Appendix O.4 AGENCY CORRESPONDENCE

Robinson, Jennifer

From: EA Notices to CRegion (MECP) <eanotification.cregion@ontario.ca>
Sent: Thursday, March 5, 2020 2:41 PM
To: Robinson, Jennifer; Addley, Diana; Esedebe, Hilda
Cc: Martin, Paul (MECP); Dugas, Celeste (MECP)
Subject: RE: City of Vaughan, MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)
Attachments: mecp delegating letter-5march2020.pdf

Please find the attached letter as the ministry general comments for this project including delegating the procedural aspects of rights-based consultation to the proponent through this letter.

If you have any questions regarding these comments, please feel free to contact me directly.

Thank you,
Chunmei Liu | Environmental Planner | Environmental Assessment Coordinator
Central Region, **Ontario Ministry of the Environment, Conservation and Parks**
5775 Yonge Street, 8th Floor, Toronto, ON M2M 4J1
416-326-4886 | Chunmei.Liu@ontario.ca | Website: http://www.ene.gov.on.ca/

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: March-05-20 11:50 AM
To: EA Notices to CRegion (MECP) <eanotification.cregion@ontario.ca>
Cc: Addley, Diana <Diana.Addley@stantec.com>; Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>
Subject: City of Vaughan, MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)

Hello,

Please see the attached Notice of Study Commencement for the Bass Pro Mills Drive (Highway 400 to Weston Road) project, as well as the completed Project Information Form.

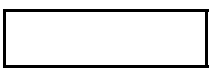
Please do not hesitate to contact us should you have any questions.

Regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Markham Office

Direct: 905-944-6232
Fax: 905-474-9889
Jennifer.Robinson@stantec.com

Stantec
300W-675 Cochrane Drive
Markham ON L3R 0B8



Ministry of the Environment, Conservation and Parks
Drinking Water and Environmental Compliance Division
Central Region

5775 Yonge Street, 8th floor
North York ON M2M 4J1
Tel.: 416 326-6700
Fax.: 416 325-6345

Ministère de l'Environnement, de la Protection de la nature et des Parcs
Division de la conformité en matière d'eau potable et d'environnement
Région du Centre

8e étage, 5775, rue Yonge
North York ON M2M 4J1
Tél. : 416 326-6700
Téléc. : 416 325-6345

Ontario

February 20, 2020

File No.: EA 01-06-05

Hilda Esedebe, P.Eng.
City of Vaughan
Project Manager
2141 Major Mackenzie Dr.
Vaughan, ON L6A 1T1
hilda.esedebe@vaughan.ca

BY EMAIL ONLY

Re: **Bass Pro Mills Drive, from Highway 400 to Weston Road**
The City of Vaughan
Schedule C Municipal Class EA
Response to Notice of Commencement

Dear Ms. Esedebe,

This letter is in response to the Notice of Commencement for the above noted project. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the City of Vaughan has indicated that the study is following the approved environmental planning process for a Schedule C project under the Municipal Class Environmental Assessment (Class EA).

The attached "Areas of Interest" document provides guidance regarding the ministry's interests with respect to the Class EA process. Please identify the areas of interest which are applicable to the project and ensure they are addressed. Proponents who address all of the applicable areas of interest can minimize potential delays to the project schedule.

An Air Quality Impact Assessment (AQIA) may be required to be included in the report and used as part of the decision-making process to address all potential air quality impacts to current and future sensitive receptors. This AQIA should include at a minimum the predicted traffic flows and the current and future emissions estimates, as well as any required mitigation measures. General guidance regarding the scope of AQIA requirements for Schedule C road improvement Municipal Class EA ESRs is attached to this letter for your reference. Please contact this office to determine potential AQIA requirements for this project.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge, real or constructive, of the existence or potential existence of an Aboriginal or treaty right and contemplates conduct that may adversely impact that right. Before the proponent may proceed with this project, the Crown must ensure that its duty to consult has been fulfilled, where such a duty is triggered. Although the duty to consult with Aboriginal peoples is a duty of the Crown, the Crown may delegate procedural aspects of this duty to project proponents while retaining oversight of the consultation process.

The proposed project may have the potential to affect Aboriginal or treaty rights protected under Section 35 of Canada's *Constitution Act* 1982. Where the Crown's duty to consult is triggered in

relation to the proposed project**, the MECP is delegating the procedural aspects of rights-based consultation to the proponent through this letter.** The Crown intends to rely on the delegated consultation process in discharging its duty to consult and maintains the right to participate in the consultation process as it sees fit.

Based on information provided to date and the Crown`s preliminary assessment the proponent is required to consult with the following communities who have been identified as potentially affected by the proposed project:

- Mississaugas of the Credit First Nation
- Hiawatha First Nation (copy to the Williams Treaties Coordinator)
- Curve Lake First Nation (copy to the Williams Treaties Coordinator)
- Alderville First Nation (copy to the Williams Treaties Coordinator)
- Mississauga's of Scugog Island First Nation (copy to the Williams Treaties Coordinator)

If there are potential archeological impacts:

- Huron-Wendat Nation

Nothing in the above guidance should prevent the City from reaching out to other Indigenous communities and/or organization which it understands may have an interest in the study, including those Indigenous communities and organizations that it notified during the Class EA study.

Steps that the proponent may need to take in relation to Aboriginal consultation for the proposed project are outlined in the "Code of Practice for Consultation in Ontario's Environmental Assessment Process" which can be found at the following link: https://www.ontario.ca/document/consultation-ontarios-environmental-assessment-process
Additional information related to Ontario's Environmental Assessment Act is available online at: www.ontario.ca/environmentalassessments

Please also refer to the attached document "A Proponent's Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities" for further information.

The proponent must contact the Director of Environmental Assessment and Permissions Branch under the following circumstances subsequent to initial discussions with the communities identified by MECP:

- Aboriginal or treaty rights impacts are identified to the proponent by the communities;
- The proponent has reason to believe that the proposed project may adversely affect an Aboriginal or treaty right;
- Consultation has reached an impasse;
- A Part II Order request or elevation request is expected.

The Director can be notified either by email, mail or fax using the information provided below:

Email:	enviropermissions@ontario.ca Subject: Potential Duty to Consult
Fax:	416-314-8452
Address:	Environmental Assessment and Permissions Branch 135 St. Clair Avenue West, 1st Floor Toronto, ON, M4V 1P5

The MECP will then assess the extent of any Crown duty to consult for the circumstances and will consider whether additional steps should be taken, including what role the proponent will be asked to play should additional steps and activities be required.

A Part II Order Request Form must be used to request a Part II Order. The Part II Order Request Form is available online on the Forms Repository website (http://www.forms.ssb.gov.on.ca/) by searching “Part II Order” or “012-2206E” (the form ID number). Please include reference to this in the Notice of Completion for this project.

Please note that there is a new long-term temporary address for the Minister of the Environment, Conservation and Parks. The new address is as follows:

Office of the Minister of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
Tel.: 416-314-6790
minister.mecp@ontario.ca

A draft copy of the ESR should be sent to this office prior to the filing of the final report, allowing a minimum of 30 days for the ministry’s technical reviewers to provide comments. Please also forward the Notice of Completion and final ESR to us when completed.

Should you or any members of your project team have any questions regarding the material above, please contact me at Chunmei.Liu@ontario.ca or 416-326-4886.

Yours truly,

Chunmei Liu
Regional Environmental Assessment Coordinator
Air, Pesticides and Environmental Planning

cc: Paul Martin, Supervisor, Technical Support Section, MECP
Celeste Dugas, Manager, York Durham District Office, MECP
Diana Addley, Senior Environmental Planner, Stantec Consulting Ltd.
Central Region EA File
A & P File

Attach: Areas of Interest
A Proponent’s Introduction to the Delegation of Procedural Aspects of consultation with Aboriginal Communities
Air Quality Impact Assessment Guidance for Municipal Road Class EAs

AREAS OF INTEREST

It is suggested that you check off each applicable area after you have considered / addressed it.

☐ **Species at Risk**

- The Ministry of the Environment, Conservation and Parks has now assumed responsibility of Ontario's Species at Risk program. For any questions related to subsequent permit requirements, you may contact SAROntario@ontario.ca.

☐ **Planning and Policy**

- Parts of the study area may be subject to the A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019), Oak Ridges Moraine Conservation Plan (2017), Niagara Escarpment Plan (2017), Greenbelt Plan (2017) or Lake Simcoe Protection Plan (2014). Applicable policies should be referenced in the Project File/ESR, and the proponent should describe how the proposed study adheres to the relevant policies in these plans.

- The Provincial Policy Statement (2014) contains policies that protect Ontario's natural heritage and water resources. Applicable policies should be referenced in the Project File/ESR, and the **proponent should describe how this proposed project is consistent with these policies.**

☐ **Source Water Protection (all projects)**

The Clean Water Act, 2006 (CWA) aims to protect existing and future sources of drinking water. To achieve this, several types of vulnerable areas have been delineated around surface water intakes and wellheads for every municipal residential drinking water system that is located in a source protection area. These vulnerable areas are known as a Wellhead Protection Areas (WHPAs) and surface water Intake Protection Zones (IPZs). Other vulnerable areas that have been delineated under the CWA include Highly Vulnerable Aquifers (HVAs), Significant Groundwater Recharge Areas (SGRAs), Event-based modelling areas (EBAs), and Issues Contributing Areas (ICAs). Source protection plans have been developed that include policies to address existing and future risks to sources of municipal drinking water within these vulnerable areas.

Projects that are subject to the Environmental Assessment Act that fall under a Class EA, or one of the Regulations, have the potential to impact sources of drinking water if they occur in designated vulnerable areas or in the vicinity of other at-risk drinking water systems (i.e. systems that are not municipal residential systems). MEA Class EA projects may include activities that, if located in a vulnerable area, could be a threat to sources of drinking water (i.e. have the potential to adversely affect the quality or quantity of drinking water sources) and the activity could therefore be subject to policies in a source protection plan. Where an activity poses a risk to drinking water, policies in the local source protection plan may impact how or where that activity is undertaken. Policies may prohibit certain activities, or they may require risk management measures for these activities. Municipal Official Plans, planning decisions, Class EA projects (where the project includes an activity that is a threat to drinking water) and prescribed instruments must conform with policies that address significant risks to drinking water and must have regard for policies that address moderate or low risks.

- In October 2015, the MEA Parent Class EA document was amended to include reference to the Clean Water Act (Section A.2.10.6) and indicates that proponents undertaking a Municipal Class EA project must identify early in their process whether a project is or could potentially be occurring with a vulnerable area. **Given this requirement, please include a section in the Project File/ESR on source water protection.**
    - The proponent should identify the source protection area and should clearly document how the proximity of the project to sources of drinking water (municipal or other) and any delineated vulnerable areas was considered and assessed. Specifically the report should discuss whether or not the project is located in a vulnerable area and provide applicable details about the area.
    - If located in a vulnerable area, proponents should document whether any project activities are prescribed drinking water threats and thus pose a risk to drinking water (this should be consulted on with the appropriate Source Protection Authority). Where an activity poses a risk to drinking water, the proponent must document and discuss in the Project File/ESR how the project adheres to or has regard to applicable policies in the local source protection plan. This section should then be used to inform and be reflected in other sections of the report, such as the identification of net positive/negative effects of alternatives, mitigation measures, evaluation of alternatives etc.

- While most source protection plans focused on including policies for significant drinking water threats in the WHPAs and IPZs it should be noted that even though source protection plan policies may not apply in HVAs, these are areas where aquifers are sensitive and at risk to impacts and within these areas, activities may impact the quality of sources of drinking water for systems other than municipal residential systems.

- **In order to determine if this project is occurring within a vulnerable area, proponents can use this mapping tool: http://www.applications.ene.gov.on.ca/swp/en/index.php. Use the "Map Legend" on the left side to turn on various layers (including Highly Vulnerable Aquifer and Significant Groundwater Recharge Area under Water Quality Layers). The mapping tool will also provide a link to the appropriate source protection plan in order to identify what policies may be applicable in the vulnerable area.**

- For further information on the maps or source protection plan policies which may relate to their project, proponents must contact the appropriate source protection authority. **Please consult with the local source protection authority to discuss potential impacts on drinking water. The contact for this project is Jennifer Stephens at jstephens@trca.on.ca. Please document the results of that consultation within the Report and include all communication documents/correspondence.**

More Information
For more information on the Clean Water Act, source protection areas and plans, including specific information on the vulnerable areas and drinking water threats, please refer to Conservation Ontario's website where you will also find links to the local source protection plan/assessment report.

A list of the prescribed drinking water threats can be found in section 1.1 of Ontario Regulation 287/07 made under the Clean Water Act. In addition to prescribed drinking water threats, some source protection plans may include policies to address additional "local" threat activities, as approved by the MECP.

Climate Change

A guide has now been finalized: "Considering Climate Change in the Environmental Assessment Process" (Guide), which is found online at: https://www.ontario.ca/page/considering-climate-change-environmental-assessment-process

The Guide is now a part of the Environmental Assessment program's Guides and Codes of Practice. The Guide sets out the ministry's expectation for considering climate change in the preparation, execution and documentation of environmental assessment studies and processes. The guide provides examples, approaches, resources, and references to assist proponents with consideration of climate change in EA. Please review this Guide in detail.

- We expect proponents to:
  1. Take into account during the assessment of alternative solutions and alternative designs, the following:
     a. the project's expected production of greenhouse gas emissions and impacts on carbon sinks (climate change mitigation); and
     b. resilience or vulnerability of the undertaking to changing climatic conditions (climate change adaptation).
  2. Include a discrete section in the Project File/ESR detailing how climate change was considered in the EA.

  How climate change is considered can be qualitative or quantitative in nature, and should be scaled to the project's level of environmental effect. In all instances, both a project's impacts on climate change (mitigation) and impacts of climate change on a project (adaptation) should be considered. **Please ensure climate change is considered in the report.**

- The ministry has also prepared another guide to support provincial land use planning direction related to the completion of energy and emission plans. The "Community Emissions Reduction Planning: A Guide for Municipalities" document is designed to educate stakeholders on the municipal opportunities to reduce energy and greenhouse gas emissions, and to provide guidance on methods and techniques to incorporate consideration of energy and greenhouse gas emissions into municipal activities of all types. We encourage you to review the Guide for information.

Air Quality, Dust and Noise

- If there are sensitive receptors in the surrounding area of this project, an air quality/odour impact assessment will be useful to evaluate alternatives, determine impacts and identify appropriate mitigation measures. The scope of the assessment can be determined based on the potential effects of the proposed alternatives, and typically includes source and receptor characterization and a quantification of local air quality impacts on the sensitive receptors and the environment in the study area. The assessment will compare to all applicable standards or guidelines for all contaminants of concern. **Please contact this office for further consultation on the level of Air Quality Impact Assessment required for this project if not already advised.**

- If a quantitative Air Quality Impact Assessment is not required for the project, the Project File/ESR should still contain:
  - A discussion of local air quality including existing activities/sources that significantly impact local air quality and how the project may impact existing conditions;
  - A discussion of the nearby sensitive receptors and the project's potential air quality impacts on present and future sensitive receptors;
  - A discussion of local air quality impacts that could arise from this project during both construction and operation; and
  - A discussion of potential mitigation measures.

- Assessments for NOx emissions from diesel generators are required for permitting of municipal residential water systems. If the new pumping station will have a diesel generator system for standby power, please include the NOx POI assessment as supporting documentation for the EA.

- As a common practice, "air quality" should be used an evaluation criterion for all road projects.

- Dust and noise control measures should be addressed and included in the construction plans to ensure that nearby residential and other sensitive land uses within the study area are not adversely affected during construction activities.

- The ministry recommends that non-chloride dust-suppressants be applied. For a comprehensive list of fugitive dust prevention and control measures that could be applied, refer to *Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities.* Report prepared for Environment Canada. March 2005.http://www.bv.transports.gouv.qc.ca/mono/1173259.pdf

- The Project File/ESR should consider the potential impacts of increased noise levels during the operation of the completed project. The proponent should explore all potential measures to mitigate significant noise impacts during the assessment of alternatives.

Ecosystem Protection and Restoration

- Any impacts to ecosystem form and function must be avoided where possible. The Project File/ESR should describe any proposed mitigation measures and how project planning will protect and enhance the local ecosystem.

- All natural heritage features should be identified and described in detail to assess potential impacts and to develop appropriate mitigation measures. The following sensitive environmental features may be located within or adjacent to the study area:

  - Areas of Natural and Scientific Interest (ANSIs)
  - Rare Species of flora or fauna
  - Watercourses
  - Wetlands
  - Woodlots

We recommend consulting with the Ministry of Natural Resources and Forestry (MNRF), Fisheries and Oceans Canada (DFO) and your local conservation authority to determine if special measures or additional studies will be necessary to preserve and protect these sensitive features. In addition, you may consider the provisions of the Rouge Park Management Plan if applicable.

Surface Water

- The Project File/ESR must include a sufficient level of information to demonstrate that there will be no negative impacts on the natural features or ecological functions of any watercourses within the study area. Measures should be included in the planning and design process to ensure that any impacts to watercourses from construction or operational activities (e.g. spills, erosion, pollution) are mitigated as part of the proposed undertaking.

- Additional stormwater runoff from new pavement can impact receiving watercourses and flood conditions. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing surfaces. The ministry's Stormwater Management Planning and Design Manual (2003) should be referenced in the Project File/ESR and utilized when designing stormwater control methods. **A Stormwater Management Plan should be prepared as part of the Class EA process** that includes:

    - Strategies to address potential water quantity and erosion impacts related to stormwater draining into streams or other sensitive environmental features, and to ensure that adequate (enhanced) water quality is maintained
    - Watershed information, drainage conditions, and other relevant background information
    - Future drainage conditions, stormwater management options, information on erosion and sediment control during construction, and other details of the proposed works
    - Information on maintenance and monitoring commitments.

- Ontario Regulation 60/08 under the Ontario Water Resources Act (OWRA) applies to the Lake Simcoe Basin, which encompasses Lake Simcoe and the lands from which surface water drains into Lake Simcoe. If the proposed sewage treatment plant is listed in Table 1 of the regulation, the Project File/ESR should describe how the proposed project and its mitigation measures are consistent with the requirements of this regulation and the OWRA.

- Any potential approval requirements for surface water taking or discharge should be identified in the Project File/ESR. In particular, a Permit to Take Water (PTTW) under the OWRA will be required for any water takings that exceed 50,000 L/day, with the exception of certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the Water Taking User Guide for EASR for more information. Additionally, an Environmental Compliance Approval under the OWRA is required for municipal stormwater management works.

Groundwater

- The status of, and potential impacts to any well water supplies should be addressed. If the project involves groundwater takings or changes to drainage patterns, the quantity and quality of groundwater may be affected due to drawdown effects or the redirection of existing contamination flows. In addition, project activities may infringe on existing wells such that they must be reconstructed or sealed and abandoned. Appropriate information to define existing groundwater conditions should be included in the Project File/ESR.

- If the potential construction or decommissioning of water wells is identified as an issue, the Project File/ESR should refer to Ontario Regulation 903, Wells, under the OWRA.

- Potential impacts to groundwater-dependent natural features should be addressed. Any changes to groundwater flow or quality from groundwater taking may interfere with the ecological processes of streams, wetlands or other surficial features. In addition, discharging contaminated or high volumes of groundwater to these features may have direct impacts on their function. Any potential effects should be identified, and appropriate mitigation measures should be recommended. The level of detail required will be dependent on the significance of the potential impacts.

- Any potential approval requirements for groundwater taking or discharge should be identified in the Project File/ESR. In particular, a Permit to Take Water (PTTW) under the OWRA will be required for any water

takings that exceed 50,000 L/day, with the exception of certain water taking activities that have been prescribed by the Water Taking EASR Regulation – *O. Reg. 63/16*. These prescribed water-taking activities require registration in the EASR instead of a PTTW. Please review the Water Taking User Guide for EASR for more information.

Contaminated Soils

- Since the removal or movement of soils may be required, appropriate tests to determine contaminant levels from previous land uses or dumping should be undertaken. If the soils are contaminated, you must determine how and where they are to be disposed of, consistent with *Part XV.1 of the Environmental Protection Act* (EPA) and Ontario Regulation 153/04, Records of Site Condition, which details the new requirements related to site assessment and clean up. Please contact the ministry's District Offices for further consultation if contaminated sites are present.

- Any current or historical waste disposal sites should be identified in the Project File/ESR. The status of these sites should be determined to confirm whether approval pursuant to Section 46 of the EPA may be required for land uses on former disposal sites.

- The location of any underground storage tanks should be investigated in the Project File/ESR. Measures should be identified to ensure the integrity of these tanks and to ensure an appropriate response in the event of a spill. The ministry's Spills Action Centre must be contacted in such an event.

- The Project File/ESR should identify any underground transmission lines in the study area. The owners should be consulted to avoid impacts to this infrastructure, including potential spills.

Excess Materials Management

- Activities involving the management of excess soil should be completed in accordance with the MECP's current guidance document titled "Management of Excess Soil – A Guide for Best Management Practices" (2014) available online (http://www.ontario.ca/document/management-excess-soil-guide-best-management-practices).

- All waste generated during construction must be disposed of in accordance with ministry requirements.

Servicing and Facilities

- Any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste must have an Environmental Compliance Approval (ECA) before it can operate lawfully. Please consult with the Environmental Assessment and Permissions Branch to determine whether a new or amended ECA will be required for any proposed infrastructure.

- We recommend referring to the ministry's "D-Series" guidelines – Land Use Compatibility to ensure that any potential land use conflicts are considered when planning for any infrastructure or facilities related to wastewater, pipelines, landfills or industrial uses.

Mitigation and Monitoring

Contractors must be made aware of all environmental considerations so that all environmental standards and commitments for both construction and operation are met. Mitigation measures should be clearly referenced in the Project File/ESR and regularly monitored during the construction stage of the project. In addition, we encourage proponents to conduct post-construction monitoring to ensure all mitigation measures have been effective and are functioning properly.

- Design and construction reports and plans should be based on a best management approach that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.

- The proponent's construction and post-construction monitoring plans must be documented in the Project

File/ESR, as outlined in Section A.2.5 and A.4.1 of the MEA Class EA parent document.

Consultation

- The Project File/ESR must demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all stakeholder consultation efforts undertaken during the planning process. This includes a discussion in the Project File/ESR that identifies concerns that were raised and **describes how they have been addressed by the proponent** throughout the planning process. The Class EA also directs proponents to include copies of comments submitted on the project by interested stakeholders, and the proponent's responses to these comments.

Class EA Process

- The Project File/ESR should provide clear and complete documentation of the planning process in order to allow for transparency in decision-making.

- If this project is a Master Plan: there are several different approaches that can be used to conduct a Master Plan, examples of which are outlined in Appendix 4 of the Class EA. The Master Plan should clearly indicate the selected approach for conducting the plan, in particular by identifying whether the levels of assessment, consultation and documentation are sufficient to fulfill the requirements for Schedule B or C projects. Please note that any Schedule B or C projects identified in the plan would be subject to Part II Order Requests under the *Environmental Assessment Act* (EAA), although the plan itself would not be.

- The Class EA requires the consideration of the effects of each alternative on all aspects of the environment. The Project File/ESR should include a level of detail (e.g. hydrogeological investigations, terrestrial and aquatic assessments) such that all potential impacts can be identified and appropriate mitigation measures can be developed. Any supporting studies conducted during the Class EA process should be referenced and included as part of the Project File/ESR.

- Please include in the Project File/ESR a list of all subsequent permits or approvals that may be required for the implementation of the preferred alternative, including but not limited to, MECP's PTTW, EASR Registrations and ECAs, conservation authority permits, species at risk permits, and approvals under the *Canadian Environmental Assessment Act* (CEAA).

- Ministry guidelines and other information related to the issues above are available at http://www.ontario.ca/environment-and-energy/environment-and-energy. We encourage you to review all the available guides and to reference any relevant information in the Project File/ESR.

DEFINITIONS

The following definitions are specific to this document and may not apply in other contexts:

Aboriginal communities – the First Nation or Métis communities identified by the Crown for the purpose of consultation.

Consultation – the Crown's legal obligation to consult when the Crown has knowledge of an established or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. This is the type of consultation required pursuant to s. 35 of the *Constitution Act, 1982*. Note that this definition does not include consultation with Aboriginal communities for other reasons, such as regulatory requirements.

Crown – the Ontario Crown, acting through a particular ministry or ministries.

Procedural aspects of consultation – those portions of consultation related to the process of consultation, such as notifying an Aboriginal community about a project, providing information about the potential impacts of a project, responding to concerns raised by an Aboriginal community and proposing changes to the project to avoid negative impacts.

Proponent – the person or entity that wants to undertake a project and requires an Ontario Crown decision or approval for the project.

I. PURPOSE

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that may adversely impact that right. In outlining a framework for the duty to consult, the Supreme Court of Canada has stated that the Crown may delegate procedural aspects of consultation to third parties. This document provides general information about the Ontario Crown's approach to delegation of the procedural aspects of consultation to proponents.

This document is not intended to instruct a proponent about an individual project, and it does not constitute legal advice.

II. WHY IS IT NECESSARY TO CONSULT WITH ABORIGINAL COMMUNITIES?

The objective of the modern law of Aboriginal and treaty rights is the *reconciliation* of Aboriginal peoples and non-Aboriginal peoples and their respective rights, claims and interests. Consultation is an important component of the reconciliation process.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. For example, the Crown's duty to consult is triggered when it considers issuing a permit, authorization or approval for a project which has the potential to adversely impact an Aboriginal right, such as the right to hunt, fish, or trap in a particular area.

The scope of consultation required in particular circumstances ranges across a spectrum depending on both the nature of the asserted or established right and the seriousness of the potential adverse impacts on that right.

Depending on the particular circumstances, the Crown may also need to take steps to accommodate the potentially impacted Aboriginal or treaty right. For example, the Crown may be required to avoid or minimize the potential adverse impacts of the project.

III. THE CROWN'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

The Crown has the responsibility for ensuring that the duty to consult, and accommodate where appropriate, is met. However, the Crown may delegate the procedural aspects of consultation to a proponent.

There are different ways in which the Crown may delegate the procedural aspects of consultation to a proponent, including through a letter, a memorandum of understanding, legislation, regulation, policy and codes of practice.

If the Crown decides to delegate procedural aspects of consultation, the Crown will generally:

- Ensure that the delegation of procedural aspects of consultation and the responsibilities of the proponent are clearly communicated to the proponent;
- Identify which Aboriginal communities must be consulted;
- Provide contact information for the Aboriginal communities;
- Revise, as necessary, the list of Aboriginal communities to be consulted as new information becomes available and is assessed by the Crown;
- Assess the scope of consultation owed to the Aboriginal communities;
- Maintain appropriate oversight of the actions taken by the proponent in fulfilling the procedural aspects of consultation;
- Assess the adequacy of consultation that is undertaken and any accommodation that may be required;
- Provide a contact within any responsible ministry in case issues arise that require direction from the Crown; and
- Participate in the consultation process as necessary and as determined by the Crown.

IV. THE PROPONENT'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

Where aspects of the consultation process have been delegated to a proponent, the Crown, in meeting its duty to consult, will rely on the proponent's consultation activities and documentation of those activities. The consultation process informs the Crown's decision of whether or not to approve a proposed project or activity.

A proponent's role and responsibilities will vary depending on a variety of factors including the extent of consultation required in the circumstance and the procedural aspects of consultation the Crown has delegated to it. Proponents are often in a better position than the Crown to discuss a project and its potential impacts with Aboriginal communities and to determine ways to avoid or minimize the adverse impacts of a project.

A proponent can raise issues or questions with the Crown at any time during the consultation process. If issues or concerns arise during the consultation that cannot be addressed by the proponent, the proponent should contact the Crown.

a) What might a proponent be required to do in carrying out the procedural aspects of consultation?

Where the Crown delegates procedural aspects of consultation, it is often the proponent's responsibility to provide notice of the proposed project to the identified Aboriginal communities. The notice should indicate that the Crown has delegated the procedural aspects of consultation to the proponent and should include the following information:

- a description of the proposed project or activity;
- mapping;
- proposed timelines;
- details regarding anticipated environmental and other impacts;

- details regarding opportunities to comment; and
- any changes to the proposed project that have been made for seasonal conditions or other factors, where relevant.

Proponents should provide enough information and time to allow Aboriginal communities to provide meaningful feedback regarding the potential impacts of the project. Depending on the nature of consultation required for a project, a proponent also may be required to:

- provide the Crown with copies of any consultation plans prepared and an opportunity to review and comment;
- ensure that any necessary follow-up discussions with Aboriginal communities take place in a timely manner, including to confirm receipt of information, share and update information and to address questions or concerns that may arise;
- as appropriate, discuss with Aboriginal communities potential mitigation measures and/or changes to the project in response to concerns raised by Aboriginal communities;
- use language that is accessible and not overly technical, and translate material into Aboriginal languages where requested or appropriate;
- bear the reasonable costs associated with the consultation process such as, but not limited to, meeting hall rental, meal costs, document translation(s), or to address technical & capacity issues;
- provide the Crown with all the details about potential impacts on established or asserted Aboriginal or treaty rights, how these concerns have been considered and addressed by the proponent and the Aboriginal communities and any steps taken to mitigate the potential impacts;
- provide the Crown with complete and accurate documentation from these meetings and communications; and
- notify the Crown immediately if an Aboriginal community not identified by the Crown approaches the proponent seeking consultation opportunities.

b) What documentation and reporting does the Crown need from the proponent?

Proponents should keep records of all communications with the Aboriginal communities involved in the consultation process and any information provided to these Aboriginal communities.

As the Crown is required to assess the adequacy of consultation, it needs documentation to satisfy itself that the proponent has fulfilled the procedural aspects of consultation delegated to it. The documentation required would typically include:

- the date of meetings, the agendas, any materials distributed, those in attendance and copies of any minutes prepared;
- the description of the proposed project that was shared at the meeting;
- any and all concerns or other feedback provided by the communities;
- any information that was shared by a community in relation to its asserted or established Aboriginal or treaty rights and any potential adverse impacts of the proposed activity, approval or disposition on such rights;
- any proposed project changes or mitigation measures that were discussed, and feedback from Aboriginal communities about the proposed changes and measures;
- any commitments made by the proponent in response to any concerns raised, and feedback from Aboriginal communities on those commitments;
- copies of correspondence to or from Aboriginal communities, and any materials distributed electronically or by mail;
- information regarding any financial assistance provided by the proponent to enable participation by Aboriginal communities in the consultation;
- periodic consultation progress reports or copies of meeting notes if requested by the Crown;
- a summary of how the delegated aspects of consultation were carried out and the results; and
- a summary of issues raised by the Aboriginal communities, how the issues were addressed and any outstanding issues.

In certain circumstances, the Crown may share and discuss the proponent's consultation record with an Aboriginal community to ensure that it is an accurate reflection of the consultation process.

c) Will the Crown require a proponent to provide information about its commercial arrangements with Aboriginal communities?

The Crown may require a proponent to share information about aspects of commercial arrangements between the proponent and Aboriginal communities where the arrangements:

- include elements that are directed at mitigating or otherwise addressing impacts of the project;
- include securing an Aboriginal community's support for the project; or
- may potentially affect the obligations of the Crown to the Aboriginal communities.

The proponent should make every reasonable effort to exempt the Crown from confidentiality provisions in commercial arrangements with Aboriginal communities to the extent necessary to allow this information to be shared with the Crown.

The Crown cannot guarantee that information shared with the Crown will remain confidential. Confidential commercial information should not be provided to the Crown as part of the consultation record if it is not relevant to the duty to consult or otherwise required to be submitted to the Crown as part of the regulatory process.

V. WHAT ARE THE ROLES AND RESPONSIBILITIES OF ABORIGINAL COMMUNITIES' IN THE CONSULTATION PROCESS?

Like the Crown, Aboriginal communities are expected to engage in consultation in good faith. This includes:

- responding to the consultation notice;
- engaging in the proposed consultation process;
- providing relevant documentation;
- clearly articulating the potential impacts of the proposed project on Aboriginal or treaty rights; and
- discussing ways to mitigates any adverse impacts.

Some Aboriginal communities have developed tools, such as consultation protocols, policies or processes that provide guidance on how they would prefer to be consulted. Although not legally binding, proponents are encouraged to respect these community processes where it is reasonable to do so. Please note that there is no obligation for a proponent to pay a fee to an Aboriginal community in order to enter into a consultation process.

To ensure that the Crown is aware of existing community consultation protocols, proponents should contact the relevant Crown ministry when presented with a consultation protocol by an Aboriginal community or anyone purporting to be a representative of an Aboriginal community.

VI. WHAT IF MORE THAN ONE PROVINCIAL CROWN MINISTRY IS INVOLVED IN APPROVING A PROPONENT'S PROJECT?

Depending on the project and the required permits or approvals, one or more ministries may delegate procedural aspects of the Crown's duty to consult to the proponent. The proponent may contact individual ministries for guidance related to the delegation of procedural aspects of consultation for ministry-specific permits/approvals required for the project in question. Proponents are encouraged to seek input from all involved Crown ministries sooner rather than later.

Air Quality Impact Assessment Guidance for Municipal Road Class EAs

1. Study Area

   The scope of the AQIA should be determined by the proponent and clearly outlined in the AQIA document based on the number and nature of scenarios/alternatives being considered, for example, the routes under consideration.

   The focus should be on defining the "worst case scenario", whether it is the length of roadway with the highest traffic volumes in close proximity to sensitive receptors or sections of roadways with on and off ramps and overpasses. The end result should be a defined study area.

2. List of Parameters

   The list of parameters should focus mainly on the key pollutants released from mobile sources such as, but not limited to, the following:
   - CO
   - NO_x (with a focus on NO and NO_2)
   - TSP
   - PM_{10}
   - $PM_{2.5}$
   - Selected VOCs (benzene, 1-3 Butadiene, formaldehyde, acetaldehyde and acrolein)
   - Benzo(a)pyrene – as a surrogate for PAHs

   All averaging periods for which there is a corresponding standard or guideline should be assessed.

3. Background Data

   Background data representative of the study area is generally summarized for the most recent 5 years from the nearest or most representative MOECC AQHI and/or NAPS stations. The 90^{th} percentile should be used when assessing combined air quality concentrations for comparison against applicable standards and guidelines.

4. Emission Estimates

   Emission estimates are based on current and proposed future traffic counts where MOVES is used to generate emission factors.

5. Traffic Data

   Traffic data including fleet distribution and characteristics, road type, traffic signals, idling conditions, or roundabouts/stop signs may be considered or incorporated into the assessment.

6. Dispersion Modelling and Meteorological Data

   Dispersion modelling, typically using CAL3QHCR or AERMOD, is conducted to determine maximum pollutant concentrations resulting from implementation of the project and the resulting air quality impacts at the most impacted sensitive receptors for the different scenarios. At a minimum, two modelling scenarios are to be conducted to determine the incremental difference between the current conditions (base case) and future scenario. The timing of the future scenario should be defined and take into consideration projected population growth and traffic/emissions impacts.

   According to the Ministry of Transportations' *Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects (June, 2012)*, "…local air quality impacts are assumed to be limited to a distance of approximately 500 m from the transportation facility, in each direction." Therefore, the Cartesian grid system used to easily model concentrations at each receptor typically has a grid limit of approximately 500 m from the edge of the subject road.

   The five most recent years of meteorological data should be used for dispersion modelling. However,

under certain conditions, one year of continuous data may be sufficient. Surface data can be obtained from facilities such as Pearson International Airport, Toronto Island, Buttonville or site-specific and upper air data obtained from Buffalo, New York.

All supporting documentation and assumptions that are inputted into the models should be summarized as appendices. A sample of the electronic dispersion model input and output files must be submitted for the ministry's review.

7. Sensitive Receptors

All key and potentially sensitive receptors located in the surrounding area must be identified and included in the model. Sensitive receptors include but are not limited to residences, schools, health care facilities and daycare centers. Future sensitive receptors should also be included in the assessment.

8. Combined Effects

In order to assess the combined effects at nearby sensitive receptors, the AQIA should sum the maximum modelled concentrations with the 90th percentile background concentrations for comparison against applicable standards and guidelines.

If exceedances or non-conformances are predicted, a discussion of possible mitigation measures should be included.

9. Applicable Guidelines

Applicable standards and guidelines may include:

- MOECC Ambient Air Quality Criteria (AAQCs)
- Canadian Ambient Air Quality Standards (CAAQs)

10. Results

The predicted results obtained from the dispersion modelling exercise are to be presented in detail in the AQIA and summarized in the ESR. This should include an analysis and discussion of the results and potential air quality impacts of the project.

Results for each contaminant should be discussed separately and should depict predicted maximum concentrations at the most impacted sensitive receptor(s), the overall maximum predicted concentrations and the combined concentrations, for each averaging period assessed. It may also be relevant to discuss receptor specific results.

11. Climate Change and Regional Impacts

The AQIA should consider climate change and regional air quality impacts when assessing the project's potential impacts and possible mitigation measures. This may include comparing impacts from the proposed undertaking with the provincial greenhouse gas totals reported by Environment Canada.

12. Summary and Mitigation Measures

The AQIA and ESR should summarize the key conclusions of the study based on the results as provided. In addition, general mitigation measures should be discussed, including those mitigation measures that will be implemented during construction to minimize off-site impacts.

For example, best management practices should be applied to mitigate any air quality impacts caused by construction dust. Please note that the ministry recommends that non-chloride dust suppressants be applied.

For a comprehensive list of fugitive dust prevention and control measures, please refer to *Cheminfo Services Inc. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities.* Report prepared for Environment Canada. March 2005. http://www.bv.transports.gouv.qc.ca/mono/1173259.pdf

13. Cumulative Impacts

The ministry is currently preparing draft guidance documents to address cumulative effects in EAs. In the interim, please use the following federal EA resources as references for addressing cumulative effects:

- Cumulative Effects Assessment Practitioners' Guide
  https://www.ceaa-acee.gc.ca/default.asp?lang=En&n=43952694-%201&offset=&toc=hide

- Reference Guide: Addressing Cumulative Environmental Effects
  https://www.ceaa-acee.gc.ca/default.asp?lang=En&n=9742C481-%201&offset=&toc=hide

14. Further Guidance

For further guidance, including additional references and information such as prediction of emissions from re-entrained road dust and silt loading factors, please refer to the Ministry of Transportations' *Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects (June, 2012) or any subsequent version.* http://www.raqsb.mto.gov.on.ca/techpubs/eps.nsf/0/24FE4BB174A2AF7085257AA9006558F4?opendocument

Stantec Consulting Ltd.
300W-675 Cochrane Drive, Markham, ON L3R 0B8

February 7, 2020
File: 160540006

Attention: Chunmei Liu
Environmental Resource Planner and EA Coordinator
Place Nouveau, 9th Floor
5775 Yonge Street
Toronto, ON M2M 4J1

Dear Chunmei,

Reference: Bass Pro Mills Extension (between Highway 400 and Weston Road) Schedule 'C' Municipal Class Environmental Assessment, City of Vaughan

The City of Vaughan (City) has initiated a Municipal Class Environmental Assessment (Class EA) study to assess the need to extend Bass Pro Mills Drive, from Highway 400 to Weston Road, as recommended in the Vaughan Mills Centre Secondary Plan (2014). These recommendations were made to:

- Provide a new east-west multi-modal connection between Highway 400 and Weston Road;
- Alleviate traffic congestion along Rutherford Road;
- Support future growth and development within the plan area;
- Create new multi-modal transportation connections; and,
- Develop a safe and comfortable environment for active transportation users.

This study is being carried out in accordance with the planning design process for a Schedule 'C' project, as outlined in the Municipal Class Environmental Assessment (October 2000, as amended in 2011 and 2015), which is approved under the *Ontario Environmental Assessment Act*. Please refer to the attached figure detailing the approximate location of the study area.

Consultation with Indigenous communities is an integral part of the Municipal Class EA process. As a first step, the study team is seeking MECP confirmation of Indigenous communities or organizations to be contacted as part of this study. Based on our understanding of the study area, and the information gathered to date, the following Indigenous communities/organizations were identified as potentially having an interest in this project:

- Mississaugas of the Credit First Nation
- Alderville First Nation
- Beausoleil First Nation
- Chippewas of Georgina Island First Nation
- Chippewas of Rama (Mnjikaning) First Nation
- Curve Lake First Nation

Reference: **Bass Pro Mills Extension (between Highway 400 and Weston Road) Schedule 'C' Municipal Class Environmental Assessment, City of Vaughan**

- Hiawatha First Nation
- Mississaugas of Scugog Island First Nation

It would be appreciated if you could kindly review the attached preliminary list of Indigenous communities/organizations and associated contact information and indicate if there are any other Indigenous communities or organizations that may have an interest in this project.

Based on MECP's confirmation, the study team will initiate communications with these communities at study commencement (anticipated to be formally initiated in late February 2020), and throughout the duration of the project, to determine if these communities have an interest in this project and/or wish to be further engaged as part of this study.

Thank you in advance for taking the time to review the attached list and provide your feedback. Should you have any comments, questions or concerns, please do not hesitated to contact the undersigned.

Regards,

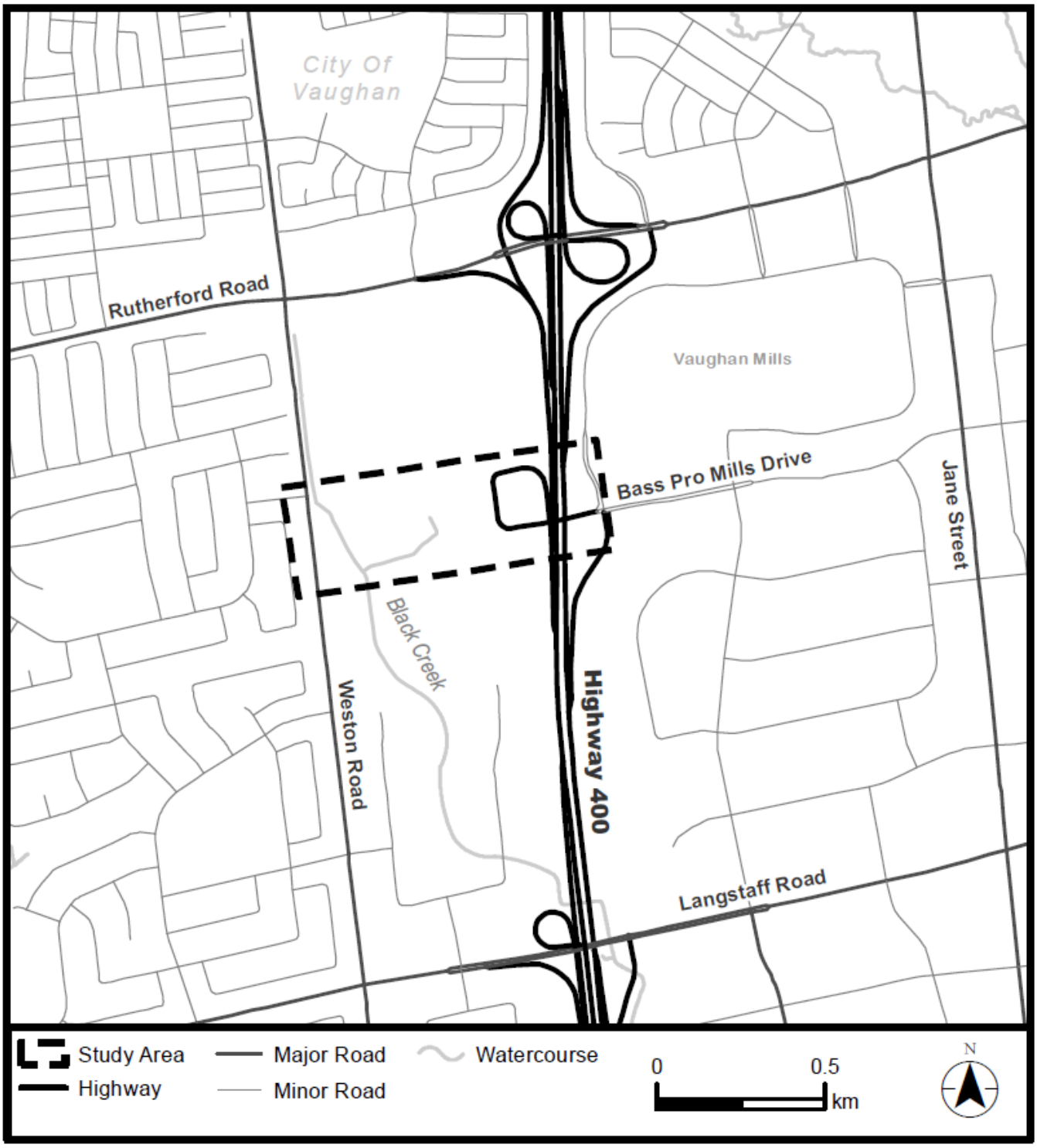
Stantec Consulting Ltd.

Diana Addley
Senior Environmental Planner
Phone: 905-615-6401
Fax: 905-747-9889
Email: Diana.Addley@stantec.com

Attachment: Study Area Location Plan
Preliminary Contact List – Indigenous Communities and Organizations

Cc. Emilee O'Leary, MECP
Paul Martin, MECP
Hilda Esedebe, City of Vaughan Peter
Cholewa, Stantec Consulting Ltd.

Study Area Location Plan
City of Vaughan
Bass Pro Mills Extension (between Highway 400 and Weston Road) Schedule 'C'
Municipal Class Environmental Assessment



Stantec

Preliminary Contact List
Indigenous Communities and Organizations
Bass Pro Mills Extension (between Highway 400 and Weston Road) Schedule 'C' Municipal Class Environmental Assessment
City of Vaughan

First Name	Last Name	Title	Representing	Address 1	Address 2	Town	Province	Postal Code	Phone	Email
Dave	**Mowat**	**Chief**	**Alderville First Nation**	**11696 Second Line**	**P.O. Box 46**	**Roseneath**	**ON**	**K0K 2X0**	**905-352-2011**	**dmowat@alderville.ca**
Dave	Simpson	Lands and Resource Coordinator	Alderville First Nation	11696 Second Line	P.O. Box 46	Roseneath	ON	K0K 2X0	905-352-2011	consultation@alderville.ca
Karry	**Sandy-McKenzie**	**Coordinator**	**Williams Treaties First Nation**	**8 Creswick Court**		**Barrie**	**ON**	**L4M 2J7**	**705-792-5087**	**k.a.sandy-mckenzie@rogers.com**
Guy	**Monague**	**Chief**	**Beausoleil First Nation**	**11 Ogemaa Miikaan**		**Christian Island**	**ON**	**L9M 0A9**	**705-247-2051**	**council@chimnissing.ca**
Mike	Smith	Environmental Specialist	Beausoleil First Nation	11 Ogemaa Miikaan		Christian Island	ON	L9M 0A9	705-247-2051	msmith@chimnissing.ca
Dana	Monague	Lands Compliance Officer	Beausoleil First Nation	11 Ogemaa Miikaan		Christian Island	ON	L9M 0A9	705-247-2051	danamonague@chimnissing.ca
Donna	**Big Canoe**	**Chief**	**Chippewas of Georgina Island**	**R.R. #2**	**P.O. Box 12**	**Sutton West**	**ON**	**L0E 1R0**	**705-437-1337**	**donna.bigcanoe@georginaisland.com**
Natasha	Charles	Community Consultation Coordinator	Chippewas of Georgina Island	R.R. #2	P.O. Box 12	Sutton West	ON	L0E 1R0	705-437-1337	natasha.charles@georginaisland.com
Rodney	**Noganosh**	**Chief**	**Chippewas of Rama First Nation (Mnjikaning)**	**5884 Rama Road**	**Suite 200**	**Rama**	**ON**	**L0K 1T0**	**705-325-3611**	**chief@ramafirstnation.ca**
Hollie	Nolan	Executive Assistant to the Chief, Administration	Chippewas of Rama First Nation (Mnjikaning)	5884 Rama Road	Suite 200	Rama	ON	L0K 1T0	705-325-3611 ext. 1216	hollien@ramafirstnation.ca
Emily	**Whetung**	**Chief**	**Curve Lake First Nation**	**22 Winookeeda Road**		**Curve Lake**	**ON**	**K0L 1R0**	**705-657-8045**	**chief@curvelakefn.ca**
Julie	Kapryka	Lands Resource Consultation Liaison	Curve Lake First Nation	22 Winookeeda Road		Curve Lake	ON	K0L 1R0	705-657-8045	juliek@curvelake.ca
Kaitlin	Hill	Lands Resource Consultation Liaison	Curve Lake First Nation	22 Winookeeda Road		Curve Lake	ON	K0L 1R0	705-657-8045	kaitlinh@curvelake.ca
Laurie	**Carr**	**Chief**	**Hiawatha First Nation**	**123 Paudash Street**	**R.R. #2**	**Keene**	**ON**	**K0L 2G0**	**705-295-4421**	**chiefcarr@hiawathafn.ca**
Tom	Cowie	Lands Resource Consultation Liaison	Hiawatha First Nation	123 Paudash Street	R.R. #2	Keene	ON	K0L 2G0	705-295-4421	tcowie@hiawathafn.ca
Sean		Community Consultation Worker	Hiawatha First Nation	123 Paudash Street	R.R. #2	Keene	ON	K0L 2G0	705-295-7771	
Kelly	**LaRocca**	**Chief**	**Mississaugas of Scugog Island**	**22521 Island Road**		**Port Perry**	**ON**	**L9L 1B6**	**905-985-3337**	**klarocca@scugogfirstnation.com**
Monica	Sanford	Community Consultation Administrative Assistant	Mississaugas of Scugog Island	22521 Island Road		Port Perry	ON	L9L 1B6	905-985-3337	msanford@scugogfirstnation.com
Dave	Mowat	Community Consultation Specialist	Mississaugas of Scugog Island	22521 Island Road		Port Perry	ON	L9L 1B6	905-985-3337 ext. 263	dmowat@scugogfirstnation.com
R. Stacey	**LaForme**	**Chief**	**Mississaugas of the Credit First Nation**	**2789 Mississauga Road**	**R.R. #6**	**Hagersville**	**ON**	**N0A 1H0**	**905 768 1133 ext. 240**	Stacey.LaForme@mncfn.ca
Fawn	Sault	Consultation Coordinator, Department of Consultation & Accomodation	Mississaugas of the Credit First Nation	4065 Highway 6 North	R.R. #6	Hagersville	ON	N0A 1H0	905-768-4260	Fawn.Sault@mncfn.ca
Megan	DeVries	Archaeological Operations Supervisor, Department of Consultation & Accomodation	Mississaugas of the Credit First Nation	4065 Highway 6 North	R.R. #6	Hagersville	ON	N0A 1H0	905-768-4260	Megan.DeVries@mncfn.ca

From:	Manirul Islam
To:	Esedebe, Hilda
Cc:	Rendon, Ruth; Cholewa, Peter; Addley, Diana; Suzanne Bevan
Subject:	RE: CFN 61893 Bass Pro Mills Ext EA - Field Investigation Schedule
Date:	Monday, February 3, 2020 4:46:23 PM
Attachments:	image002.png image003.png

Good afternoon Hilda.
Please find response on timing of field investigation:

- Fluvial Geomorphology: The proposed timing is fine. Please try to go out for field work where there is no ice cover on the rivers.
- Hydrology: It is likely a desk top exercise, so we don't think the timing matters.
- Environmental Impact Study Components, Tree Inventory: Proposed timing is fine.
- Geotechnical and Hydrogeology: The proposed timing is fine
- Stage 1nd 2 Archaeological Assessment: April is a little ambitious as fieldwork is dependent on ground thaw and drying up following the winter. Archeology season normally starts up about mid-May, so it's doable by the end of May.

Staff is unable to comments on the timing of Cultural Heritage, Contamination Overview Study and Topographical survey.

Should you have any question please contact me.
Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

Toronto and Region Conservation Authority

From: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>
Sent: Monday, January 27, 2020 7:10 PM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: Rendon, Ruth <Ruth.Rendon@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; 'Addley, Diana' <Diana.Addley@stantec.com>; Suzanne Bevan <Suzanne.Bevan@trca.ca>
Subject: CFN 61893 Bass Pro Mills Ext EA - Field Investigation Schedule

Hello Manirul,

Please see below for the Field Investigation Schedule for the Bass Pro Mills Extension EA. Kindly advise if this is acceptable for timing windows of work. Please advise if there are any questions.

Field Investigations

Activity	Approximate Timing
Topographical Survey	April
Contamination Overview Study	March/April
Environmental Impact Study • ELC, flora inventory, SWH • Bird Surveys (grassland SAR, Bobolink, Barn Swallow) • Frog call count surveys • Black Ck tributary hydrology, fish/fish habitat	April – September June – September Late May – early July April – early July May - August
Fluvial Geomorphology	March/April
Tree Inventory	Mid-April
Stage 1 and 2 Archaeological Assessment	April-May
Cultural Heritage	March
Geotechnical Investigation	March
Hydrogeological Investigation	March/April

VAUGHAN Stantec

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

VAUGHAN

Robinson, Jennifer

From: maria.agnew@hydroone.com
Sent: Friday, March 6, 2020 3:26 PM
To: Robinson, Jennifer
Cc: SecondaryLandUse@HydroOne.com
Subject: RE: Notice of Study Commencement - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)
Attachments: 160540006_notice_study_commencement_final_IM-7212-19.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Hello Jennifer,

Thank you for sending the attached notice of study commencement for the construction of multi-modal transportation connections. I have had a cursory look at the study area and can confirm that there are no Hydro One transmission nor distribution corridors within the study area. Hydro One's nearest transmissin corridors are located west of Islington Ave and south of Hwy 407. Therefore, Hydro One would have no comments nor objections to the City's proposal.

Thank you,

Maria Agnew
Real Estate Services Supervisor, Facilities & Real Estate, R32
Hydro One Networks Inc.
Tel: 905.946.6275
Cell: 416.464.2045
Fax: 905.946.6242
Email: maria.agnew@HydroOne.com

From: SCHATZ Richard <rick.schatz@HydroOne.com>
Sent: Friday, March 06, 2020 1:00 PM
To: SECONDARY LAND USE Department <SecondaryLandUse@HydroOne.com>
Cc: AGNEW Maria <maria.agnew@hydroone.com>
Subject: FW: Notice of Study Commencement - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)

FYI

Rick

Robinson, Jennifer

From: Eastern Region Crossing <est.reg.crossing@enbridge.com>
Sent: Friday, March 6, 2020 1:46 PM
To: Robinson, Jennifer
Subject: RE: Notice of Study Commencement - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)

Follow Up Flag: Follow up
Flag Status: Completed

Enbridge Pipelines does not have any assets in the area

Thank you

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: Friday, March 6, 2020 12:24 PM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Cc: Addley, Diana <Diana.Addley@stantec.com>; Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: [External] Notice of Study Commencement - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)

Hello,

Please see the attached Notice of Study Commencement for the **Bass Pro Mills Drive (Highway 400 to Weston Road)** project. As indicated within the attached notice, the City of Vaughan has initiated a Municipal Class Environmental Assessment study for the proposed extension of Bass Pro Mills Drive, between Highway 400 and Weston Road. The purpose of this notice is to inform you of this study and the overall consultation process.

Should you have any questions, please do not hesitate to contact us.

Regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Markham Office

Direct: 905-944-6232
Fax: 905-474-9889
Jennifer.Robinson@stantec.com

Stantec
300W-675 Cochrane Drive
Markham ON L3R 0B8

Robinson, Jennifer

From: Addley, Diana
Sent: Wednesday, March 11, 2020 5:44 PM
To: Robinson, Jennifer
Subject: FW: Hydro One Response: Bass Pro Mills Drive, from Highway 400 to Weston Road
Attachments: 20200311-NoticeOfCommence-Bass Pro Mills Drive, from Highway 400 to Weston Road.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jenn – could you please file this agency response and update the contact list to include this new email address?

Thank you!

Diana Addley
Senior Environmental Planner

Direct: 905 415-6401
Mobile: 647 588-7112
Diana.Addley@stantec.com

Stantec
150 - 1555 Wentworth Street
Whitby ON L1N 9T6

From: SecondaryLandUse@HydroOne.com <SecondaryLandUse@HydroOne.com>
Sent: Wednesday, March 11, 2020 10:54 AM
To: Addley, Diana <Diana.Addley@stantec.com>
Cc: Hilda.Esedebe@vaughan.ca
Subject: Hydro One Response: Bass Pro Mills Drive, from Highway 400 to Weston Road

Please see the attached for Hydro One's Response.

Hydro One Networks Inc
SecondaryLandUse@HydroOne.com

Hydro One Networks Inc
483 Bay St
Toronto, ON

March 11, 2020

Re: Bass Pro Mills Drive, from Highway 400 to Weston Road

Attention:
Diana Addley
Stantec Consulting Ltd.
Senior Environmental Planner

Following our preliminary assessment, we confirm there are no existing Hydro One Transmission assets in the subject area. Please be advised that this is only a preliminary assessment based on current information.

However, if plans for the undertaking change or the study area expands beyond that shown, please contact Hydro One to assess impacts of existing or future planned electricity infrastructure.

Any future communications are sent to Secondarylanduse@hydroone.com.

Sent on behalf of,

Secondary Land Use
Asset Optimization
Strategy & Integrated Planning
Hydro One Networks Inc.

Robinson, Jennifer

From: Robinson, Jennifer
Sent: Wednesday, March 11, 2020 11:41 AM
To: Watt, Heather (MMAH); Harris, Maya (MMAH)
Cc: Aldo.Ingraldi@ontario.ca; Esedebe, Hilda; Addley, Diana; Cholewa, Peter
Subject: RE: Notice of Study Commencement - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)
Attachments: 160540006_notice_study_commencement_final_IM-7212-19.pdf

Much appreciated Aldo!

Heather/Maya, please see the attached Notice of Study Commencement for the **Bass Pro Mills Drive (Highway 400 to Weston Road)** project. As indicated within the attached notice, the City of Vaughan has initiated a Municipal Class Environmental Assessment study for the proposed extension of Bass Pro Mills Drive, between Highway 400 and Weston Road. The purpose of this notice is to inform you of this study and the overall consultation process.

Should you have any questions, please do not hesitate to contact us.

Regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Markham Office

Direct: 905-944-6232
Fax: 905-474-9889
Jennifer.Robinson@stantec.com

Stantec
300W-675 Cochrane Drive
Markham ON L3R 0B8

From: Ingraldi, Aldo (MMAH) <Aldo.Ingraldi@ontario.ca>
Sent: Wednesday, March 11, 2020 11:32 AM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Cc: Watt, Heather (MMAH) <Heather.Watt@ontario.ca>; Harris, Maya (MMAH) <Maya.Harris@ontario.ca>
Subject: Re: Notice of Study Commencement - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)

Hi Jennifer,

Maya Harris and Heather Watt are the Community Planning and Development managers at the Ministry of Municipal Affairs and Housing's Municipal Service Office - Central Region. I have copied them hereto so that you have their respective email addresses.

Thanks.
Aldo

Get Outlook for iOS

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: Friday, March 6, 2020 12:30 PM
To: Ingraldi, Aldo (MMAH)
Cc: Esedebe, Hilda; Addley, Diana; Cholewa, Peter
Subject: Notice of Study Commencement - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)

Hello,

This email was originally addressed to Darryl Lyons, but we noted the automatic reply that he is no longer with the Ontario Public Service and has delegated all emails to you. Please let me know if there is an alternate contact for the Ministry of Municipal Affairs and Housing that this should be sent to.

Please see the attached Notice of Study Commencement for the **Bass Pro Mills Drive (Highway 400 to Weston Road)** project. As indicated within the attached notice, the City of Vaughan has initiated a Municipal Class Environmental Assessment study for the proposed extension of Bass Pro Mills Drive, between Highway 400 and Weston Road. The purpose of this notice is to inform you of this study and the overall consultation process.

Should you have any questions, please do not hesitate to contact us.

Regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Markham Office

Direct: 905-944-6232
Fax: 905-474-9889
Jennifer.Robinson@stantec.com

Stantec
300W-675 Cochrane Drive
Markham ON L3R 0B8

Robinson, Jennifer

From: caroline.rysyk@zayo.com on behalf of Utility Circulations <utility.circulations@zayo.com>
Sent: Thursday, March 19, 2020 3:23 PM
To: Robinson, Jennifer
Subject: Re: Notice of Study Commencement - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Road)

Follow Up Flag: Follow up
Flag Status: Flagged

Good afternoon

Zayo has no existing plant in the area indicated in your submission. No markup and no objection. Thank you.

Utility Circulations

Caroline Rysyk

On Fri, 6 Mar 2020 at 12:44, Robinson, Jennifer <Jennifer.Robinson@stantec.com> wrote:

> Hello,
>
> Please see the attached Notice of Study Commencement for the **Bass Pro Mills Drive (Highway 400 to Weston Road)** project. As indicated within the attached notice, the City of Vaughan has initiated a Municipal Class Environmental Assessment study for the proposed extension of Bass Pro Mills Drive, between Highway 400 and Weston Road. The purpose of this notice is to inform you of this study and the overall consultation process.
>
> Should you have any questions, please do not hesitate to contact us.
>
> Regards,
>
> **Jenn Robinson**
>
> Environmental Planner, Transportation GTA
>
> OSEC, Markham Office
>
> Direct: 905-944-6232
> Fax: 905-474-9889
> Jennifer.Robinson@stantec.com

Robinson, Jennifer

From: Addley, Diana
Sent: Thursday, April 16, 2020 6:26 PM
To: Robinson, Jennifer
Cc: Cholewa, Peter
Subject: FW: CFN 61893 Notice of Commencement (NoC)- Bass Pro Mills Drive Extension EA, Schedule C
Attachments: CFN 61893_ Bass Pro Mills Extension EA_ Notice of Commenecement letter.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jenn – can you please file in the agency correspondence folder.

Thank you,
Diana

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Thursday, April 16, 2020 5:28 PM
To: 'Esedebe, Hilda' <Hilda.Esedebe@vaughan.ca>
Cc: Addley, Diana <Diana.Addley@stantec.com>; Beth Williston <Beth.Williston@trca.ca>; Suzanne Bevan <Suzanne.Bevan@trca.ca>; Jackie Burkart <Jackie.Burkart@trca.ca>; Hubjer, Selma <Selma.Hubjer@vaughan.ca>
Subject: CFN 61893 Notice of Commencement (NoC)- Bass Pro Mills Drive Extension EA, Schedule C

Good afternoon Hilda,
Please find attached the Notice of Commencement (NoC) letter for the Bass Pro Mills Drive Extension EA.

Should you have any question please let me know.

Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

April 16, 2020 CFN 61893

BY E-MAIL ONLY

Ms. Hilda Esedebe, P.Eng., MBA, M.Sc. (hilda.esedebe@vaughan.ca)
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management,
City of Vaughan,
2141 Major Mackenzie Drive,
Ontario, L6A 1T1

Dear Ms. Esedebe:

Re: Notice of Commencement
Bass Pro Mills Drive Extension between Highway 400 and Weston Road
Municipal Class Environmental Assessment – Schedule C
Humber River Watershed; City of Vaughan; Regional Municipality of York

Toronto and Region Conservation Authority (TRCA) staff received digital copy of the Notice of Commencement for the above noted Environmental Assessment on March 19, 2020.

PROJECT OVERVIEW

It is our understanding that this undertaking involves the extension of Bass Pro Mills Drive westerly from Highway 400 to Weston Road. Staff understand that the study will assess service to the Vaughan Mills Center Secondary Plan (VMCSP) area, distribution of east west traffic - alleviating Rutherford Road to the north and the provision of another route connection for York Region Transit (YRT). Staff also understand that the study will follow the Municipal Class Environmental Assessment (MCEA) process, Schedule 'C', Phases 1 to 4.

Please note TRCA staff reviewed the draft Terms of Reference (ToR) for this project and provided comments on September 3, 2019.

TRCA COMMENTING ROLES

As detailed in TRCA's 2014 **The Living City Policies** (LCP), TRCA has a number of commenting roles relative to its review of this environmental assessment, including:

1. Regulatory Authority
2. Delegated Provincial Interests
3. Public Commenting Body
4. Resources Management Agency
5. Service Provider

These are further detailed **in Appendix A: TRCA Commenting Roles**.

TRCA AREAS OF INTEREST

In relation to this application, TRCA staff has identified several areas of interest within the study area related to these various commenting roles, including:

1. TRCA Program and Policy Areas
    A. Natural System Programs and Policies
    B. Sustainability Programs and Policies
2. Provincial Program Areas
3. Federal Program Areas

Further details are provided in **Appendix B: TRCA Areas of Interest**.

In relation to these areas of interest, please be advised that TRCA has select digital data available through an open data platform on the TRCA website that should be used to supplement the existing conditions analysis in the development of the environmental assessment. Upon request, TRCA can provide additional data for areas of interest not available on the web. Please contact the undersigned as needed.

ASSESSMENT OF ALTERNATIVES

In developing, evaluating and selecting alternatives, staff require the LCP policies be considered. TRCA staff recommends the preferred alternative meets the policies of Section 7. In particular, impacts to and opportunities for the following should be addressed:

1. Flooding, erosion or slope instability
2. Existing landforms, features and functions
3. Aquatic and terrestrial habitat and functions, including connectivity
4. TRCA property and heritage resources
5. Environmental best management practices that support climate change mitigation and adaptation
6. Community and public realm benefits

TRCA requires that the preferred alternative considers avoiding, minimizing, mitigating, and compensating impacts to the ecosystem, and avoid, mitigate or remediate hazards, in that order. In order to fulfil requirements of Ontario Regulation 166/06 at the detailed design stage, staff also requires that the preferred alternative meets LCP policies in Section 8.

In order to ensure TRCA concerns are addressed early in the review process, it is recommended that the TRCA planner be contacted when key project milestones are reached, as detailed in **Appendix C: Recommended Contact Points.** Please contact the undersigned TRCA planner to discuss the appropriate time for a site visit, ensure the TRCA planner is included in all Technical Advisory Committee (TAC) meetings.

SUBMISSION REQUIREMENTS

As this project proceeds through the various stages of the environmental assessment process, please ensure the following is provided to TRCA for review and comment at the appropriate time. Please note that prior to submitting the technical reports and materials, as well as appendices related to the draft and final EA documents, it is recommended that the project manager be contacted so that review requirements can be scoped to the TRCA areas of interest.

Paper Copies

1. One copy of draft technical reports and associated materials, including a covering letter that outlines the project purpose and lists the reports enclosed for review.
2. One copy of draft evaluation criteria and matrices, including a summary that details how the criteria and weighting (if applicable) were established.

3. One copy of the draft EA document, including a covering letter that outlines how previous TRCA comments have been addressed.
4. One copy of the Final EA document, including a covering letter that outlines how previous TRCA comments have been addressed.

Digital Submissions

1. All TAC meeting agendas, as well as draft and final meeting minutes.
2. All TRCA technical meeting agendas, as well as draft and final meeting minutes.
3. Draft public information centre presentation boards, prior to public review.
4. Notices of public meetings, including final display material and handouts.
5. Draft technical reports and associated materials, including a covering letter that outlines the project purpose and lists the reports enclosed for review.
6. Draft evaluation criteria and matrices, including a summary that details how the criteria and weighting (if applicable) were established.
7. Draft EA document, including a covering letter that outlines how previous TRCA comments have been addressed.
8. Final EA document, including a covering letter that outlines how previous TRCA comments have been addressed.

Please ensure all materials are submitted in PDF format, with drawings pre-scaled to print on 11”x17” pages. Materials submitted through e-mail must be less than 2.5 MB, and materials submitted through a file transfer protocol (FTP) site must be posted a minimum of two weeks.

Should you have any questions, please contact me at extension 5715 or at mislam@trca.on.ca.

Yours truly,

Manirul Islam
Planner, Infrastructure Planning and Permits
Development and Engineering Services

Encl. Appendix A: TRCA Commenting Roles
Appendix B: TRCA Areas of Interest
Appendix C: Recommended TRCA Contact Points

BY E-MAIL

Cc:
City of Vaughan: Selma Hubjer (Selma.Hubjer@vaughan.ca)
Consultant: Diana Addley, Stantec Consulting Limited (Diana.Addley@stantec.com)
TRCA: Beth Williston, Associate Director, Infrastructure Planning and Permits
Suzanne Bevan, Senior Planner, Infrastructure Planning and Permits
Jackie Burkart, Senior Planner, Development Planning and Permit

APPENDIX A: TRCA COMMENTING ROLES

TRCA COMMENTING ROLES	
Public Commenting Body	
Planning Act	Pursuant to the **Planning Act**, conservation authorities are a "public commenting body", and therefore must be notified of municipal policy documents and planning and development applications under the Planning Act. TRCA comments according to its Board-approved policies as a local resource management agency to the municipality planning approval authority on these documents and applications.
Environmental Assessment Act	Pursuant to the federal and provincial environmental assessment (EA) Acts, conservation authorities are a commenting body. Conservation authorities are also responsible for comments made under environmental assessment (EA) exemption regulations, and the Ontario and National Energy boards. TRCA reviews and comments on environmental assessment that occur within TRCA's jurisdiction under these various forms of legislation.
Delegated Provincial Interests	
Hazard Lands	As outlined in the Conservation Ontario/ Ministry of Natural Resources and Forestry/ Ministry of Municipal Affairs and Housing Memorandum of Understanding on CA Delegated Responsibilities, CAs have been delegated the responsibility of representing the provincial interest on natural hazards encompassed by Section 3.1 of the PPS 2014.
Conservation Authorities Act	
Regulatory Authority	
Ontario Regulation 166/06, Development, Interference with Wetlands and Alterations to Shorelines and Watercourses	In accordance with Ontario Regulation 166/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), a permit is required from the TRCA prior to any development (e.g. construction) if, in the opinion of TRCA, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected. The Regulation Limit defines the greater of the natural hazards associated with Ontario Regulation 166/06 (listed below). NOTE: The Regulation Limit provides a geographical screening tool for determining if Ontario Regulation 166/06 will apply to a given proposal. Through site assessment or other investigation, it may be determined that areas outside of the defined Regulation Limit require permits under Ontario Regulation 166/06. In these instances, it is the text of the regulation that will prevail; modifications to the regulation line may be required. Any development within the Regulation Limit must comply with the applicable sections of The Living City Policies (2014).
Resources Management Agency	
TRCA Programs	In accordance with Section 20 and 21 of the **Conservation Authorities Act**, CAs are local watershed-based natural resource management agencies that develop programs that reflect local resource management needs within their jurisdiction. TRCA has developed programs and policies related to our role as a resource management agency that include, but are not limited to, watershed plans, fisheries management plans, land management plans, ecosystem restoration programs, and **The Living City Policy** (2014), which are approved by the TRCA Board.

	Please confirm that the preferred alternative design for this project addresses TRCA concerns related to its program areas. These will be further defined through the EA review process.
Service Provider	
Service Agreements and Memorandum of Understandings	**Service Level Agreements:** TRCA has service level agreements to provide EA Review services to various partners within specific service delivery timelines. Fees are charged as per agreement stipulations; review fees are not charged for individual files. **Memorandum of Understandings:** The provision of planning advisory services to municipalities is implemented through a Memorandum of Understandings (MOU) with participating municipalities or as part of a CA's approved program activity. In this respect, the CA is essentially acting as a technical advisor to municipalities. The agreements cover the CA's areas of technical expertise such as water management, natural hazards, and natural heritage.
Restoration Opportunities	TRCA requires that the preferred alternative considers avoiding, minimizing, mitigating, and compensating impacts to ecosystems in that order. In areas where impacts are unavoidable, mitigation or compensation will be required. It is recommended that the costs associated with these impacts be factored into decisions made during the EA. TRCA has identified opportunities for habitat restoration and enhancement on TRCA property and some privately-owned lands, targeted to improve natural form and function based on goals in the watershed strategies. Should ecosystem restoration or compensation be required for this project, TRCA may be able to provide both restoration opportunities and restoration field services on a project specific basis. This will be further discussed through the EA review process.
Community and Public Realm Benefits	TRCA understands that purpose of providing project-based community benefits is to provide measurable economic benefits to the local community, and that the purpose of providing public realm benefits is to support local opportunities for social and environmental improvements. As part of the TRCA Strategic Plan, TRCA has identified the need to achieve measurable positive impacts on the health of our watersheds and has developed a number of programs that actively engage with local communities to support a green, local economy. These programs include but are not limited to, Sustainable Neighbourhood Retrofit Action Plans, TRCA Conservation Land Care Program, TRCA Trails Program, TRCA Community Transformation Program and Partners in Project Green. It is recommended that commitment be made to work with TRCA and other partners to develop a Community and Public Realm Benefits Strategy for this project.

APPENDIX B: TRCA AREAS OF INTEREST

TRCA PROGRAM AND POLICY AREAS *Note: Additional program and policy information may be available at www.trca.on.ca, or by request.*	
Natural System Programs and Policies	
Systems Approach	TRCA follows a systems approach in which the natural features and water resources are considered in relation to each other and the broader landscape in which they occur. The systems approach recognizes the role that linkages and connectivity within the natural system has in supporting ecological and hydrologic processes and functions that are vital to maintaining a healthy and robust natural system that is resilient against the impacts of urbanization and climate change. An assessment of the existing systems, together with an evaluation as to how the proposal may impact the systems is required.
Aquatic Systems, Species and Habitat	The aquatic system includes watercourses, wetlands, and flora and fauna species. Aquatic species and habitat should be assessed based on their conservation status according to sensitivity to disturbance and specialized ecological needs, as well as rarity. TRCA has prepared watershed plans or strategies, as well as fisheries management plans for some watersheds. The proposal must prevent negative impacts to the aquatic system, and as such, TRCA requires an assessment of the existing aquatic system, an evaluation as to how the proposal will meet the objectives articulated in the watershed plan or strategy, and/or an evaluation as to how the proposal will meet the objectives of the fisheries management plan.
Terrestrial System, Species and Habitat	The terrestrial system includes landscape features, vegetation communities, and flora and fauna species. Terrestrial species and habitat should be assessed based on their conservation status according to sensitivity to disturbance and specialized ecological needs, as well as rarity. TRCA has identified the need to improve both the quality and quantity of terrestrial habitat. TRCA's **Terrestrial Natural Heritage System Strategy** sets measurable targets for attaining a healthier natural system by creating an expanded and targeted land base. It includes strategic directions for stewardship and securement of the land base, a land use policy framework to help achieve the target system, and other implementation mechanisms. TRCA requires an assessment of the existing terrestrial species and habitat, together with an evaluation as to how the proposal will meet the objectives articulated in the watershed plan or terrestrial natural heritage strategy, as well as prevent negative impacts to the terrestrial system.
Groundwater Systems	
Aquifers and Hydrogeological Features and Functions	Groundwater systems include aquifers and their functional connections to surface water. The extraction and discharge of groundwater has the potential to negatively impact surrounding natural features and their functions. Even small amounts of groundwater extraction may reduce contributions to groundwater dependent features such as wetlands, springs, or fish spawning habitat. In addition, the discharge of groundwater must be controlled to avoid impacts to watercourses and fish habitat from temperature, erosion and sedimentation, as well other water quantity and quality issues.

	TRCA requires geotechnical or hydrogeological investigations to confirm dewatering and discharge requirements, and to identify appropriate mitigation measures with respect to potential impacts to natural features and functions.
Surface Water Systems	
Watercourses	Typically, watercourses are associated with aquatic species, and direct or indirect habitat. Any alteration or interference to a watercourse (e.g., straightening, diverting, realigning, altering baseflow) has the potential to impact fish communities, but may also affect the Regulatory Flood Plain, erosion or other natural channel processes. TRCA requires an environmental study or site confirmation of watercourse locations.
Meander Belt	Channel migration has a significant impact on infrastructure, structures and property located near river systems. Determining channel stability is important to ensure that damage from erosion, down cutting or other natural channel processes is avoided. TRCA requires a meander belt delineation study or fluvial geomorphology analysis to confirm that any development does not conflict with natural channel processes.
Regulatory Flood Plain	The Regulatory Flood Plain is the approved standard used in a particular watershed to define the limit of the flood plain for regulatory purposes. Within TRCA's jurisdiction, the Regulatory Flood Plain is based on the greater of the regional storm, Hurricane Hazel, and the 100-year flood. TRCA's framework for Flood Plain Management is the LCP. TRCA requires a flood study or hydraulic update to confirm that there will be no impacts to the storage or conveyance of flood waters.
Wetlands	Wetlands are sensitive natural habitats that play an important role in numerous physical, chemical and biological processes, including storm water control, natural habitat and water quality improvement. Most wetlands are designated by the Ministry of Natural Resources and Forestry as Provincially Significant or Locally Significant. Other wetlands have also been identified on a site-specific basis by TRCA. All wetlands are regulated under Ontario Regulation 166/06. TRCA requires an environmental study or site confirmation of wetland locations.
Storm Water Management, including Green Infrastructure	Stormwater management is integral to the health of streams, rivers, lakes, fisheries and terrestrial habitats, and source water protection is integral for managing the quality and quantity of drinking water at its source. TRCA requires all development, infrastructure and site alteration meet the criteria in the TRCA 2012 Stormwater Management Criteria document for water quantity, water quality, erosion control, discharge water temperature, and water balance for groundwater recharge and natural features. Green Infrastructure techniques, including Low Impact Development (LID) measures should be used to address issues related to stormwater management, as well as maximize ecosystem services and mitigate the impacts of urbanization and climate change.

	For further information, please refer to https://sustainabletechnologies.ca/home/urban-runoff-green-infrastructure, particularly the 2010 Low Impact Development Stormwater Management Planning and Design Guide.
PROVINCIAL PROGRAM AREAS	
Clean Water Act and Credit Valley - Toronto & Region - Central Lake Ontario (CTC) Source Protection Plan	The Clean Water Act ensures communities protect their drinking water supplies through prevention by developing collaborative, watershed-based source protection plans that are locally driven and based on science. Please be advised that the subject property appears to fall within the WHPA-Q1Q2, vulnerable areas under the Credit Valley - Toronto and Region - Central Lake Ontario Source Protection Plan (CTC SPP). Please confirm that the preferred alternative design for this project conforms with the CTC SPP. Please also consult with the Risk Management Official as copied on this letter. Please note that in accordance with Ontario Regulation 166/06, permits from TRCA may be required for mitigation solutions that are designed to ensure conformity with the CTC SPP.

Please contact the Ministry of Natural Resources and Forestry (MNRF) to confirm if there are program interests related to this project for:

- **Areas of Natural and Scientific Interest** (ANSI)
- **Provincially Significant Wetlands** (PSW)

Please contact the Ministry of Environment, Conservation and Parks (MOECP) to confirm if there are program interests related to this project for:

- **Provincially Endangered Species under the Species at Risk Act** (SARA)

Please be advised that this list is not inclusive, and the onus is on the proponent and it consultants to consult with other provincial agencies, as required, to ensure that requirements of their respective legislation is met.

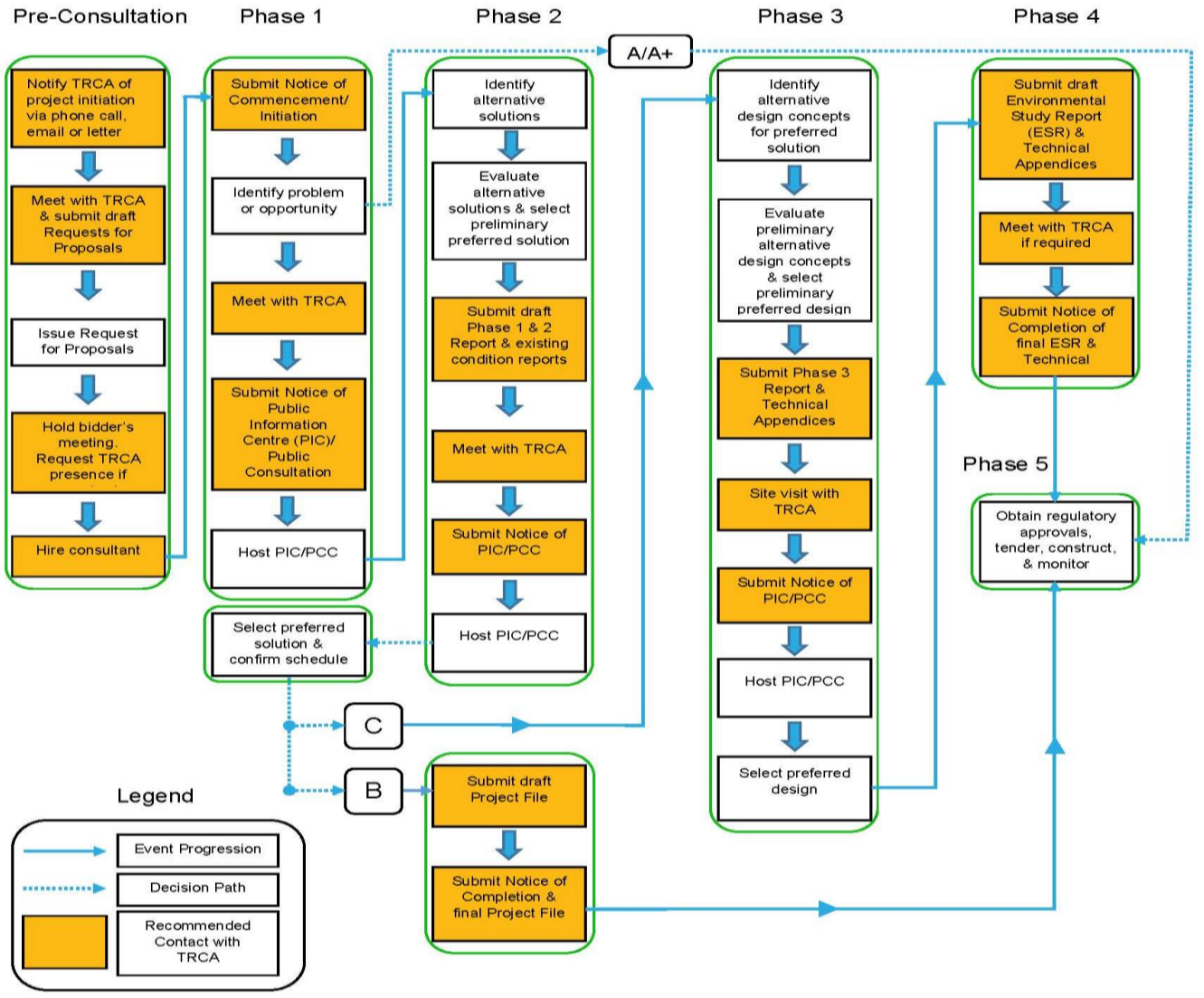
FEDERAL PROGRAM AREAS

Please contact the relevant federal agency to confirm if there are issues related to:

- Asian Long-horned Beetle Regulated Area
- Federally Endangered Species under the **Endangered Species Act** (ESA)
- The **Fisheries Act**

Please be advised that this list is not inclusive and the onus is on the proponent and it consultants to consult with other provincial agencies, as required, to ensure that requirements of their respective legislation is met.

APPENDIX C: RECOMMENDED TRCA CONTACT POINTS IN THE MCEA PROCESS



Robinson, Jennifer

From: Addley, Diana
Sent: Thursday, May 14, 2020 11:38 AM
To: Harvey, Joseph (MHSTCI)
Cc: Barboza, Karla (MHSTCI); Minkin, Dan (MHSTCI); Hilda.Esedebe@vaughan.ca; Robinson, Jennifer; Cholewa, Peter
Subject: RE: Notice of Study Commencement - Extension of Bass Pro Mills Drive
Attachments: mem_heritage_overview_bass_pro_mills_160540006_fnl.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning,

Please find a copy of the Cultural Heritage Overview memorandum prepared as part of this project attached. This supporting documentation will be included in the Environmental Study Report.

Thank you, and please do not hesitate to let me know if you have any comments and/or questions.

Kind regards,

Diana Addley
Senior Environmental Planner

Direct: 905 415-6401
Mobile: 647 588-7112
Diana.Addley@stantec.com

Stantec
150 - 1555 Wentworth Street
Whitby ON L1N 9T6

From: Harvey, Joseph (MHSTCI) <Joseph.Harvey@ontario.ca>
Sent: Thursday, April 2, 2020 3:31 PM
To: Hilda.Esedebe@vaughan.ca
Cc: Barboza, Karla (MHSTCI) <Karla.Barboza@ontario.ca>; Minkin, Dan (MHSTCI) <Dan.Minkin@ontario.ca>; Addley, Diana <Diana.Addley@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: Notice of Study Commencement - Extension of Bass Pro Mills Drive

Hilda Esedebe,

Please find attached, a letter acknowledging the receipt of your notice of commencement. Contact the undersigned with any further questions or concerns.

Joseph Harvey
On behalf of

Dan Minkin
Heritage Planner
Heritage Planning Unit
Dan.Minkin@ontario.ca

Ministry of Heritage, Sport, Tourism, and Culture Industries

Programs and Services Branch
401 Bay Street, Suite 1700
Toronto, ON M7A 0A7
Tel: 416.314.7147

Ministère des Industries du Patrimoine, du Sport, du Tourisme et de la Culture

Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto, ON M7A 0A7
Tél: 416.314.7147

Ontario

April 2nd, 2020 EMAIL ONLY

Hilda Esedebe, P. Eng.
Project Manager
City of Vaughn
Vaughan, ON L6A 1T1
Hilda.Esedebe@vaughan.ca

MHSTCI File	**:**	**0012050**
Proponent	**:**	**The City of Vaughan**
Subject	**:**	**Notice of Study Commencement – Municipal Class EA**
Project	**:**	**Extension of Bass Pro Mills Drive**
Location	**:**	**City of Vaughan**

Dear Hilda Esedebe:

Thank you for providing the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) with the Notice of Study Commencement for the above-referenced project. MHSTCI's interest in this Environmental Assessment (EA) project relates to its mandate of conserving Ontario's cultural heritage, which includes:

- Archaeological resources, including land and marine;
- Built heritage resources, including bridges and monuments; and,
- Cultural heritage landscapes.

Under the EA process, the proponent is required to determine a project's potential impact on cultural heritage resources.

Project Summary
The City of Vaughan (City) has initiated a Municipal Class Environmental Assessment (Class EA) study to assess the need to extend Bass Pro Mills Drive, from Highway 400 to Weston Road, as recommended in the Vaughan Mills Centre Secondary Plan (2014). The study will be completed in accordance with the planning and design process for Schedule 'C' projects, as outlined in the Municipal Engineers Association (MEA) Municipal Class EA guidelines (October 2000, amended 2007, 2011 and 2015), which is approved under the Ontario Environmental Assessment Act.

Identifying Cultural Heritage Resources
While some cultural heritage resources may have already been formally identified, others may be identified through screening and evaluation. Indigenous communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Indigenous communities includes a discussion about known or potential cultural heritage resources that are of value to these communities. Municipal Heritage Committees, historical societies and other local heritage organizations may also have knowledge that contributes to the identification of cultural heritage resources.

Archaeological Resources
The *Criteria for Evaluating Archaeological Potential* is normally used to determine if an archaeological assessment is needed. In this case we understand that you have retained an archaeologist licenced under the *OHA*, who will complete the necessary archaeological assessment work and will be responsible for submitting the reports directly to MHSTCI for review.

Built Heritage and Cultural Heritage Landscapes
The MHSTCI *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* should be completed to help determine whether this EA project may impact cultural heritage resources. If potential or known heritage resources exist, MHSTCI recommends that a Heritage Impact Assessment (HIA), prepared by a qualified consultant, should be completed to assess potential project impacts. Our Ministry's *Info Sheet #5: Heritage Impact Assessments and Conservation Plans* outlines the scope of HIAs. Please send the HIA to MHSTCI for review, and make it available to local organizations or individuals who have expressed interest in review.

Environmental Assessment Reporting
All technical cultural heritage studies and their recommendations are to be addressed and incorporated into EA projects. Please advise MHSTCI whether any technical cultural heritage studies will be completed for this EA project, and provide them to MHSTCI before issuing a Notice of Completion or commencing any work on the site. If screening has identified no known or potential cultural heritage resources, or no impacts to these resources, please include the completed checklists and supporting documentation in the EA report or file.

Thank you for consulting MHSTCI on this project and please continue to do so throughout the EA process. If you have any questions or require clarification, do not hesitate to contact me.

Sincerely,

Joseph Harvey
On behalf of

Dan Minkin
Heritage Planner
Heritage Planning Unit
Dan.Minkin@ontario.ca

Copied to: Diana Addley, Senior Environmental Planner, Stantec Consulting Ltd
Jenn Robinson, Environmental Planner, Stantec

Robinson, Jennifer

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Monday, December 14, 2020 4:44 PM
To: Addley, Diana
Cc: Esedebe, Hilda; Cholewa, Peter; Robinson, Jennifer; Alison MacLennan
Subject: RE: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan_Revised work plan

Follow Up Flag: Follow up
Flag Status: Flagged

HI Diana:
Good afternoon. Please find TRCA's opinion regarding the revised work plan:

Ecological work plan: The revised proposal seems acceptable. The only caveat staff would add is that because you can't do the field survey components of the Headwater Drainage Features, a conservative approach should be taken when recommending management strategies. The precautionary principle should apply.

The naturalization of the required buffers for the existing Natural Features will be required – this would include planting plan, maintenance schedule and monitoring plan.

Regarding fluvial geomorphology component – in this situation TRCA staff would be relied on professional judgment of the consultant's Water Resources Engineer (WRE). Under the circumstances of restricted access to the study sites consultant's WRE should have high comfort level, and should have suffice accurate information to justify their study. There may have ways to do that such as using similar reach in nearby areas, extrapolating data, etc. But we leave that up to the consultant's WRE and again, the precautionary principle should apply.

Should you have any question please contact me.

Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Addley, Diana <Diana.Addley@stantec.com>
Sent: Thursday, December 10, 2020 8:05 AM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: RE: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan

Good morning Manirul,

I just wanted to quickly follow up on our telephone call and message below/revised work plan to see if you and your team have had an opportunity to review and/or have any comments, questions or concerns.

Please do not hesitate to contact me if you would like to discuss anything further.

Kind regards,

Diana Addley
Senior Environmental Planner

Direct: 905 415-6401
Direct: 647 588-7112
Diana.Addley@stantec.com

From: Addley, Diana
Sent: Friday, November 13, 2020 12:53 PM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: RE: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan

Hi Manirul,

Please find the revised ecological work plan for this study attached. As discussed, the work plan has been revised as access to private property has not been granted, and therefore the detailed surveys are proposed to be undertaken from publicly accessible areas surrounding the study area. With the exception of the bat and reptile surveys, all other surveys continue to be included within the work plan.

In addition, a fluvial geomorphological assessment is proposed as part of the study process to address the potential new crossing of the tributary to Black Creek. However, as site access is not available at this time, the field component of the assessment is also proposed to be completed from publicly accessible areas.

Could you kindly let us know if TRCA has any concerns with the attached revised ecological work plan and/or the amended approach to completing the fluvial geomorphological assessment as part of this study?

Thank you, and please do not hesitate to let us know if you have any questions or comments, and/or would like to schedule a call to discuss in more detail.

Kind regards,

Diana Addley
Senior Environmental Planner

Direct: 905 415-6401
Mobile: 647 588-7112
Diana.Addley@stantec.com

Stantec Consulting Ltd.
200-835 Paramount Drive, Stoney Creek ON L8J 0B4

November 12, 2020
File: 160540006
IM-7212-10
CFN 61893

Attention: Manirul Islam
Toronto Region Conservation Authority
101 Exchange Avenue
Vaughan, ON L4K 5R6
Manirul.Islam@trca.ca

Dear Manirul Islam,

Reference: Revised Terms of Reference for Bass Pro Mills Drive Extension (Between Highway 400 and Weston Road) Schedule 'C' Municipal Class Environmental Assessment

Stantec Consulting Ltd. (Stantec) was retained by the City of Vaughan to complete a Schedule 'C' Municipal Class Environmental Assessment (EA) to assess the need to extend Bass Pro Mills Drive, from Highway 400 to Weston Road (i.e., Study Area). A copy of the Study Area Location Plan (Figure 1) is provided in Attachment 1. Our work will document the existing ecological (terrestrial and aquatic) features, assess the potential impacts to the natural environment, and identify appropriate measures to avoid or mitigate impacts where possible.

An initial Terms of Reference (ToR) was submitted to Toronto Region Conservation Authority (TRCA) in February of 2020 based on the assumption that property access would be granted. Permission to enter private properties within and/or adjacent to the study has not been provided, and as such the approach to assessing the property site conditions needs to be revised accordingly. The purpose of this revised ToR is to outline our proposed approach to complete the natural heritage assessment and support the completion of the Municipal Class EA and preliminary design for the proposed extension of Bass Pro Mills Drive without access to private properties. Our work plan (Table 2) was prepared in consideration of the TRCA *Environmental Impact Statement (EIS) Guidelines (2014),* the *City of Vaughan Draft Environmental Management Guideline (2013),* and the restrictions concerning direct property access. The scope is based on the general open nature (predominantly meadow) of the Study Area and absence of major natural heritage features determined from results of the background review, aerial photograph interpretation, desktop Ecological Land Classification and Species at Risk Habitat Assessment. The Study Area is approximately 700 m in length and 420 m wide and its setting allows for observations and several surveys to be conducted from roadside locations.

BACKGROUND REVIEW

Stantec reviewed the following background information on natural heritage features and potential species at risk (SAR) and species of conservation concern (SOCC) that overlap with the Study Area:

- The Ministry of Natural Resources and Forestry (MNRF) Natural Heritage Information Centre (NHIC) Biodiversity Explorer database (MNRF 2020a)
- MNRF Land Information Ontario (LIO) database (MNRF 2020b)
- Species at Risk in Ontario (SARO) List (MNRF 2020c)
- Atlas of the Mammals of Ontario (Dobbyn 1994)
- Atlas of the Breeding Birds of Ontario (Cadman et al. 2007)
- eBird Canada (eBird 2020)
- Ontario Reptile and Amphibian Atlas (Ontario Nature 2019)
- Department of Fisheries and Oceans (DFO) Aquatic SAR Mapping (DFO 2020)
- Vaughan Official Plan Schedule 2 (City of Vaughan 2010)
- TRCA regulated area and meander belt mapping
- Humber River Watershed Plan (TRCA, 2008)
- Agency information requests will be solicited from the TRCA, MNRF and MECP

VEGETATION COMMUNITY ASSESSMENT

A desktop vegetation community assessment was conducted for the Study Area according to the Ecological Land Classification system for southern Ontario (Lee et al. 1998) and where appropriate, the updated ELC Catalogue (2008). Vegetation communities were delineated using aerial photographs, site photos, and roadside observations. All of the vegetation communities appear to be common in Ontario based on the rankings assigned by the NHIC (MNRF 2019d). The ELC mapping (Figure 2) is included as Attachment 2.

The lands in the Study Area are dominated by culturally influenced ME meadow communities, much of which appears to be comprised of former agricultural lands. Meadow within the Highway 400 right of way appears to be regularly mowed. Meadow areas adjacent to the MASM1-12 wetland and CVC_2 community appear to be more naturalized. A MASM1-12 shallow marsh community occurs in the center of the Study Area with a narrow connection to an adjacent MASM1-12 community immediately straddling the southern Study Area boundary. Observations from accessible vantage points show these features to be dominated by highly invasive Phragmites (common reed). The marsh contained entirely within the Study Area appears to contribute water to the Black Creek Tributary, and the adjacent marsh to the south appears to contain standing water that may also contribute water to Black Creek. There is also a MASM1-12 shallow marsh community established in the Highway 400 right of way at the southern edge of the Study Area. The remainder of the Study Area consisted of constructed areas and a stormwater management pond associated with Highway 400.

HABITAT ASSESSMENT FOR SPECIES AT RISK SPECIES OF CONSERVATION CONCERN

A review of the wildlife atlas records and ELC, identified the following SAR and SOCC that may be present in the Study Area:

Reference: **Revised Terms of Reference for Bass Pro Mills Drive Extension (Between Highway 400 and Weston Road) Schedule 'C' Municipal Class Environmental Assessment**

Table 1: Habitat assessment of SAR and SOCC in the Study Area

Type	Common Name	Latin Name	Provincial S-rank	SARO	SARA Schedule 1
Species at Risk	Barn Swallow	*Hirundo rustica*	S4B	THR	THR
	Bobolink	*Dolichonyx oryzivorus*	S4B	THR	THR
	Eastern Meadowlark	*Sturnella magna*	S4B	THR	THR
	Butternut	*Juglans cinerea*	S3?	END	END
	Eastern Small-footed Myotis	*Myotis leibii*	S2S3	END	Not Listed
	Little Brown Myotis	*Myotis lucifugus*	S4	END	END
	Northern Myotis	*Myotis septentrionalis*	S3?	END	END
	Tri-coloured Bat	*Perimyotis subflavus*	S3?	END	END
Species of Conservation Concern	Western Chorus Frog	*Pseudacris triseriata*	S3	NAR	THR
	Common Nighthawk	*Chordeiles minor*	S4B	SC	THR
	Grasshopper Sparrow	*Ammodramus savannarum*	S4B	SC	SC
	Monarch	*Danaus plexippus*	S4B, S2N	SC	SC
	Eastern Milksnake	*Lampropeltis triangulum*	S3	NAR	SC
	Snapping Turtle	*Chelydra serpentina*	S3	SC	SC

DESIGNATED NATURAL HERITAGE FEATURES

Black Creek is identified on the west side of the Study Area and includes a short tributary that appears to start within the Study Area. Both watercourses are identified as having a warm thermal regime. Black Creek appears to start approximately 600 m to the north of the Study Area and flows south, eventually connecting to the Humber River approximately 6 km from Lake Ontario. Black Creek and its associated tributary are regulated features on TRCA Regulated Areas Mapping (TRCA 2020).

SEASONAL SURVEYS

Based on a review of the original work plan, surveys have been modified to be completed from roadside ROWs. Given the open nature of the habitat and the relatively small size of the Study Area, most of the terrestrial surveys can be completed from the roadside. However, we are unable to complete the headwater drainage feature assessment, full bat roost tree assessment or reptile surveys. Our modified work plan is described below in Table 2.

Table 2: Proposed Seasonal Surveys and Schedule

Seasonal Survey	Timing
• **Vegetation surveys/wildlife habitat assessment (1 visit)** – Desktop ELC will be confirmed and a Significant Wildlife Habitat (SWH), species at risk and other species of conservation concern habitat assessments will be conducted. Wetland will be assessed from the roadside.	June 2021
• **Amphibian call surveys (3 visits) –** nocturnal call surveys conducted using the Marsh Monitoring Program Participant's Handbook (Bird Studies Canada, revised 2008) as a guide. Surveys will be conducted from safe, roadside locations. Surveys are conducted in the evening, involving 2 five-minute call counts, surveys to be timed during lowest possible traffic volume.	April - June 2021
• **Breeding bird surveys (2 visits)** – point counts and area searches will be conducted from roadside locations using the Ontario Breeding Bird Atlas: Guide for Participants (Birds Ontario, 2001) as a guide. The first survey will occur between May 24 and June 15 and the second between June 16 and July 10, allowing a minimum of 10 days between the 2 surveys.	July 2021

HEADWATER DRAINAGE ASSESSEMENT

Desktop components of the headwater drainage assessment protocols will be completed using the 2014 Evaluation, Classification and Management of Headwater Drainage Features Guidelines. The field survey components will not be completed due to restricted property access. Any headwater drainage features will be conditionally classified based on the available information derived from the desktop study. When access to the property is granted Stantec can complete the field surveys for the headwater studies during the appropriate season (April-July) for an additional fee.

BAT HABITAT ASSESSMENTS

A full bat habitat assessment cannot be completed, however, due to good visibility of the site from roadside locations, observations will be able to identify areas of candidate suitable habitat (i.e. areas with mature trees).

DATA ANALYSIS/ EVALUATION OF SIGNIFICANCE

Significant natural heritage features will be identified using the Provincial Policy Statement, City of Vaughan Official Plan and city-wide natural heritage study, and relevant guidance documents, including Significant Wildlife Habitat Technical Guide (MNR 2000), Eco-Region Criteria (MNR 2015) the Natural Heritage Reference Manual (MNR 2010), and the TRCA's Terrestrial Natural Heritage System. Because a full wetland evaluation will not be possible, a conservative approach will be taken when recommending mitigation and buffers.

Reference: **Revised Terms of Reference for Bass Pro Mills Drive Extension (Between Highway 400 and Weston Road) Schedule 'C' Municipal Class Environmental Assessment**

REPORTING

A Limited Environmental Impact Study report will be prepared consistent with components of the Vaughan Draft Environmental Management Guideline (June 2013) and TRCA's *Environmental Impact Statement (EIS) Guideline* (2014). The EIS will include a summary of the background review, site description, ecological features and functions, evaluation of ecological impacts, recommendations for mitigation and identification of environmental permitting and approvals. We are aware that Black Creek will be realigned and naturalized in the future. Options for the realignment and naturalization will be take into consideration during the preparation of the EIS. Draft reports will be provided as paperless, electronic submission.

ASSUMPTIONS

An edge management plan is not included in this scope. If an Edge Management Plan is needed then Stantec can prepare a cost for this item. An assessment and identification of local, regional and national trail systems is beyond the scope of this work. Stantec will be submitting a formal request to the TRCA for additional area information that can be used to inform the EIS data, refine features characterization, and assess potential impacts.

We would appreciate confirmation that our proposed scope is appropriate for this assignment.

If you require any additional information regarding this project or have any questions, please contact the undersigned.

Sincerely,

Stantec Consulting Ltd.

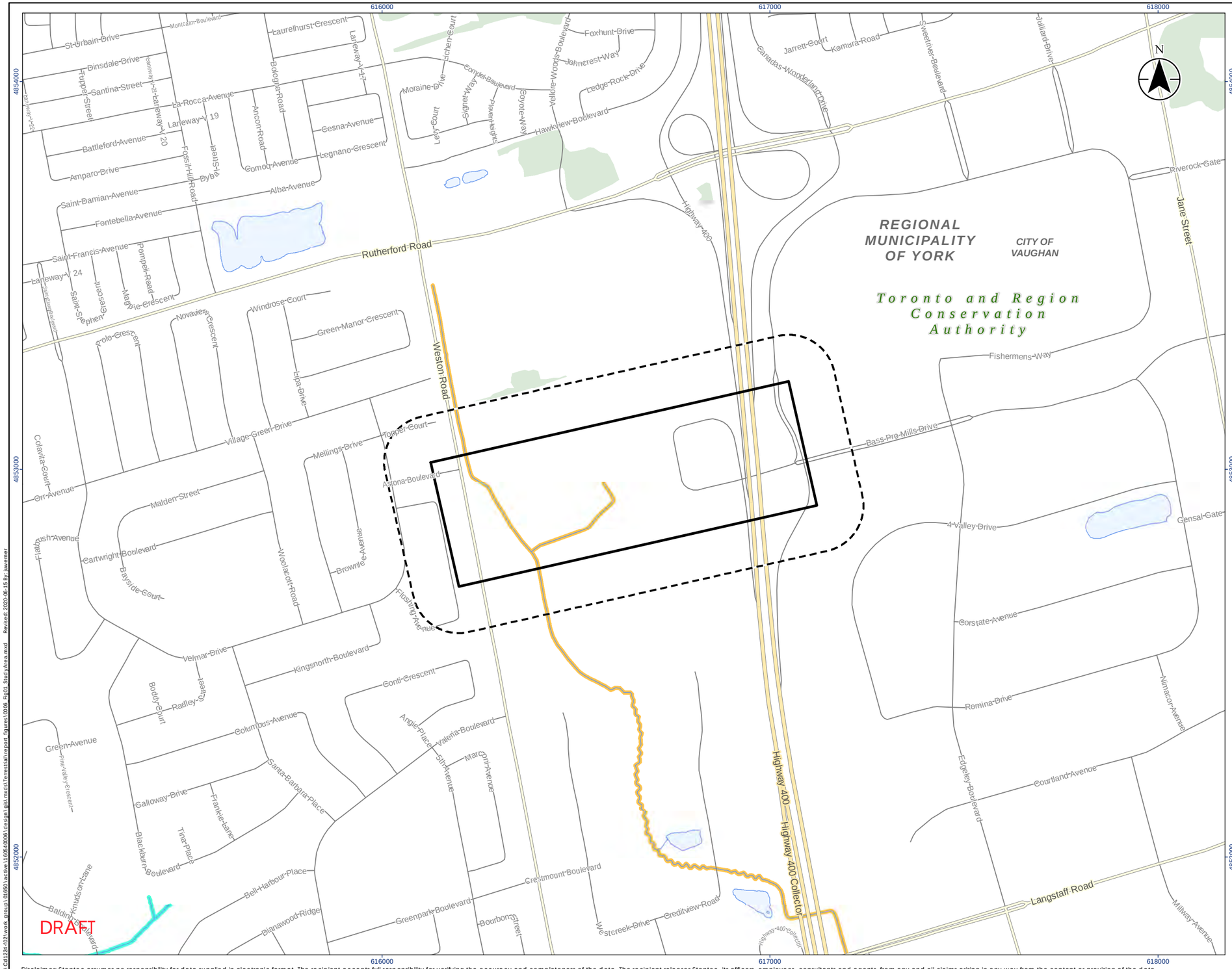
Debbie Giesbrecht M.Sc.
Senior Ecologist
Phone: 905-381-3214
Debbie.Giesbrecht@stantec.com

Attachments: Attachment 1 - Figure 1 – Site Investigation Area
Attachment 2 - Figure 2 – Ecological Land Classification Desktop Assessment

c. Hilda Esedebe, City of Vaughan
Diana Addley, Stantec Consulting Ltd.
Peter Cholewa, Stantec Consulting Ltd.

ATTACHMENT 1:

Figure 1 – Site Investigation Area



Stantec

Legend

- Study Area
- Subject Property
- Thermal Regime, Cool
- Thermal Regime, Warm
- Highway
- Major Road
- Minor Road
- Watercourse (Permanent)
- Conservation Area Administrative Boundary
- Waterbody
- Wooded Area

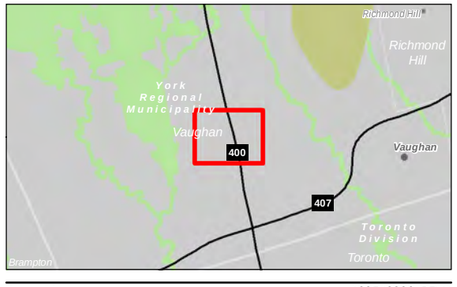
0 200 400 Meters

1:10,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2019.

- Oak Ridges Moraine
- Greenbelt Natural Heritage System



Project Location
City of Vaughan

160540006 REV4
Prepared by JW on 2020-06-15

Client/Project
CITY OF VAUGHAN
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT STUDY

Figure No.
1

DRAFT

Title
Environmental Features

ATTACHMENT 2:

Figure 2 – Ecological Land Classification Desktop Assessment

616000 617000

Rutherford Road

Weston Road

Highway 400

Black Creek

ME CVC_1 CVI_1 ME CVC_1 CVC_2 ME SA ME ME CVC_1 CVR_3 MASM1-12 CVC_2 MASM1-12 CVI_1

N

4853000 4853000

DRAFT

616000 617000

Stantec

Legend

- Watercourse (Permanent)
- Subject Property
- Study Area
- ELC

ELC Code

CVC_1 - Business Sector
CVC_2 - Light Industry
CVI_1 - Transportation
CVR_3 - Single Family Residential
MASM1-12 - Common Reed Mineral Shallow Marsh Type
ME - Meadow
SA - Shallow Water

0 100 200 Meters

1:5,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2019.
3. Orthoimagery obtained from the ©First Base Solutions; Imagery date York Region 2018.

Project Location
City of Vaughan

160540006 REV1
Prepared by JW on 2020-06-15

Client/Project
CITY OF VAUGHAN
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT STUDY
BASS PRO MILLS DRIVE FROM HWY 400 TO WESTON

Figure No.
2

DRAFT

Title
Ecological Land Classification Desktop Assessment

Robinson, Jennifer

From: phil.arbeau@zayo.com on behalf of Utility Circulations <utility.circulations@zayo.com>
Sent: Thursday, December 17, 2020 7:22 PM
To: Robinson, Jennifer
Subject: Re: Notice of Online PIC 1 - MCEA Class EA, Bass Pro Mills Drive (Highway 400 to Weston Rd)

Follow Up Flag: Follow up
Flag Status: Flagged

Good afternoon,

Zayo has no existing plant in the area indicated in your submission. No markup and no objection. Thank you.

Phil Arbeau
Utility Circulations

On Thu, 26 Nov 2020 at 15:00, Robinson, Jennifer <Jennifer.Robinson@stantec.com> wrote:

> Hello,
>
> Please see the attached Notice of Online Public Information Centre (PIC) 1 for the **Bass Pro Mills Drive (Highway 400 to Weston Road)** project. As indicated within the attached notice the City of Vaughan is undertaking a Municipal Class Environmental Assessment Study for the proposed extension of Bass Pro Mills Drive, between Highway 400 and Weston Road. The purpose of this notice is to inform of the Online Public Information Centre that has been arranged to present and solicit feedback on the study background, evaluation of alternatives solutions and associated criteria, the recommended solution and the next steps in the study process. As part of the online PIC, a recorded presentation and online survey will be available for your review on the project website (**Vaughan.ca/BassProMillsEA**) from **December 3, 2020 to January 8, 2021**.
>
> Should you have any questions or concerns, please do not hesitate to contact us.
>
> Regards,
>
> **Jenn Robinson**
>
> Environmental Planner, Transportation GTA
>
> OSEC, Markham Office
>
> Jennifer.Robinson@stantec.com
>
> Stantec
> 300W-675 Cochrane Drive
> Markham ON L3R 0B8

Robinson, Jennifer

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Monday, January 18, 2021 11:42 AM
To: Addley, Diana
Cc: Esedebe, Hilda; Cholewa, Peter; Robinson, Jennifer
Subject: FW: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan_Revised work plan

Follow Up Flag: Follow up
Flag Status: Flagged

HI Diana:
Please find response from our Water Resources Engineer re your inquiry on meander belt studies .
Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Alison MacLennan <Alison.MacLennan@trca.ca>
Sent: Monday, January 18, 2021 9:23 AM
To: Manirul Islam <Manirul.Islam@trca.ca>
Subject: RE: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan_Revised work plan

Hi Mani,
I am not aware of any meander belt studies for this area.
Thanks,
Aliso

Alison MacLennan, P.Eng
Senior Engineer, Water Resources
Engineering Services | Development and Engineering Services

T: (416) 661-6600 ext. 5290
E: alison.maclennan@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Friday, January 15, 2021 6:20 PM
To: Alison MacLennan <Alison.MacLennan@trca.ca>
Subject: FW: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan_Revised work plan

Hi Alison:
Please find consultant request below.
Are you aware of any meander belt assessment study for watercourse near Bass Pro Mills and Highway 400, Vaughan.
Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Addley, Diana <Diana.Addley@stantec.com>
Sent: Friday, January 08, 2021 3:06 PM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Alison MacLennan <Alison.MacLennan@trca.ca>
Subject: RE: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan_Revised work plan

Good afternoon Manirul, and thank you for taking the time to review and comment on the revised EIS work plan.

Could you please advise if a Meander Belt Assessment was completed for the area downstream of the Bass Pro Mills MCEA study area, and if so would a copy of this report be available for Stantec's review?

Thank you,

Diana Addley
Senior Environmental Planner
Direct: 905 415-6401
Diana.Addley@stantec.com

Robinson, Jennifer

From: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>
Sent: Thursday, January 21, 2021 2:43 PM
To: 'Rosario Sacco'
Cc: Robinson, Jennifer; Cholewa, Peter; Manirul Islam; Alison.MacLennan@trca.ca; Khademi, Dana; Velasquez, Diego; Addley, Diana; Yousaf, Saad; 'Sam Speranza'; JSgro@zzengroup.com
Subject: RE: [External] RE: CFN 61893 Bass Pro Mills Municipal Class EA - Black Creek
Attachments: UEL Amendment to Supplementary SWM Report dated July 18,2008.PDF; 99050-MESP-SWM PLAN-Figure 2.pdf; TRCA Approval Letters- October 16,2008 etc.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Rosario,

Thank you very much for this information. Yes, this is being requested for the Bass Pro Mills Extension Municipal Class Environmental Assessment Study. For more information, you may visit the study website at www.vaughan.ca/basspromillsea. All potentially affected landowners and their representatives are already part of the study contact list and Stakeholders Group. You can be added to the study contact list as well.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Rosario Sacco <rosario@urbanecosystems.com>
Sent: Thursday, January 21, 2021 1:34 PM
To: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>
Cc: Jennifer.Robinson@stantec.com; Peter.Cholewa@stantec.com; Manirul.Islam@trca.ca; Alison.MacLennan@trca.ca; Khademi, Dana <Dana.Khademi@vaughan.ca>; Velasquez, Diego <Diego.Velasquez@vaughan.ca>; JSgro@zzengroup.com; 'Sam Speranza' <SSperanza@zzengroup.com>
Subject: [External] RE: CFN 61893 Bass Pro Mills Municipal Class EA - Black Creek

Hilda,

Please confirm that the primary purpose of the EA (ie. the extension of Bass Pro Mills Road ???), as this firm represents a number of clients in this area and therefore it is imperative that our client's representatives and this firm be included in the EA process.

With respect to meander studies of the Black Creek in the Weston/400 North Development Block, as the City and TRCA are aware, an MESP and SWM plan was previously submitted for this area and approved by the City and TRCA.

The approved SWM Plan included the re-alignment of the Black Creek drainage course and relocation of the flood plain to a mid block location as identified on Figure2 - SWM Plan, copy attached for your information and file.

Attached please find a copy of Amendment to Supplementary Stormwater Management Report for the Weston/400 North Development Area prepared by this firm dated revised July 15, 2008 and a copy of TRCA approval letters dated October 16, 2008, September 29, 2005,August25, 2005 and February 25, 2000, for your information and file.

The approved SWM Plan included four off-line Quality Control SWM Ponds and an on-line Quantity Control SWM Channel, providing a realigned Black Creek drainage feature based on a natural channel design, a relocated Regional Floodplain contained with the Channel Cross-section and an on-line two chamber Quantity Control SWM Facility contained with the Channel Cross-section to control post development flows to allow development of the entire Weston/400 North Development Block to proceed.

Although the southerly lands are currently development, including channel construction, the balance of the lands were held up due lack of cooperation from the non-participating landowners.
This situation has now changed and we anticipate that the landowners will be proceeding in the near future to develop their lands and complete the channel construction for the entire development block.

We trust the above background information is sufficient for your present needs.

Regards,

Rosario Sacco, P.Eng

UEL urban ecosystems
7050 Weston Road, Suite 705
Woodbridge, ON, L4L 8G7
Tel (905) 856-0629
Fax (905) 856-0698
Mobile (416) 930-3284

From: Esedebe, Hilda [mailto:Hilda.Esedebe@vaughan.ca]
Sent: January-20-21 8:56 PM
To: 'Rosario Sacco' <rosario@urbanecosystems.com>
Subject: RE: CFN 61893 Bass Pro Mills Municipal Class EA - Black Creek

Hello Rosario,

Saad thought I should check with you to see if you have the report requested in the email below regarding the Black Creek meander belt studies in the vicinity of the Bass Pro Mills area.

Could you kindly advise?

Many thanks,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Yousaf, Saad <Saad.Yousaf@vaughan.ca>
Sent: Wednesday, January 20, 2021 3:12 PM
To: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Velasquez, Diego <Diego.Velasquez@vaughan.ca>
Cc: Khademi, Dana <Dana.Khademi@vaughan.ca>; 'Rosario Sacco' <rosario@urbanecosystems.com>
Subject: RE: CFN 61893 Bass Pro Mills Municipal Class EA - Black Creek

You may ask Rosario Sacco of UEL as may have a digital copy of the report. I have copied him on this email.

Regards,
Saad

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: Monday, January 18, 2021 2:34 PM
To: Manirul Islam <manirul.islam@trca.ca>; Alison MacLennan <Alison.MacLennan@trca.ca>
Cc: Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>
Subject: [External] RE: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan_Revised work plan

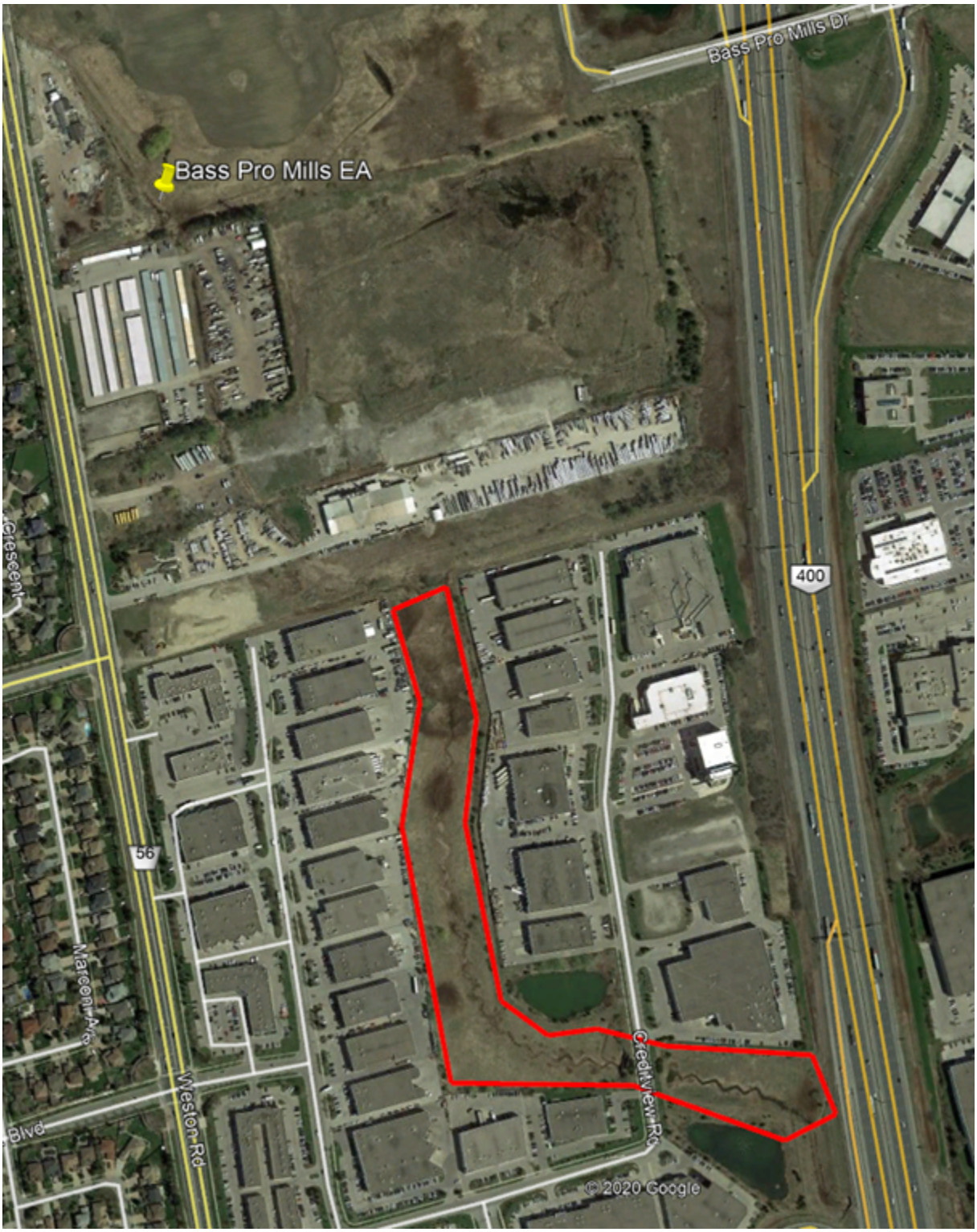
Good Afternoon Manirul/Alison,

Thank you for your quick response in regard to the potential of a Meander Belt Assessment within the vicinity of the Bass Pro Mills EA study area.

Apologies, but we just wanted to further clarify that the downstream area we were referring to is the large section of realigned creek near Creditview Road, highlighted in red below. This realignment would likely have be in relation to the development of Creditview Road, the construction of which is estimated to have been completed in 2000/2001.

Could you please confirm that there was no Meander Belt Assessment for this area?

Thank you!



Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Markham Office
Jennifer.Robinson@stantec.com
Stantec
300W-675 Cochrane Drive
Markham ON L3R 0B8

Robinson, Jennifer

From: Mota, Steve <Steve.Mota@york.ca>
Sent: Friday, March 26, 2021 9:23 AM
To: Esedebe, Hilda
Cc: Cholewa, Peter; Addley, Diana; Robinson, Jennifer
Subject: Bass Pro Mills Dr EA - PIC 1 Comments - Pine Valley Drive

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Hilda,
We are starting an update to the Region's 2016 Transportation Master Plan which may be of interest to stakeholders. The project website will be up and running shortly.
Regards.

Steve Mota, P.Eng. | Program Manager – Transportation Planning
Transportation & Infrastructure Planning Branch | Transportation Services
---
The Regional Municipality of York| 17250 Yonge Street | Newmarket, ON L3Y 6Z1
O: 905-830-4444 ext. 75056 | Steve.Mota@york.ca | www.york.ca

---

From: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>
Sent: Thursday, March 25, 2021 7:04 PM
To: Mota, Steve <Steve.Mota@york.ca>
Cc: Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; 'Robinson, Jennifer' <Jennifer.Robinson@stantec.com>
Subject: Bass Pro Mills Dr EA - PIC 1 Comments - Pine Valley Drive

Hi Steve,

I hope this email finds you well. As you may have been aware, we held the first Online PIC for the Bass Pro Mills Extension Environmental Assessment (EA) between December 3, 2020 and January 8, 2021. I thought to bring to your attention comments from the public that were received regarding Regional Roads in the area. There were a number of comments regarding congestion on Weston Road and Rutherford Road (especially as our study is reviewing extending Bass Pro Mills Drive to Weston Road) and we did our best to advise of the Regions plans in the area and ongoing projects. Although this is beyond the scope of our study, I was curious to know if the Region plans to revisit connecting the Pine Valley corridor as noted in the 2016 YTMP (see capture below). Members of the public felt that having this connection would help alleviate congestion on Weston Road by providing another north-south connection in the area. Your thoughts on this would be appreciated.

Pine Valley Drive. The missing link of Pine Valley Drive between Langstaff and Rutherford Road creates challenges for network connectivity in the western part of Vaughan. This missing link has been the subject of study since before the 2009 TMP.

In February 2006 the Ministry of the Environment and Climate Change approved the EA Terms of Reference for the Pine Valley Drive Corridor, including a condition stipulating that any alternative through the Boyd Conservation Area could not be considered in the EA. Based on the approved EA Terms of Reference for the Pine Valley Drive Transportation Corridor, the Western Vaughan Individual Environmental Assessment (IEA) was initiated in 2007 to explore alternatives to address the transportation deficiencies in western Vaughan to the 2031 horizon year. The study area for the Western Vaughan IEA was bounded by Steeles Avenue to the south, Teston Road to the north, Highway 50 to the west and Highway 400 to the east. The Western Vaughan IEA was completed in 2011 and approved by the Ministry of the Environment and Climate Change in July 2012.

Subsequent to the Minister's Decision on the EA Terms of Reference which excluded the consideration of any alternative through the Boyd Conservation Area, the City of Vaughan declared the original road allowance of Pine Valley Drive between Rutherford Road and Club House Road as surplus lands and authorized the conveyance of those lands to the Toronto and Region Conservation Authority for the purpose of the protection and enhancement of the surrounding natural environment. The subject lands were conveyed by the City of Vaughan to the Toronto and Region Conservation Authority in 2009.

Analysis undertaken as part of this TMP, which includes 10 years of additional growth to the 2041 horizon year, indicates that there will be transportation deficiencies in north-south capacity in the Pine Valley Drive corridor area. In recognition of this need and respecting that no options for connecting Pine Valley on the traditional grid are viable, a future study is recommended to examine solutions to 2041.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

Robinson, Jennifer

From: Glass, Heather (MTO) <Heather.Glass@ontario.ca>
Sent: Friday, March 26, 2021 8:24 AM
To: Esedebe, Hilda
Cc: Robinson, Jennifer; Addley, Diana; Cholewa, Peter; Mikolajczak, Margaret (MTO); Janke, Aaron (MTO); Uddin, Zaka (MTO)
Subject: RE: Bass Pro Mills Dr EA - PIC 1 Comments - Hwy 400

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Hilda

I concur with your comments. Due to the proximity of the Highway 400/Rutherford Interchange to Bass Pro Mills, the Ministry would not consider adding ramps to the north at Highway 400/Bass Pro since they would compromise the safety and operation of the freeway.

Regards,

Heather

Heather Glass, P.Eng.
Senior Project Engineer
Project Delivery, York West / Simcoe
Transportation Infrastructure Management Division
Ministry of Transportation, Ontario
phone: (416) 235-5521
fax: (416) 235-3576
email: heather.glass@ontario.ca

From: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>
Sent: March-25-21 5:58 PM
To: Glass, Heather (MTO) <Heather.Glass@ontario.ca>
Cc: 'Robinson, Jennifer' <Jennifer.Robinson@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: Bass Pro Mills Dr EA - PIC 1 Comments - Hwy 400

Hi Heather,

I hope this email finds you well. As you may have been aware, we held the first Online PIC for the Bass Pro Mills Extension Environmental Assessment (EA) between December 3, 2020 and January 8, 2021. I thought to bring to your attention comments from the public that were received regarding northbound access to Highway 400 from Bass Pro Mills Drive. Although this is beyond the scope of our study, I was curious to know if the MTO has looked into such a connection (see very rough sketch below). My thoughts are there just isn't enough room to fit in either of the ramp options while satisfying MTO standards for geometry/spacing especially with such close proximity to the Rutherford Road full moves interchange to the north. Members of the public felt that having this movement at Bass Pro Mills would help alleviate congestion on Rutherford Road and increase the functionality of Bass Pro Mills Drive. Your thoughts on this would be appreciated.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

Robinson, Jennifer

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Wednesday, September 1, 2021 3:48 PM
To: Manirul Islam
Cc: 'Adam Miller'; Cholewa, Peter; Addley, Diana; Robinson, Jennifer; Dana Khademi
Subject: RE: CFN 61893 Bass Pro Mills EA - Geotech/Hydrog. Report
Attachments: basspromills_cov_ltr_TRCA_geotech_hydrog_20210901.pdf

Hello Manirul,

I hope you've been well. Please find attached the Cover Letter for the submission of the revised Geotechnical and Hydro Geology Report for the Bass Pro Mills Drive Environmental Assessment. The report and comments-response table can be found at the link below. kindly advise if there are any concerns.

https://vaughancloud-my.sharepoint.com/:f:/g/personal/hilda_esedebe_vaughan_ca/EhEz_k46c0dOlmfxpwISFtgB_zFBnMVpqxzF5scZ3nwA-Q?e=1tCWQY
Expiring September 30, 2021

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Hilda Esedebe
Sent: Monday, July 5, 2021 11:49 AM
To: 'Manirul Islam' <Manirul.Islam@trca.ca>
Cc: Adam Miller <Adam.Miller@trca.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; 'Addley, Diana' <Diana.Addley@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Dana Khademi <Dana.Khademi@vaughan.ca>
Subject: RE: CFN 61893 Bass Pro Mills EA - Draft Geotech/Hydrog. Report

Hi Manirul,

Thank you for TRCA's comments. The Project Team will review.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager

Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Manirul Islam
Sent: Monday, July 5, 2021 8:29 AM
To: Hilda Esedebe
Cc: Adam Miller
Subject: [External] RE: CFN 61893 Bass Pro Mills EA - Draft Geotech/Hydrog. Report

Good morning Hilda.
Please find attached the comments letter on the Draft Geotech/ HydroG report prepared for the Bass Pro Mills Extension EA.

Should you have any questions, please let me know.
Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Thursday, June 24, 2021 9:50 AM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: Suzanne Bevan <Suzanne.Bevan@trca.ca>; 'Cholewa, Peter' <Peter.Cholewa@stantec.com>; 'Addley, Diana' <Diana.Addley@stantec.com>; 'Robinson, Jennifer' <Jennifer.Robinson@stantec.com>; Khademi, Dana <dana.khademi@vaughan.ca>
Subject: RE: CFN 61893 Bass Pro Mills EA - Draft Geotech/Hydrog. Report

Hello Manirul,

I hope this email finds you well. This is just a gentle reminder regarding my email below.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Esedebe, Hilda
Sent: Thursday, June 3, 2021 1:41 PM
To: 'Manirul Islam' <Manirul.Islam@trca.ca>
Cc: Suzanne Bevan <Suzanne.Bevan@trca.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; 'Robinson, Jennifer' <Jennifer.Robinson@stantec.com>; Khademi, Dana <Dana.Khademi@vaughan.ca>
Subject: CFN 61893 Bass Pro Mills EA - Draft Geotech/Hydrog. Report

Hello Manirul,

Please use this link to access the draft Geotechnical/Hydrogeology Report for the Bass Pro Mills Environmental Assessment Study. Kindly have the appropriate TRCA staff review and provide comments by June 24, 2021.

If there are any questions, please let me know.

Much appreciated!

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

Stantec Consulting Ltd.

Stantec

September 1, 2021

Attention: Manirul Islam
Planner, Infrastructure Planning and Permits
Development and Engineering Services
Toronto and Region Conservation Authority
101 Exchange Avenue,
Vaughan, ON L4K 5R6

Dear Mr. Islam,

Reference: Geotechnical and Hydrogeological Desktop Review
Bass Pro Mills Drive Extension Between Highway 400 and Weston Road
Municipal Class Environmental Assessment – Schedule C
Humber River Watershed; City of Vaughan; Regional Municipality of York

Thank you for taking the time to review the draft Geotechnical and Hydrogeological Desktop Review report completed for this on behalf of Toronto Region Conservation Authority (TRCA). Your letter response was received by the study team on July 5, 2021.

In an effort to address your comments, we have provided responses within the comment/response table. Should you have any questions, comments and/or concerns, please do not hesitate to contact the project team.

Regards,

Stantec Consulting Ltd.

Diana Addley
Senior Environmental Planner
Email: Diana.Addley@stantec.com

Attachment: Revised Geotechnical and Hydrogeological Desktop Review Report
Comment/Response Table

c. Adam Miller, TRCA
Hilda Esedebe, City of Vaughan
Peter Cholewa, Stantec Consulting Ltd.
Jenn Robinson, Stantec Consulting Ltd.

Geotechnical and Hydrogeological Desktop Review
Bass Pro Mills Drive Extension Between Highway 400 and Weston Road
Municipal Class Environmental Assessment - Scheudle C
Humber River Watershed; City of Vaughan; Regional Municipality of York

Item #	TRCA Comments (July 5, 2021)	Proponent/Consultant Response
Ecology Comments:		
1	The report does not identify the presence of the tributary to the Black Creek (which runs approximately East/West) and the wetland features on site, and off-site (but still within the study area). The tributary of the Black Creek connects these wetlands to the Black Creek. All of these features are regulated by TRCA and need to be identified and considered throughout the entire EA, since their hydrological and ecological functions will need to be maintained. This will influence on the proposed design of the future road extension. Both features (tributary and wetlands) are easily spotted on aerial image, and should be identified on a desktop-only study. Please update the report to include these features.	Noted. The draft Geotechnical and Hydrogeological Desktop Review report did not highlight the wetland feature as the wetland was not indicated as a wetland or a TRCA regulated area based on the TRCA Regulation Mapping and/or MNRF Natural Heritage Areas Map. In addition, observations were limited to a site walk-bys. However, based on the aerial photograph and the comments provided the Desktop Review has been revised accordingly to incorporate the wetlands and Black Creek tributary.
2	For future studies, it is expected that all the environmental features present on site (including watercourses, wetlands, HDFs, etc.) will be assessed through on-site studies. If permission to enter for the site cannot be secured for future studies, then the precautionary principle will apply – all features will be assumed to be sensitive, and the proposed design will be guided by that consideration.	Noted. However, please note that this study was limited to a review of subsurface soil and groundwater conditions. Natural enviornmental features observed on-site have been reported under separate cover and will also be documented within the Environmental Study Report for the Bass Pro Mills Drive Extension Municipal Class Enviornmental Assessment study.
3	As part of future studies, a Wetland Water Balance Risk Evaluation (available at https://trcaca.s3.ca-central-1.amazonaws.com/app/uploads/2019/01/17104739/WetlandWaterBalanceRiskEvaluation_Nov2018.pdf) will be required. This Evaluation will help assess the risk the proposed development poses to the wetland features. Depending on the risk, a Monitoring Program might need to be initiated (available at https://trcaca.s3.ca-central-1.amazonaws.com/app/uploads/2016/08/17180016/TRCA-Wetland-Water-Balance-Monitoring-Protocol-1.pdf).	Noted. However, please note that this study was limited to a review of subsurface soil and groundwater conditions. Natural enviornmental features observed on-site have been reported under separate cover and will also be documented within the Environmental Study Report for the Bass Pro Mills Drive Extension Municipal Class Enviornmental Assessment study.
4	Additionally, please note that all crossing should comply with the following Guidelines: a.Crossing Guideline for Valley and Stream Corridorshttps://drive.google.com/file/d/0BxjqkzmOuaaRMmt1TmdyWUlmUDg/view?resourcekey=0-28vf3yb-j9nnP99nNDPr6A b.Fish and Wildlife Crossing Guideline https://cvc.ca/wp-content/uploads/2017/05/CVC-Fish-and-Wildlife-Crossing-Guidelines-final-web.pdf And that for a proposed Channel modification thefollowing submission is required: c.Channel Modification Design and Submission Requirements https://trcaca.s3.ca-central-1.amazonaws.com/app/uploads/2016/02/17185407/CHANNEL_MODIFICATION_REQUIREMENTS.pdf	Noted. However, please note that this study was limited to a review of subsurface soil and groundwater conditions. Natural enviornmental features observed on-site have been reported under separate cover and will also be documented within the Environmental Study Report for the Bass Pro Mills Drive Extension Municipal Class Enviornmental Assessment study.
Hydrogeology Comments:		
5	Please note that the hydrogeological schedule should allow the EA study to capture the seasonal high.	Noted. A detailed Hydrogeological Assessment is anticipated to be undertaken during detail design of this project, the timing of which is not currently known.
6	On-site hydrogeological investigations will be required for detailed design. Please refer to Conservation Ontario's Guide for Hydrogeological Assessments. HydroAssessmentGuidelines-20130807-FINAL (trca.on.ca) Please consider the tributary of Black Creek and wetland feature on site in addition to Black Creek watercourse on site.	Noted. Following Ontario guidelines, a Hydrogeological Assessment will be completed during the detail design phase of this and will include considerations for Black Creek, its tributary, and the wetland feature.
Geotechnical Comments:		
7	The report should be stamped by a geotechnical engineer or hydrogeologist.	The purpose of this report was to provide a summary of existing data and reports obtained from desktop review of available information. As such, there are no detailed investigations and/or engineering recommendations, other than to conduct detailed investigations during detail design. The detailed geotechnical and/or hydrogeological investigation reports will be stamped and signed by a Professional Engineer.

Robinson, Jennifer

From: Barboza, Karla (MHSTCI) <Karla.Barboza@ontario.ca>
Sent: Monday, September 13, 2021 5:07 PM
To: Robinson, Jennifer
Cc: Hilda Esedebe; Cholewa, Peter; Addley, Diana; Harvey, Joseph (MHSTCI)
Subject: RE: Notice of Online PIC 2 - MCEA Class EA, Bass Pro Mills Drive (Hwy 400 to Weston Rd)

Hi Jennifer,

Thanks for the update and please accept our apologies for the oversight.

It is appropriate to undertake the Stage 2 AA during detailed design. Our recommendation is that it is completed as early as possible during the detailed design phase.

We are reviewing the Cultural Heritage Overview and will provide comments, if any, later this week or early next week.

Thanks again,
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. 660.1027 | Email: karla.barboza@ontario.ca

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: August-26-21 9:23 AM
To: Barboza, Karla (MHSTCI) <Karla.Barboza@ontario.ca>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>
Subject: RE: Notice of Online PIC 2 - MCEA Class EA, Bass Pro Mills Drive (Hwy 400 to Weston Rd)

Hi Karla,

Thank you for confirming your receipt of the Stage 1 Archaeological Assessment (AA). Please note that while Stage 2 AA field work has been identified for this study, it is not scheduled to take place until the detail design phase of this project, the timing of which is still unknown. However, please find the attached Cultural Heritage Overview memorandum which was prepared as part of this project, and provided to MHSTCI on May 14, 2020.

We appreciate you informing us on your staffing adjustments. We will update our study mailing list accordingly.

Please do not hesitate to let us know should you have any comments and/or questions.

Kind Regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

From: Barboza, Karla (MHSTCI) <Karla.Barboza@ontario.ca>
Sent: Wednesday, August 25, 2021 12:46 PM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>
Subject: FW: Notice of Online PIC 2 - MCEA Class EA, Bass Pro Mills Drive (Hwy 400 to Weston Rd)

Hi Jennifer (et al.),

Thanks for sending the Notice of Online PIC 2 to the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI).

Please note that our unit is going through some adjustments and both Rosi Zirger and Dan Minkin are on leave. So could you please include me as the ministry's contact for this project?

I can confirm that the Stage 1 Archaeological Assessment (under Project Information Form number P1060-0099-2020) has been entered into the Ontario Public Register of Archaeological Reports. The Stage 2 AA (under PIF # P362-0288-2020) have yet to be submitted by the licensed archaeologist. I recommend that your licensed archaeologist submit the Stage 2 AA as soon as possible.

I reviewed the PIC materials but it is not clear how built heritage resources and/or cultural heritage landscapes have been addressed. I would appreciated any information and/or studies be sent to our review.

In the meantime, let me know if you have any questions.

Thanks again,
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. 660.1027 | Email: karla.barboza@ontario.ca

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: August 12, 2021 3:27 PM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>
Subject: Notice of Online PIC 2 - MCEA Class EA, Bass Pro Mills Drive (Hwy 400 to Weston Rd)

Hello,

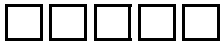
Please see the attached Notice of Online Public Information Centre (PIC) 2 for the **Bass Pro Mills Drive Municipal Class Environmental Assessment (EA) Study**. As indicated within the attached notice**,** the City of Vaughan is undertaking this

EA Study for the proposed extension of Bass Pro Mills Drive, between Highway 400 and Weston Road. The purpose of this notice is to inform of the Online Public Information Centre that has been arranged to present and solicit feedback on the outcomes of PIC 1, the traffic analysis and environmental investigations, the evaluations of alternative alignments and cross-sections, the Technically Recommended Design and the next steps in the study process. As part of this online PIC, a recorded presentation and comment form will be available for your review and feedback on the project website (Vaughan.ca/BassProMillsEA) from **August 19, 2021 to September 16, 2021**.

Should you have any questions or concerns, please do not hesitate to contact us.

Regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec



Robinson, Jennifer

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Wednesday, November 24, 2021 6:36 PM
To: Manirul Islam
Cc: Dana Khademi; Cholewa, Peter; Addley, Diana; Robinson, Jennifer; Harsimrat Pruthi
Subject: RE: [External] RE: CFN 61893 Bass Pro Mills EA - Draft Fluvial Geomorphological Assessment Report

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Manirul,

Thank you for taking the time to review and provide comments on the Fluvial Geomorphological Assessment Report for the above-mentioned project on behalf of TRCA.

The reasoning for Alternative A's minor realignment on the north side of the existing Black Creek crossing is to mitigate property impacts to the south of the proposed roadway extension. While a skewed culvert was considered during this study, it was noted that skewed culverts in general tend to be more problematic than straight culverts in terms of manufacturing and construction. Thus, a straight culvert was identified as a more suitable option.

Further, given that the land use planning decisions within the Vaughan Mills Secondary Plan area have not been confirmed, the culvert size and configuration proposed for Alternative A was only designed for the purposes of the Class EA, and may not be implemented if one of the creek crossing locations (Alternatives B, C and D) is identified as the ultimate crossing location during detailed design.

We appreciate you taking the time to provide comments at this phase of the project. The City of Vaughan will continue to engage TRCA concerning the realignment of the creek during the detail design phase of the project.

Should you have any other questions or comments please feel free to contact us.

Kind Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Friday, November 12, 2021 4:58 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Dana Khademi <Dana.Khademi@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Harsimrat Pruthi

<Harsimrat.Pruthi@trca.ca>
Subject: [External] RE: CFN 61893 Bass Pro Mills EA - Draft Fluvial Geomorphological Assessment Report

Good afternoon Hilda.
Staff has completed their review of the draft Fluvial Geomorphological Assessment Report submitted on October 9, 2021 in support of the Bass Pro Mills Extension Municipal Class EA (CFN 61893).

Review Comments:
Based on review of the report and that the final alignment of Black Creek has not yet been determined, please see staff's comments below:

- Please consider whether the minor realignment in Alternative A is necessary. Consideration should be given to whether the culvert can be installed on a skew to preserve the channel in its natural alignment.
- Please note, staff will be in a better position to provide more detailed comments/recommendations when the final alignment of the creek has been determined.

Should you have any question please contact me.
Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Thursday, November 11, 2021 5:19 PM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: Suzanne Bevan <Suzanne.Bevan@trca.ca>; Khademi, Dana <dana.khademi@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: RE: CFN 61893 Bass Pro Mills EA - Draft Fluvial Geomorphological Assessment Report

Hello Manirul,

I am just following up on my email below. Kindly advise if TRCA has had the opportunity to review.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Hilda Esedebe
Sent: Saturday, October 9, 2021 4:19 PM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: 'Suzanne Bevan' <Suzanne.Bevan@trca.ca>; Dana Khademi <Dana.Khademi@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: CFN 61893 Bass Pro Mills EA - Draft Fluvial Geomorphological Assessment Report

Hello Manirul,

Happy Thanksgiving!

Please use this link to access the Bass Pro Mills EA - Draft Fluvial Geomorphological Assessment Report, for TRCA's review.

If comments could be provided **by November 5th, 2021**, it would be much appreciated.

Kindly let me know if you have any questions.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

Robinson, Jennifer

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Monday, February 14, 2022 3:11 PM
To: Mikolajczak, Margaret (MTO)
Cc: Uddin, Zaka (MTO); Cholewa, Peter; Addley, Diana; Robinson, Jennifer
Subject: RE: [External] RE: Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Margaret,

The Traffic Impact Assessment Report for the Bass Pro Mills Extension Environmental Assessment can be found at this link. Please advise if there are any questions/comments.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Monday, February 14, 2022 10:13 AM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>
Subject: [External] RE: Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo

Hi Hilda, I have received the following request from our Traffic Office:

"I'll appreciate if you could share with me the Traffic Report for this EA Study. "

I've quickly checked my emails and did not find the TIS, if you have one, can you please forward me a copy.

Thank you

Margaret

Robinson, Jennifer

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Tuesday, February 22, 2022 9:29 PM
To: Manirul Islam
Cc: Harsimrat Pruthi; 'Adam Miller'; Robinson, Jennifer; Addley, Diana; Cholewa, Peter
Subject: FW: [External] CFN 61893- Bass Pro Mills Extension EA- comments on Environmental Impact Study (EIS) and Stormwater Management Report (SWM)
Attachments: ltr_TRCA_EIS_SWM_dft_20220217.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Manirul,

Please find attached Letter to the TRCA and associated Comment/Response Table regarding the above-mentioned comments received.

Please also find the below OneDrive link to the following:

- Revised EIS Report
- Revised SWM Report & Modeling

Revised EIS, SWM Report & TRCA Response

If TRCA has any follow up comments or would like to discuss any further, please contact the undersigned.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Tuesday, January 25, 2022 11:40 AM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Harsimrat Pruthi <Harsimrat.Pruthi@trca.ca>; Adam Miller <Adam.Miller@trca.ca>
Subject: [External] CFN 61893- Bass Pro Mills Extension EA- comments on Environmental Impact Study (EIS) and Stormwater Management Report (SWM)

Good morning Hilda.

Staff has completed their review of the above noted technical documents (EIS and SWM report), prepared in support of the Bass Pro Mills Extension MCEA (CFN 61893).
Please find attached the documents for technical comments.
Should you have any questions please contact me.
Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

Stantec Consulting Ltd.

February 17, 2022

Attention: Manirul Islam
Planner, Infrastructure Planning and Permits
Development and Engineering Services
Toronto and Region Conservation Authority
101 Exchange Avenue,
Vaughan, ON L4K 5R6

Dear Manirul Islam,

Reference: Environmental Impact Study and Stormwater Management Report
Bass Pro Mills Drive Extension Between Highway 400 and Weston Road
Municipal Class Environmental Assessment – Schedule C
Humber River Watershed; City of Vaughan; Regional Municipality of York
(Letter Received January 25, 2022)

Thank you for your letter, received January 25, 2022. We appreciate you taking the time to provide comments on the draft Environmental Impact Study (EIS) and Stormwater Management (SWM) reports.

In an effort to address your comments, we have provided responses within the attached comment/response table. In addition, we have updated the EIS and SWM reports to reflect the majority of your comments and suggestions.

Should you have any questions, comments and/or concerns, please do not hesitate to contact the undersigned.

Regards,

Stantec Consulting Ltd.

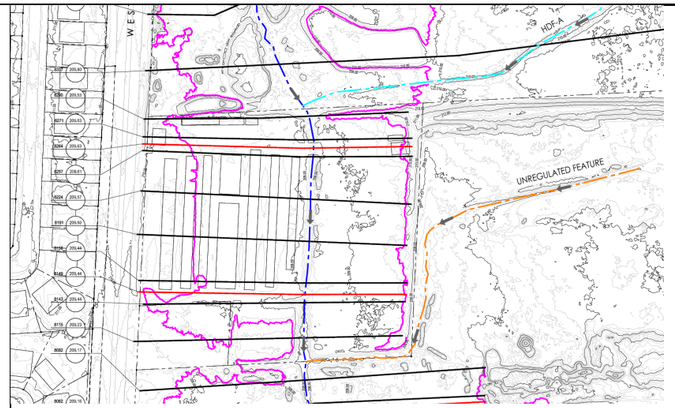
Diana Addley
Senior Environmental Planner
Email: Diana.Addley@stantec.com

Attachment: Revised Environmental Impact Study
Revised Stormwater Management Report
Comment/Response Table

c. Hilda Esedebe, City of Vaughan
Peter Cholewa and Jenn Robinson, Stantec Consulting Ltd.
Adam Miller and Harsimrat Pruthi, TRCA

APPENDIX A: TRCA COMMENTS AND PROPONENT RESPONSES

ITEM	TRCA COMMENTS (January 25, 2022)	PROPONENT/CONSULTANT RESPONSE
Ecology Comments (Environmental Impact Study):		
1.	Unmapped Feature (Sections 5.1.3.3, 5.2.6.3 and 6.5.3) As per previous TRCA directions, considering the challenges of conducting a site visit for appropriate assessment of Headwater Drainage Feature (HDF) on site, a conservative approach to management strategies is required and the precautionary principle should apply. Based on aerial images, it appears to TRCA staff that this feature connects the wetland community (MASM1) to the Black Creek, to the south of the commercial property located to the west of the study area (see images below). Therefore, it should be considered a HDF and part of the TRCA regulated area (as mentioned before, the text of the Regulation takes precedence over the preliminary screening mapping). Please update the EIS accordingly. Please revise all related potential impacts and mitigation measures.  urce: Google Earth  urce: York Region Land Information (aerial image from 2019)	We have updated our figures to highlight this feature and labelled it on our figures as “Potential Headwater Drainage Feature”. However, this is new information that was not shared with Stantec/the City at previous meetings with TRCA and/or follow up comments. Specifically, TRCA previously noted that the proposed approach impacts Black Creek, a single tributary, and the wetland. Regardless, this HDF will not be impacted by the footprint of the proposed extension of Bass Pro Mills Drive, therefore we respectfully suggest that TRCA allow for the assignment of classifications and management recommendation for this feature to take place at a later time, in particular when development planning is undertaken by the City and others in the future.

	 urce: Dwg # 3 (Existing Conditions Regional Storm Floodplain Mapping)	
2.	Vegetation Communities (Section 5.2.1 and Appendix D) i. Please update Appendix D to provide a break down of occurrence of each species of vascular plants for each Ecological Land Classification (ELC) community. TRCA staff needs additional data for a comprehensive review of the proposed ELCs. ii. Please clarify why the entire wetland located at the center of the study area has been classified as Mineral Shallow Marsh (MASM1) as opposed to having a portion of it classified as Mineral Meadow Marsh (MAMM1).	i. The plant list was compiled from the road ROW, and therefore a comprehensive species list by community was not prepared. The dominant species in each community (as assessed from the ROW) are provided in Table 5 (Ecological Land Classification (ELC) Vegetation Types). ii. It was difficult to determine the boundaries of the MASM1 vs MAMM1 communities from the road ROW and/or satellite imagery. The community classification has been revised as MASM1/MAMM1.
3.	Significant Wildlife Habitat (Section 6.3.3, Section 7.2.4, Appendix G) Section 5.2.3 (Breeding Birds) state that Virginia Rail and Marsh Wren have been recorded in the Study Area, and that they were assumed to be breeding in the area. According to the criteria described in the Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 6E (MNRF, 2015) for determining **SWH - Marsh Breeding Bird Habitat**, one of the defining criteria for "*Confirmed SWH*" is "*presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren OR 1 pair of Sandhill Cranes OR breeding by any combination of 5 or more of the listed species*[1]". Given that: • both Virginia Rail and Marsh Wren were recorded in the area, and • the number of nesting pairs of Marsh Wren is unknown or has not been specified it is unclear why this community hasn't been considered a Candidate **SWH -Marsh Breeding Bird Habitat**. Appendix G states that "*the wetlands are unlikely to support the required number of species to qualify as SWH*". This seems to be speculative and does not refute the potential for 5 pairs of Marsh Wren to be on site. In addition, the presence of Virginia Rail, American Woodcock and Alder Flycatcher points towards a relatively high-functioning wetland. Based on the application of the precautionary principle, and in the absence of targeted callback surveys for marsh breeding birds, TRCA advises this area to be considered a Candidate SWH for Marsh Breeding Bird Habitat.	The EIS has been revised to include Candidate Marsh Breeding Bird Habitat in the SWH assessment section in 6.3.3 as follows: The MASM1 wetland communities are the only communities with the potential to provide specialized habitats for wildlife (marsh breeding bird habitat). There were two marsh breeding bird habitat indicator species observed during field investigations: Virginia Rail and Marsh Wren. Targeted callback surveys for marsh breeding birds were not completed during field investigations; however, they are recommended to be completed during detailed design to confirm whether marsh breeding bird habitat is present. Added Candidate Marsh Breeding Bird Habitat to Section 7.2.4.1 (impacts) and Section 8.6.1 (mitigation).

[1] American Bittern, **Virginia Rail**, Sora, Common Moorhen, American Coot, Pied-billed Grebe, **Marsh Wren**, Sedge Wren, Common Loon, Sandhill Crane, Green Heron, Trumpeter Swan, Black Tern, Yellow Rail

	Please revise the EIS to indicate this area is a **Candidate SWH for Marsh Breeding Bird Habitat**. Please revise all related preliminary impact assessment and mitigation measures	
4.	Headwater Drainage Feature A (Section 7.3.2) TRCA does not support reduction of the length of drainage features. Please ensure that the proposed design will maintain the length of the feature (e.g., meanders can be added to the design). Please update the EIS.	During detail design, reduction in length within this human-made feature will be offset by natural channel design techniques to relocate and enhance the HDF and its riparian area. For impacts deemed unavoidable, such as loss of channel length, compensation will be required. The compensation requirements will be determined according to the TRCA Guideline for Determining Ecosystem Compensation (https://s3-ca-central-1.amazonaws.com/trcaca/app/uploads/2019/11/27105627/TRCA-Guideline-for-Determining-Ecosystem-Compensation-June-2018_v2.pdf).
5.	Wildlife Crossing (Section 8.7) Section 8.7 states that TRCA's Crossing Guideline for Valley and Stream Corridors and CVC's Fish and Wildlife Crossing Guideline are to be consulted if during detailed design the wetlands are found to support turtles. This approach is not supported by TRCA. These guidelines should necessarily inform the requirements for the proposed crossings, both for aquatic and terrestrial wildlife passages. Where possible, please combine both aquatic and terrestrial wildlife passage in one larger culvert. Please note that the terrestrial passages should aim to provide safe passage for mid-sized mammals. Please check CVC Fish and Wildlife Crossing Guidelines for specific requirements for sizing and openness ratio.	Section 8.7 of the EIS has been revised as follows: TRCA's Crossings Guideline for Valley and Stream Corridors (TRCA 2015) and CVC's Fish and Wildlife Crossing Guideline (CVC 2017) should inform the requirements for the proposed crossings to provide passage for both fish and terrestrial wildlife, including mid-sized mammals. Where possible, the design should combine both aquatic and terrestrial wildlife passage in one larger culvert. CVC's Fish and Wildlife Crossing Guideline should inform the specific requirements for sizing and openness ratio for culverts that may be used by fish and terrestrial wildlife.
6.	Staff requests that a wetland evaluation following the Ontario Wetland Evaluation System (OWES) is completed. While the EIS suggests this evaluation to be deferred to detailed design, TRCA recommends that the evaluation is conducted at this stage, to better inform road and culvert alignments, overall construction/staging requirements, mitigation and compensation requirements. Alternatively, if the evaluation needs to be deferred to a later stage (e.g., detail design), the City of Vaughan and consultants on the project should work on the assumption that the feature is a Provincially Significant Wetland.	In order to accurately assess the wetland feature, the evaluation will need to be deferred to a later stage when property access is granted. Section 8.2 outlines the recommendation to complete an OWES evaluation to inform wetland compensation. There are no Provincially Significant Wetland Features identified within 750m from the wetland to consider the wetland for potential complexing, so the wetland would need to qualify as significant based solely on its own characteristics. The wetland contains an abundance of Phragmites, which would limit its biodiversity score. Size (social component) and hydrological components would likely be the most important qualities to consider for the evaluation.
7.	The Living City Policies indicates that the natural features protection hierarchy should be applied in all developments: avoidance, minimization of impacts, and then mitigation/restoration. Compensation should be used as a last resource, and not as the default. Please provide documentation demonstrating that this hierarchy has been followed in the determination of the proposed alignment.	A Recommended Alignment discussion has been added in Section 7.1.1 which provides context for why the MASM1/MAMM1 wetland and other natural features were not completely avoided. Impacts to natural features are outlined in Section 7.0 and minimization of impacts in the forms of recommended mitigation measures and compensation are provided Section 8.0. As noted previously, this study is being completed following the MCEA process, and as such all reasonable alternatives have been considered. The decision-making process is documented within the public consultation materials shared with the public and other stakeholders during the course this study, including the Environmental Study Report (ESR). In summary, the need and justification for the roadway extension has been demonstrated through the Vaughan Mills Centre Secondary Plan (VMCSP), as well as the traffic analyses completed as part of this MCEA study. With respect to proposed alignment, other alternatives were considered at a broader level; however, were not carried forward for further consideration given their impacts to private property, business operations, costs, etc. Further, no alternatives that would avoid impacts to the existing wetland feature are feasible, given its proximity to the existing terminus of Bass Pro Mills Drive and associated geometric requirements of the new roadway. Also, potential impacts to natural features was considered as part of a number of other criteria that were used to compare the advantages and disadvantages of alternatives design concepts (including cross-section and alignment alternatives). Please also note that the wetland feature is situated within the VMCSP area, which is being planned for future development, subject to future review under the Planning Act process.

8.	For the proposed realignment of the Black Creek, please submit the Channel Modification Design and Submission Requirements, available at: https://trcaca.s3.ca-central-1.amazonaws.com/app/uploads/2016/02/17185407/CHANNEL_MODIFICATION_REQUIREMENTS.pdf Please note that TRCA requires that a natural channel design is applied to the design of the realigned channel.	Noted. The following report: The Fluvial Geomorphological Assessment Black Creek at Bass Pro Mills Drive from Highway 400 to Weston Road Vaughan, Ontario prepared by Stantec (September 2021) includes a recommendation that all future channel realignments follow the Channel Modification Design and Submission Requirements. This will be completed during detail design.
9.	Please demonstrate that all proposed crossings and culverts comply with the following Guidelines: a. Crossing Guideline for Valley and Stream Corridors https://drive.google.com/file/d/0BxjqkzmOuaaRMmt1TmdyWUlmUDg/view?resourcekey=0-28vf3yb-j9nnP99nNDPr6A b. Fish and Wildlife Crossing Guideline https://cvc.ca/wp-content/uploads/2017/05/CVC-Fish-and-Wildlife-Crossing-Guidelines-final-web.pdf	a. The recommendations in the EIS follow the Crossing Guidelines for Valley and Stream Corridors. The guideline notes that if spanning the meander belt is not feasible then spanning the 100-year erosion limit should be considered to minimize the risk associated with channel migration over time. We have calculated the 100-year erosion limit in our meander belt reporting as per this TRCA guideline and have recommended future crossings to have a minimum span of 14 m, which will take into account this erosion limit. b. The report recommends that the detail design of any watercourse crossings follows the Fish and Wildlife Crossing Guidelines by CVC (2017).
10.	For any impacts deemed unavoidable, such as loss of wetland, compensation will be required. The Compensation requirements will be determined according to the TRCA Guideline for Determining Ecosystem Compensation (https://s3-ca-central-1.amazonaws.com/trcaca/app/uploads/2019/11/27105627/TRCA-Guideline-for-Determining-Ecosystem-Compensation-June-2018_v2.pdf). Since the removal of wetland area will negatively impact a feature that provides multiple Significant Wildlife Habitat (SWH) functions, TRCA requests that both Land Base AND Ecosystem Structure compensation are provided.	Text added to Section 8.2 to explain that ecosystem structure and functions must also be compensated for.
Ecology Comments (Stormwater Management Report):		
11.	The report and drawings show a drainage feature to the south of the study area as an “unmapped” and “unregulated” feature (please refer to images shown on comment 1). Given that the site visit could not be undertaken for appropriate assessment, this feature should be considered a HDF and part of the TRCA regulated area (as mentioned before, the text of the Regulation takes precedence over the preliminary screening mapping). Please update the SWM Report accordingly. Please revise all related potential impacts and mitigation measures.	We have updated our figures to highlight this feature and labelled it on our figures as “Potential Headwater Drainage Feature”. This HDF will not be impacted by the footprint of the proposed extension of Bass Pro Mills therefore we respectfully suggest that TRCA allow for the assignment of classifications and management recommendation for this feature to a later time, in particular when development planning is undertaken for this area.
12.	For the TRCA Wetland Water Balance Risk Evaluation (shown on page 62 of the SWM Report), please clarify/provide the following: a. Please provide drawings showing each one of the data entered for the calculation of the magnitude of potential hydrological change (e.g. the extent and size of the pre-development catchment, area of the wetlands’ catchment lying outside of any identified natural system, percent of impervious cover planned within the proponent’s holdings, proposed extent and size of post-development catchment, etc). b. For the total development area of catchment, please clarify how the natural system and natural hazard limits were calculated. Please let us know the spatial layers were used to determine them. c. Please clarify why the percentage (%) of replaced pervious cover to impervious cover under the evaluation criteria is shown as 0%, since there will be changes in pervious cover.	a. Drawing D.2.1 has been prepared and illustrates various areas used in the water balance risk evaluation. b. TRCA’s Regulated Area (2020) is shown within Drawing D.2.1. For this assessment a 30 m Wetland buffer has conservatively been assumed. c. The value of replaced pervious cover to impervious cover is 0% as the Site is not located within a recharge area.
Water Resources Comments (Floodplain Management):		

13.	Please provide a digital version of the hydraulic modelling which includes a project file. When the provided flow and geometry files were imported the model ran into an error and wouldn't compute. TRCA will review the model completely once it has been received.	A copy of the model has been included with this submission.
14.	Please confirm the depth blocked within the culvert as it appears to be 0.3 m on drawing 4 (proposed conditions) but is modelled as 0.1 m. Please clarify and revised as necessary.	The cross section on Drawing 4 has been revised to match the proposed HEC-RAS geometry. The 1.52 m dimension is from culvert soffit to Channel Invert.
15.	Once TRCA's model review has been completed and is approved, TRCA requests that the FPM sheets be prepared to TRCA's specifications in order to be incorporated into TRCA's flood plain mapping program.	Noted.
16.	In order for TRCA to verify that catchment 46.16 does not contribute to the Black Creek subwatershed, please provide details/drawings to demonstrate that flows from this catchment are routed elsewhere, particularly during the Regional storm where storm sewers are not considered and overland flow is used.	Please refer to Figure B.2.1 in Appendix B2.
Water Resources Comments (Stormwater Management):		
17.	Please note that the target UFR equations need to consider the pre-development drainage area within the ROW to the outlet location in the watercourse. From Drawing 1 (Existing Conditions) it appears that the pre-development area that should be used would be smaller than the 2.22 ha proposed.	Under existing conditions, the proposed 2.22 ha ROW area discharges flows to the outlet location. As illustrated on Drawing 1, existing Bass Pro Mills Drive discharges runoff via storm sewer to the northern portion of the Wetland. Per Section 2.1 of the SWM Report, the northern portion of the wetland will discharge flows to HDF-A and Black Creek prior to flowing over the trapezoidal weir to the southern portion of Wetland-1.
18.	TRCA is pleased to see the storage volumes required to meet TRCA's SWM criteria provided within the SWM report. It would be preferred if preliminary locations and footprints of LID measures/oversized pipes could be presented to demonstrate the feasibility of providing the required storage volumes at the EA stage in case there is a need for additional lands or a larger ROW. Please provide all details possible for the locations and sizing of these measures to ensure feasibility.	Per Section 5.3, LIDs will be incorporated wherever possible to provide the require Quality Control. Per Section 5.5, to achieve the erosion control requirement a footprint area of approximately 407 m^2 is required. Based on the Plan and Profile, 1400 m^2 of Boulevard is available for LIDs. Table 9 summarizes the various oversized pipe options which satisfy the total 100-year storage requirements.

Robinson, Jennifer

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Thursday, April 21, 2022 10:31 PM
To: Manirul Islam
Cc: Cholewa, Peter; Addley, Diana; Robinson, Jennifer; Harsimrat Pruthi; 'Adam Miller'
Subject: RE: [External] CFN 61893- Bass Pro Mills Extension EA- comments on Environmental Impact Study (EIS) and Stormwater Management Report (SWM)
Attachments: cov_ltr_TRCA_EIS_SWM_Bass Pro Mills EA-20220421.pdf; Bass Pro Mills_TRCA Comments_Stantec Response_20220421.pdf; letter_ecoworkplan_basspromillsmcea_trca_20201112_final (003).pdf; RE: CFN 61893 Bass Pro Mills Municipal Class EA - EIS Work Plan_Revised work plan

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Manirul,

In response to the April 1, 2022 comments received from TRCA on the above noted reports, please see attached the following:

1. Cover letter
2. Updated comments/response table
3. Revised Workplan for the study as approved by TRCA in 2020, for reference
4. The email confirmation from TRCA from 2020, also for reference

This is for TRCA's kind review. The Project Team is currently working on the draft Environmental Study Report which we hope to file very soon.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Friday, April 1, 2022 10:46 AM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Harsimrat Pruthi <Harsimrat.Pruthi@trca.ca>; Adam Miller <Adam.Miller@trca.ca>
Subject: RE: [External] CFN 61893- Bass Pro Mills Extension EA- comments on Environmental Impact Study (EIS) and Stormwater Management Report (SWM)

Good morning Hilda.

Please find attached the comments letter on the revised EIS and SWM Reports, prepared in support of the Bass Pro Mills Extension EA.

Should you have any questions please contact me.
Thank You and have a great weekend.
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Tuesday, February 22, 2022 9:29 PM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: Harsimrat Pruthi <Harsimrat.Pruthi@trca.ca>; Adam Miller <Adam.Miller@trca.ca>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: FW: [External] CFN 61893- Bass Pro Mills Extension EA- comments on Environmental Impact Study (EIS) and Stormwater Management Report (SWM)

Hi Manirul,

Please find attached Letter to the TRCA and associated Comment/Response Table regarding the above-mentioned comments received.

Please also find the below OneDrive link to the following:

- Revised EIS Report
- Revised SWM Report & Modeling

Revised EIS, SWM Report & TRCA Response

If TRCA has any follow up comments or would like to discuss any further, please contact the undersigned.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Tuesday, January 25, 2022 11:40 AM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Harsimrat Pruthi <Harsimrat.Pruthi@trca.ca>; Adam Miller <Adam.Miller@trca.ca>
Subject: [External] CFN 61893- Bass Pro Mills Extension EA- comments on Environmental Impact Study (EIS) and Stormwater Management Report (SWM)

Good morning Hilda.
Staff has completed their review of the above noted technical documents (EIS and SWM report), prepared in support of the Bass Pro Mills Extension MCEA (CFN 61893).
Please find attached the documents for technical comments.
Should you have any questions please contact me.
Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

Stantec Consulting Ltd.

April 21, 2022

Attention: Manirul Islam
Planner, Infrastructure Planning and Permits
Development and Engineering Services
Toronto and Region Conservation Authority
101 Exchange Avenue,
Vaughan, ON L4K 5R6

Dear Manirul Islam,

Reference: Revised Environmental Impact Study and Stormwater Management Report (SWM) – Sub 2
Bass Pro Mills Drive Extension Between Highway 400 and Weston Road
Municipal Class Environmental Assessment – Schedule C
Humber River Watershed; City of Vaughan; Regional Municipality of York
(Letter Received April 1, 2022)

Thank you for your letter, received April 1, 2022. We appreciate you taking the time to provide comments on behalf of Toronto and Region Conservation Authority (TRCA) with respect to the revised draft Environmental Impact Study (EIS) and Stormwater Management (SWM) reports.

In response to your comments, we have provided responses within the attached comment/response table. Please also find the attached Revised Terms of Reference (ToR) for the Limited Environmental Impact Study for this study, which was submitted to TRCA in November 2020. As indicated within the attached letter, an initial ToR was submitted to TRCA in February 2020 based on the assumption that property access would be granted; however, given that Permission to Enter private property within and/or adjacent to the study area was not provided following substantial efforts by the study team, a Revised ToR was prepared and issued to TRCA for review and approval, which outlined the study team's approach to completing the natural heritage assessment to support the Municipal Class Environmental Assessment (MCEA) and preliminary design of this project without access to private properties within the study area. A response was subsequently received from TRCA on December 14, 2020, indicating that the revised ToR seemed acceptable, and that a conservative approach should be taken when recommending management strategies. As such, we respectfully request that TRCA accept the responses enclosed within the attached, with the understanding that the additional investigations requested by TRCA within recent correspondence will be carried out during detail design, at which time the City will be in a position to expropriate the lands required to accommodate the proposed extension of Bass Pro Mills Drive and undertake the additional/detailed investigations required to inform the detail design of the new infrastructure.

The study team agrees that the wetland should be delineated and staked in the field with TRCA when land access is available to provide the necessary information for compensation. In the interim, a conservative approach to the assessment of impacts has been undertaken as part of this MCEA, and clear commitments for the City to adhere to during detail design will be noted within the Environmental Study Report (ESR) for this project, including but not limited to:

Reference: **Revised Environmental Impact Study and Stormwater Management Report (SWM) – Sub 2**
Bass Pro Mills Drive Extension Between Highway 400 and Weston Road
Municipal Class Environmental Assessment – Schedule C
Humber River Watershed; City of Vaughan; Regional Municipality of York
(Letter Received April 1, 2022)

- Detail design of the proposed extension of Bass Pro Mills Drive will be fully integrated with the land use planning activities associated with the Vaughan Mills Centre Secondary Plan area.
- Detailed ecological field investigations will be undertaken during detail design to further refine Ecological Land Classification vegetation communities and to collect additional botanical information for the inaccessible areas.
- Marsh bird call playback surveys will be carried out during detail design to inform the wetland compensation.
- Delineation of the wetland boundaries, including along Black Creek, will be undertaken during detail design to confirm the size, wetland type and function of the existing wetland, and to apply the appropriate compensation measures for the removal of the wetland to accommodate the project.
- Compensation for wetlands will be confirmed during detail design, in consultation with TRCA, and will follow the requirements in the TRCA's Guideline for Determining Ecosystem Compensation.

Please note that the City is committed to continuing to involve TRCA in the decision-making process for this project during detail design, as well as the land use planning activities associated with the future Planning Act application process associated with the surrounding Vaughan Mills Centre Secondary Plan area. This commitment will be clearly documented within the Bass Pro Mills Drive Extension ESR. A draft copy of this ESR, including a copy of the updated final EIS and SWM reports, is tentatively scheduled to be circulated for TRCA's review and comment for a 45-day review period in early May 2022.

Should you have any questions, comments and/or concerns, and/or wish to hold a meeting with the study team to discuss this project in more detail, please do not hesitate to contact the undersigned.

Regards,

Stantec Consulting Ltd.

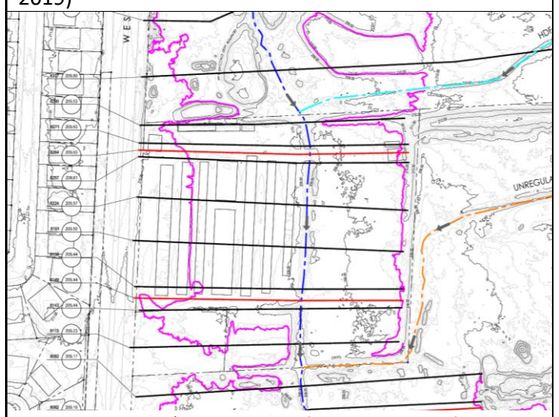
Diana Addley
Senior Environmental Planner
Email: Diana.Addley@stantec.com

Attachment: Comment/Response Table
Revised ToR, Limited EIS
December 2020 TRCA Email Response

c. Hilda Esedebe, City of Vaughan
Peter Cholewa and Jenn Robinson, Stantec Consulting Ltd.
Adam Miller and Harsimrat Pruthi, TRCA

APPENDIX A: TRCA COMMENTS AND PROPONENT RESPONSES

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
Ecology Comments (Environmental Impact Study):				
			Staff notes that land uses associated with the Vaughan Mills Secondary Plan area, immediately north of the proposed Bass Pro Mills Drive extension have not been finalized. This includes the proposed alignment and extent of the Black Creek corridor and associated natural heritage system. The results of the Vaughan Mills Secondary Plan land use planning processes will influence the Bass Pro Mills Drive extension, and associated detail design. Thus, advancing the EA may be premature at this stage. TRCA encourages that the EA be integrated with land use planning activities, considering that land uses will influence the road design and vice versa.	As indicated within the Request for Proposal (RFP) for this project (i.e., RFP19-246), which was issued for TRCA's review and comment in 2019, "*appeals before the Local Planning Appeal Tribunal with regards to the VMCSP and related applications for amendments to the City of Vaughan Official Plan, the Secondary Plan, and the Zoning By-law Amendments. The exact land use of those developments may not be available until a settlement is reached, which may take a longer time beyond the study period*". The study team included reviews of alternatives for the ultimate location of Black Creek in anticipation of the detailed design. The expectation is that the Ontario Land Tribunal hearings will be complete for detail design, and in the meantime, the EA is being completed. The City's leadership is committed to advancing the extension of Bass Pro Mills Drive to improve the transportation network in the area which is much needed.
1.	Unmapped Feature (Sections 5.1.3.3, 5.2.6.3 and 6.5.3) As per previous TRCA directions, considering the challenges of conducting a site visit for appropriate assessment of Headwater Drainage Feature (HDF) on site, a conservative approach to management strategies is required and the precautionary principle should apply. Based on aerial images, it appears to TRCA staff that this feature connects the wetland community (MASM1) to the Black Creek, to the south of the commercial property located to the west of the study area (see images below). Therefore, it should be considered a HDF and part of the TRCA regulated area (as mentioned before, the text of the Regulation takes precedence over the preliminary screening mapping). Please update the EIS accordingly. Please revise all related potential impacts and mitigation measures.	We have updated our figures to highlight this feature and labelled it on our figures as "Potential Headwater Drainage Feature". However, this is new information that was not shared with Stantec/the City at previous meetings with TRCA and/or follow up comments. Specifically, TRCA previously noted that the proposed approach impacts Black Creek, a single tributary, and the wetland. Regardless, this HDF will not be impacted by the footprint of the proposed extension of Bass Pro Mills Drive, therefore we respectfully suggest that TRCA allow for the assignment of classifications and management recommendation for this feature to take place at a later time, in particular when development planning is undertaken by the City and others in the future.	Addressed. The feature has been recognized as a potential Headwater Drainage Feature (HDF) within the study area, and in the absence of field data, will be treated as a regulated HDF.	Noted.

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
	 urce: Google Earth  urce: York Region Land Information (aerial image from 2019)  urce: Dwg # 3 (Existing Conditions Regional Storm Floodplain Mapping)			

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
2.	Vegetation Communities (Section 5.2.1 and Appendix D) i. Please update Appendix D to provide a break down of occurrence of each species of vascular plants for each Ecological Land Classification (ELC) community. TRCA staff needs additional data for a comprehensive review of the proposed ELCs. ii. Please clarify why the entire wetland located at the center of the study area has been classified as Mineral Shallow Marsh (MASM1) as opposed to having a portion of it classified as Mineral Meadow Marsh (MAMM1).	i. The plant list was compiled from the road ROW, and therefore a comprehensive species list by community was not prepared. The dominant species in each community (as assessed from the ROW) are provided in Table 5 (Ecological Land Classification (ELC) Vegetation Types). ii. It was difficult to determine the boundaries of the MASM1 vs MAMM1 communities from the road ROW and/or satellite imagery. The community classification has been revised as MASM1/MAMM1.	Partly Addressed. iii. Not Addressed. Without the field data, TRCA is unable to properly evaluate the proposed Ecological Land Classification communities, and the assessment of direct and indirect impacts to the features or the proposed mitigation recommendations. Should access to adjacent lands remain restricted, please outline known ELC communities and assumed ELC communities and their associated limits, acknowledging which areas have yet to be verified in the field. Efforts to access all features within the study area is recommended. iv. TRCA is concerned that relevant ELC communities are not being included at this time. For example, most of the lands to the north have been classified as MEMM3. However, based on aerial image, it appears there are wetlands communities along the Black Creek corridor, which extend all the way into the EA area. If those features are indeed wetlands, then impact assessment and mitigation measures should be discussed in the document. Please clarify why the area shown with red arrows have been classified as MEMM3. In the absence of specific field data, are there photographic records that could be provided to support this classification?	Assessment of wetland communities was difficult to determine without access to the property. The aerial imagery used in the report was from 2018, which differs from the current site conditions. For this reason, it should not be relied on as an accurate interpretation of Ecological Land Classification (ELC) boundaries. For example, the field has returned to meadow (MEMM3) after not being plowed for a couple of seasons, which differs from the plowed field shown on the aerial imagery on the report figures. The screen shot below shows the line of site from Weston Road (facing east) taken in June 2021 from Google Maps Streetview, which is similar to the site lines that were used in the field to assess the extent of the wetland along Black Creek. From this vantage point, wetland vegetation appeared to only occur along the delineation of Black Creek. It is possible that the boundary of the wetland could extend further beyond this vantage point; however, it could not be determined due to the lack of access. When property access is available during detail design, and prior to the commencement of construction activities, ecological field investigations will proceed to further refine Ecological Land Classification vegetation communities and to collect additional botanical information on the previously inaccessible areas of the property. This will include delineation of the wetland boundaries in the centre of the property and along Black Creek. The wetland assessment will provide the necessary details (size, wetland type and function) in order to apply appropriate compensation measures for the removal of wetland to accommodate the project. Compensation for wetlands will be determined through consultation with the TRCA and will follow the requirements in the TRCA Guideline for Determining Ecosystem Compensation (https://s3-ca-central- 1.amazonaws.com/trcaca/app/uploads/2019/11/27105627/TRCA-Guideline-for-Determining- Ecosystem-Compensation-June- 2018_v2.pdf).

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
				
3.	Significant Wildlife Habitat (Section 6.3.3, Section 7.2.4, Appendix G) Section 5.2.3 (Breeding Birds) state that Virginia Rail and Marsh Wren have been recorded in the Study Area, and that they were assumed to be breeding in the area. According to the criteria described in the Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 6E (MNRF, 2015) for determining **SWH - Marsh Breeding Bird Habitat**, one of the defining criteria for "*Confirmed SWH*" is "*presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren OR 1 pair of Sandhill Cranes OR breeding by any combination of 5 or more of the listed species*[1]". Given that: • both Virginia Rail and Marsh Wren were recorded in the area, and • the number of nesting pairs of Marsh Wren is unknown or has not been specified it is unclear why this community hasn't been considered a Candidate **SWH -Marsh Breeding Bird Habitat**. Appendix G states that "*the wetlands are unlikely to support the required number of species to qualify as SWH*". This seems to be speculative and does not refute the potential for 5 pairs of Marsh Wren to be on site. In addition, the presence of Virginia Rail, American Woodcock and Alder Flycatcher points towards a relatively high-functioning wetland. Based on the application of the precautionary principle, and in the absence of targeted callback surveys for marsh breeding birds, TRCA advises this area to be considered a Candidate SWH for Marsh Breeding Bird	The EIS has been revised to include Candidate Marsh Breeding Bird Habitat in the SWH assessment section in 6.3.3 as follows: The MASM1 wetland communities are the only communities with the potential to provide specialized habitats for wildlife (marsh breeding bird habitat). There were two marsh breeding bird habitat indicator species observed during field investigations: Virginia Rail and Marsh Wren. Targeted callback surveys for marsh breeding birds were not completed during field investigations; however, they are recommended to be completed during detailed design to confirm whether marsh breeding bird habitat is present. Added Candidate Marsh Breeding Bird Habitat to Section 7.2.4.1 (impacts) and Section 8.6.1 (mitigation).	Partly Addressed. While the EIS has been revised to indicate the feature is a candidate Marsh Breeding Bird Habitat, the EIS does not discuss potential impacts to the candidate Significant Wildlife Habitat nor proposes any mitigation measures. Instead, it defers targeted callback surveys for marsh breeding birds to detailed design. As per previous TRCA direction, in the absence offield data, the precautionary principle should apply. The feature should be assumed SWF (Marsh Breeding Bird Habitat) and all impact assessments and proposed mitigation measures are to be discussed at this stage. Alternatively, a targeted callback survey for marsh breeding birds could be conducted at this stage.	Stantec feels that the mitigation that was recommended for wetlands and migratory birds also affords protection to marsh birds if present. We have assumed that the feature is candidate SWH. Marsh bird surveys cannot be conducted at this stage due to lack of access. During DD, call playback surveys are recommended to inform the wetland compensation. Compensation for wetlands will be determined through consultation with the TRCA and will follow the requirements in the TRCA Guideline for Determining Ecosystem Compensation (https://s3-ca- central-1.amazonaws.com/trcaca/app/uploads/2019/11/27105627/TRCA-Guideline-for-Determining- Ecosystem-Compensation- June-2018_v2.pdf).

[1] American Bittern, **Virginia Rail**, Sora, Common Moorhen, American Coot, Pied-billed Grebe, **Marsh Wren**, Sedge Wren, Common Loon, Sandhill Crane, Green Heron, Trumpeter Swan, Black Tern, Yellow Rail

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
	Habitat. Please revise the EIS to indicate this area is a **Candidate SWH for Marsh Breeding Bird Habitat**. Please revise all related preliminary impact assessment and mitigation measures.			
4.	Headwater Drainage Feature A (Section 7.3.2) TRCA does not support reduction of the length of drainage features. Please ensure that the proposed design will maintain the length of the feature (e.g., meanders can be added to the design). Please update the EIS.	During detail design, reduction in length within this human-made feature will be offset by natural channel design techniques to relocate and enhance the HDF and its riparian area. For impacts deemed unavoidable, such as loss of channel length, compensation will be required. The compensation requirements will be determined according to the TRCA Guideline for Determining Ecosystem Compensation (https://s3-ca-central-1.amazonaws.com/trcaca/app/uploads/2019/11/27105627/TRCA-Guideline-for-Determining-Ecosystem-Compensation-June-2018_v2.pdf).	Not Addressed. The headwater Drainage Feature A has been assessed for conservation management, meaning that natural channel designs techniques should be used to maintain or enhance its ecological and hydrological functions. While relocation of the feature is possible, please consider efforts to maintain or enhance ecological and hydrological functions. TRCA encourages that the drainage feature and its associated riparian functions be contained within an open space corridor. Should this not be feasible, maintenance of the hydrological function and compensation for any lost ecological function will be required. Please update the report to document how HDF A will be managed.	The footprint of the proposed Bass Pro Mills Drive Extension encroaches onto HDF A which has been linked to the 'Conservation' management option using the Evaluation, Classification, and Management of Headwater Drainage Features Guidelines (TRCA/CVC 2014). During detail design the management recommendations associated with the 'Conservation' option shall be taken into consideration such as: 1) Maintain, Relocate and/or enhance the HDF A with a riparian zone corridor; 2) Use natural channel design techniques to maintain or enhance overall productivity of HDF A; 3) Maintain the downstream connection to Black Creek; 4) Maintain on-site flows using mitigation measures. Maintaining a HDF A in place is not an option due to the proposed alignment of Bass Pro Mills Drive Extension. Other factors that contribute to the valued functions of HDF such as maintaining or improving the riparian zone corridor and maintaining on-site flow may not be options either due to land use constraints on adjacent properties not controlled by the City. For impacts deemed unavoidable, such as loss of channel length, loss of riparian zone corridor or loss of catchment drainage /on-site flows, compensation will be required. The compensation requirements will be determined according to the Guideline for Determining Ecosystem Compensation (TRCA 2018).
5.	Wildlife Crossing (Section 8.7) Section 8.7 states that TRCA's Crossing Guideline for Valley and Stream Corridors and CVC's Fish and Wildlife Crossing Guideline are to be consulted if during detailed design the wetlands are found to support turtles. This approach is not supported by TRCA. These guidelines should necessarily inform the requirements for the proposed crossings, both for aquatic and terrestrial wildlife passages. Where possible, please combine both aquatic and terrestrial wildlife passage in one larger culvert. Please note that the terrestrial passages should aim to provide safe passage for mid-sized mammals. Please check CVC Fish and Wildlife Crossing Guidelines for specific requirements for sizing and openness ratio.	Section 8.7 of the EIS has been revised as follows: TRCA's Crossings Guideline for Valley and Stream Corridors (TRCA 2015) and CVC's Fish and Wildlife Crossing Guideline (CVC 2017) should inform the requirements for the proposed crossings to provide passage for both fish and terrestrial wildlife, including mid-sized mammals. Where possible, the design should combine both aquatic and terrestrial wildlife passage in one larger culvert. CVC's Fish and Wildlife Crossing Guideline should inform the specific requirements for sizing and openness ratio for culverts that may be used by fish and terrestrial wildlife.	Addressed.	Noted.

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
6.	Staff requests that a wetland evaluation following the Ontario Wetland Evaluation System (OWES) is completed. While the EIS suggests this evaluation to be deferred to detailed design, TRCA recommends that the evaluation is conducted at this stage, to better inform road and culvert alignments, overall construction/staging requirements, mitigation and compensation requirements. Alternatively, if the evaluation needs to be deferred to a later stage (e.g., detail design), the City of Vaughan and consultants on the project should work on the assumption that the feature is a Provincially Significant Wetland.	In order to accurately assess the wetland feature, the evaluation will need to be deferred to a later stage when property access is granted. Section 8.2 outlines the recommendation to complete an OWES evaluation to inform wetland compensation. There are no Provincially Significant Wetland Features identified within 750m from the wetland to consider the wetland for potential complexing, so the wetland would need to qualify as significant based solely on its own characteristics. The wetland contains an abundance of Phragmites, which would limit its biodiversity score. Size (social component) and hydrological components would likely be the most important qualities to consider for the evaluation.	Not Addressed. Please characterize the wetlands within and adjacent to the study area to document ecological function at this stage in the EA. Recognizing that access to parts of the wetlands is restricted as a result of property access limitations, please rely on all available data and additional data (e.g., targeted callback surveys for marsh breeding birds) that will be collected to support characterization. Additional study should be carried out at this stage in the EA to inform detail design. Characterization of the wetland is critical to informing an evaluation of impacts, proposed mitigation, and any required compensation.	Stantec did not have access to assess the wetlands within the Study Area. The size of the Study Area was established to document features on adjacent lands. Assessing lands outside of the Study Area is beyond the scope of this study. Targeted playback surveys are not possible due to lack of access. The wetland can be further characterized during DD when access is available. Compensation for wetlands will be determined through consultation with the TRCA during detail design and will follow the requirements in the TRCA Guideline for Determining Ecosystem Compensation (https://s3-ca-central- 1.amazonaws.com/trcaca/app/uploads/2019/11/27105627/TRCA-Guideline-for-Determining- Ecosystem-Compensation- June-2018_v2.pdf).
7.	The Living City Policies indicates that the natural features protection hierarchy should be applied in all developments: avoidance, minimization of impacts, and then mitigation/restoration. Compensation should be used as a last resource, and not as the default. Please provide documentation demonstrating that this hierarchy has been followed in the determination of the proposed alignment.	A Recommended Alignment discussion has been added in Section 7.1.1 which provides context for why the MASM1/MAMM1 wetland and other natural features were not completely avoided. Impacts to natural features are outlined in Section 7.0 and minimization of impacts in the forms of recommended mitigation measures and compensation are provided Section 8.0. As noted previously, this study is being completed following the MCEA process, and as such all reasonable alternatives have been considered. The decision-making process is documented within the public consultation materials shared with the public and other stakeholders during the course this study, including the Environmental Study Report (ESR). In summary, the need and justification for the roadway extension has been demonstrated through the Vaughan Mills Centre Secondary Plan (VMCSP), as well as the traffic analyses completed as part of this MCEA study. With respect to proposed alignment, other alternatives were considered at a broader level; however, were not carried forward for further consideration given their impacts to private property, business operations, costs, etc. Further, no alternatives that would avoid impacts to the existing wetland feature are feasible, given its proximity to the existing terminus of Bass Pro Mills Drive and associated geometric requirements of the new roadway. Also, potential impacts to natural features was considered as part of a number of other criteria that were used to compare the advantages and	To be addressed during detail design. The EIS states that: “A detailed evaluation of the alternative alignments will be provided in the Environmental Study Report (ESR).”	Noted.

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
		disadvantages of alternatives design concepts (including cross-section and alignment alternatives). Please also note that the wetland feature is situated within the VMCSP area, which is being planned for future development, subject to future review under the Planning Act process.		
8.	For the proposed realignment of the Black Creek, please submit the Channel Modification Design and Submission Requirements, available at: https://trcaca.s3.ca-central-1.amazonaws.com/app/uploads/2016/02/17185407/CHANNEL_MODIFICATION_REQUIREMENTS.pdf Please note that TRCA requires that a natural channel design is applied to the design of the realigned channel.	Noted. The following report: The Fluvial Geomorphological Assessment Black Creek at Bass Pro Mills Drive From Highway 400 to Weston Road Vaughan, Ontario prepared by Stantec (September 2021) includes a recommendation that all future channel realignments follow the Channel Modification Design and Submission Requirements. This will be completed during detail design.	To be addressed during detail design.	Noted.
9.	Please demonstrate that all proposed crossings and culverts comply with the following Guidelines: a. Crossing Guideline for Valley and Stream Corridors https://drive.google.com/file/d/0BxjqkzmOuaaRMmt1TmdyWUlmUDg/view?resourcekey=0-28vf3yb-j9nnP99nNDPr6A b. Fish and Wildlife Crossing Guideline https://cvc.ca/wp-content/uploads/2017/05/CVC-Fish-and-Wildlife-Crossing-Guidelines-final-web.pdf	a. The recommendations in the EIS follow the Crossing Guidelines for Valley and Stream Corridors. The guideline notes that if spanning the meander belt is not feasible then spanning the 100-year erosion limit should be considered to minimize the risk associated with channel migration over time. We have calculated the 100-year erosion limit in our meander belt reporting as per this TRCA guideline and have recommended future crossings to have a minimum span of 14 m, which will take into account this erosion limit. b. The report recommends that the detail design of any watercourse crossings follows the Fish and Wildlife Crossing Guidelines by CVC (2017).	To be addressed during detail design.	Noted.
10.	For any impacts deemed unavoidable, such as loss of wetland, compensation will be required. The Compensation requirements will be determined according to the TRCA Guideline for Determining Ecosystem Compensation (https://s3-ca-central-1.amazonaws.com/trcaca/app/uploads/2019/11/27105627/TRCA-Guideline-for-Determining-Ecosystem-Compensation-June-2018_v2.pdf). Since the removal of wetland area will negatively impact a feature that provides multiple Significant Wildlife Habitat (SWH) functions, TRCA requests that both Land Base AND Ecosystem Structure compensation are provided.	Text added to Section 8.2 to explain that ecosystem structure and functions must also be compensated for.	Not Addressed. The text added to the EIS does not reflect TRCA's previous comment. Please identify compensation objectives and targets that will be applied to the project. TRCA encourages that compensation for feature losses be considered comprehensively. Thus, losses associated with the road construction should be considered in conjunction with any proposed losses associated with development within the Secondary Plan area. A comprehensive compensation strategy should consider all opportunities to replace features within and/or in close proximity to the losses – for instance within the natural heritage system associated with the Secondary Plan. Also, prior to quantification of wetland loss, it is recommended that wetland limits be delineated on site by TRCA staff, the environmental consulting team and certified Ontario Land Surveyors. Once the area of wetland is known (through field verification), then calculation of	We agree that the wetland should be delineated and staked in the field with TRCA when land access is available. This will provide the necessary information for compensation. Compensation for wetlands will be determined through consultation with the TRCA during detail design and will follow the requirements in the TRCA Guideline for Determining Ecosystem Compensation (https://s3-ca-central- 1.amazonaws.com/trcaca/app/uploads/2019/11/27105627/TRCA-Guideline-for-Determining- Ecosystem-Compensation- June-2018_v2.pdf).

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
			proposed area of loss can occur.	
Ecology Comments (Stormwater Management Report):				
11.	The report and drawings show a drainage feature to the south of the study area as an "unmapped" and "unregulated" feature (please refer to images shown on comment 1). Given that the site visit could not be undertaken for appropriate assessment, this feature should be considered a HDF and part of the TRCA regulated area (as mentioned before, the text of the Regulation takes precedence over the preliminary screening mapping). Please update the SWM Report accordingly. Please revise all related potential impacts and mitigation measures.	We have updated our figures to highlight this feature and labelled it on our figures as "Potential Headwater Drainage Feature". This HDF will not be impacted by the footprint of the proposed extension of Bass Pro Mills therefore we respectfully suggest that TRCA allow for the assignment of classifications and management recommendation for this feature to a later time, in particular when development planning is undertaken for this area.	Addressed.	Noted
12.	For the TRCA Wetland Water Balance Risk Evaluation (shown on page 62 of the SWM Report), please clarify/provide the following: a. Please provide drawings showing each one of the data entered for the calculation of the magnitude of potential hydrological change (e.g. the extent and size of the pre-development catchment, area of the wetlands' catchment lying outside of any identified natural system, percent of impervious cover planned within the proponent's holdings, proposed extent and size of post-development catchment, etc). b. For the total development area of catchment, please clarify how the natural system and natural hazard limits were calculated. Please let us know the spatial layers were used to determine them. c. Please clarify why the percentage (%) of replaced pervious cover to impervious cover under the evaluation criteria is shown as 0%, since there will be changes in pervious cover.	a. Drawing D.2.1 has been prepared and illustrates various areas used in the water balance risk evaluation. b. TRCA's Regulated Area (2020) is shown within Drawing D.2.1. For this assessment a 30 m Wetland buffer has conservatively been assumed. c. The value of replaced pervious cover to impervious cover is 0% as the Site is not located within a recharge area.	Partly Addressed. a. Partly Addressed b. Partly Addressed. The exact limits of the features within the study area have not been delineated in the field, so the natural systems as shown in plans and reports do not necessarily reflect the conditions in the field. Please note that once further refined limits of existing conditions and features are provided, the calculations and drawings related to the wetland risk evaluation assessment might need to be revised. c. Addressed.	Noted. Please see responses provided above.
Water Resources Comments (Floodplain Management):				
13.	Please provide a digital version of the hydraulic modelling which includes a project file. When the provided flow and geometry files were imported the model ran into an error and wouldn't compute. TRCA will review the model completely once it has been received.	A copy of the model has been included with this submission.	The digital model has been received. TRCA will finalize review of the model once all modelling comments below have been addressed.	Noted.

ITEM	TRCA COMMENTS (January 25, 2022)	Study Team Comments (February 14, 2022)	TRCA COMMENTS (April 1, 2022)	Study Team Comments (April 21, 2022)
14.	Please confirm the depth blocked within the culvert as it appears to be 0.3 m on drawing 4 (proposed conditions) but is modelled as 0.1 m. Please clarify and revised as necessary.	The cross section on Drawing 4 has been revised to match the proposed HEC-RAS geometry. The 1.52 m dimension is from culvert soffit to Channel Invert.	The modelling and drawing have been revised and are now consistent. The comment has been addressed.	Noted.
15.	Once TRCA's model review has been completed and is approved, TRCA requests that the FPM sheets be prepared to TRCA's specifications in order to be incorporated into TRCA's flood plain mapping program.	Noted.	This request has been noted in the response matrix. The comment remains outstanding until the modelling comment below has been addressed.	Noted. All requested information will be provided to TRCA upon TRCA's approval of the provided HEC-RAS model.
16.	In order for TRCA to verify that catchment 46.16 does not contribute to the Black Creek subwatershed, please provide details/drawings to demonstrate that flows from this catchment are routed elsewhere, particularly during the Regional storm where storm sewers are not considered and overland flow is used.	Please refer to Figure B.2.1 in Appendix B2.	Figure B.2.1 was provided in Appendix B, however the major overland flow arrows still appear to direct some portions of the catchment to the east towards Black Creek. It is TRCA's suggestion that the original TRCA flows be used in the hydraulic modelling as they are similar in magnitude and unlikely to cause difficulties for this project. Otherwise TRCA will require further overland flow details and drainage catchment delineation to confirm what portion of 46.16 should be removed, if any.	The HEC-RAS model will be revised using TRCA's original flow file.
Water Resources Comments (Stormwater Management):				
17.	Please note that the target UFR equations need to consider the pre-development drainage area within the ROW to the outlet location in the watercourse. From Drawing 1 (Existing Conditions) it appears that the pre-development area that should be used would be smaller than the 2.22 ha proposed.	Under existing conditions, the proposed 2.22 ha ROW area discharges flows to the outlet location. As illustrated on Drawing 1, existing Bass Pro Mills Drive discharges runoff via storm sewer to the northern portion of the Wetland. Per Section 2.1 of the SWM Report, the northern portion of the wetland will discharge flows to HDF-A and Black Creek prior to flowing over the trapezoidal weir to the southern portion of Wetland-1.	A figure and description have been provided to justify why 2.22 ha has been used in the calculations. This is satisfactory and addresses the comment.	Noted.
18.	TRCA is pleased to see the storage volumes required to meet TRCA's SWM criteria provided within the SWM report. It would be preferred if preliminary locations and footprints of LID measures/oversized pipes could be presented to demonstrate the feasibility of providing the required storage volumes at the EA stage in case there is a need for additional lands or a larger ROW. Please provide all details possible for the locations and sizing of these measures to ensure feasibility.	Per Section 5.3, LIDs will be incorporated wherever possible to provide the require Quality Control. Per Section 5.5, to achieve the erosion control requirement a footprint area of approximately 407 m^2 is required. Based on the Plan and Profile, 1400 m^2 of Boulevard is available for LIDs. Table 9 summarizes the various oversized pipe options which satisfy the total 100-year storage requirements.	The response letter notes that the required footprint to meet the 5 mm on- site retention requirement is 407 m2 and the available space within the boulevard is 1400 m2 based on the Plan and Profile drawing. Please provide this drawing with the potential footprint area identified to help ensure it is considered and implemented at the detailed design stage. Further, if there are drawings available showing the potential location of the oversized pipes to meet TRCA's quantity control requirement please provide the plans to TRCA. It is TRCA's preference that the feasibility of these measures be explored at the EA stage to increase the likelihood of their implantation at detail design.	A drawing will be provided which highlights the available boulevard areas where LIDs can be incorporated. The oversized pipe sizes and locations will be provided during detailed design as there are many different configuration options available to achieve the storage volumes outlined in Table 8.

Robinson, Jennifer

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Tuesday, May 3, 2022 6:03 PM
To: Mikolajczak, Margaret (MTO)
Cc: Glass, Heather (MTO); Janke, Aaron (MTO); Uddin, Zaka (MTO); Szymanski, Frederic (MTO); Van Voorst, John (MTO); Sadek, Sandra (MTO); Day, Mina (MTO); Molai, Sam (MTO); tom.hewitt@ontario.ca; Cholewa, Peter; Addley, Diana; Robinson, Jennifer
Subject: Bass Pro Mills Extension EA - Highway 400 Crossing - MTO
Attachments: HSBM-DCSO2018-07-CyclingConstrain-181022.pdf; Bass_Pro_Mills_Typ_section - (20220427).pdf; Bass Pro Mills EA Plan-COMBINED SET.pdf

Importance: High

Hello Margaret,

I hope this email finds you well. Regarding the above noted project, the following is a follow-up to the February 9 meeting with MTO and the March 9 comments received from MTO regarding the Traffic Analysis:

In relation to these meetings with MTO and comments received, the EA project team has examined and deliberated on various options for the Highway 400 crossing location to provide adequate provisions for cyclist and pedestrian activity, including those requiring mobility assistance, at the Bass Pro Mills bridge structure over Highway 400. The various schemes examined by the project team considered the existing General Bridge Arrangement, MTO and other (TAC) design guidelines, cost, property impacts, functionality and safety.

The options considered ranged from ‘do nothing’, modify existing structure to actual bridge widening; with or without a separate accompanying pedestrian bridge depending on scenario option examined.

Options that did not require any widening of the bridge sub-structure, yet satisfying prevailing criteria, are obviously more economical solutions (estimated costs of $2M +/-) to provide adequate and safe measures for non-vehicle traffic at the bridge crossing. The underlying objective for extending Bass Pro Mills from Highway 400 to Weston Road is to alleviate area traffic congestion, provide direct east west connection between Jane Street and Weston Road and to promote emerging area development; all at an economical cost. To recommend a solution ($10M - $15M bridge widening/separate pedestrian structure) for the highway crossing will drastically increase the project cost and have property impact (north-east quadrant) to achieve the project objective, without providing any additional benefit to functionality or safety.

The project team also took into consideration timelines associated with Ministry planning for the widening of Highway 400 to 10-lanes and the Region of York planning for the improvement of Langstaff Road and Highway 400 interchange south of Bass Pro Mills. Given that both of these external projects and implications to the Bass Pro Mills project are undermined at this time, it is further prudent that the EA recommendation avoid a widening of the Bass Pro Mills structure over Highway 400.

City Financial Planning and Capital Programming provides that the extension of Bass Pro Mills to Weston Road proceeds to construction in 2027 and ideally in concert with the Region of York

widening of Weston Road. To meet this timeline, the Bass Pro Mills ESR is planned to be filed for public 30-day review in June, with circulation to the agencies in early May.

The EA project team will be recommending that the existing bridge crossing over Highway 400 be modified to provide a 1.8 m wide sidewalk on each side, 500mm shoulder clearance, 4 vehicle lanes at 3.5m each, and a raised centre 1.2m median (see attached GA) and that the design modifications be based on a 60km/hour design speed.

Ministry Design and Contract Standards Office #2018-07 (attached) discusses incorporating cycling facilities into bridge rehabilitation projects within provincial highway rights-of-way and recognizes that it is not always feasible to apply design guidelines that are used for design of provincial highways and for such situations, consideration may be given to apply alternative design guidelines or aspects at the lower end of the design domain. The Ministry policy statement allows the narrowing of such features as centre islands and shoulders. The EA recommendation reflects the MTO policy statement.

The following Table demonstrates that the EA recommendation satisfies criteria and permissiveness under MTO policy #2018-17.

	Sidewalk (m)	Lane Width (m)	Traffic Median	Railing Height (m)	Shoulder Width (m)
Minimum Required	1.8	3.5	1.2	1.37	0.5
Parameter Proposed	1.8	3.5	1.2	1.37	0.5
Standard/ Guideline/ Reference	AODA	MTO Design Supplement Exhibit 4-B	City Standard/MTO #2018-07	CHBDC	MTO Design Su Exhibit 4-U / TA 4.10.1 (60 Desig
Compliance	Yes	Yes	Yes	Yes	Ye

The EA Study will further recommend that signage be posted on the bridge advising cyclists to dismount before crossing the structure and that design criteria be further reviewed at detail design stage with MTO and the City of Vaughan.

Preliminary Design Plans associated with the recommended GA are also attached; wherein dual lefts from the Highway 400 northbound off ramp are provided.

MTO can elect to submit comments at this time or defer submitting comments until formal circulation of the draft ESR is made. The project team feels that the attached addresses the MTO requirements and comments received during the EA consultation process and will be well received for acceptance within the realm of the EA study.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager

Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Thursday, March 10, 2022 4:40 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Subject: RE: [External] Bass Pro Mills Extension EA - Draft Highway 400 Crossing

Thank you Hilda.

Margaret

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: March 10, 2022 2:36 PM
To: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Glass, Heather (MTO) <Heather.Glass@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>
Subject: RE: [External] Bass Pro Mills Extension EA - Draft Highway 400 Crossing

Hi Margaret,

Thank you for your email.

Regarding the survey data, as the City is committed to completing the Bass Pro Mills EA within the next two-three months, we have used the elevations found on the GA for the Bass Pro Mills crossing. Survey data and any shifts of the Highway 400 mainline can be obtained for detailed design purposes at that time.

Comments from the traffic office have been noted.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Wednesday, March 9, 2022 4:33 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Glass, Heather (MTO) <Heather.Glass@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>
Subject: [External] Bass Pro Mills Extension EA - Draft Highway 400 Crossing

Hi Hilda, please find below Ministry comments to your March 3, 2022 submission.

TRANSPORTATION INFRASTRUCTURE MANAGEMENT:

At out previous meeting with Vaughan and your consultant regarding the Bass Pro Mills EA, we had mentioned that we will be able to provide some info related to the project schedule and surveying data.

For surveying data and specific information about the vertical clearance to the existing Bass Pro Mills Underpass, we checked internally whether we may have this existing information but there was no records. Therefore Vaughan would have 2 options: 1) to undertake their own surveying, or 2) we can provide some surveying information by late spring 2022 that will be undertaken by the Hwy 400 widening consultant. **It is worth noting that any surveying information provided by the ministry shall be used as reference only and that by no means the ministry will be liable for this information. It will be up to the City to check the accuracy of the information.**

For the general timeline and implications on Hwy 400 widening project, the consultant has just started the Preliminary design work and is anticipated to complete the PD work by winter of 2022/2023. As part of the work, there will be a crown shift on Hwy 400 mainline and the ministry is yet to confirm whether the vertical clearance to the existing structure may change, this will be determined during the PD phase.

TRAFFIC OFFICE:

We have reviewed the TIS Report and noted some of the salient features of the study such as:

- The extension of Bass Pro Mills Dr would function as a new major collector roadway linking the neighbourhoods from Weston Rd to Jane St.
- The proposed extension of Bass Pro Mills Dr is envisaged to support future development including VMCSP in the study area.
- The extension is aimed at alleviating congestion on Rutherford Road to the north as well.
- The study has considered future transportation improvements envisioned by York in its 2031/2041 development program such as:
    - Langstaff Rd extension to Hwy 7 and its widening between Weston Rd and E of Jane St.
    - Widening of Weston Rd north of Bass Pro Mills Ext to Hawk view Blvd.
    - 2014 Vaughan Mills Centre secondary plan road network and trips.
- Analysis based on microsimulation modelling of the future conditions 2031/2041 scenarios show significant deterioration of the intersection traffic operations in the Primary Study Area

when compared to existing conditions. Many intersections including Hwy 400 NB off ramps at Bass Pro Mills Dr and Langstaff Rd show significantly worse level of service (LOS).
- Total future traffic conditions 2041 indicates 508 v/h NBL at the Hwy 400/Bass Pro Mills S-EW ramp intersection. The volumes are high enough to meet the warrants for double left turn lane.
- The study needs to identify all major traffic issues associated with the extension of Bass Pro Mills Dr and present realistic options for their resolution.

We believe, no additional ramps are proposed. The existing configuration shall be maintained except for few improvements deemed necessary to improve the potential future operations at this IC.

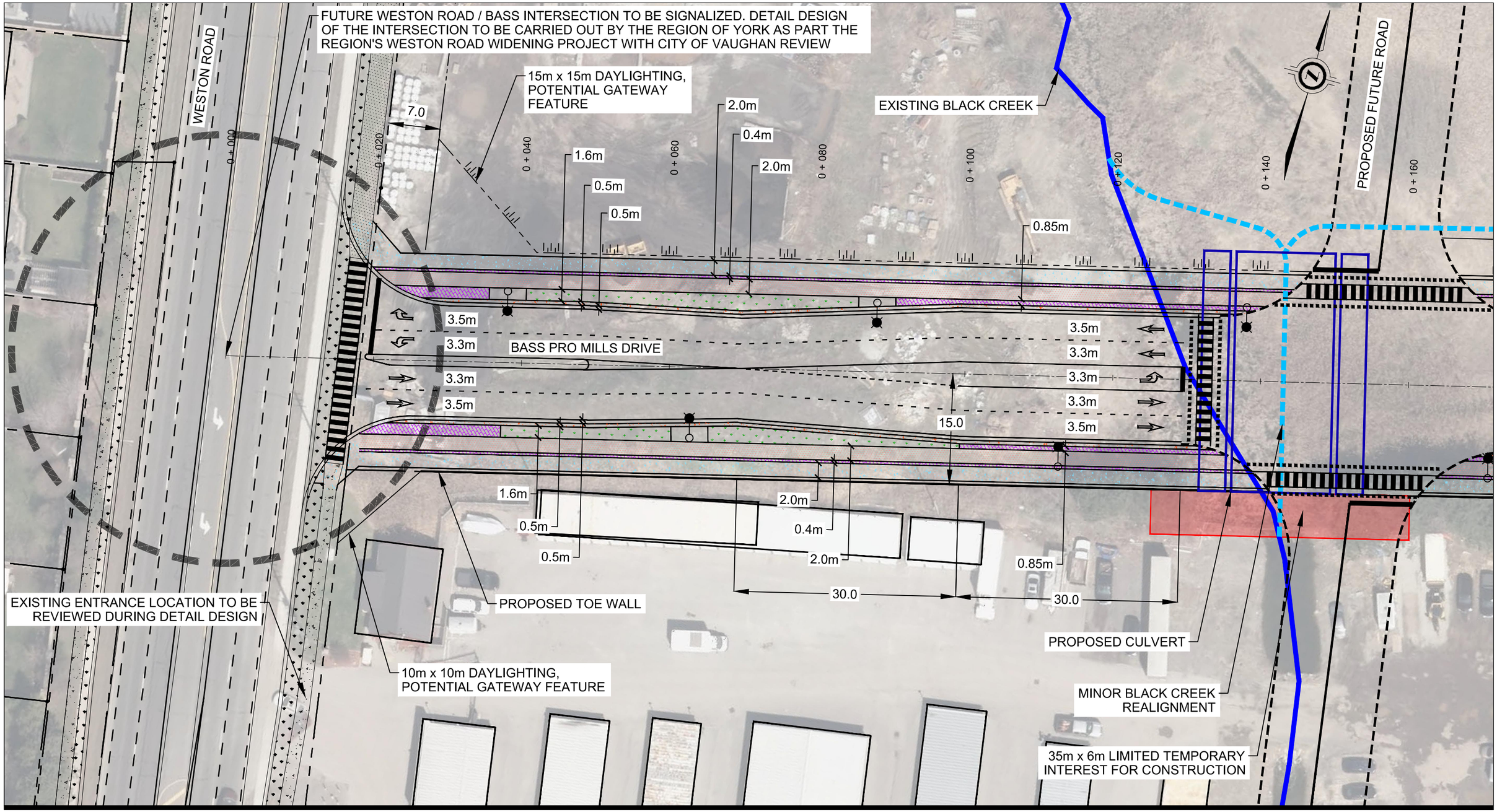
DRAINAGE OFFICE:

No comments

Thank you

Margaret Mikolajczak, C.E.T.
Senior Project Manager
Ministry of Transportation
Corridor Management Section
159 Sir William Hearst Avenue, 7th Floor
Downsview, Ontario M3M 0B7

Phone: 416-235-4269
Fax: 416-265-4267



Stantec

300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

LEGEND:

- CONCRETE SIDEWALK
- STAMPED CONCRETE BUFFER
- BIKE PATH
- BOULEVARD
- CONCRETE STRIP
- CONCRETE BARRIER

Client/Project
CITY OF VUAGHAN

Figure No.
PLAN - 1

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500

LOCATION OF PROPOSED FUTURE ROAD CONNECTIONS TO BE CONFIRMED DURING DETAIL DESIGN, OPPORTUNITY FOR URBAN PLAZAS/POPS AT INTERSECTIONS (VAUGHAN MILLS PUBLIC REALM & STREETSCAPE PLAN)

APPROXIMATE TOE OF SLOPE

INTERMITTENT BIO-SWALE (TYP.)

REALIGNMENT AND CONNECTION OF EXISTING TRIBUTARY

PROPOSED FUTURE ROAD

BASS PRO MILLS DRIVE

PROPOSED TOE WALL

0 + 180
0 + 200
0 + 220
0 + 240
0 + 260
0 + 280
0 + 300
0 + 320
0 + 340
0 + 360

0.65m
2.0m
0.4m
2.0m
2.3m
0.5m
0.5m

3.5m
3.3m
3.3m
3.3m
3.5m

15.0

30.0
30.0

2.0m
0.4m
2.0m
2.3m
0.5m
0.5m

LEGEND:

- CONCRETE SIDEWALK
- STAMPED CONCRETE BUFFER
- BIKE PATH
- BOULEVARD
- CONCRETE STRIP
- CONCRETE BARRIER

Stantec

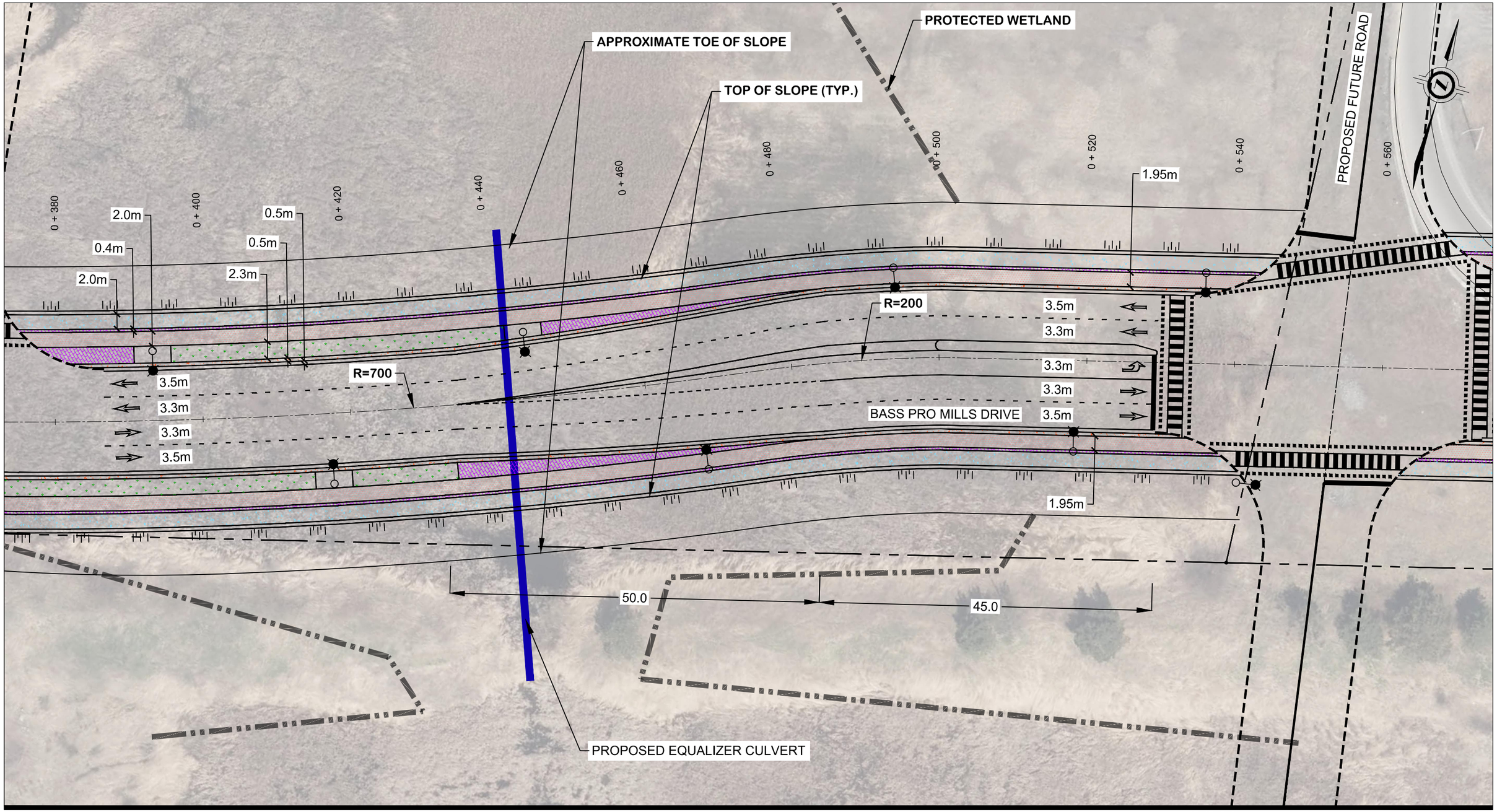
300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

Client/Project
CITY OF VUAGHAN

Figure No.
PLAN - 2

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500



Stantec

300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

LEGEND:

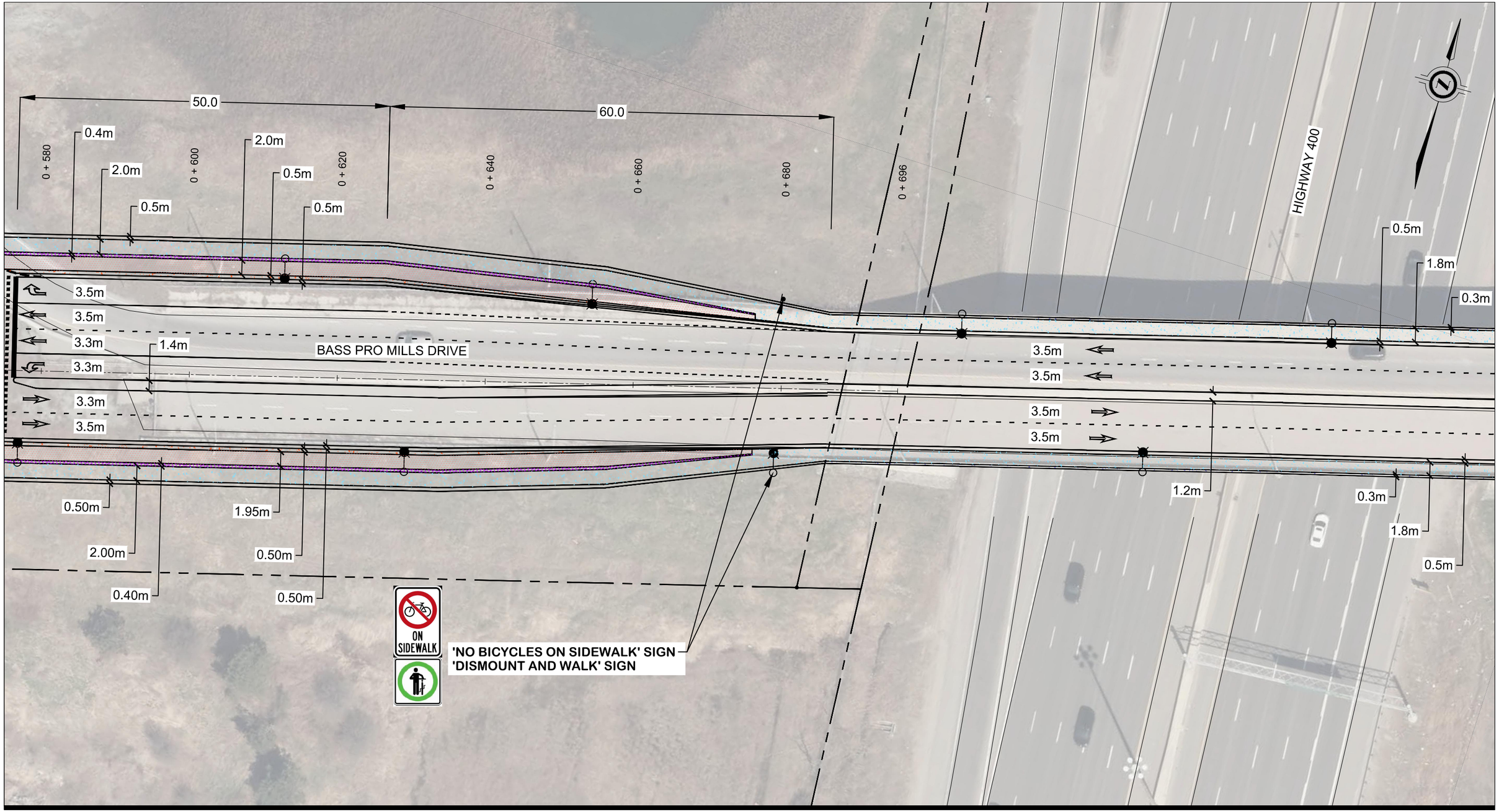
- CONCRETE SIDEWALK
- STAMPED CONCRETE BUFFER
- BIKE PATH
- BOULEVARD
- CONCRETE STRIP
- CONCRETE BARRIER

Client/Project
CITY OF VUAGHAN

Figure No.
PLAN - 3

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500



Stantec

300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

LEGEND:

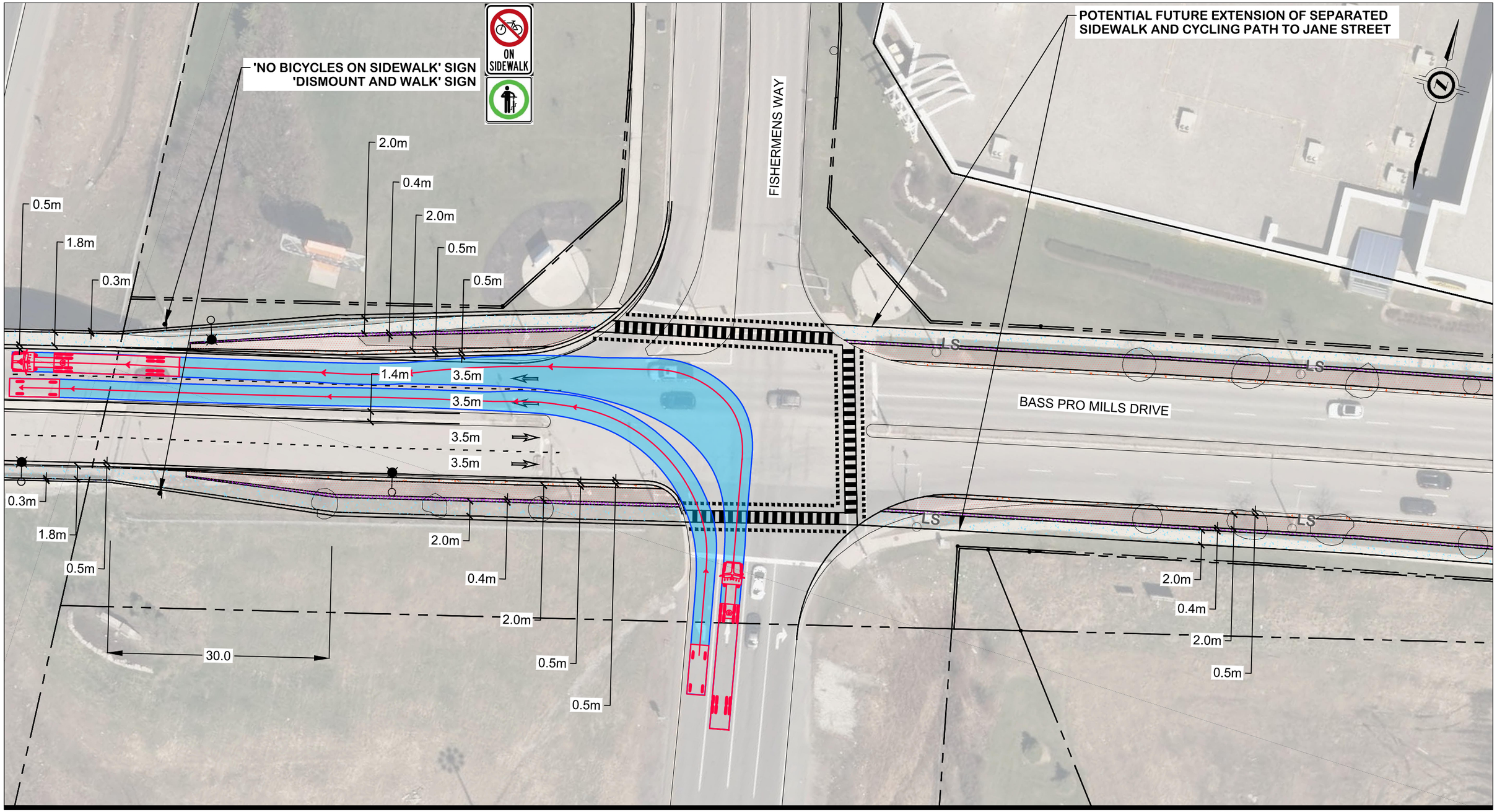
- CONCRETE SIDEWALK
- STAMPED CONCRETE BUFFER
- BIKE PATH
- BOULEVARD
- CONCRETE STRIP
- CONCRETE BARRIER

Client/Project
CITY OF VUAGHAN

Figure No.
PLAN - 4

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500



Stantec

300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

LEGEND:

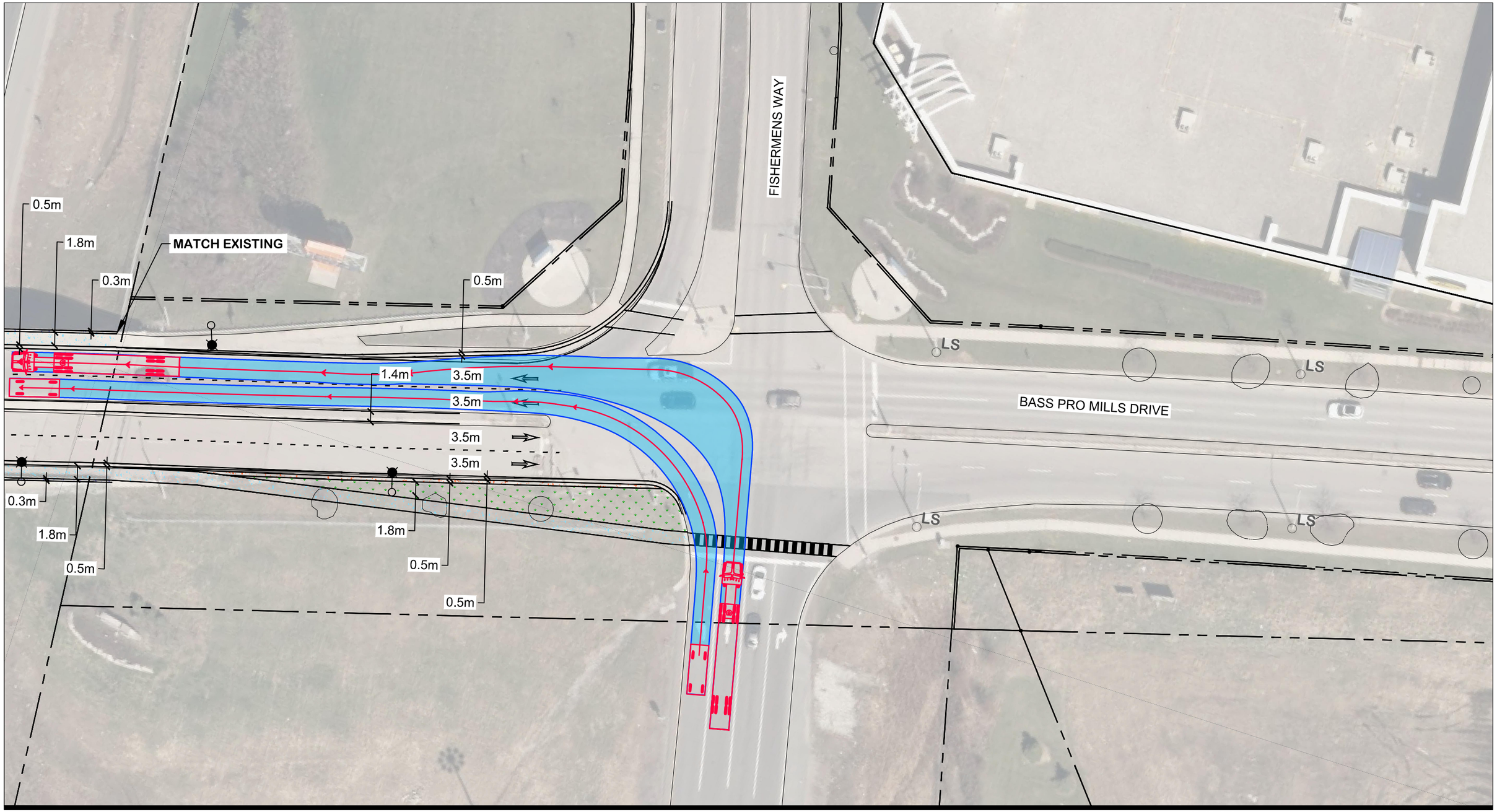
- CONCRETE SIDEWALK
- STAMPED CONCRETE BUFFER
- BIKE PATH
- BOULEVARD
- CONCRETE STRIP
- CONCRETE BARRIER

Client/Project
CITY OF VUAGHAN

Figure No.
PLAN - 5

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500



LEGEND:

- CONCRETE SIDEWALK
- STAMPED CONCRETE BUFFER
- BIKE PATH
- BOULEVARD
- CONCRETE STRIP
- CONCRETE BARRIER

Stantec

300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

Client/Project
CITY OF VUAGHAN

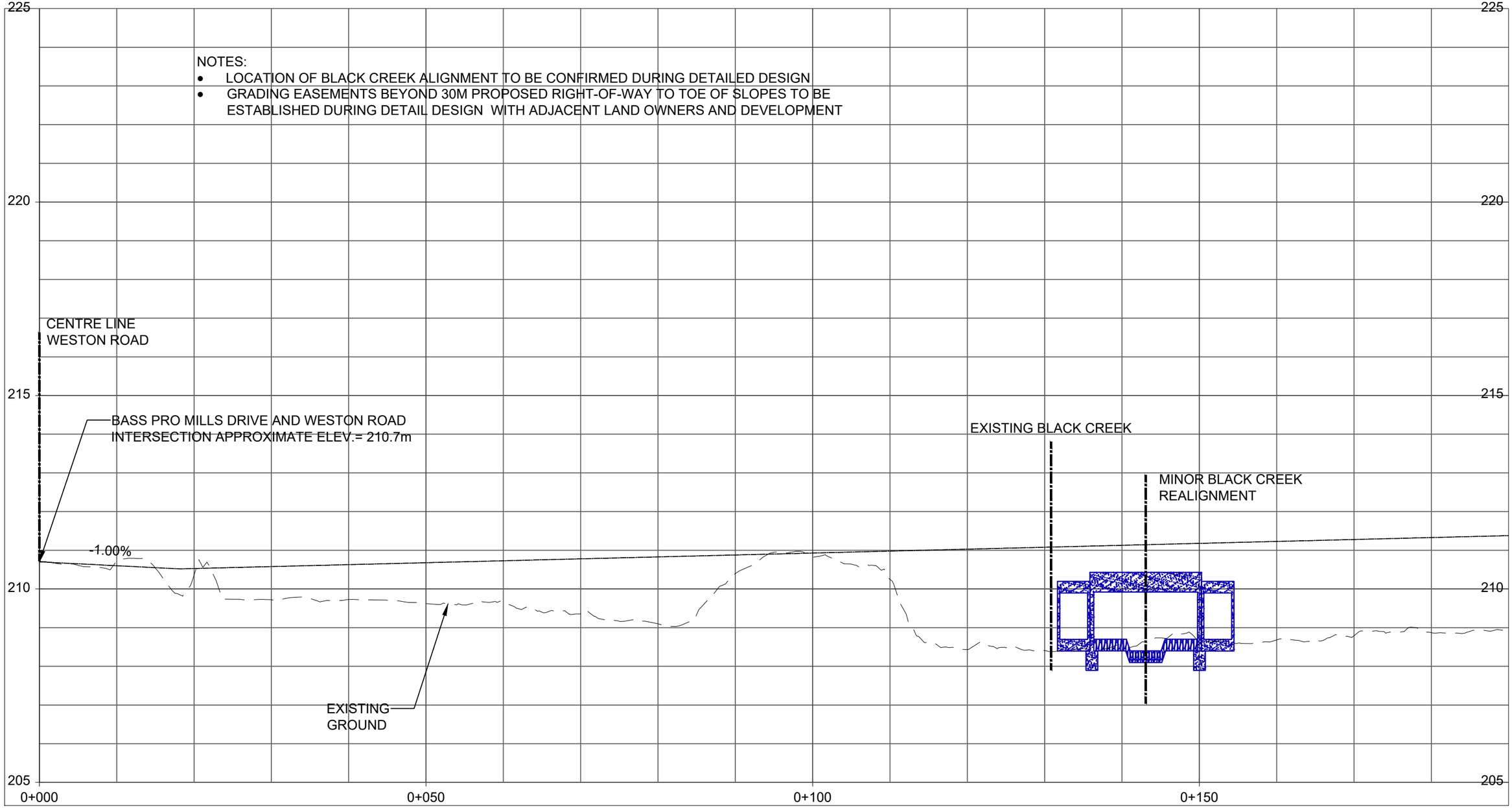
Figure No.
PLAN - 5

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500

NOTES:

- LOCATION OF BLACK CREEK ALIGNMENT TO BE CONFIRMED DURING DETAILED DESIGN
- GRADING EASEMENTS BEYOND 30M PROPOSED RIGHT-OF-WAY TO TOE OF SLOPES TO BE ESTABLISHED DURING DETAIL DESIGN WITH ADJACENT LAND OWNERS AND DEVELOPMENT



Stantec

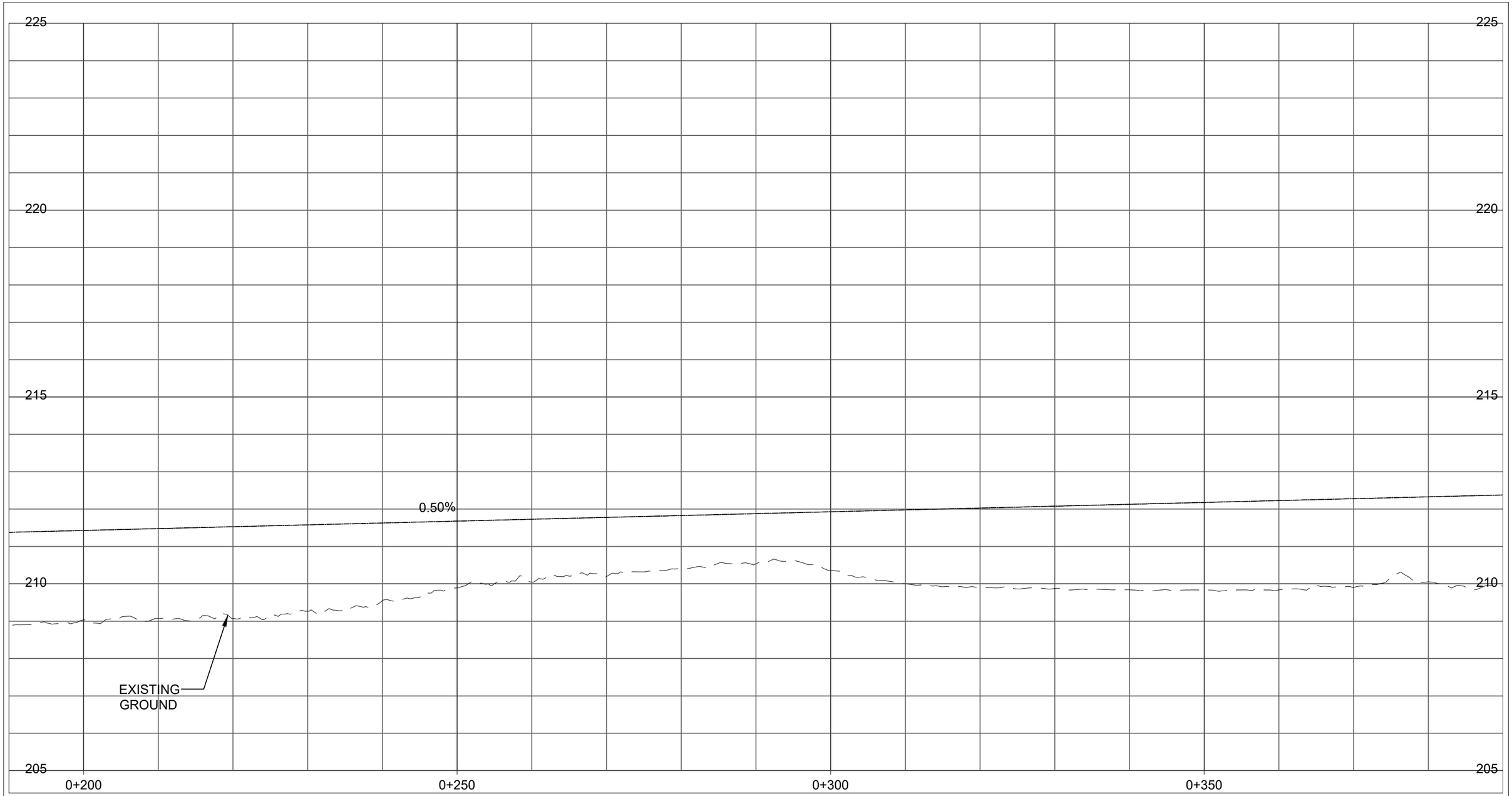
300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

Client/Project
CITY OF VUAGHAN

Figure No.
PROFILE - 1

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500



Stantec

300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

Client/Project
CITY OF VUAGHAN

Figure No.
PROFILE - 2

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500

Stantec

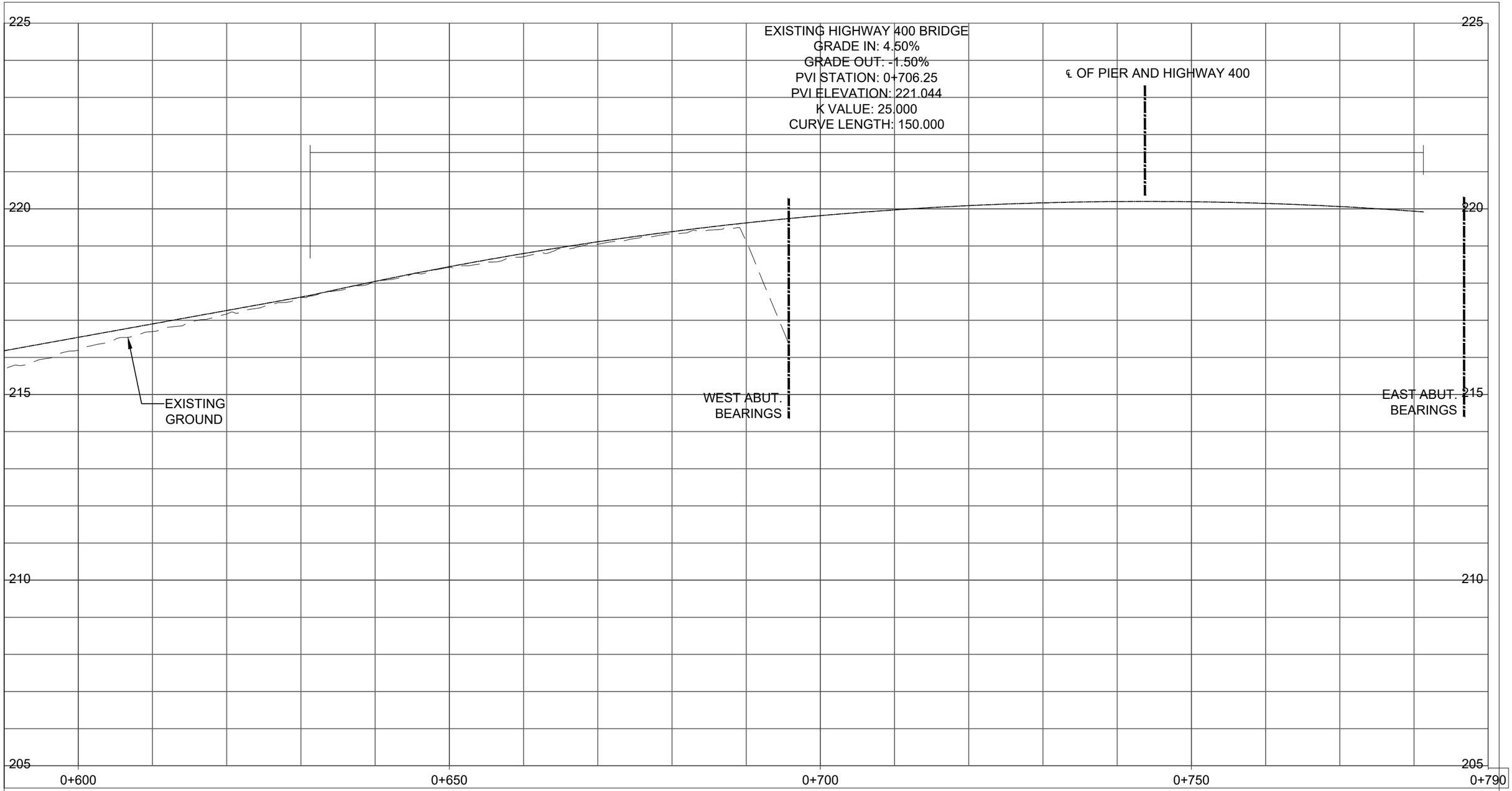
300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

Client/Project
CITY OF VUAGHAN

Figure No.
PROFILE - 3

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500



Stantec

300-675 Cochrane Drive, West Tower
Markham ON
www.stantec.com

Client/Project
CITY OF VUAGHAN

Figure No.
PROFILE - 4

Title
ENVIRONMENTAL ASSESSMENT

Scale
1:500

METRIC

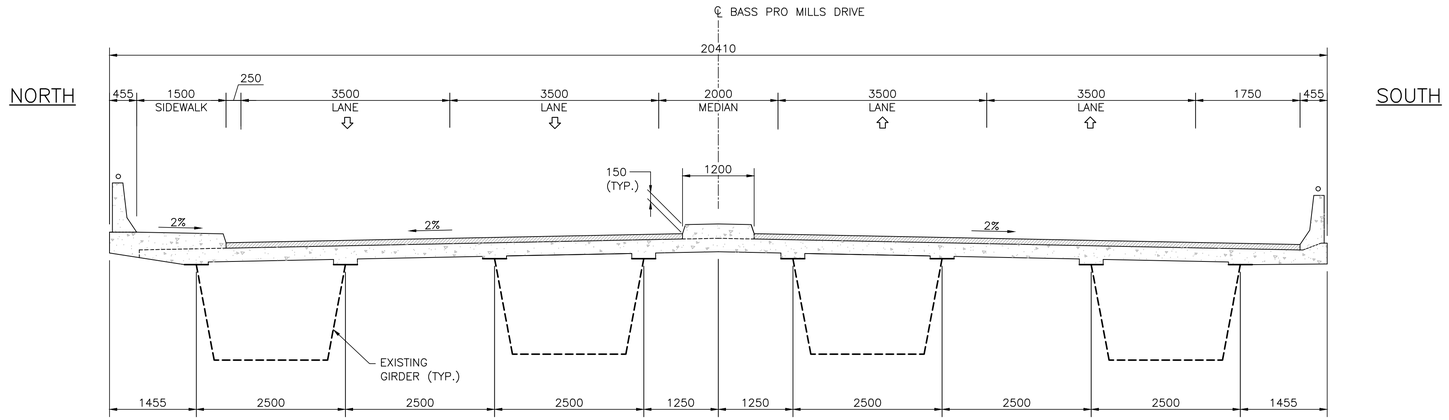
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN

DIST. No.
CONT No xxx-xx-xx
WP No WP_NUM

SHEET

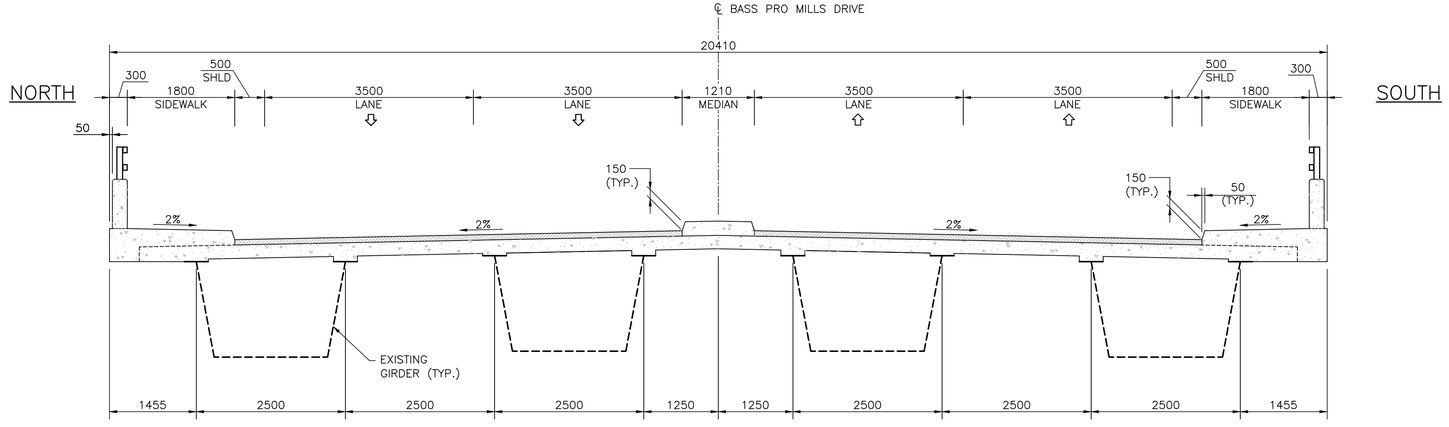
CITY OF VAUGHAN
HIGHWAY 400
BASS PRO MILLS DRIVE
DECK CROSS SECTION

Stantec Consulting Ltd.
300-675 Cochrane Drive West Tower
Markham ON Canada
L3R 0B8
Tel. 905.944.7777
Fax. 905.474.9889
www.stantec.com



EXISTING DECK SECTION

SCALE: 1 : 50



PROPOSED SECTION

SCALE: 1 : 50

DRAWING NOT TO BE SCALED
100 mm ON ORIGINAL DRAWING

REVISIONS			
	DATE	BY	DESCRIPTION

DESIGN K.L.	CHK	CODE	LOAD	DATE	
DRAWN A.K.L.	CHK	SITE	STRUCT	SCHEME	DWG

MINISTRY OF TRANSPORTATION, ONTARIO PR-D-707 88-05

DRAWING NAME: \\CD1215-F01\work_group\01605\administration\Bridges\10-temp\021_Bass_Pro_Mills_Extension\99_Working\AK\Bass_Pro_Mills_Typ_section - (20220427) - Copy.dwg
MODIFIED: Apr 27, 2022 - 6:13pm
REVISED BY:

Design and Contract Standards Office #2018-07

HIGHWAY STANDARDS BRANCH

PROVINCIAL ENGINEERING MEMORANDUM

Design and Contract Standards Office #2018-07, October 22, 2018

Guidelines for Geometric Design of Cycling Facilities within Constrained Right-of-Ways

---

Implementation

This memorandum is effective as of the date of issue.

Background

For planning and geometric design of roadways within provincial highway right-of-ways, the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (2017) in conjunction with the MTO Design Supplement shall be used (HSB PEM DCSO #2017-07). For planning and geometric design of bicycle facilities within provincial highways, the Bikeways Design Manual shall be used (HSB PEM DCSO #2014-04).

To incorporate cycling facilities into rehabilitation projects on municipal roadways crossing provincial highways within provincial highway right-of-ways. It is recognized that it is not always feasible to apply design guidelines that are used for design of provincial highways. For such situations, consideration may be given to using alternative design guidelines or aspects at the lower end of the design domain.

Ontario's cycling strategy, was developed and launched in 2013 to promote cycling and cycling safety in the province. The strategy is a 20-year vision to have cycling recognized as a respected and valued mode of transportation within Ontario. By engaging with stakeholders and communities across the province, a draft province-wide network was identified. Detailed field investigations and feasibility assessments are needed to confirm the existing context and conditions, facility type(s) and estimated cost to implement specific on- and off-road routes identified in the network. There will be cases where various projects will incur challenges within constrained corridors. This memo was developed based on lessons learned from within the Province and ITE case study, "Countermeasures Prove Effective in Reducing Bicycle Collisions"[1].

Policy

For planning and geometric design of cycling facilities crossing provincial highways within provincial highway right-of-ways:

- For new municipal crossing roads and bridges, and widening of existing municipal roads and bridges, design shall be according to the MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads and the Bikeways Design Manual.
- For rehabilitation of existing municipal crossing roads and bridges, follow Appendix A
- Where design parameters other than MTO are proposed, follow HSB PEM DCSO #2018-06
- The side clearance requirements included in Exhibit 4-O and Exhibit 4-P in the MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads are inclusive of and not in addition to the cycling facility

---

[1] Nazir Lalani and Kristopher Gunterson, Countermeasures Prove Effective in Reducing Bicycle Collisions, www.ite.org, May 2018

- HSB PEM DCSO #2017-07 and HSB PEM DCSO #2014-04 are amended by this memorandum to allow consideration and use of alternative design guidelines for design of municipal crossing roadways and bridges including municipal cycling facilities within provincial highway right-of-ways.

Phil Hutton, P. Eng.
Manager, Design and Contract Standards Office

cc: Distribution List

Design and Contract Standards Office #2018-07

Distribution List

Provincial Highways Management Division:
K. Bentley, Executive Director, Chief Engineer

Highway Standards Branch:
D. Remolino, Director, Highway Standards Branch
T. Merlo, Manager, Bridge Office
P. Hutton, Manager, Design and Contract Standards Office
R. Berg, Manager, Geomatics Office
S. Graham, Manager, Traffic Office
B. Lane, Manager, Materials Engineering and Research Office
M. Pearsall, Head, Design Standards Section
K. Kernaghan, Head, Corridor Management & Property Section
W. Roy, Head, Design Innovation Section
L. Vaz, Head, Engineering Specifications and Standards Management Section
M. Pearsall, Head, Design Standards Section

Contract Management and Operations Branch:
T. Tuinstra, Director, Contract Management and Operations Branch
D. Pateman, Manager, Contract Management Office
A. Beaulieu, Manager, Maintenance Office
B. Liegler, Manager, Contract Innovations Office

Regional Managers of Engineering:
M. Nadeau, WR
I. Galloway, NWR
J. Fraser, NER
P. Makula, ER
J. White, CR

Regional Heads of Planning and Design:
M. Favell, WR
B. Stephenson, CR
N. Meyers, ER
J. Asghar, NER(A)
D. Cooper, NWR

Regional Heads of Traffic:
R. Bakalarczyk, WR
A. Beal, CR
C. Klein, ER
D. Herbrand, NER
K. Schmid, NWR

Regional Managers of Operations:
Steve McInnis-WR
Paul Mathur-CR
Rafael Albino-ER
Kevin Morphet-NER
Gary Weiss-NWR

APPENDIX A: Guidance for choice of design parameters

In choosing the design parameters for rehabilitation or retrofitting of existing municipal crossing roads and bridges, for the provision of cycling facilities within constrained corridors, the following considerations should be applied in this order:

1. Use design parameters according to the MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads and design parameters according to the Bikeways Design Manual.
2. If width is an issue, consider a road diet and remove a lane, if possible, to accommodate the cycling facility(ies) on one or both sides of the roadway
3. If width is an issue, consider reallocation of road space and a lane diet as follows:
    a. Consider narrowing features such as centre islands and shoulders as much as possible.
    b. Consider narrowing sidewalks to the minimum allowed by AODA standards.
    c. Considering narrowing lanes to meet widths in the TAC Geometric Design Guide for Canadian Roads, particularly if this allows for the provision for a shared curb lane or the provision of a buffer between the bicycle lane and vehicle lane.
    d. Consider eliminating shoulders and gutter pan offsets.
    e. Identify all conflict zones (e.g. ramp terminals and intersections) and consider the use of green coatings (HSB PEM DCSO #2018-08) to mark conflict zones in advance and downstream of intersections with right turning traffic
    f. Consider pavement markings such as zebra crosswalk markings, bike lane pavement marking, sharrows, or bike legends
    g. Consider further enhancements to further delineate cyclists from vehicles with the use of signs, flexible delineators and in rural applications, consider the use of rumble strips
    h. Appropriate signage to mark the presence of cyclists and pedestrians and signage to prohibit parking,
4. For all features consider using the local municipal road design guidelines issued by the municipality's engineering department.
5. Consider design parameters from standards or guidelines published by another North American jurisdiction with similar climate and operating characteristics.

Robinson, Jennifer

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: Thursday, May 26, 2022 3:49 PM
To: Glass, Heather (MTO)
Cc: Hilda Esedebe; Addley, Diana; Cholewa, Peter; Mikolajczak, Margaret (MTO)
Subject: [External] RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hi Heather,

Apologies, we will update our contact list accordingly.

Thank you!

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

From: Glass, Heather (MTO) <Heather.Glass@ontario.ca>
Sent: Thursday, May 26, 2022 3:43 PM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hi Jennifer

Please note that Margaret Mikolajczak is the main MTO contact for this project so, going forward, please send all project submissions directly to her for internal distribution within MTO.

Thanks,

Heather

Heather Glass, P.Eng.
Senior Project Engineer
Project Delivery, York West / Simcoe
Transportation Infrastructure Management Division
Ministry of Transportation, Ontario
phone: (437) 925-1164
email: heather.glass@ontario.ca

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: May-26-22 3:30 PM
To: Steve.Mota@york.ca; mislam@trca.on.ca; Liu, Chunmei (MECP) <Chunmei.Liu@ontario.ca>; Glass, Heather (MTO) <Heather.Glass@ontario.ca>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hello,

Please use the link below to access the draft Environmental Study Report related to the Bass Pro Mills Drive Schedule C Municipal Class Environmental Assessment study. It would be appreciated if you could kindly provide your comments by **Friday, June 24, 2022**, to facilitate the study's completion schedule.

In the interim, should you have any comments or questions, and/or wish to discuss anything in more detail, please do not hesitate to contact us. In addition, please let me know should you experience any difficulties accessing these files.

Kind regards,

Login Information

Browser link: https://tmpsftp.stantec.com
FTP Client Hostname: tmpsftp.stantec.com **Port:** 22 (can be used within a SFTP client to view and transfer files and folders; e.g., FileZilla)
Login name: s0601113423
Password: 4983197
Disk Quota: 20 GB
Expiry Date: 6/1/2022

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

Robinson, Jennifer

From: Pak, Margaret (MTO) <Margaret.Pak@ontario.ca>
Sent: Tuesday, June 21, 2022 3:51 PM
To: Robinson, Jennifer
Cc: Mikolajczak, Margaret (MTO); Hilda Esedebe; Cholewa, Peter; Addley, Diana
Subject: [External] RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Thank you Jennifer. I managed to download the files.

Margaret Pak, M.Sc.(Ag.)ERM
Environmental Planner
M: 416-230-2285

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: June 21, 2022 2:12 PM
To: Pak, Margaret (MTO) <Margaret.Pak@ontario.ca>
Cc: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>; Hilda Esedebe <hilda.esedebe@vaughan.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hello,

Please use the link below to access the draft Environmental Study Report related to the Bass Pro Mills Drive Schedule C Municipal Class Environmental Assessment study. It would be appreciated if you could kindly provide your comments by **Friday, June 24, 2022**, to facilitate the study's completion schedule.

Bass pro Mills Drive Extension MCEA Draft ESR

In the interim, should you have any comments or questions, and/or wish to discuss anything in more detail, please do not hesitate to contact us. In addition, please let me know should you experience any difficulties accessing these files.

Kind regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Tuesday, June 21, 2022 11:32 AM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hi Jennifer, please send the ESR report to Margaret Pak of our Environmental Office.

Thank you

Margaret

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: June 21, 2022 11:09 AM
To: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hello,

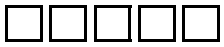
A friendly reminder that the draft Environmental Study Report (ESR) related to the Bass Pro Mills Drive Schedule C Municipal Class Environmental Assessment study is available for your review.

It would be greatly appreciated if all comments could be received by this **Friday, June 24, 2022**.

Should you have any issues accessing the files please let me know.

Thank you!

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec



From: Robinson, Jennifer
Sent: Thursday, May 26, 2022 3:30 PM
To: Steve.Mota@york.ca; mislam@trca.on.ca; chunmei.liu@ontario.ca; heather.glass@ontario.ca
Cc: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hello,

Please use the link below to access the draft Environmental Study Report related to the Bass Pro Mills Drive Schedule C Municipal Class Environmental Assessment study. It would be appreciated if you could kindly provide your comments by **Friday, June 24, 2022**, to facilitate the study's completion schedule.

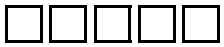
In the interim, should you have any comments or questions, and/or wish to discuss anything in more detail, please do not hesitate to contact us. In addition, please let me know should you experience any difficulties accessing these files.

Kind regards,

Login Information

Browser link: https://tmpsftp.stantec.com
FTP Client Hostname: tmpsftp.stantec.com **Port:** 22 (can be used within a SFTP client to view and transfer files and folders; e.g., FileZilla)
Login name: s0601113423
Password: 4983197
Disk Quota: 20 GB
Expiry Date: 6/1/2022

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec



Robinson, Jennifer

From: Mota, Steve <Steve.Mota@york.ca>
Sent: Tuesday, June 21, 2022 11:18 AM
To: Robinson, Jennifer
Cc: Hilda Esedebe; Addley, Diana; Cholewa, Peter; Hakimi, Mehrak
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hi folks.
Thanks for sharing the draft ESR with York Region staff. We have reviewed Regional issues and are satisfied with how they have been dealt with in the ESR.
Regards.

Steve Mota, P.Eng. | Program Manager – Transportation Planning
Transportation & Infrastructure Planning Branch | Public Works
---
The Regional Municipality of York| 17250 Yonge Street | Newmarket, ON L3Y 6Z1
O: 905-830-4444 ext. 75056 | Steve.Mota@york.ca | www.york.ca

---

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: Tuesday, June 21, 2022 11:06 AM
To: Mota, Steve <Steve.Mota@york.ca>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hello,

A friendly reminder that the draft Environmental Study Report (ESR) related to the Bass Pro Mills Drive Schedule C Municipal Class Environmental Assessment study is available for your review.

It would be greatly appreciated if all comments could be received by this **Friday, June 24, 2022**.

Should you have any issues accessing the files please let me know.

Thank you!

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

From: Robinson, Jennifer
Sent: Thursday, May 26, 2022 3:30 PM
To: Steve.Mota@york.ca; mislam@trca.on.ca; chunmei.liu@ontario.ca; heather.glass@ontario.ca
Cc: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hello,

Please use the link below to access the draft Environmental Study Report related to the Bass Pro Mills Drive Schedule C Municipal Class Environmental Assessment study. It would be appreciated if you could kindly provide your comments by **Friday, June 24, 2022**, to facilitate the study's completion schedule.

In the interim, should you have any comments or questions, and/or wish to discuss anything in more detail, please do not hesitate to contact us. In addition, please let me know should you experience any difficulties accessing these files.

Kind regards,

Login Information

Browser link: https://tmpsftp.stantec.com
FTP Client Hostname: tmpsftp.stantec.com **Port:** 22 (can be used within a SFTP client to view and transfer files and folders; e.g., FileZilla)
Login name: s0601113423
Password: 4983197
Disk Quota: 20 GB
Expiry Date: 6/1/2022

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Robinson, Jennifer

From: Robinson, Jennifer
Sent: Wednesday, July 20, 2022 3:01 PM
To: Lee, Erinn (MECP)
Cc: Dugas, Celeste (MECP); Potter, Katy (MECP); Cholewa, Peter; Addley, Diana; Hilda Esedebe
Subject: RE: MECP Comments - Draft ESR - Bass Pro Mills Extension MCEA
Attachments: basspromillsea_ltr_MECP_dftESR_20220720.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon Erinn,

Thank you for taking the time to provide comments on the behalf of MECP in relation to the above referenced study. Please find the attached cover letter and comment/response table that has been prepared in response to the comments received.

Should you have any questions and/or concerns, please do not hesitate to contact us.

Kind regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

From: Lee, Erinn (MECP) <Erinn.Lee2@ontario.ca>
Sent: Friday, July 15, 2022 6:04 AM
To: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>
Cc: Dugas, Celeste (MECP) <Celeste.Dugas@ontario.ca>; Potter, Katy (MECP) <Katy.Potter@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: RE: MECP Comments - Draft ESR - Bass Pro Mills Extension MCEA

Good morning,

Please find below MECP's remaining comments. Thank you for your patience.

1. MECP notes that MHSCTI is included on the agency contact list. Please ensure they are provided a copy of the Notice of Completion and supporting appendices.

2. Table 16 indicates that "Phase One and Two Environmental Site Assessment investigations should be carried to assess…". Given "some of the properties have been identified as having potential for contamination that could pose environmental concerns within the project area" and "the recommended alignment traverses properties which have been identified as having a high risk of contamination", this

language should be revised to state that, at a minimum, a Phase One Environmental Site Assessment *will* be completed to determine the need for additional investigations and identify appropriate mitigation measures and procedures as needed.

3. MECP recommends that Table 16 include a commitment to prepare an Erosion and Sediment Control Plan during detailed design.

4. Please clarify why portions of the study area could not be accessed for investigations during this stage. Are all of the inaccessible areas private property without permission to access? When does the project team expect site access to be permitted?

5. Figure 9 shows wetlands that are labelled as unevaluated per OWES. However, section 3.2.3 states that, "through review of existing MNRF and TRCA Regulation Mapping, no provincially significant wetlands or unevaluated wetlands were identified within the study area. However, there are two wetland communities present within the study area which consist of a shallow marsh community which is approximately 3.6 ha in size…". Please clarify whether these wetlands are unevaluated.

6. As previously noted, MECP technical staff will be reviewing surface water, stormwater and groundwater related information during the public comment period and may provide additional comments at that time.

Thank you,

Erinn Lee (she/her)
Regional Environmental Planner | Ministry of the Environment, Conservation and Parks
Project Review Unit, Environmental Assessment Branch
135 St. Clair Ave W, Toronto, ON M4V 1P5
P : 1 (416) 357-1511 E: Erinn.Lee2@ontario.ca

From: Lee, Erinn (MECP)
Sent: July 5, 2022 5:18 PM
To: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>
Cc: Dugas, Celeste (MECP) <Celeste.Dugas@ontario.ca>; Potter, Katy (MECP) <Katy.Potter@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: MECP Comments - Draft ESR - Bass Pro Mills Extension MCEA

Good afternoon,

Thank you for the opportunity to provide comments on the draft Environmental Study Report for the Bass Pro Mills Extension MCEA. Please find attached MECP's comments. I will be following up with additional comments by this Thursday (July 7th), but recognizing the tight project timelines I am providing these comments now. I am not expecting any significant concerns/comments in the follow-up comments.

Additionally, please note that the surface water specialist and hydrogeologist will be reviewing and providing comments on the ESR during the public comment period.

Thank you for your patience.

Thanks,

Erinn Lee (she/her)
Regional Environmental Planner | Ministry of the Environment, Conservation and Parks

Ministry of the Environment, Conservation and Parks

Environmental Assessment Branch

1st Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Direction des évaluations environnementales

Rez-de-chaussée
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Téléc. : 416 314-8452

Ontario

July 5, 2022

Hilda Esedebe, Project Manager (BY EMAIL ONLY)
City of Vaughan
Hilda.Esedebe@vaughan.ca

Diana Addley, Senior Environmental Planner (BY EMAIL ONLY)
Stantec Consulting Ltd.
Diana.Addley@stantec.com

Jenn Robinson, Environmental Planner (BY EMAIL ONLY)
Stantec Consulting Ltd.
Jennifer.Robinson@stantec.com

Re: Bass Pro Mills Drive from Highway 400 to Weston, City of Vaughan
Municipal Class Environmental Assessment – Schedule C
Draft Environmental Study Report
MECP Project Review Unit Comments

Dear Project Team,

This letter is in response to the draft Environmental Study Report prepared for the Bass Pro Mills Drive from Highway 400 to Weston Municipal Class Environmental Assessment. The Ministry of the Environment, Conservation and Parks (MECP) provides the following comments for your consideration. We will be following up with additional comments in a second letter.

Section 3.2: Natural Environment

1. It is the responsibility of the proponent to ensure that Species at Risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the proposed activities to be carried out on the site. Please contact SAROntario@ontario.ca for any questions and concerns related to Species at Risk and authorizations under the *Endangered Species Act* (ESA).

   The attached, Client's Guide to Preliminary Screening for Species at Risk, should be utilized to determine potential for conflicts with species subject to the ESA. The results of this screening, along with a completed checklist, should be provided to SAR Ontario Branch in the case where there is a potential to impact species at risk or their habitat.

Sections 3.2.7 and 7.5.4: Source Water Protection

2. It appears that portions of the study area are also located in Wellhead Protection Areas Q1 and Q2 with moderate stress. Please review the Source Protection Information Atlas and/or consult with the local source protection authority to confirm the vulnerable areas within the study area and any applicable source protection policies. The proponent must document and discuss in the report how the project adheres to or has regard to applicable policies in the local source protection plan, where applicable.

   In order to determine if this project is occurring within a vulnerable area, proponents can use this mapping tool: http://www.applications.ene.gov.on.ca/swp/en/index.php. Note that various layers (including WHPAs, WHPA-Q1 and WHPA-Q2, IPZs, HVAs, SGRAs, EBAs, ICAs) can be turned on through the "Map Legend" bar on the left. The mapping tool will also provide a link to the appropriate source protection plan in order to identify what policies may be applicable in the vulnerable area.

Appendix M: Noise and Vibration Assessment

3. Although Appendix M is entitled, "Noise and Vibration Assessment" in the ESR, the enclosed report is entitled "Bass Pro Mills Drive Extension Municipal Class Environmental Assessment – Noise Impact Assessment" and does not mention or address the subject of vibration. While a full vibration assessment is not expected as part of this report, the report should comment on the potential for impacts due to vibration. It is noted that the ESR states that construction monitoring related to construction activities will be carried out to verify that acceptable construction vibration levels are not exceeded.

4. Provincial versus regional guidelines: As outlined in the Noise Impact Assessment, the guidelines, methods and criteria for handling noise impacts are different from the provincial and regional perspectives. Based on the three modelling scenarios presented in Appendix C of the Noise Impact Assessment, it appears that the provincial guidelines were not explicitly followed and deviations from the standard approach are not sufficiently explained. Further details are provided in the comments below.

5. Road Traffic Data:
   a) Section 5.1 notes that a 10-year future horizon year should be used. The use of years 2027 and 2041 does not appear to meet this requirement. Further explanation of why this approach was used and why it is considered to be conservative would provide clarity.

   b) The raw traffic that was obtained from relevant authorities should be presented more clearly in the Impact Assessment so that the traffic data and related assumptions can be verified. For example, the report states that the 2019 AADT for Weston Road was used, but what is that value? What are the traffic data from the "Bass Pro Mills Extension Traffic Impact Analysis (Stantec Consulting, 2021)" that were used and how were they adjusted for the purposes of the noise assessment?

   c) Modelling the 2041 "No-build" Condition: There is no data presented for this modelling scenario nor is there evidence of STAMSON modelling for it. The reported noise level, presented in Table 5.2, appears to be from the 2027 traffic data on Weston Road (without any further adjustment to the future year of 2041). A separate modelling scenario should be evaluated for the future "No-Build" in order to compare with the future "Build" results.

6. Posted Speed Limits: One of the input parameters for the STAMSON modelling is the posted speed limit of the roadway. The use of the 85th percentile speed for the posted speed limit on Weston Road may be acceptable for Regional Guidelines, but this is not the standard practice for provincial assessments. Further, the use of 10 km/hr above the posted speed limit on Bass Pro Mills Drive appears to be an adjustment that is inconsistent with the 85th percentile approach. A consistent approach (for example, using the posted speed limit for both or the same adjustment for both) should be applied. An explanation of rationale is required to justify any deviations from standard practice.

7. Existing Noise Barrier Walls and Points of Reception: Due to very high existing and projected traffic noise levels at the points of reception, the feasibility of mitigation measures should be considered and evaluated. All assumptions and limitations should be clearly stated and justified. In particular, consider the following points:

    a) The report indicates that the existing noise barrier wall is approximately 2.0 – 2.3 m high. Rationale should be provided as to why a height of 2.2 m was used in the STAMSON modelling for the representative point of reception.
    b) More than a single POR should be included in the assessment. Refer to published guidance for minimum requirements.
    c) Since the limit for the future height of the barrier wall is 3 m, explain how using a 2.2 m existing barrier height is appropriate in illustrating the worst-case impact for the proposed mitigation. For the noise mitigation investigation exercise, rationale should be provided as to why using this POR location and 2.2 m barrier height represents a worst-case scenario (as opposed to, for example, using an existing barrier height of 2 m and future barrier height of 3 m)
    d) Construction Noise & Vibration (contained in the ESR and the Impact Assessment): In addition to referencing MECP publication NPC-115 “Construction Equipment”, reference should also be made to NPC-118 “Motorized Conveyances”. For issues relating to vibration, references can also be made to NPC-119 “Blasting” and NPC-207 “Impulse Vibration in Residential Buildings”.
    e) Section 7.2.3 Acoustics: This section of the ESR states that noise impacts were assessed based on four scenarios. As described above, only three scenarios were found in the Impact Assessment (no future no-build scenario). This is a deficiency in the assessment that needs to be corrected.

Appendix N: Air Quality Assessment

8. Please clarify and provide supporting documentation on why a multiplier of nine was applied to the total of AM and PM peak volumes.

Administrative/Editorial Comments

9. Please update Part II Order language to use Section 16 Order language. For information about Section 16 Order requests and the information that must be provided, please refer to: Class environmental assessments: Section 16 Order | ontario.ca

10. Section 2.1.1.2: Please note that the Growth Plan was most recently updated in 2020.

11. Section 5.3.10: This section states that “the estimated cost may be in the approximate range of $2.0M to $2.0M”. This is noted as a potential editorial error.

Thank you for the opportunity to comment on this draft Environmental Study Report. Should you or any members of your project team have any questions regarding the material above, please contact me at Erinn.Lee2@ontario.ca.

Sincerely,

Erinn Lee

Erinn Lee
Regional Environmental Planner
Project Review Unit, Environmental Assessment Branch
Ontario Ministry of the Environment, Conservation and Parks

cc Katy Potter, Supervisor, Project Review Unit, MECP
Celeste Dugas, Manager, York-Durham District Office, MECP
Peter Cholewa, Stantec Consulting Ltd.

Attached: Client's Guide to Preliminary Screening for SAR

Client's Guide to Preliminary Screening for Species at Risk

Ministry of the Environment, Conservation and Parks

Species at Risk Branch, Permissions and Compliance

DRAFT - May 2019

Table of Contents

1.0 Purpose, Scope, Background and Context

1.1 Purpose of this Guide

This guide has been created to:

- help clients better understand their obligation to gather information and complete a preliminary screening for species at risk before contacting the ministry,
- outline guidance and advice clients can expect to receive from the ministry at the preliminary screening stage,
- help clients understand how they can gather information about species at risk by accessing publicly available information housed by the Government of Ontario, and
- provide a list of other potential sources of species at risk information that exist outside the Government of Ontario.

It remains the client's responsibility to:

- carry out a preliminary screening for their projects,
- obtain best available information from all applicable information sources,
- conduct any necessary field studies or inventories to identify and confirm the presence or absence of species at risk or their habitat,
- consider any potential impacts to species at risk that a proposed activity might cause, and
- comply with the *Endangered Species Act* (ESA).

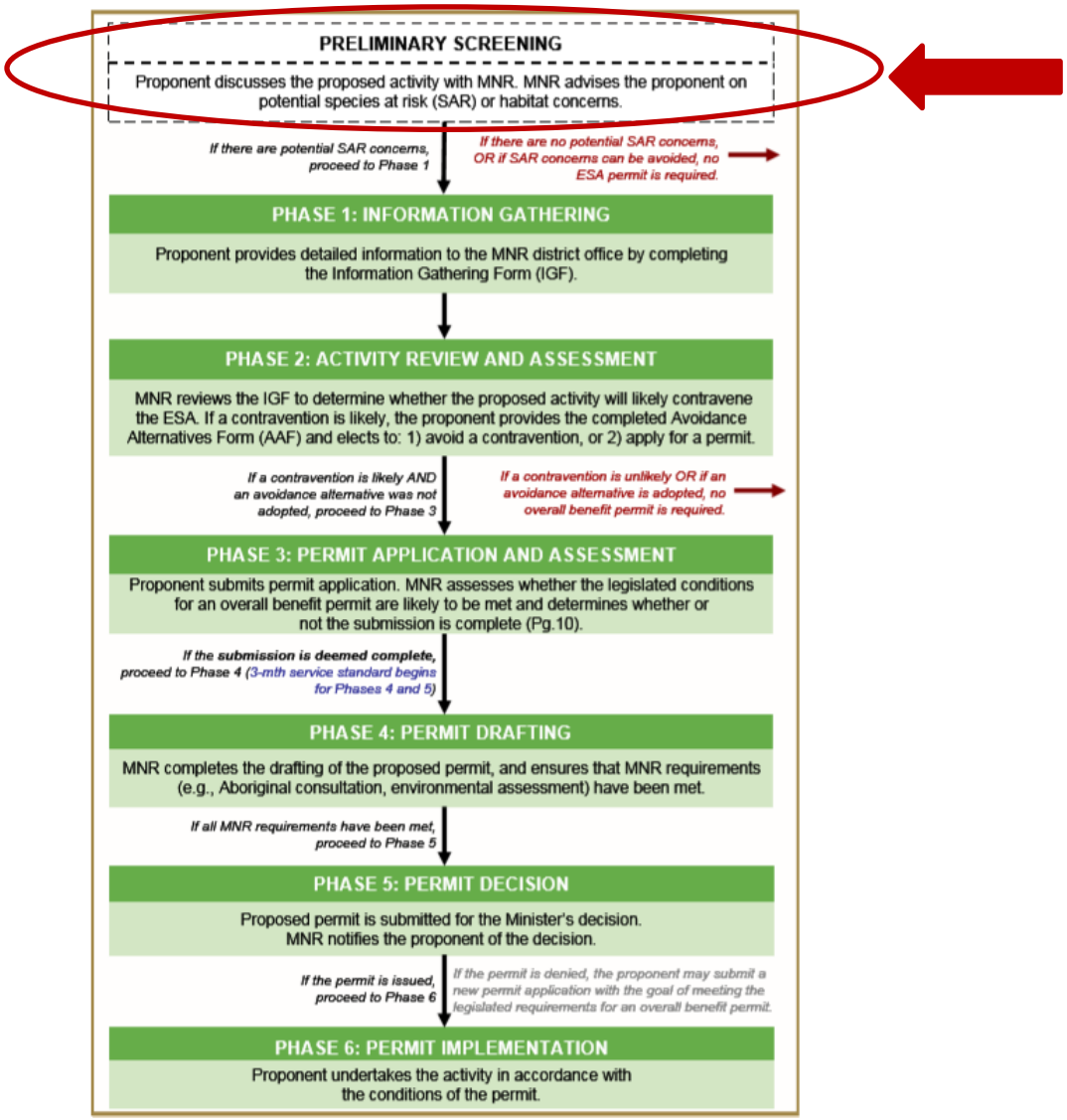
To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide, at a minimum, prior to contacting Government of Ontario ministry offices for further information or advice.

1.2 Scope

This guide is a resource for clients seeking to understand if their activity is likely to impact species at risk or if they are likely to trigger the need for an authorization under the ESA. It is not intended to circumvent any detailed site surveys that may be necessary to document species at risk or their habitat nor to circumvent the need to assess the impacts of a proposed activity on species at risk or their habitat. This guide is not an exhaustive list of available information sources for any given area as the availability of information on species at risk and their habitat varies across the province. This guide is intended to support projects and activities carried out on Crown and private land, by private landowners, businesses, other provincial ministries and agencies, or municipal government.

1.3 Background and Context

To receive advice on their proposed activity, clients must first determine whether any species at risk or their habitat exist or are likely to exist at or near their proposed activity, and whether their proposed activity is likely to contravene the ESA. Once this step is complete, clients may contact the ministry at SAROntario@ontario.ca to discuss the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. At this stage, the ministry can provide advice and guidance to the client about potential species at risk or habitat concerns, measures that the client is considering to avoid adverse effects on species at risk or their habitat and whether additional field surveys are advisable. This is referred to as the "Preliminary Screening" stage. For more information on additional phases in the diagram below, please refer to the *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits* policy available online at https://www.ontario.ca/page/species-risk-overall-benefit-permits. Please note: any reference to MNR in the diagram is replaced by MECP.



2.0 Roles and Responsibilities

To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide prior to contacting Government of Ontario ministry offices for further information or advice.

Step 1: Client seeks information regarding species at risk or their habitat that exist, or are likely to exist, at or near their proposed activity by referring to all applicable information sources identified in this guide.

Step 2: Client reviews and consider guidance on whether their proposed activity is likely to contravene the ESA (see section 3.4 of this guide for guidance on what to consider).

Step 3: Client gathers information identified in the checklist in section 4 of this guide.

Step 4: Client contacts the ministry at SAROntario@ontario.ca to discuss their preliminary screening. Ministry staff will ask the client questions about the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. Ministry staff will also ask the client for their interpretation of the impacts of their activity on species at risk or their habitat as well as measures the client has considered to avoid any adverse impacts.

Step 5: Ministry staff will provide advice on next steps.

Option A: Ministry staff may advise the client they can proceed with their activity without an authorization under the ESA where the ministry is confident that:

- no protected species at risk or habitats are likely to be present at or near the proposed location of the activity; or
- protected species at risk or habitats are known to be present but the activity is not likely to contravene the ESA; or
- through the adoption of avoidance measures, the modified activity is not likely to contravene the ESA.

Option B: Ministry staff may advise the client to proceed to Phase 1 of the overall benefit permitting process (i.e. Information Gathering in the previous diagram), where:

- there is uncertainty as to whether any protected species at risk or habitats are present at or near the proposed location of the activity; or
- the potential impacts of the proposed activity are uncertain; or
- ministry staff anticipate the proposed activity is likely to contravene the ESA.

3.0 Information Sources

Land Information Ontario (LIO) and the Natural Heritage Information Centre (NHIC) maintain and provide information about species at risk, as well as related information about fisheries, wildlife, crown lands, protected lands and more. This information is made available to organizations, private individuals, consultants, and developers through online sources and is often considered under various pieces of legislation or as part of regulatory approvals and planning processes.

The information available from LIO or NHIC and the sources listed in this guide should not be considered as a substitute for site visits and appropriate field surveys. Generally, this information can be regarded as a starting point from which to conduct further field surveys, if needed. While this data represents best available current information, it is important to note that a lack of information for a site does not mean that species at risk or their habitat are not present. There are many areas where the Government of Ontario does not currently have information, especially in more remote parts of the province. The absence of species at risk location data at or near your site does not necessarily mean no species at risk are present at that location. On-site assessments can better verify site conditions, identify and confirm presence of species at risk and/or their habitats.

Information on the location (i.e. observations and occurrences) of species at risk is considered sensitive and therefore publicly available only on a 1km square grid as opposed to as a detailed point on a map. This generalized information can help you understand which species at risk are in the general vicinity of your proposed activity and can help inform field level studies you may want to undertake to confirm the presence, or absence of species at risk at or near your site.

Should you require specific and detailed information pertaining to species at risk observations and occurrences at or near your site on a finer geographic scale; you will be required to demonstrate your need to access this information, to complete data sensitivity training and to obtain a Sensitive Data Use License from the NHIC. Information on how to obtain a license can be found online at https://www.ontario.ca/page/get-natural-heritage-information.

Many organizations (e.g. other Ontario ministries, municipalities, conservation authorities) have ongoing licensing to access this data so be sure to check if your organization has this access and consult this data as part of your preliminary screening if your organization already has a license.

3.1 Make a Map: Natural Heritage Areas

The Make a Natural Heritage Area Map (available online at https://www.ontario.ca/page/make-natural-heritage-area-map provides public access to natural heritage information, including species at risk, without the user needing to have Geographic Information System (GIS) capability. It allows users to view and identify generalized species at risk information, mark areas of interest, and create and print a custom map directly from the web application. The tool also shows topographic information such as roads, rivers, contours and municipal boundaries.

Users are advised that sensitive information has been removed from the natural areas dataset and the occurrences of species at risk has been generalized to a 1-kilometre grid to mitigate the risks to the species (e.g. illegal harvest, habitat disturbance, poaching).

The web-based mapping tool displays natural heritage data, including:

- Generalized Species at risk occurrence data (based on a 1-km square grid),
- Natural Heritage Information Centre data.

Data cannot be downloaded directly from this web map; however, information included in this application is available digitally through Land Information Ontario (LIO) at https://www.ontario.ca/page/land-information-ontario.

3.2 Land Information Ontario (LIO)

Most natural heritage data is publicly available. This data is managed in a large provincial corporate database called the LIO Warehouse and can be accessed online through the LIO Metadata Management Tool at https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home. This tool provides descriptive information about the characteristics, quality and context of the data. Publicly available geospatial data can be downloaded directly from this site.

While most data are publicly available, some data may be considered highly sensitive (i.e. nursery areas for fish, species at risk observations) and as such, access to some data maybe restricted.

3.3 Additional Species at Risk Information Sources

- The Breeding Bird Atlas can be accessed online at http://www.birdsontario.org/atlas/index.jsp?lang=en
- eBird can be accessed online at https://ebird.org/home
- iNaturalist can be accessed online at https://www.inaturalist.org/
- The Ontario Reptile and Amphibian Atlas can be accessed online at https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas
- Your local Conservation Authority. Information to help you find your local Conservation Authority can be accessed online at https://conservationontario.ca/conservation-authorities/find-a-conservation-authority/

  Local naturalist groups or other similar community-based organizations
- Local Indigenous communities
- Local land trusts or other similar Environmental Non-Government Organizations
- Field level studies to identify if species at risk, or their habitat, are likely present or absent at or near the site.
- When an activity is proposed within one of the continuous caribou ranges, please be sure to consider the caribou Range Management Policy. This policy includes figures and maps of the continuous caribou range, can be found online at https://www.ontario.ca/page/range-management-policy-support-woodland-caribou-conservation-and-recovery

3.4 Information Sources to Support Impact Assessments

- Guidance to help you understand if your activity is likely to adversely impact species at risk or their habitat can be found online at https://www.ontario.ca/page/policy-guidance-harm-and-harass-under-endangered-species-act and https://www.ontario.ca/page/categorizing-and-protecting-habitat-under-endangered-species-act
- A list of species at risk in Ontario is available online at https://www.ontario.ca/page/species-risk-ontario. On this webpage, you can find out more about each species, including where is lives, what threatens it and any specific habitat protections that apply to it by clicking on the photo of the species.

4.0 Check-List

Please feel free to use the check list below to help you confirm you have explored all applicable information sources and to support your discussion with Ministry staff at the preliminary screening stage.

- ✓ Land Information Ontario (LIO)
- ✓ Natural Heritage Information Centre (NHIC)
- ✓ The Breeding Bird Atlas
- ✓ eBird
- ✓ iNaturalist
- ✓ Ontario Reptile and Amphibian Atlas
- ✓ List Conservation Authorities you contacted:_____

  _____
- ✓ List local naturalist groups you contacted:_____

  _____
- ✓ List local Indigenous communities you contacted:_____

  _____
- ✓ List any other local land trusts or Environmental Non-Government Organizations you contacted:_____

  _____
- ✓ List and field studies that were conducted to identify species at risk, or their habitat, likely to be present or absent at or near the site: _____

  _____
- ✓ List what you think the likely impacts of your activity are on species at risk and their habitat (e.g. damage or destruction of habitat, killing, harming or harassing species at risk):_____

  _____

Stantec Consulting Ltd.

July 20, 2022

Attention: **Erinn Lee, Regional Environmental Planner**
Ministry of the Environment, Conservation and Parks
Project Review Unit, Environmental Assessment Branch
135 St. Clair Avenue West
Toronto ON M4V 1P5

Dear Erinn Lee,

Reference: **MECP Comments, Draft Environmental Study Report Review**
Schedule C Municipal Class Environmental Assessment
Bass Pro Mills Drive, from Highway 400 to Weston Road, City of Vaughan

Thank you for taking the time to provide comments on behalf of the Ministry of the Environment, Conservation and Parks (MECP) in relation to the draft Environmental Study Report (ESR) for the above-referenced study. Your comments were received by the City of Vaughan (City) via separate emails on July 5 and July 15, 2022. In response to the comments received, the attached comment/response table has been prepared.

Please note that the final Environmental Study Report is tentatively scheduled to be filed in August 2022. Should you have any comments, questions and/or concerns in the interim, please do not hesitate to contact the undersigned.

Regards,

Stantec Consulting Ltd.

Diana Addley
Senior Environmental Planner
Phone: 905-415-6401
diana.addley@stantec.com

c. Celeste Dugas, MECP
Katy Potter, MECP
Hilda Esedebe, City of Vaughan
Peter Cholewa, Stantec Consulting Ltd.
Jennifer Robinson, Stantec Consulting Ltd.

Attachments: Comment / Response Table

Bass Pro Mills Drive from Highway 400 to Weston, City of Vaughan
Municipal Class Environmental Assessment - Schedule C
Draft Environmental Study Report
MECP Project Review Unit Comments

Item #	MECP Comments (July 5, 2022)	Proponent/Consultant Response
Section 3.2: Natural Environment		
1	It is the responsibility of the proponent to ensure that Species at Risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the proposed activities to be carried out on the site. Please contact SAROntario@ontario.ca for any questions and concerns related to Species at Risk and authorizations under the Endangered Species Act (ESA). The attached, Client's Guide to Preliminary Screening for Species at Risk, should be utilized to determine potential for conflicts with species subject to the ESA. The results of this screening, along with a completed checklist, should be provided to SAR Ontario Branch in the case where there is a potential to impact species at risk or their habitat.	Noted. While the guide has not been referenced specifically within the Draft ESR, it includes all of the tasks completed as part of the background review completed for this study. Based on the findings of the this study, impacts to SAR and/or habitat were not identified.
Section 3.2.7 and 7.5.4: Source Water Protection		
2	It appears that portions of the study area are also located in Wellhead Protection Areas Q1 and Q2 with moderate stress. Please review the Source Protection Information Atlas and/or consult with the local source protection authority to confirm the vulnerable areas within the study area and any applicable source protection policies. The proponent must document and discuss in the report how the project adheres to or has regard to applicable policies in the local source protection plan, where applicable. In order to determine if this project is occurring within a vulnerable area, proponents can use this mapping tool: http://www.applications.ene.gov.on.ca/swp/en/index.php. Note that various layers (including WHPAs, WHPA-Q1 and WHPA-Q2, IPZs, HVAs, SGRAs, EBAs, ICAs) can be turned on through the "Map Legend" bar on the left. The mapping tool will also provide a link to the appropriate source protection plan in order to identify what policies may be applicable in the vulnerable area.	Noted, thank you. The final ESR will be updated to indicate that the study area and general surrounding region is situated within Wellhead Protection Areas Q1 and Q2. Please note that the link to the mapping tool provided is no longer active.
Appendix M: Noise and Vibration Assessment		
3	Although Appendix M is entitled, "Noise and Vibration Assessment" in the ESR, the enclosed report is entitled "Bass Pro Mills Drive Extension Municipal Class Environmental Assessment – Noise Impact Assessment" and does not mention or address the subject of vibration. While a full vibration assessment is not expected as part of this report, the report should comment on the potential for impacts due to vibration. It is noted that the ESR states that construction monitoring related to construction activities will be carried out to verify that acceptable construction vibration levels are not exceeded.	Noted. The report will be updated to include discussion regarding the potential impacts associated with vibration from operation of the Bass Pro Mills Extension.
4	Provincial versus regional guidelines: As outlined in the Noise Impact Assessment, the guidelines, methods and criteria for handling noise impacts are different from the provincial and regional perspectives. Based on the three modelling scenarios presented in Appendix C of the Noise Impact Assessment, it appears that the provincial guidelines were not explicitly followed and deviations from the standard approach are not sufficiently explained. Further details are provided in the comments below.	Noted. Please refer to responses below.
Appendix M: Noise and Vibration Assessment - Road Traffic Data		
5 a)	Section 5.1 notes that a 10-year future horizon year should be used. The use of years 2027 and 2041 does not appear to meet this requirement. Further explanation of why this approach was used and why it is considered to be conservative would provide clarity.	2027 data was used to align with Regional assessment requirements. However, 2041 data used is in line with requirements per MECP (horizon year minimum 10 year after completion of the project) and the Region's requirement for mature state of development.
5 b)	The raw traffic that was obtained from relevant authorities should be presented more clearly in the Impact Assessment so that the traffic data and related assumptions can be verified. For example, the report states that the 2019 AADT for Weston Road was used, but what is that value? What are the traffic data from the "Bass Pro Mills Extension Traffic Impact Analysis (Stantec Consulting, 2021)" that were used and how were they adjusted for the purposes of the noise assessment?	The report will be updated to clarify the Weston Road and Bass Pro Mills Drive Extension traffic data, and will include raw data obtained from relevant authorities. The 2031 AADT and commercial vehicles % based on peak hourly vehicle volumes from the Bass Pro Mills Extension Traffic Impact Analysis that was completed as part of this study. The 2041 AADT was calculated from 2031 AADT based on 2% yearly growth rate; commercial vehicles % were maintained from 2031 data.
5 c)	Modelling the 2041 "No-build" Condition: There is no data presented for this modelling scenario nor is there evidence of STAMSON modelling for it. The reported noise level, presented in Table 5.2, appears to be from the 2027 traffic data on Weston Road (without any further adjustment to the future year of 2041). A separate modelling scenario should be evaluated for the future "No-Build" in order to compare with the future "Build" results.	The data used for the "no-build" condition is the 2041 Weston Road Traffic Data in Table 5.1. Stantec will update the report to clarify this. The supporting STAMSON modelling results for the 2041 no-build scenario are included in Page 35 of the report. The reported noise level, presented in Table 5.2 (66 dBA) is obtained from the logarithmic sum of the Weston Road partial noise level contributions from the northbound road segment (63.02 dBA) and southbound road segment (63.09 dBA). See page 35 for the STAMSON modelling results for the Weston road segments. The "no-build" results presented in Table 5.2 represent a separate modelling scenario which considers only the noise contribution from Weston Road.
6	Posted Speed Limits: One of the input parameters for the STAMSON modelling is the posted speed limit of the roadway. The use of the 85th percentile speed for the posted speed limit on Weston Road may be acceptable for Regional Guidelines, but this is not the standard practice for provincial assessments. Further, the use of 10 km/hr above the posted speed limit on Bass Pro Mills Drive appears to be an adjustment that is inconsistent with the 85th percentile approach. A consistent approach (for example, using the posted speed limit for both or the same adjustment for both) should be applied. An explanation of rationale is required to justify any deviations from standard practice.	Stantec will update the assessment to reflect an estimated 85th percentile speed for Bass Pro Mills Drive.

7 a)	The report indicates that the existing noise barrier wall is approximately 2.0 – 2.3 m high. Rationale should be provided as to why a height of 2.2 m was used in the STAMSON modelling for the representative point of reception.	The report will be updated to clarify that 2.2 m was used as it is the existing noise barrier height at the representative point of reception considered in the model.
7 b)	More than a single POR should be included in the assessment. Refer to published guidance for minimum requirements.	POR01 is expected to be representative of the most impacted receptor along Weston Road due to its exposure to Bass Pro Mills Drive. No sensitive receptors were proposed and identified along Bass Pro Mills Drive.
7 c)	Since the limit for the future height of the barrier wall is 3 m, explain how using a 2.2 m existing barrier height is appropriate in illustrating the worst-case impact for the proposed mitigation. For the noise mitigation investigation exercise, rationale should be provided as to why using this POR location and 2.2 m barrier height represents a worst-case scenario (as opposed to, for example, using an existing barrier height of 2 m and future barrier height of 3 m)	A 2.2 m existing noise barrier wall height is considered appropriate for illustrating the worst-case impact since it is the height of the existing wall POR01. As per response 7 b) POR01 is expected to representative of the most impacted receptor along Weston Road
7 d)	Construction Noise & Vibration (contained in the ESR and the Impact Assessment): In addition to referencing MECP publication NPC-115 “Construction Equipment”, reference should also be made to NPC-118 “Motorized Conveyances”. For issues relating to vibration, references can also be made to NPC-119 “Blasting” and NPC-207 “Impulse Vibration in Residential Buildings”.	The Noise Impact Assessment and Final ESR will be updated to reference NPC-118. No blasting operations are expected as part of project; therefore, NPC-119 is not applicable to the Project. Stationary sources of vibration are not expected as part of the project and therefore, NPC-207 is not applicable to the Project.
7 e)	Section 7.2.3 Acoustics: This section of the ESR states that noise impacts were assessed based on four scenarios. As described above, only three scenarios were found in the Impact Assessment (no future no-build scenario). This is a deficiency in the assessment that needs to be corrected.	Please refer to response to Comment 5 c).
Appendix N: Air Quality Assessment		
8	Please clarify and provide supporting documentation on why a multiplier of nine was applied to the total of AM and PM peak volumes.	As requested, the following is the supporting documentation for the multiplier of nine that was applied to the total AM and PM peak volumes to estimate AADT for the air quality assessment. The multiplier was based on limited traffic data collected in or near the project area per table below. The AADT volumes are from MTO. AM and PM peak volumes are traffic counts collected for the project. The maximum factor is estimated to be 8.72 as shown. The conversion rate of 9 was selected as a conservative value.

Intersection/Ramp/Segment	AADT	AM	PM	Factor
HWY 7 IC 29-VAUGHAN & LANGSTAFF RD IC 30	6,000	191	497	8.72
LANGSTAFF RD IC 30 & BASS PRO MILLS DR IC 32	5,894	590	515	5.33
LANGSTAFF RD IC 30 & BASS PRO MILLS DR IC 32	5,629	214	637	6.61
BASS PRO MILLS DR IC 32 & BASS PRO MILLS DR IC 32	7,831	148	1,126	6.15
Hwy 400 & Rutherford Rd - Ramp 24 - Hwy 400 NB to Rutherford Rd	19,292	1,028	1,633	7.25
Hwy 400 & Rutherford Rd - Ramp 34 - Hwy 400 SB to Rutherford Rd	10,690	862	577	7.43
Hwy 400 & Rutherford Rd - Ramp 53 - Rutherford Rd EB to Hwy 400 SB	9,970	1,185	432	6.17
			Minimum	5.33
			Maximum	8.72
			Average	6.81
			Median	6.61

Administrative/Editorial Comments		
9	Please update Part II Order language to use Section 16 Order language. For information about Section 16 Order requests and the information that must be provided, please refer to: Class environmental assessments: Section 16 Order | ontario.ca	Noted. The final ESR will include information about the Notice of Study Completion and associated Section 16 Order process.
10	Section 2.1.1.2: Please note that the Growth Plan was most recently updated in 2020.	Noted. The final ESR will be updated accordingly.
11	Section 5.3.10: This section states that “the estimated cost may be in the approximate range of $2.0M to $2.0M”. This is noted as a potential editorial error.	Section 5.3.10 will be updated to indicate that, "the estimated cost may be approximately $2.3M".
Item #	**MECP Comments (July 15, 2022)**	**Proponent/Consultant Response**
1	MECP notes that MHSCTI is included on the agency contact list. Please ensure they are provided a copy of the Notice of Completion and supporting appendices.	As per the requirements of the MCEA process, all interested parties are included on the mailing list and circulated on all study notifications, including Notice of Study Completion. It should be noted that MCTS received and reviewed a copy of the Cultural Heritage Overview Memorandum that was prepared as part of this study, the findings of which indicated that there were no heritage resources within the study area. MCTS indicated that, “the report is consistent with the requirements, guidance and standards of the Municipal Class EA and with best practice guidance prepared by MHSTCI”. A copy of this correspondence is provided in Appendix O of the ESR.
2	Table 16 indicates that “Phase One and Two Environmental Site Assessment investigations should be carried to assess…”. Given “some of the properties have been identified as having potential for contamination that could pose environmental concerns within the project area” and “the recommended alignment traverses properties which have been identified as having a high risk of contamination”, this language should be revised to state that, at a minimum, a Phase One Environmental Site Assessment will be completed to determine the need for additional investigations and identify appropriate mitigation measures and procedures as needed.	Noted. Table 16 will be updated accordingly.
3	MECP recommends that Table 16 include a commitment to prepare an Erosion and Sediment Control Plan during detailed design.	Noted. Table 16 will be updated accordingly.

4	Please clarify why portions of the study area could not be accessed for investigations during this stage. Are all of the inaccessible areas private property without permission to access? When does the project team expect site access to be permitted?	The majority of the study area is situated within the VMCSP Area. As noted in Sections 1.2, 5.3.1, and 7.1, the VMCSP was approved by Council in 2014; however, was under appeal during the course of this study and, at the time of issuing this response, remains under appeal. While the City and consultant team made extensive efforts to contact these landowners (i.e., via mail, email and telephone) and obtain PTEs during this study, access was not granted by the landowners within the study area/VMCSP planning area. As noted in several sections of the draft ESR, on-site investigations will be carried out during detail design. During detail design, the City will be in a position to aquire the lands required to accommodate the new road right-of-way and complete the field investigations. It should be further noted that a Terms of Reference and subsequent revised Terms of Reference was provided to TRCA for review and approval to confirm the approach to the ecological and surface water field investigations and revised field investigations (i.e., field surveys undertaken from publicly accessible areas), respectively. TRCA confirmed their approval of the modified work plan provided that a conservative approach be taken for the recommended mitigation/management strategies.
5	Figure 9 shows wetlands that are labelled as unevaluated per OWES. However, section 3.2.3 states that, “through review of existing MNRF and TRCA Regulation Mapping, no provincially significant wetlands or unevaluated wetlands were identified within the study area. However, there are two wetland communities present within the study area which consist of a shallow marsh community which is approximately 3.6 ha in size…”. Please clarify whether these wetlands are unevaluated.	The sentence will be revised to indicate that no 'evaluated' wetlands were identified within the study area. As noted in Table 16, additional species-specific surveys and an Ontario Wetland Evaluation System (OWES) will be undertaken during detail design. Table 16 further notes that delineation of the wetland boundaries will be undertaken during detail design to confirm the size, wetland type and function of the existing wetland, and to apply the appropriate compensation measures for the removal of the wetland to accommodate the project, and that the wetland will be delineated and staked in the field with TRCA when land access becomes available.
6	As previously noted, MECP technical staff will be reviewing surface water, stormwater and groundwater related information during the public comment period and may provide additional comments at that time.	Noted.

Robinson, Jennifer

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Friday, July 29, 2022 5:19 PM
To: Mikolajczak, Margaret (MTO)
Cc: Hewitt, Tom (MTO); Selma Hubjer; Grobel, Lukasz (MTO); Janke, Aaron (MTO); Uddin, Zaka (MTO); Szymanski, Frederic (MTO); Van Voorst, John (MTO); Sadek, Sandra (MTO); Day, Mina (MTO); Molai, Sam (MTO); Francolini, William (MTO); Cholewa, Peter; Addley, Diana; Robinson, Jennifer
Subject: RE: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & draft ESR Submission
Attachments: Bass Pro Mills Extension EA - Highway 400 Crossing - MTO; [External] RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road; [External] RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Margaret,

Respectfully, the attached email shows that you received the May 26, 2022 request for comments on the draft ESR from the City's consultant and forwarded it to MTO's Environmental office for review. The attached May 3, 2022 courtesy email that was sent in advance was addressed from me directly to you. That said, going forward all correspondence on this project between the City and MTO will occur between you and I as you have requested.

Please advise when the City can expect comments on the draft ESR as we are currently scheduled to file the final ESR on August 18, 2022.

Regards,

Vacation alert: starting EOD July 29, returning on August 9.

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Friday, July 29, 2022 2:33 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Selma Hubjer <Selma.Hubjer@vaughan.ca>; Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Francolini, William (MTO)

<William.Francolini@ontario.ca>
Subject: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & draft ESR Submission

Hi Hilda, for the record, I did not receive any email from you on May 26,2022 therefore my comments were related to the previous submission, on March 3, 2022.

I understand that on the Bass Pro Mills Extension EA study, you are the main contact for this project, so any correspondence between Vaughan and MTO, will be between you and me. If there was a change made, please let me know, otherwise your submissions have to be send directly to my attention and my response, will be sent to you.

Shortly, I will send you our response to your red text comments, forwarded July 14, 2022. Just so you know, I was on vacation from July 15 to July 26, 2022.

Regards

Margaret Mikolajczak, C.E.T.
Senior Project Manager
Ministry of Transportation
Corridor Management Section
159 Sir William Hearst Avenue, 7th Floor
Downsview, Ontario M3M 0B7

Phone: 416-235-4269
Fax: 416-265-4267

Cell # 437-833-9462

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: July 19, 2022 2:26 PM
To: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>
Subject: RE: Bass Pro Mills Extension EA - Highway 400 Crossing & draft ESR Submission

The email below with attachments is being resent, in case it was missed the first time.

From: Hilda Esedebe
Sent: Friday, July 15, 2022 5:20 PM
To: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO)

<Mina.Day@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>
Subject: RE: Bass Pro Mills Extension EA - Highway 400 Crossing & draft ESR Submission

Hello Margaret,

It appears that your comments are based on a stale project submission and not the draft Environmental Study Report (ESR) that was sent for review as per the attached May 26, 2022 email. A courtesy email with the proposed design was sent in advance of the draft ESR submission on May 3, 2022, email also attached for your convenience. Nonetheless, responses to the comments are provided below in red.

Please note that due to the elapsed time and schedule commitments, the project team will proceed to file the ESR with no changes to the proposed design. MTO may comment on the ESR during the 30-day public review period.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Thursday, July 14, 2022 3:30 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>
Subject: [External] Bass Pro Mills Extension EA - Highway 400 Crossing

Hi Hilda, I apologize for the delay with my response.

GENERAL:

We have noticed that the barrier is assumed to be replaced with bicycle/traffic parapet wall. The assumed height of the new combined parapet is 1.85 m. Please notice that the minimum heigh of these combined parapets is 1.37 m minimum per CHBDC and MTO standards. We would like to ask Stantec to clarify the background of the 1.85 m as it was not used before by MTO and there is no standard drawings for this height. Please refer to the additional comments in the attachment. Your email came with no attachment. The project team will review the height of the barrier; however, as noted 1.37m is a minimum not a maximum height.

In the attached Stantec Crossing Assessment Report, the assumption was made that the bridge might to be own by the City of Vaughan therefore the lower design standards were applied.

This is a fault statement because the bridge is now owned by MTO and still will be under the Ministry jurisdiction therefore Ministry design standards must be applied. It is understood that the Bass Pro Mills bridge is within the MTO's CAH corridor and subject to MTO review; however, City records show that the bridge was built and commissioned by the City. Please provide documentation supporting MTO's claim to ownership of the structure.

- The Hwy 400 bridge cross-section shows a 2.65m wide MUP, which does not comply with the Bikeway Design Manual OTM Book 14 standards. The Book 14 suggests a minimum bike lane width of 3m for a two-way Active Transportation Path. Moreover, we would like to know as how would the MUP be tied into the off-ramp and maintain the SB right out only? Please see draft ESR submission as per the attached emails for latest proposed design.

- Proposed EBLT at the NB off-ramp terminal intersection might reduce operations of the off ramp. Analysis are required to support the proposal. This movement is not being proposed. Please see draft ESR submission as per the attached emails for latest proposed design.

- SB on-ramp converted to a button hook type with access from a road directly across and north and south. This is unusual to have a road directly feeding the on-ramp and not an MTO standard. As noted in the preliminary design drawings, the proposed intersecting road locations are subject to the ongoing Vaughan Mills Centre Secondary Plan by the City's Policy Planning department. Modifications to the intersecting road locations are outside the scope of work for this EA project; however, MTO's concerns have been passed along to the appropriate City department. The expectation is that the intersecting road locations will be finalized during the detailed design phase of the Bass Pro Mills extension project.

- New signal west of the bridge does not appear to be conforming with the ministry standard distance. The new signalized intersection is just 300m from the NB off-ramp terminal intersection. See response above.

- The proposed extension of Bass Pro Mills Dr. from Hwy 400 to Weston has identified 4 alternatives. The recommended alternative #2 provides for 2 lanes (3.4m & 3.3m) in each direction. Note, as per ministry standards we cannot permit lane width of less than 3.5m within CAH jurisdiction. 3.5m lanes are being proposed. Please see draft ESR submission as per the attached emails for latest proposed design.

- The EA Study recommends a side clearance of 0.25m. As per TAC guidelines (Exhibit 4.0 attached), side clearance with min 0.5m with a physical barrier and desirable 1.0m with painted buffer can be permitted. As per OTM Book 18, where two-way bicycle facility is provided, the min recommended buffer width is 0.6m as the multi-use path always functions as a two-way facility. Please see draft ESR submission as per the attached emails for latest proposed design.

- The recommended 3.0m width for the MUP is to low when it comes to a mixed ped and bicycle two-way traffic. Please see draft ESR submission as per the attached emails for latest proposed design.

- Will the MUP be AODA compliant? Please see draft ESR submission as per the attached emails for latest proposed design.

- The extension of Bass Pro Mills Dr will likely impact the configuration of the Hwy 400/Bass Pro Mills/Fishermens Way intersection. Therefore, the EA Study should consider a complete redesigning of the intersection and modifications. Please see draft ESR submission as per the attached emails for latest proposed design.

TRAFFIC OFFICE:

- The extension of Bass pro Mills Rd would function as a new major collector roadway linking the neighbourhoods from Weston Rd to Jane St.
- The proposed extension of Bass Pro Mills Dr is envisaged to support future development including VMCSP in the study area.
- The extension is aimed at alleviating congestion on Rutherford Road to the north as well.
- The study has considered future transportation improvements envisioned by York in its 2031/2041 development program such as:

    - Langstaff Rd extension to Hwy 7 and its widening between Weston Rd and E of Jane St.
    - Widening of Weston Rd north of Bass Pro Mills Ext to Hawk view Blvd.
    - 2014 Vaughan Mills Centre secondary plan road network and trips.

- Analysis based on microsimulation modelling of the future conditions 2031/2041 scenarios show significant deterioration of the intersection traffic operations in the Primary Study Area when compared to existing conditions. Many intersections including Hwy 400 NB off ramps at Bass Pro Mills and Langstaff Rd show significantly worse level of service (LOS). Resulting from the proposed developments forecast for the area, not caused by the extension of Bass Pro Mills Drive.
- Total future traffic conditions 2041 indicates 508 v/h NBL at the Hwy 400/Bass Pro Mills S-EW ramp intersection. The volumes are high enough to meet the warrants for double left turn lane. Please see draft ESR submission as per the attached emails. The double left turn lane has been provided.
- The study needs to identify all major traffic issues associated with the extension of Bass Pro Mills Dr and present realistic options for their resolution. Please see draft ESR submission as per the attached emails. The traffic report shows that the extension of Bass Pro Mills Drive will help improve the intersection traffic operations at key locations in the area including at the Rutherford Road and Langstaff Road interchanges.
- Does the EA include any additional ramps (i.e. those that are currently missing) with the Bass Pro Mills Rd IC, or just maintain the existing ramps/access? No additional ramps are proposed as part of this EA, it's beyond the scope of work for the road extension.

ENVIRONMENTAL:

- Section 5.2
    - Sections 5.4.1 MTO Meeting and 5.4.2 Modifications to Hwy 400 Bridge Cross-Section
        - It is noted in Section 5.4.1 that a number of features of **the recommended design did not meet MTO standards**. However, it is not clear in section 5.4.2 if all the comments were addressed to bring the recommended design to MTO standards and endorsed by MTO. Please clarify. See notes above.

- Section 5.4.1 MTO Meeting:

- 2nd sentence, revise “detail design study” to “Preliminary and Detail Design and Class Environmental Assessment Study” Noted

Thank you

Margaret Mikolajczak, C.E.T.
Senior Project Manager
Ministry of Transportation
Corridor Management Section
159 Sir William Hearst Avenue, 7th Floor
Downsview, Ontario M3M 0B7

Phone: 416-235-4269
Fax: 416-265-4267

Robinson, Jennifer

From: Robinson, Jennifer
Sent: Friday, August 12, 2022 4:44 PM
To: Lee, Erinn (MECP)
Cc: Dugas, Celeste (MECP); Potter, Katy (MECP); Cholewa, Peter; Penney, Deborah (MECP); Addley, Diana; Hilda Esedebe
Subject: RE: MECP Comments - Draft ESR - Bass Pro Mills Extension MCEA
Attachments: basspromillsea_MECP_ltr_response_fnl_20220812.pdf

Good Afternoon Erinn,

Thank you for taking the time to provide additional comments on the behalf of MECP in relation to the above referenced study. Please find the attached letter in response to the comments received.

Should you have any questions and/or concerns, please do not hesitate to contact us.

Kind regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

From: Lee, Erinn (MECP) <Erinn.Lee2@ontario.ca>
Sent: Wednesday, August 10, 2022 9:01 PM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>
Cc: Dugas, Celeste (MECP) <Celeste.Dugas@ontario.ca>; Potter, Katy (MECP) <Katy.Potter@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Penney, Deborah (MECP) <Deborah.Penney@ontario.ca>
Subject: RE: MECP Comments - Draft ESR - Bass Pro Mills Extension MCEA

Hi Jennifer,

Thank you again for providing a response table for MECP's comments. For the most part, I will be reviewing the proposed changes in the final ESR once available. However, MECP offers the following comments in the interim to inform the updates:

1. Comment 2: In addition to identifying that the study area is within Wellhead Protection Areas Q1 and Q2, please identify any relevant policies, where applicable.

2. Comment 5c) and 7e): The 2041 no build scenario was modelled with the exact same traffic counts that were used in the future scenario including Bass Pro Mills Dr. This implies that there will be no difference in traffic volumes on Weston Road as a result of constructing the new Bass Pro Mills Dr. This seems to be counterintuitive and this assumption should be confirmed by a traffic specialist rather than an acoustic specialist.

I will be away until Monday August 29th. If you have any questions about the noise assessment comments in the interim, please contact Deborah Penney, Senior Noise Engineer (copied).

3. No concerns or additional questions for the response provided for comment 8.

Thank you,

Erinn Lee (she/her)
Regional Environmental Planner | Ministry of the Environment, Conservation and Parks
Project Review Unit, Environmental Assessment Branch
135 St. Clair Ave W, Toronto, ON M4V 1P5
P : 1 (416) 357-1511 E: Erinn.Lee2@ontario.ca

From: Lee, Erinn (MECP)
Sent: July 27, 2022 10:56 AM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>
Cc: Dugas, Celeste (MECP) <Celeste.Dugas@ontario.ca>; Potter, Katy (MECP) <Katy.Potter@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: RE: MECP Comments - Draft ESR - Bass Pro Mills Extension MCEA

Good morning Jenn,

Thank you for providing a response table to MECP's comments. I have shared the air and noise responses with the appropriate technical staff and will follow up with you on those responses.

Initially I indicated that MECP will be conducting our review of surface water and groundwater information during the public comment period, but the technical reviewers have conducted a preliminary review. I have attached MECP's comments related to surface water and groundwater. Many of these comments outline required information if a PTTW is needed.

Thank you,

Erinn Lee (she/her)
Regional Environmental Planner | Ministry of the Environment, Conservation and Parks
Project Review Unit, Environmental Assessment Branch
135 St. Clair Ave W, Toronto, ON M4V 1P5
P : 1 (416) 357-1511 E: Erinn.Lee2@ontario.ca

Ministry of the Environment, Conservation and Parks

Environmental Assessment Branch

1st Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Direction des évaluations environnementales

Rez-de-chaussée
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Téléc. : 416 314-8452

Ontario

July 27, 2022

Hilda Esedebe, Project Manager (BY EMAIL ONLY)
City of Vaughan
Hilda.Esedebe@vaughan.ca

Diana Addley, Senior Environmental Planner (BY EMAIL ONLY)
Stantec Consulting Ltd.
Diana.Addley@stantec.com

Jenn Robinson, Environmental Planner (BY EMAIL ONLY)
Stantec Consulting Ltd.
Jennifer.Robinson@stantec.com

Re: Bass Pro Mills Drive from Highway 400 to Weston, City of Vaughan
Municipal Class Environmental Assessment – Schedule C
Draft Environmental Study Report
MECP Project Review Unit Comments

Dear Project Team,

This letter is in response to the draft Environmental Study Report prepared for the Bass Pro Mills Drive from Highway 400 to Weston Municipal Class Environmental Assessment. The Ministry of the Environment, Conservation and Parks (MECP) provides the following comments related to groundwater and surface water.

Surface Water

1. It is recommended that the final Stormwater Management Report (Appendix G) discuss and explain how the proposed SWM facility (a combination of bioretention, bioswale, super pipe etc.) is to meet the proposed Enhanced Water Quality Control (80% TSS removal).

2. It is acknowledged that the ESR has provided a series of commitments to future works. It is recommended the committed work (Table 16) also include a performance monitoring and maintenance plan to be developed during the detailed design for the proposed SWM facilities to ensure the treatment efficiency as per design.

3. It is noted that general Erosion and Sediment Control (ESC) measures have been recommended in Table 16 of the report. It is also recommended that a detailed ESC Plan be prepared during detailed design to further address the possible construction-related impacts on surface water features and the

natural environment. An ESC Plan should consider the site-specific conditions and identify the required ESC BMPs for the proposed construction activities. As previously noted in earlier comments, MECP recommends that Table 16 include a commitment to prepare an Erosion and Sediment Control Plan during detailed design.

4. The proposed road extension likely needs a Permit to Take Water (PTTW) for construction dewatering. If this is the case, the committed work (Table 16) should also include a hydrogeological/technical assessment report to be prepared to support the PTTW application. It worth noting that the supporting document, in terms of surface water, should include, but not be limited to, an impact assessment of the proposed dewatering activity on surface water features nearby, an assessment of local groundwater quality, and a dewatering effluent discharge monitoring and contingency plan. As such, further review by MECP during the PTTW application will be required.

Groundwater

5. As the report indicated, the preferred design is located approximately 150 m northwest of an existing Highly Vulnerable Aquifer. Thus, an assessment of the potential impacts of the project on this zone should be conducted for this environmental assessment.

6. The groundwater information in this environmental assessment study is based on desktop studies. The project design should be based on more detailed and intrusive site-specific hydrogeological and surface water-groundwater interaction information related to this project.

7. Considering the potential for encountering contaminated soil throughout this project, as indicated in Section 7.5.3 and Appendix I, the Echolog survey indicated in Appendix I of the report can assist in locating the areas with contaminated soil. The excess soil throughout this project should be handled as per O. Reg. 406/19 On-Site and Excess Soil Management.

8. During construction, if any excavations below groundwater levels are needed, a Permit to Take Water may be required. In addition, a monitoring and mitigation plan should be implemented so that the potential neighbouring private wells as indicated in Section 7.5.2 of the report are not permanently impacted.

9. If any dewatering permit will be required for any section of this project, a hydrogeological study should be conducted with supporting field data assessing the impacts of the required water taking on the surrounding environment and other water users.

10. If any dewatering permit will be required for any section of this project, the related monitoring and mitigation plan for preventing the redirection and mobilization of potential contamination identified in the official potential contaminated sites (Ecolog Survey) presented in Appendix I of this assessment should be provided as part of the supporting documents of any Permit to Take Water application.

11. If any part of this project requires a dewatering permit, a geotechnical assessment should be conducted by a qualified geotechnical engineer to identify any potential structural damage due to the required dewatering within the zone of influence of this project and propose a related monitoring and mitigation plan.

12. If any dewatering permit will be required for any section of this project in any of the properties that have a different owner than the City of Vaughan, a written permission to carry out the water taking must be obtained from the owner(s) of the property(ies) before any water taking. The written

permission(s) should be provided as part of the supporting documents of any Permit to Take Water applications.

13. If any dewatering permit will be required for any section of this project, an impact assessment should be conducted to assess the impacts of this project on the environment and other water resource users. A related monitoring and mitigation plan should be provided based on this assessment to prevent any undesirable impacts from this project on the surrounding environment and other water resource users.

14. If any dewatering will be required for any section of this project, a groundwater quality assessment along with a discharge plan should be provided as part of the supporting documents of any Permit to Take Water application.

15. The assessment of the project's impacts on the surface water features within the zone of influence of this project should be conducted and reviewed by a surface water specialist.

Thank you for the opportunity to comment on this draft Environmental Study Report. Should you or any members of your project team have any questions regarding the material above, please contact me at Erinn.Lee2@ontario.ca.

Sincerely,

Erinn Lee

Erinn Lee
Regional Environmental Planner
Project Review Unit, Environmental Assessment Branch
Ontario Ministry of the Environment, Conservation and Parks

cc Katy Potter, Supervisor, Project Review Unit, MECP
Celeste Dugas, Manager, York-Durham District Office, MECP
Peter Cholewa, Stantec Consulting Ltd.

Stantec Consulting Ltd.

August 12, 2022

Attention: **Erinn Lee, Regional Environmental Planner**
Ministry of the Environment, Conservation and Parks
Project Review Unit, Environmental Assessment Branch
135 St. Clair Avenue West
Toronto ON M4V 1P5

Dear Erinn Lee,

Reference: **Bass Pro Mills Drive from Highway 400 to Weston, City of Vaughan, Municipal Class Environmental Assessment – Schedule C, Draft Environmental Study Report MECP Project Review Unit Comments**

Thank you for taking the time to provide additional surface water and groundwater comments on behalf of the Ministry of the Environment, Conservation and Parks (MECP) in relation to the draft Environmental Study Report (ESR) for the above-referenced study. Your comments were received by the City of Vaughan (City) via separate emails on July 27, 2022 and August 10, 2022.

In response to Comment 2 provided in the August 10, 2022 email, we offer the following:

> The 2041 no build scenario is not assessed in the Bass Pro Mills Drive Extension Municipal Class Environmental Assessment – Noise Impact Assessment prepared by Stantec and dated August 3, 2022 (noise report). Under provincial guidelines, the noise report assesses the 2037 build scenario against the 2037 no-build scenario to align with the assessment methodology in the MTO Environmental Guide for Noise (MTO Guide).
>
> The impact of traffic volume on the Weston Road due to the construction of the Bass Pro Mill Drive has not been conducted for 2037. Therefore, the assessment considers the Weston Road traffic counts to be the same for 2037 build scenario and 2037 no-build scenario (Table 5.1 in the noise report). Any differences in traffic volumes between these scenarios are not expected to affect the noise mitigation investigation for the Bass Pro Mills Extension. The investigation results are that mitigation measures applied within the right-of-way of the Bass Pro Mills Extension are not expected to meet the minimum 5 dB noise reduction required to be considered technically feasible under the MTO Guide.
>
> For the 2037 build scenario, the expected overall noise reduction at the modelled receptors is up to 1 dB for mitigation measures applied within the Bass Pro Mills Extension right-of-way. All else being equal, increasing the 2037 build Annual Average Daily Traffic (AADT) for Weston Road beyond what was considered in the assessment would reduce the noise influence of the Bass Pro Mills Extension at the modelled receptors. As a result, the expected noise reduction to overall noise levels would also be reduced and would not meet the minimum 5 dB noise reduction to be considered technically feasible under the MTO Guide.
>
> On this basis, the assumption of equal traffic volumes between the 2037 build and 2037-no build scenarios is considered to sufficiently address the mitigation investigation under the MTO Guide.

Reference: Bass Pro Mills Drive from Highway 400 to Weston, City of Vaughan, Municipal Class Environmental Assessment – Schedule C, Draft Environmental Study Report MECP Project Review Unit Comments

Please note that the final ESR will be revised in consideration of your comments and is scheduled to be filed on August 18, 2022 for public review. Should you have any comments, questions and/or concerns in the interim, please do not hesitate to contact the undersigned.

Regards,

Stantec Consulting Ltd.

Diana Addley
Senior Environmental Planner
Phone: 905-415-6401
diana.addley@stantec.com

c. Celeste Dugas, MECP
Katy Potter, MECP
Deborah Penney, MECP
Hilda Esedebe, City of Vaughan
Peter Cholewa, Stantec Consulting Ltd.
Jennifer Robinson, Stantec Consulting Ltd.

Robinson, Jennifer

From: Robinson, Jennifer
Sent: Monday, August 15, 2022 5:13 PM
To: Manirul Islam
Cc: Addley, Diana; Cholewa, Peter; Esedebe, Hilda; Harsimrat Pruthi; Don Ford; Stephen Bohan; Suzanne Bevan; Victoria Kramkowski
Subject: RE: [External] CFN 61893- Comments Letter on the Draft ESR for the Bass Pro Mills Drive MCEA, Highway 400 to Weston Road
Attachments: ltr_TRCA_ESR_20220815.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon Manirul,

Thank you for taking the time to provide comments on the behalf of TRCA in relation to the above referenced study. Please find the attached letter in response to the comments received.

In addition, please find the requested AutoCAD files for the existing conditions floodplain mapping in the below FTP site.

Should you have any questions and/or concerns, please do not hesitate to contact us.

Kind regards,

Login Information

Browser link: https://tmpsftp.stantec.com
FTP Client Hostname: tmpsftp.stantec.com **Port:** 22 (can be used within a SFTP client to view and transfer files and folders; e.g., FileZilla)
Login name: s0822150931
Password: 8211805
Disk Quota: 20 GB
Expiry Date: 8/22/2022

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Friday, July 29, 2022 4:45 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Harsimrat Pruthi <Harsimrat.Pruthi@trca.ca>; Don Ford <Don.Ford@trca.ca>; Stephen Bohan <Stephen.Bohan@trca.ca>; Suzanne Bevan

<Suzanne.Bevan@trca.ca>; Victoria Kramkowski <Victoria.Kramkowski@trca.ca>
Subject: [External] CFN 61893- Comments Letter on the Draft ESR for the Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Good afternoon Hilda.
Please find attached the comments letter on the Draft ESR prepared for the Bass Pro Mills Drive Extension EA from Highway 400 to Weston Road, City of Vaughan.
Should you have any questions please contact me.
Thank you and have a great long weekend!
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Manirul Islam
Sent: Thursday, July 07, 2022 4:12 PM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Harsimrat Pruthi <Harsimrat.Pruthi@trca.ca>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Good afternoon Jennifer.
Staff has completed their review of the draft ESR and SWM Digital Model related to Bass Pro Mills Extension EA.
I am working on the comments received from the review team and may need to discuss some of the comments with the team for better clarity. I will let you know early next about the anticipated date. Sorry if it has caused any inconvenience.
Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5715
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: Thursday, July 07, 2022 2:11 PM
To: Manirul Islam <Manirul.Islam@trca.ca>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Good Afternoon Manirul,

Just a friendly reminder that the draft ESR and SWM Digital Model files related to the Bass Pro Mills Drive Schedule C MCEA study were provided to the TRCA for review on May 26, 2022.

Could you please kindly confirm if the TRCA has any feedback regarding these materials, and if so, provide an estimate of when comments are anticipated to be provided.

Should you have any questions or have any issues accessing the files please let me know.

Thank you!

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

From: Robinson, Jennifer
Sent: Tuesday, June 21, 2022 11:08 AM
To: mislam@trca.on.ca
Cc: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hello,

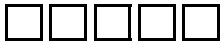
A friendly reminder that the draft Environmental Study Report (ESR) and SWM Digital Model files related to the Bass Pro Mills Drive Schedule C Municipal Class Environmental Assessment study are available for your review.

It would be greatly appreciated if all comments could be received by this **Friday, June 24, 2022**.

Should you have any issues accessing the files please let me know.

Thank you!

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec



From: Robinson, Jennifer
Sent: Thursday, May 26, 2022 4:09 PM
To: mislam@trca.on.ca
Cc: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: RE: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hi Manirul,

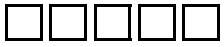
In follow-up to our previous email where the Draft ESR is saved. Please find the below link where the updated SWM Digital Model files are available for your review.

Please let me know should you have any difficulty accessing these files.

Kind regards,

Bass Pro Mills Drive Extension - SWM Digital Model

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec



From: Robinson, Jennifer
Sent: Thursday, May 26, 2022 3:30 PM
To: Steve.Mota@york.ca; mislam@trca.on.ca; chunmei.liu@ontario.ca; heather.glass@ontario.ca
Cc: Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: Draft ESR for Review - Bass Pro Mills Drive MCEA, Highway 400 to Weston Road

Hello,

Please use the link below to access the draft Environmental Study Report related to the Bass Pro Mills Drive Schedule C Municipal Class Environmental Assessment study. It would be appreciated if you could kindly provide your comments by **Friday, June 24, 2022**, to facilitate the study's completion schedule.

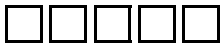
In the interim, should you have any comments or questions, and/or wish to discuss anything in more detail, please do not hesitate to contact us. In addition, please let me know should you experience any difficulties accessing these files.

Kind regards,

Login Information

Browser link: https://tmpsftp.stantec.com
FTP Client Hostname: tmpsftp.stantec.com **Port:** 22 (can be used within a SFTP client to view and transfer files and folders; e.g., FileZilla)
Login name: s0601113423
Password: 4983197
Disk Quota: 20 GB
Expiry Date: 6/1/2022

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec



Stantec Consulting Ltd.

August 15, 2022

Attention: Manirul Islam
Planner, Infrastructure Planning and Permits
Development and Engineering Services
Toronto and Region Conservation Authority
101 Exchange Avenue,
Vaughan, ON L4K 5R6

Dear Manirul Islam,

Reference: Draft Environmental Study Report (ESR)
Bass Pro Mills Drive Extension Between Highway 400 and Weston Road (CFN 61893)
Municipal Class Environmental Assessment (MCEA) – Schedule C
Humber River Watershed; City of Vaughan; Regional Municipality of York

Thank you for taking the time to provide comments on behalf of the Toronto and Region Conservation Authority (TRCA) in relation to the draft Environmental Study Report (ESR) for the above-referenced study. Your comments were received by the City of Vaughan (City) via email on July 29, 2022. In response to your comments, we have provided the attached comment/response table.

Please note that the final ESR is scheduled to be filed on August 18, 2022 for public review. Should you have any comments, questions and/or concerns in the interim, please do not hesitate to contact the undersigned.

Stantec Consulting Ltd.

Diana Addley
Senior Environmental Planner
Email: Diana.Addley@stantec.com

Attachment: Comment/Response Table
AutoCAD Existing Conditions Floodplain Mapping

c. Hilda Esedebe, City of Vaughan
Peter Cholewa and Jenn Robinson, Stantec Consulting Ltd.
Harsimrat Pruthi, Don Ford, Stephan Bohan, Suzanne Bevan and Victoria Kramkowski, TRCA

Appendix A: TRCA Comments and Proponent Responses

ITEM	TRCA COMMENTS	PROPONENTS/CONSULTANT RESPONSES
Ecology Comments		
1	TRCA's Comments July 12, 2022 Alternative Cross Sections. TRCA Ecology staff supports the EA recommended cross-section 3, which includes the use of Green Infrastructure (street trees in open planters; passive irrigation underground storage; bio-retention planters) on both north and south sides of the roadway.	Proponent's Responses August 15, 2022 Noted.
2	TRCA's Comments July 12, 2022 Alternative Alignments. TRCA staff supports the selected alignment B (Astona Boulevard Connection) in principle, provided that the proposed mitigation measures, implementation commitments and monitoring outlined on Section 9.0 of the Environmental Study Report are delivered. TRCA Ecology staff supports the mitigation measures, implementation commitments and monitoring outlined on Section 9.0 of the Environmental Study Report.	Proponent's Responses August 15, 2022 Noted.
3	TRCA's Comments July 12, 2022 Black Creek Crossing Location and Design. Please be advised that the planning and design of the proposed Bass Pro Mills Extension should have regard to development associated with the Vaughan Mills Secondary Plan area. Specifically, the potential realignment of Black Creek through a formalized natural heritage system corridor should be identified and determined prior to advancing design of the proposed Bass Pro Mills Extension. Efforts to avoid unnecessary disturbance to Black Creek should be made, and thus any required realignment of the watercourse should be to its ultimate location, avoiding the need for interim realignments or enclosures. The Vaughan Mills Centre Secondary Plan is currently subject to appeals, with the land use framework and Black Creek corridor yet to be finalized. Therefore, TRCA staff are unable to confirm acceptability of the specific location and design of the Black Creek Crossing at this time. TRCA encourages that a refined level of design associated with the Bass Pro Mills Drive Extension EA await further confirmation and approval of the land use framework within the Vaughan Mills Secondary Plan prior to advancing any further. Furthermore, several studies (including update to Fluvial Geomorphology study) have been deferred to the detail design phase, due to the challenges of conducting site visits during this initial phase. The data and analysis resultant of these studies will need to inform the design of the proposed crossing, in addition to the requirements from TRCA's Crossing Guideline of Valley and Stream Corridors and CVC's Fish and Wildlife Crossing Guidelines informing detail design. The outstanding study and analysis should be undertaken prior to advancing the detail design of the Bass Pro Mills Drive Extension EA.	Proponent's Responses August 15, 2022 As indicated within the Request for Proposal (RFP) for this project (i.e., RFP19-246), which was issued for TRCA's review and comment in 2019, *"appeals before the Local Planning Appeal Tribunal with regards to the VMCSP and related applications for amendments to the City of Vaughan Official Plan, the Secondary Plan, and the Zoning By-law Amendments. The exact land use of those developments may not be available until a settlement is reached, which may take a longer time beyond the study period"*. The study team included reviews of alternatives for the ultimate location of Black Creek in anticipation of the detail design and future Draft Plan of Subdivision process. The expectation is that the Ontario Land Tribunal hearings will be complete for detail design. The City's leadership is committed to advancing the extension of Bass Pro Mills Drive to improve the transportation network in the area which is much needed. Previous correspondence and discussions held with TRCA staff during the course of this assignment indicated an agreement that, for the purposes of this EA, the proposed crossing would be situated and sized at the existing location and potential alternatives for its ultimate realignment would be confirmed during detail design when the ongoing appeals process for the VMCSP have ended, provided considerations are made for the TRCA's watercourse crossing guidelines and connectivity be maintained between the wetlands. In light of the comments received on July 12, 2022, Table 16 has been updated to indicate that, *"During final stages of the MCEA process, TRCA was unable to confirm acceptability of a specific design and/or the interim and ultimate locations of the Black Creek Crossing. As such, a refined level of design will be developed in consultation with TRCA, and in association with the Planning Act process associated with development within the VMCSP area, at which time the final location and configuration of the realigned Black Creek watercourse will be confirmed".* As noted in Sections 3.2.4 and 7.5.5 of the ESR, a Fluvial Geomorphological was undertaken as part of this study based on desktop review and field visit from publicly accessible areas. Section 7.5.5 and Table 16 notes that, *"site specific geomorphic and topographic data for Black Creek and the east tributary shall be obtained through a detailed field assessment prior to detail design, once full site access is available."*

ITEM	TRCA COMMENTS	PROPONENTS/CONSULTANT RESPONSES	TRCA COMMENTS	PROPONENTS/CONSULTANT RESPONSES	TRCA COMMENTS	PROPONENTS/CONSULTANT RESPONSES
Water Resources Comments (Floodplain Management)						
5	TRCA's Comments January 25, 2022 Please provide a digital version of the hydraulic modelling which includes a project file. When the provided flow and geometry files were imported the model ran into an error and wouldn't compute. TRCA will review the model completely once it has been received.	Proponent Reponses: A copy of the model has been included with this submission.	TRCA's Comments April 1, 2022 The digital model has been received. TRCA will finalize review of the model once all modelling comments below have been addressed.	Proponent's Responses April 21, 2022 Noted.	TRCA's Comments July 12, 2022 Please see comment # 8 regarding the flow in the HEC-RAS model. TRCA will finalize review of the model once the comment has been addressed.	Proponent's Responses August 15, 2022 Please refer to response to Item 8 below.

Appendix A: TRCA Comments and Proponent Responses

6	TRCA's Comments January 25, 2022 Please confirm the depth blocked within the culvert as it appears to be 0.3 m on drawing 4 (proposed conditions) but is modelled as 0.1 m. Please clarify and revised as necessary.	Proponent Reponses: The cross section on Drawing 4 has been revised to match the proposed HEC-RAS geometry. The 1.52 m dimension is from culvert soffit to Channel Invert.	TRCA's Comments April 1, 2022 The modelling and drawing have been revised and are now consistent. The comment has been addressed	Proponent's Responses April 21, 2022 Noted.	TRCA's Comments July 12, 2022 Addressed.	Proponent's Responses August 15, 2022 N/A
7	TRCA's Comments January 25, 2022 Once TRCA's model review has been completed and is approved, TRCA requests that the FPM sheets be prepared to TRCA's specifications in order to be incorporated into TRCA's flood plain mapping program.	Proponent Reponses: Noted.	TRCA's Comments April 1, 2022 This request has been noted in the response matrix. The comment remains outstanding until the modelling comment below has been addressed.	Proponent's Responses April 21, 2022 Noted. All requested information will be provided to TRCA upon TRCA's approval of the provided HEC-RAS model.	TRCA's Comments July 12, 2022 Please see comment # 8 regarding the flow in the HEC-RAS model. TRCA will finalize review of the model once the comment has been addressed. Once the model is approved and the flood plain map sheet is adjusted if necessary, please provide a digital CAD version of the map sheet for review by TRCA's mapping department.	Proponent's Responses August 15, 2022 Please refer to response to Item 8 below. The requested AutoCAD version of the existing conditions floodplain mapping is attached to this response.
8	TRCA's Comments January 25, 2022 In order for TRCA to verify that catchment 46.16 does not contribute to the Black Creek subwatershed, please provide details/drawings to demonstrate that flows from this catchment are routed elsewhere, particularly during the Regional storm where storm sewers are not considered and overland flow is used.	Proponent Reponses: Please refer to Figure B.2.1 in Appendix B2.	TRCA's Comments April 1, 2022 Figure B.2.1 was provided in Appendix B, however the major overland flow arrows still appear to direct some portions of the catchment to the east towards Black Creek. It is TRCA's suggestion that the original TRCA flows be used in the hydraulic modelling as they are similar in magnitude and unlikely to cause difficulties for this project. Otherwise TRCA will require further overland flow details and drainage catchment delineation to confirm what portion of 46.16 should be removed, if any.	Proponent's Responses April 21, 2022 The HEC-RAS model will be revised using TRCA's original flow file.	TRCA's Comments July 12, 2022 The flow used in the vicinity of the crossing was determined through flow transposition. Please provide a figure illustrating the catchment areas used to confirm the flow is appropriate and has been applied upstream from the node location to the next flow change location as per TRCA's standard and conservative approach. Alternatively, TRCA's approved flow from the downstream model of 35.79 cms can be carried upstream and used in the crossing location.	Proponent's Responses August 15, 2022 A new figure has been prepared as requested. Please refer to Figure C-1 within the updated SWM report. Per TRCA requirements, the flow at the crossing has been applied sufficiently upstream of the actual flow node location.
Water Resources Comments (Stormwater Management)						
9	TRCA Comments January 25, 2022 Please note that the target UFR equations need to consider the pre-development drainage area within the ROW to the outlet location in the watercourse. From Drawing 1 (Existing Conditions) it appears that the pre-development area that should be used would be smaller than the 2.22 ha proposed.	Proponent Reponses: Under existing conditions, the proposed 2.22 ha ROW area discharges flows to the outlet location. As illustrated on Drawing 1, existing Bass Pro Mills Drive discharges runoff via storm sewer to the northern portion of the Wetland. Per Section 2.1 of the SWM Report, the northern portion of the wetland will discharge flows to HDF-A and Black Creek prior to flowing over the trapezoidal weir to the southern portion of Wetland-1.	TRCA's Comments April 1, 2022 A figure and description have been provided to justify why 2.22 ha has been used in the calculations. This is satisfactory and addresses the comment.	Proponent's Responses April 21, 2022 Noted		N/A

Appendix A: TRCA Comments and Proponent Responses

10	TRCA Comments January 25, 2022 TRCA is pleased to see the storage volumes required to meet TRCA's SWM criteria provided within the SWM report. It would be preferred if preliminary locations and footprints of LID measures/oversized pipes could be presented to demonstrate the feasibility of providing the required storage volumes at the EA stage in case there is a need for additional lands or a larger ROW. Please provide all details possible for the locations and sizing of these measures to ensure feasibility.	Proponent Reponses: Per Section 5.3, LIDs will be incorporated wherever possible to provide the require Quality Control. Per Section 5.5, to achieve the erosion control requirement a footprint area of approximately 407 m2 is required. Based on the Plan and Profile, 1400 m2 of Boulevard is available for LIDs. Table 9 summarizes the various oversized pipe options which satisfy the total 100-year storage requirements.	TRCA's Comments April 1, 2022 The response letter notes that the required footprint to meet the 5 mm on-site retention requirement is 407 m2 and the available space within the boulevard is 1400 m2 based on the Plan and Profile drawing. Please provide this drawing with the potential footprint area identified to help ensure it is considered and implemented at the detailed design stage. Further, if there are drawings available showing the potential location of the oversized pipes to meet TRCA's quantity control requirement please provide the plans to TRCA. It is TRCA's preference that the feasibility of these measures be explored at the EA stage to increase the likelihood of their implantation at detailed design.	Proponent's Responses April 21, 2022 A drawing will be provided which highlights the available boulevard areas where LIDs can be incorporated. The oversized pipe sizes and locations will be provided during detailed design as there are many different configuration options available to achieve the storage volumes outlined in Table 8.	TRCA's Comments July 12, 2022 TRCA could not find this drawing in the submitted package. Please provide it to TRCA for review when available.	Proponent's Responses August 15, 2022 In follow up to TRCA's comments provided on April 1, 2022, Figure 4 was previously updated to illustrate where LIDs could be incorporated within the boulevard areas. Stantec's April 21, 2022 response should have indicated that Figure 4 has been updated to reflect this request.

Appendix O.4.1 ESR 30-Day Public Review Period Correspondence

Robinson, Jennifer

From: Robinson, Jennifer
Sent: Friday, October 7, 2022 9:50 AM
To: Lee, Erinn (MECP)
Cc: Hilda Esedebe; Addley, Diana; Cholewa, Peter
Subject: RE: [External] RE: Notice of Study Completion - MCEA Study, Bass Pro Mills Drive (Hwy 400 to Weston Rd)

Follow Up Flag: Follow up
Flag Status: Completed

Hello Erin,

Thank you for your submitting your comments on behalf of MECP regarding the above referenced project.

Surface Water/Groundwater Comments

1.

a) Section 3.0 of the final Stormwater Management (SWM) Report outlines the design criteria and objectives that were identified for this project, and which formed the basis of the SWM strategy. Specifically, Table 4 outlines the water quality criteria control measures, as defined in the MECP Guidelines, that were relied upon to develop the SWM strategy for this project. The balance of the report content demonstrates how the SWM strategy meets these criteria and objectives.

As discussed in Section 5.3 the bioretention facilities and bioswales are to be designed in accordance with the following documents (or most current design publications):

- *Low Impact Development Stormwater Management Planning and Design Guide*, prepared by Credit Valley Conservation and Toronto and Region Conservation Authority, 2010; and
- *Stormwater Management Planning and Design Manual*, prepared by Ontario Ministry of Environment, Conservation and Parks (formerly the Ministry of the Environment, Ontario), March 2003.

Section 5.3 further identifies various considerations and design criteria that are required to be incorporated into the design of the bioretention facilities and bioswales to ensure the quality control criteria is achieved. Note that oversized pipes will not provide any quality control but may be used to provide the required quantity control.

As noted within Table 16, Section 9.0 of the Environmental Study Report, "*the SWM facilities will be designed to meet the proposed Enhanced Water Quality Control (80% TSS removal)*". In addition, Table 16 notes that the "*various relevant Low Impact Development (LID) measures (i.e., bioretention facility, grass swales, bioswales, underground chambers, infiltration rock trenches, soil support systems, etc.) shall be further reviewed and implemented during detail design to promote the management of water quality/quantity and erosion control as a result of roadway runoff. These features shall be designed in accordance with MECP Guidelines, the LID SWM Design Guide, or the most current design publications.*"

Given that the SWM report is final, this correspondence will be appended to the ESR and used to support the detail design for this project to further demonstrate how the SWM strategy presented within the final SWM Report is intended to Enhanced Water Quality Control (80% TSS removal), and that this objective shall be met during detail design, at which time the SWM design will be further investigated for this project, in consultation with TRCA and MECP.

b) As noted within Section 7.5.4 of the ESR, the HVA is located approximately 150 m southeast of the southeast limit of the project area. Specifically, Section 7.5.4 discusses the Credit Valley-Toronto and Region-Central Lake Ontario (CTC) Source Protection Plan (SPP) policies as they relate to HVAs, and indicates that an "*HVA can be easily changed or affected by contamination from both human activities and natural processes as a*

result of its intrinsic susceptibility, as a function of the thickness and permeability of overlaying layers; or by preferential pathways to the aquifer".

Section 7.5.4 further notes that, while the CTC SPP contains policies that apply in HVAs, these policies are not applicable to the project given that the project is located outside of the HVA. However, it is noted that the project will have a regard for these policies, including developing a design that may discourage salt application or reduce the amount of salt water that recharges into the groundwater (e.g., through curb and gutter design, avoiding low spots for ponding, etc.). Preventative measures that will also be considered as part of detail design of the project, such as the implementation of safe equipment fueling practices, maintenance of minimum setback distances from all surface water features for refueling/maintenance sites, storage of equipment/chemicals, and spill management, are also described within Section 7.5.4.

As indicated within Table 16, Section 9 of the ESR:

- A site-specific hydrogeological investigation will be completed during detail design to confirm subsurface groundwater conditions on-site.
- The potential need for a PTTW/EASR shall be evaluated as part of detail design and supported by site specific monitoring data.
- The potential need for a dewatering permit shall be evaluated as part of detailed design and supported by site specific monitoring data. If a dewatering permit is required , the hydrogeological study and supporting field data will assess the impacts of the required water taking on the surrounding environment and other water users.
- If a dewatering permit is required, a groundwater quality assessment and discharge plan will be completed as part of the supporting documents for the PTTW application(s).
- Should a dewatering permit be required, a related monitoring and mitigation plan for preventing the redirection and mobilization of potential contamination identified in the potential contaminated sites shall be provided in support of a PTTW application(s) and will be implemented to ensure potential neighbouring private wells are not permanently impacted and prevent any structural damage.
- If construction dewatering is required, the collected groundwater will be discharged in such a way that it is returned to the same aquifer system so that the project does not result in a significant groundwater threat.
- Detail design will consider ways to discourage salt application or reduce the amount of salty water that recharges into groundwater (i.e., curb and gutter design, no low spots for ponding, etc.).
- Upon completion, the project will be included within the City's Salt Management Plan which ensures the continuous improvement of the management of road salt used in winter maintenance operations through the use of best management practices.
- To prevent the release of any contaminants to the sewers and/or subsurface, detail design will consider appropriate catchment and containments.
- Excess materials generated during construction will be managed in accordance with O.Reg. 406/19. All materials and debris will be removed upon completion of the work, in accordance with O.Reg. 406/19.
- During construction, all chemical storage and equipment maintenance will be located as far from the HVA as is practical.
- An Erosion and Sediment Control Plan will be completed during detail design in consideration of site-specific conditions to address possible construction-related impacts on surface water features and the natural environment.
- Silt fencing and/or barriers are recommended where there is potential for sedimentation of watercourses or inadvertent encroachment of construction activities into natural areas.
- Equipment will be refueled at minimum 30 m away from watercourses to avoid potential impacts if an accidental spill occurs.
- All sediment and erosion controls will be monitored and properly maintained regularly, and controls shall only be removed after soils of the construction area have been stabilized and adequately protected, or until cover has been re-established.
- Subsurface municipal service installation will consider the use of a channel/trench barrier mechanism to prevent the creation of preferential pathways for any future contamination.

Given that the HVA and associated policy direction are described within sections of the ESR, the HVA will be considered as part of the hydrogeological investigation to be undertaken during detail design of the

project. Please note that this correspondence will be appended to the ESR to help ensure that this objective is met during detail design.

Administrative/Editorial

2. Comment noted. The study team reached out to Alderville First Nation at study onset with a tailored letter of Notice of Study Commencement and Request to Consult, as well as with a Notice of Online Public Information Centre 1. However, a response was received from Alderville First Nation following the circulation of the Notice of Online PIC 1 indicating that they did not wish to be consulted further. As such, this First Nation was not included within the list of Indigenous communities in Section 8.7; however, a copy of this correspondence is included within Appendix O.

3. The limits of Wellhead Protection Areas Q1 and Q2 (Moderate Risk Level) span across York and Durham Regions, and generally between the south portion of the City of Vaughan northerly to the north portions of Bradford-West Gwillimbury and East Gwillimbury. Sections 3.2.7 and 7.5.4 of the ESR recognize the project area's location within this broad area, and the activities that may be required to support this project in response to the policy direction defined by the CTC SPP are described in Section 7.5.4. Given the scale of Figure 10 and extensive range of the designated area, an updated figure was not prepared.

We hope that this provides clarity to your provided comments.

Kind regards,

Jenn Robinson
Environmental Planner, Transportation GTA
Jennifer.Robinson@stantec.com
Stantec

From: Lee, Erinn (MECP) <Erinn.Lee2@ontario.ca>
Sent: Monday, September 19, 2022 4:58 PM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: [External] RE: Notice of Study Completion - MCEA Study, Bass Pro Mills Drive (Hwy 400 to Weston Rd)

Good afternoon Jenn and team,

Thank you for providing MECP with a copy of the Notice of Completion and comment response tables.

Surface water/groundwater comments

1. MECP provided comments related to groundwater and surface water on July 27, 2022. It appears that most of these comments have been addressed, but please provide responses to the following comments:
    a. Comment 1: It is recommended that the final Stormwater Management Report (Appendix G) discuss and explain how the proposed SWM facility (a combination of bioretention, bioswale, super pipe etc.) is to meet the proposed Enhanced Water Quality Control (80% TSS removal).
    b. Comment 5: As the report indicated, the preferred design is located approximately 150 m northwest of an existing Highly Vulnerable Aquifer. Thus, an assessment of the potential impacts of the project on this zone should be conducted for this environmental assessment.

At a minimum, please include a commitment to consider this as part of hydrogeological studies and field studies to be completed during detailed design.

Administrative/Editorial

2. For your awareness, Alderville First Nation is missing from the list of Indigenous communities provided in Section 8.7. However, it is noted that engagement with Alderville is described in Appendix O.

3. It is recommended that Figure 10 be updated to show all of the source protection areas within the study area, including WHPA Q-1 and WHPA Q-2. In general, it is recommended that the project team contact the local source protection authority when vulnerable areas are identified within a project area.

Thank you,

Erinn Lee (she/her)
Regional Environmental Planner | Ministry of the Environment, Conservation and Parks
Project Review Unit, Environmental Assessment Branch
135 St. Clair Ave W, Toronto, ON M4V 1P5
P : 1 (416) 357-1511 E: Erinn.Lee2@ontario.ca

From: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Sent: August 18, 2022 11:07 AM
To: Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Cc: Hilda Esedebe <hilda.esedebe@vaughan.ca>; Addley, Diana <Diana.Addley@stantec.com>; Cholewa, Peter <Peter.Cholewa@stantec.com>
Subject: Notice of Study Completion - MCEA Study, Bass Pro Mills Drive (Hwy 400 to Weston Rd)

Hello,

Please see the attached Notice of Study Completion for the **Bass Pro Mills Drive (from Highway 400 to Weston Road) Municipal Class Environmental Assessment (EA) study**. As indicated within the attached notice, a copy of the Environmental Study Report (ESR) is available for a 30-day public review period until September 19, 2022 on the study website (Vaughan.ca/BassProMillsEA).

Should you have any questions or comments please do not hesitate to contact us.

Kind regards,

Jenn Robinson
Environmental Planner, Transportation GTA
OSEC, Whitby Office
Jennifer.Robinson@stantec.com
Stantec

Robinson, Jennifer

To: Hilda Esedebe
Subject: RE: [External] CFN 61893- TRCA Response Letter_ Bass Pro Mills Drive Extension _ EA Notice of Completion (NoC)

From: Manirul Islam <Manirul.Islam@trca.ca>
Sent: Monday, October 17, 2022 5:24 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Cholewa, Peter <Peter.Cholewa@stantec.com>; Harsimrat Pruthi <Harsimrat.Pruthi@trca.ca>; Suzanne Bevan <Suzanne.Bevan@trca.ca>; Stephen Bohan <Stephen.Bohan@trca.ca>; Victoria Kramkowski <Victoria.Kramkowski@trca.ca>
Subject: [External] CFN 61893- TRCA Response Letter_ Bass Pro Mills Drive Extension _ EA Notice of Completion (NoC)

Good afternoon Hilda.
Please find attached the response letter from TRCA related to the EA Notice of Study Completion (NoC) for the Bass Pro Mills Drive Extension EA from Highway 400 to Weston Road.
Should you have any questions please do not hesitate to contact me.

Thank you,
Manirul

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP
Planner
Infrastructure Planning and Permits | Development and Engineering Services

T: 1 437-880-2426
C: (647) 241-6816
E: manirul.islam@trca.ca
A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca

October 17, 2022

CFN 61893; xref CFN 63086; CFN 48402

BY E-MAIL ONLY (hilda.esedebe@vaughan.ca)

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management, City of Vaughan,
2141 Major Mackenzie Drive,
Ontario, L6A 1T1

Dear Hilda Esedebe:

Re: Notice of Study Completion
Bass Pro Mills Drive, Highway 400 to Weston Road
Municipal Class Environmental Assessment (MCEA) – Schedule C
Humber River Watershed; City of Vaughan; Regional Municipality of York

Toronto and Region Conservation Authority (TRCA) staff received the Notice of Study Completion for the Municipal Class Environmental Assessment (MCEA) to extend Bass Pro Mills Drive, from Highway 400 to Weston Road, responses to TRCA's comments on the draft Environmental Study Report (ESR) and supporting materials on August 15, 2022. Staff has also downloaded the ESR dated August 2022 from the project's website.

Staff understands that the study involves extension of Bass Pro Mills Drive westerly from Highway 400 to Weston Road. Staff understand that the study will assess service to the Vaughan Mills Center Secondary Plan (VMCSP) area, distribution of east west traffic - alleviating Rutherford Road to the north, and the provision of another route connection for York Region Transit (YRT). Staff also understand that the study will follow the Municipal Class Environmental Assessment (MCEA) process, Schedule 'C', Phases 1 to 4.

Staff understands that the preferred alternative is to extend Bass Pro Mills Drive roadway with a straight connection to Weston Road, a 30.0 m right-of-way (including 4 lanes of vehicular travel, with 2 lanes in each direction), a 2.0 m wide sidewalk, a 2.0 m wide cycling path on either side of the roadway, a 4.0 m wide paved buffer between the sidewalk and cycling path, and a 2.3 m boulevard with an intermittent bio-retention swale.

Staff notes that this EA proposes the Black Creek crossing at its current location until all the potential alternatives for its ultimate realignment is confirmed during detail design, and upon completion of VMCSP and associated applications confirming the land use framework and Black Creek corridor. Staff understands that a refined level of crossing design will be developed in consultation with TRCA at the detail design stage in consistent with *the Crossings Guidelines for Valley Stream Corridors 2015 (linked https://trcaca.s3.ca-central-1.amazonaws.com/app/uploads/2021/09/21095149/TRCA_Crossings_Guideline_2015-v2.pdf)*. Staff looks forward to reviewing site specific geomorphic and topographic analysis/report for Black Creek and the east tributary prior to detail design.

Staff has no objection in principle to the preferred alternative for Bass Pro Mills Drive EA. Notwithstanding, in reviewing the EA document staff have comments related to detail design that will need to be addressed. Please note that TRCA comments in Appendix A should be included in the ESR.

As noted in the ESR, permits in accordance with Ontario Regulation 166/06 are required from TRCA prior to project construction. In advance of the permit submission, a Pre-Design Brief summarizing all TRCA requirements and technical commitments made during the EA stage should be completed and submitted, in draft, to TRCA for review together with a copy of the TRCA permit application form. The *TRCA Pre-Design Brief Checklist for Infrastructure Projects* is available on our website *(http://www.trca.on.ca/dotAsset/xxx.pdf) and* should be used as a guide to your submission. The draft Pre-Design Brief should also include reference to the comments in Appendix A of this letter. Once the Pre-Design Brief is finalized, please submit the 90% detailed design drawings, together with the appropriate reports and documents and the permit application form. Please also ensure at the time of pre-detail design and permitting, the current natural heritage and hazard mapping is confirmed with TRCA or updated appropriately.

Please include a digital copy of all submitted material. Materials must be submitted in PDF format, with drawings pre-scaled to print on 11"x17" pages. Materials may be submitted on discs, via e-mail (if less than 5 MB), or through file transfer protocol (FTP) sites (if posted for a minimum of two weeks).

Should you have any questions or require any additional information please contact me at Manirul.islam@trca.ca.

Regards,

Manirul Islam
Planner, Infrastructure Planning and Permits
Development and Engineering Services
HP/MI

Attached: Appendix A

BY E-MAIL

cc: Consultant: Stantec, Peter Cholewa (Peter.Cholewa@stantec.com)

TRCA: Victoria Kramkowski, Government and Community Relations Specialist, Peel/ York Watersheds
Suzanne Bevan, Senior Manager, Infrastructure Planning and Permits
Stephen Bohan, Senior Planner, Development Planning and Permits
Harsimrat Pruthi, Senior Planner, Infrastructure Planning and Permits

APPENDIX A: TRCA COMMENTS AND PROPONENT RESPONSES

ITEM	TRCA COMMENTS (July 12, 2022)	PROPONENTS/CONSULTANT RESPONSES (August 15, 2022)	TRCA Comments (October 17, 2022)
Ecology Comments			
1.	TRCA Comments July 12, 2022 Alternative Cross Sections. TRCA Ecology staff supports the EA recommended cross-section 3, which includes the use of Green Infrastructure (street trees in open planters; passive irrigation underground storage; bio-retention planters) on both north and south sides of the roadway.	Noted.	
2.	TRCA Comments July 12, 2022 Alternative Alignments. TRCA staff supports the selected alignment B (Astona Boulevard Connection) in principle, provided that the proposed mitigation measures, implementation commitments and monitoring outlined on Section 9.0 of the Environmental Study Report are delivered. TRCA Ecology staff supports the mitigation measures, implementation commitments and monitoring outlined on Section 9.0 of the Environmental Study Report.	Noted.	
3.	TRCA Comments July 12, 2022 Black Creek Crossing Location and Design. Please be advised that the planning and design of the proposed Bass Pro Mills Extension should have regard to development associated with the Vaughan Mills Secondary Plan area. Specifically, the potential realignment of Black Creek	As indicated within the Request for Proposal (RFP) for this project (i.e., RFP19-246), which was issued for TRCA's review and comment in 2019, *"appeals before the Local Planning Appeal Tribunal with regards to the VMCSP and related applications for amendments to the City of Vaughan Official Plan, the Secondary Plan, and the Zoning By-law Amendments. The exact land use of those developments may not be available*	Please see 4th paragraph of this letter.

	through a formalized natural heritage system corridor should be identified and determined prior to advancing design of the proposed Bass Pro Mills Extension. Efforts to avoid unnecessary disturbance to Black Creek should be made, and thus any required realignment of the watercourse should be to its ultimate location, avoiding the need for interim realignments or enclosures. The Vaughan Mills Center Secondary Plan is currently subject to appeals, with the land use framework and Black Creek corridor yet to be finalized. Therefore, TRCA staff are unable to confirm acceptability of the specific location and design of the Black Creek Crossing at this time. TRCA encourages that a refined level of design associated with the Bass Pro Mills Drive Extension EA await further confirmation and approval of the land use framework within the Vaughan Mills Secondary Plan prior to advancing any further. Furthermore, several studies (including update to Fluvial Geomorphology study) have been deferred to the detail design phase, due to the challenges of conducting site visits during this initial phase. The data and analysis resultant of these studies will need to inform the design of the proposed crossing, in addition to the requirements from TRCA's Crossing Guideline of Valley and Stream Corridors and CVC's Fish and Wildlife Crossing Guidelines informing detail design. The outstanding study and analysis should be undertaken prior to advancing the detail design of the Bass Pro Mills Drive Extension EA.	*until a settlement is reached, which may take a longer time beyond the study period"*. The study team included reviews of alternatives for the ultimate location of Black Creek in anticipation of the detail design and future Draft Plan of Subdivision process. The expectation is that the Ontario Land Tribunal hearings will be complete for detail design. The City's leadership is committed to advancing the extension of Bass Pro Mills Drive to improve the transportation network in the area which is much needed. Previous correspondence and discussions held with TRCA staff during the course of this assignment indicated an agreement that, for the purposes of this EA, the proposed crossing would be situated and sized at the existing location and potential alternatives for its ultimate realignment would be confirmed during detail design when the ongoing appeals process for the VMCSP have ended, provided considerations are made for the TRCA's watercourse crossing guidelines and connectivity be maintained between the wetlands. In light of the comments received on July 12, 2022, Table 16 has been updated to indicate that, *"During final stages of the MCEA process, TRCA was unable to confirm acceptability of a specific design and/or the interim and ultimate locations of the Black Creek Crossing. As such, a refined level of design will be developed in consultation with TRCA, and in association with the Planning Act process associated with development within the VMCSP area, at which time the final location and configuration of the realigned Black Creek watercourse will be confirmed".* As noted in Sections 3.2.4 and 7.5.5 of the ESR, a Fluvial Geomorphological was undertaken as part of this study based on desktop review and field visit from publicly accessible areas. Section 7.5.5 and Table 16 notes that, *"site specific geomorphic and*	

		topographic data for Black Creek and the east tributary shall be obtained through a detailed field assessment prior to detail design, once full site access is available."	
4.			Section 3.2.3 Terrestrial Environment. Under "Designated Areas" the document reads: "*the wetlands present within the study area are not shown in existing regulated area mapping* […]". Please note that the wetlands present in the study area have been identified as regulated by TRCA. Please update the text to reflect it. Please note that the text of the Regulation takes precedence over the mapping. Similarly, under "Wetlands" the document fails to mention those wetlands have been identified as regulated by TRCA. Please update the text to reflect it. Please note that the text of the Regulation takes precedence over the mapping.
5.			Section 6.7. Drainage and Stormwater Management.

			The last paragraph of page 88 reads: "*The preferred road alignment crosses Black Creek at one location, however the final land use plan and ultimate watercourse location for the adjacent lands of the VMCSP is currently unknown. As such, in discussion with TRCA staff, it was agreed that the proposed crossing would be situated and sized at the existing location*." As per the last set of comments, TRCA Ecology staff are unable to confirm the acceptability of the specific location and design of the Black Creek Crossing at this time. Please modify the text above so this is communicated in the text. Additionally, TRCA encourages efforts to avoid unnecessary disturbance to Black Creek, and strongly recommends that any required realignment of the watercourse be to its ultimate location, avoiding the need for interim realignments or enclosures.

6.				Table 16 of ESR; dated August 2022 Item "Individual Trees". The last bullet mentions "*TRCA's Landscaping and Tree Preservation Guidelines*". Please note that TRCA does not have a Guideline with this title or any other Guideline that covers this topic. Please clarify and provide a copy/link to the document being mentioned here.
7.				Appendix E – Environmental Impact Assessment Section 6.4 Wetlands These wetlands have been identified as regulated by TRCA. Please update the text to reflect it. Please note that the text of the Regulation takes precedence over the mapping.
Water Resources Comments (Floodplain Management)				
8.	TRCA Comments January 25, 2022 Please provide a digital version of the hydraulic modelling which includes a project file. When the provided flow and geometry files were	TRCA Comments April 1, 2022 The digital model has been received. TRCA will finalize	TRCA Comments July 12, 2022 Please see comment # 8 regarding the flow in the	TRCA Comments Sept 23, 2022 The flow can not yet be verified. As TRCA does not

	imported the model ran into an error and wouldn't compute. TRCA will review the model completely once it has been received.	review of the model once all modelling comments below have been addressed.	HEC-RAS model. TRCA will finalize review of the model once the comment has been addressed. .	expect the flow change to be significant, and the crossing location needs to be finalized, TRCA defers further review of the proposed crossing to detail design.
9.	TRCA Comments January 25, 2022 Please confirm the depth blocked within the culvert as it appears to be 0.3 m on drawing 4 (proposed conditions) but is modelled as 0.1 m. Please clarify and revised as necessary.	TRCA Comments April 1, 2022 The modelling and drawing have been revised and are now consistent. The comment has been addressed .	TRCA Comments July 12, 2022 Addressed.	
10.	TRCA Comments January 25, 2022 Once TRCA's model review has been completed and is approved, TRCA requests that the FPM sheets be prepared to TRCA's specifications in order to be incorporated into TRCA's flood plain mapping program.	TRCA Comments April 1, 2022 This request has been noted in the response matrix. The comment remains outstanding until the modelling comment below has been addressed.	TRCA Comments July 12, 2022 Please see comment # 11 regarding the flow in the HEC-RAS model. TRCA will finalize review of the model once the comment has been addressed. Once the model is approved and the flood plain map sheet is adjusted if necessary, please provide a digital CAD version of the map sheet for review by TRCA's mapping department. .	TRCA Comments Sept 23, 2022 Although a preliminary CAD map sheet was provided, TRCA defers further review until the detail design stage when the modelling and crossing location have been finalized.

11.	TRCA Comments January 25, 2022 In order for TRCA to verify that catchment 46.16 does not contribute to the Black Creek subwatershed, please provide details/drawings to demonstrate that flows from this catchment are routed elsewhere, particularly during the Regional storm where storm sewers are not considered and overland flow is used.	TRCA Comments April 1, 2022 Figure B.2.1 was provided in Appendix B, however the major overland flow arrows still appear to direct some portions of the catchment to the east towards Black Creek. It is TRCA's suggestion that the original TRCA flows be used in the hydraulic modelling as they are similar in magnitude and unlikely to cause difficulties for this project. Otherwise TRCA will require further overland flow details and drainage catchment delineation to confirm what portion of 46.16 should be removed, if any.	TRCA Comments July 12, 2022 The flow used in the vicinity of the crossing was determined through flow transposition. Please provide a figure illustrating the catchment areas used to confirm the flow is appropriate and has been applied upstream from the node location to the next flow change location as per TRCA's standard and conservative approach. Alternatively, TRCA's approved flow from the downstream model of 35.79 cms can be carried upstream and used in the crossing location.	TRCA Comments Sept 23, 2022 Although details have been added to Figure C-1, a small portion of Velmar Drive and Astona Boulevard appear to be draining to the crossing location and this area has not been included in the flow transposition calculations. As such, the flow of 33.230 cms used at the culvert location can not yet be confirmed. As this is a small difference from TRCA's flow of 35.79 cms, TRCA is comfortable addressing the final modelling for the crossing at detail design.
Water Resources Comments (Stormwater Management)				
12.	TRCA Comments January 25, 2022 Please note that the target UFR equations need to consider the pre-development drainage area within the ROW to the outlet location in the watercourse. From Drawing 1 (Existing Conditions) it appears that the pre-development area that should be used would be smaller than the 2.22 ha proposed.	TRCA Comments April 1, 2022 A figure and description have been provided to justify why 2.22 ha has been used in the calculations. This is satisfactory and addresses the comment.		

13.	TRCA Comments January 25, 2022 TRCA is pleased to see the storage volumes required to meet TRCA's SWM criteria provided within the SWM report. It would be preferred if preliminary locations and footprints of LID measures/oversized pipes could be presented to demonstrate the feasibility of providing the required storage volumes at the EA stage in case there is a need for additional lands or a larger ROW. Please provide all details possible for the locations and sizing of these measures to ensure feasibility.	TRCA Comments April 1, 2022 The response letter notes that the required footprint to meet the 5 mm on-site retention requirement is 407 m^2 and the available space within the boulevard is 1400 m^2 based on the Plan and Profile drawing. Please provide this drawing with the potential footprint area identified to help ensure it is considered and implemented at the detail design stage. Further, if there are drawings available showing the potential location of the oversized pipes to meet TRCA's quantity control requirement please provide the plans to TRCA. It is TRCA's preference that the feasibility of these measures be explored at the EA stage to increase the likelihood of their implantation at detail design.	TRCA Comments July 12, 2022 TRCA could not find this drawing in the submitted package. Please provide it to TRCA for review when available.	TRCA Comments Sept 23, 2022 The response matrix notes that this drawing was updated but TRCA can not locate this drawing. Although TRCA would like to review this drawing at the EA stage to determine feasibility of the LIDs, this can be deferred to detail design.

Appendix O.4.2 Post 30-Day ESR Public Review Period Correspondence

Robinson, Jennifer

To: Hilda Esedebe
Subject: RE: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Monday, September 19, 2022 9:25 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Francolini, William (MTO) <William.Francolini@ontario.ca>; Chan, Stanley (MTO) <Stanley.Chan2@ontario.ca>
Subject: RE: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

Hi Hilda, please find below Ministry comments to your August 24, 2022 submission.

We have reviewed the official submission of the ESR. The submitted cross-section is the same as presented back in May so, all of our comments still stand.

- In chapter 5 of the ESR, typical cross-section alternatives are presented for the Bass Pro Mills Road extension. However, these typical cross-sections are not applicable to the Bass Pro Mills structure area that is restricted by the deck width. When evaluating the alternatives, the ministry had expected that the cross-sections along the structure should be presented and evaluated similarly to the cross-section alternatives beyond the structure. This would ensure that the recommendations for the facilities proposed for the structure and those beyond the structure provide a continuous safe design.

- Section 5 of the ESR is for the “Identification and Evaluation of Alternative Design Concepts” and had focused throughout most sections on documenting how several alternatives were identified and thoroughly evaluated. Section 5.3.3. presents a sole bridge cross-section that was presented at PIC 2. It is hard to understand the purpose of this sub-section under the ‘Evaluation Section’ as it doesn’t discuss the process of identifying different alternatives, evaluation criteria and how the team arrived to recommend this alternative. Also, it does not summarize the concerns/ comments provided for this design, what were the next steps, etc. The ministry would expect the ESR to include evaluation tables for cross-sections across the structure with all applicable criterion similar to the tables prepared in the ESR for cross-sections beyond the structures.

- There are some errors with the information in section 5.4.2. :

    - Typo: Hwy 400 widening is anticipated between 2024 and 2026 (not 2046)
    - On February 9, 2022, the ministry has met with the study team and presented information about the Hwy 400 widening project from 8 to 10 lanes. The ministry has asked the design team to evaluate options and the team agreed to look into alternatives such as widening the structure or providing a separate AT crossing. The team mentioned about the tight vertical clearance under the Bass Pro Mills structure. MTO proposed to the team to undertake a survey to check the conditions. The MTO also mentioned about the future 400 widening project and that it is not anticipated that a

grade raise of the mainline would be required and that to be confirmed in Preliminary design. This to give the team some level of confidence that their design should not be conflicting with the 400 widening design.
    - To proactively work with the City on preparing alternative designs, the ministry has offered to share some surveying information with the team at the Bass Pro Mills bridge in early March 2022. The City has declined MTO's offer to provide further information and mentioned that this information is unnecessary at the time. It was never communicated with the ministry that these alternatives would be ruled out of consideration in the ESR. As discussed above, the ministry was very keen and proactive in sharing information with Vaughan related to the 400 widening project and never mentioned that there is an obvious conflict, either in timing or scope/ design.
    - The last paragraph in this section gives the impression that the ministry was not considerate of its own policy, which is not accurate. The ministry has met and communicated with the team about the concerns with the sole alternative presented in light of this policy memo. Also, the ministry iterated several times that the memo is not applicable as it discusses AT improvements within rehab projects, and not with new undertakings like new Environmental Assessment studies.

- Section 6 presents the DC for the bridge cross-section and mentions that the details can be further reviewed during detail design. The ministry's concerns with the concept design are fundamental and cannot be addressed during detail design as they require work that would be typically done at this current stage within the Preliminary Design and captured within the Environmental Assessment process.

- The main ESR text did not discuss the modifications to the parapet wall and the introduction of double handrailing that is typically used by cyclists while the foot note under the DC table clearly mentions that there will be signage to advise cyclists to dismount.

- Section 8.9 does not include the ministry's concerns.

Traffic:

1. The submission has not addressed all of our previous comments.
2. The bicycle path is discontinued across the bridge over Hwy 400. The plan suggests 'No Bikes on Sidewalk' Rb-104 and 'Dismount and Walk ' Rb-70 signs in both directions at the points where the bike path terminates, and cyclists are required to dismount their bikes to cross the bridge. From experience the cyclists are not likely to obey the signs and there will be perpetual potential hazards for pedestrian and bicycle traffic. The ministry would not endorse the design as presented. Our preference would be to have a continuous bike path along both sides of the bridge in addition to other improvements. It appears the City has walked away from its original intent of widening the bridge as discussed in its previous submissions.
3. The deck cross section plan shows bicycle railings over the barrier walls on either side when the cyclists are not permitted to ride within the bridge limits.
4. Plan 3 – Part of the plan on the west side of Hwy 400 does not display a complete road network. Portion of the north leg of the intersection shown in the plan consists of E-S ramp and a future proposed road. Being part of the project, the plan should include a complete design layout including the E-S on-ramp as well as the proposed road up to its north limit/connection. I understand from the previous submissions that the City also has plans to signalize this intersection. I am wondering as how signals will fit-into intersection geometry with a ramp along the NE quadrants. We would recommend north leg under the proposed plan should continue to serve as a free flow E-S ramp without interruption from opposing traffic.

5. What is the anticipated AADT and Design/Posted speeds for Bass Pro Mill Drive?
6. The proposed median island width of 1.2 m does not meet MTO's standards. Instead, a minimum width of 1.4m will be required.
7. We understand, the City's consideration of 'do nothing' option among the various alternatives ranging from structure widening to constructing separate pedestrian bridge, is essentially based on cost. But it should be noted that according to TAC requirements, on structures with posted between 50 km/h – 80 km/h, the cyclists should be separated from vehicular traffic by physical barrier/buffer. To ever integrate bike paths on the bridge in future with significant width constraint, widening of the structure would be necessary. To accommodate AT elements, width of the vehicular lanes through a road diet have already been reduced.
8. We do have concerns with 1.8m, not because of the width of the SW, but with the whole concept of discontinuity of the bike facility across the structure.

Project Delivery Office Comments:

- In February 2022, the ministry met with Vaughan and identified concerns with the AT option presented at the Bass Pro Mills crossing. From this meeting, the ministry was under the impression that city understood our concerns and would identify alternatives that would be evaluated for several criteria, not only based on cost, and to recommend an alternative that would be presented and discussed with the ministry prior to finalizing the EA. These alternatives included bridge widening and a separate AT crossing of Highway 400. The City has now proceeded with only one alternative that would be included in the EA and there appears to be no further opportunity for discussion on the proposed alternative. The ministry has not endorsed the City's preferred alternative.

- In past discussions with the City, the potential for vertical clearance issues resulting from bridge widening to accommodate AT was raised and the ministry offered to provide recent survey data for the city to further review feasibility of this option. This analysis was not undertaken by the City.

- Without addressing the AT connection across Highway 400 through this EA, the work is pushed into the future and places the onus on the ministry to resolve. This is especially concerning since there is a potential for clearance issues with the widened structure and Highway 400, which would require major roadway reconstruction to address. The EA process should at minimum consider an ultimate solution for an AT crossing of Highway 400.

  The City mentioned: "Given that both of these external projects and implications to the Bass Pro Mills project are undermined at this time, it is further prudent that the EA recommendation avoid a widening of the Bass Pro Mills structure over Highway 400." The ministry is unclear as to the implications of Highway 400 widening work to this EA. A recommendation to widen the Bass Pro Mills structure over Highway 400 does not appear to conflict with timelines for MTO's widening as the municipal work would commence after MTO's work is complete.

- **The proposed design has the following concerns:**

  - Beyond the structure, there is dedicated off road separate cyclist facilities. Even though the City proposes to have signage for cyclists to dismount their bicycle at the combined proposed 1.8m sidewalk, the ministry still has concerns because it is anticipated that cyclists will not abide to this signage. In fact, since the City is proposing to raise the bridge parapet, it entails that this is to accommodate the safer height for cyclists then it

is understood by the City that cyclist may in fact will ignore the signage and bike across the bridge using the sidewalk.

- The City referenced the Policy Memo 2018-07 which discusses the Design of Cycling Facilities within constrained RoW. This memo is not applicable since it is a 1.8m SW proposed that the City is proposing to sign 'not to be used by cyclists', thus it is not meant to be a cycling facility. This memo also refers to existing bridge that will be rehabbed and adjacent infrastructure already exists at the time of rehab. In this case, the City is proposing new facility and the structure is not to be rehabbed so doesn't apply.
- MTO has stopped using gutterless medians since 2016. The proposed cross section doesn't account for the gutter and line paint. When these are added, the 3.5m lane will end up with reduced width. There are MTODs and OPDSs that have standards for these medians, as example MTOD 504.010

Just to let you know, the Bass Pro Mills bridge, is owned by MTO.

In your next submission, please incorporate all Ministry comments provided so far, including the above ones.

Thank you

Margaret Mikolajczak, C.E.T.
Senior Project Manager
Ministry of Transportation
Corridor Management Section
159 Sir William Hearst Avenue, 7th Floor
Downsview, Ontario M3M 0B7

Phone: 416-235-4269
Fax: 416-265-4267

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: August 24, 2022 4:33 PM
To: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Francolini, William (MTO) <William.Francolini@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: RE: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

Hi Margaret and MTO Project Team,

You may have received the attached Notice of Study Completion for the Bass Pro Mills EA study, which was made public on August 18, 2022.

The Final ESR and Appendices can be found on the study website located here for your convenience. The project team is happy to receive comments on the Final ESR during the 30-day public review period ending on **September 19, 2022.**

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: November 3, 2022 5:49 PM
To: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Tom.Hewitt@ontarion.ca; Venneri, Rita (MTO) <Rita.Venneri@ontario.ca>; Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Chan, Stanley (MTO) <Stanley.Chan2@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Francolini, William (MTO) <William.Francolini@ontario.ca>; Della Mora, Dan (MTO) <Dan.DellaMora@ontario.ca>; Tomaszewski, Henry (MTO) <Henry.Tomaszewski@ontario.ca>
Subject: RE: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

Hi Margaret,

We had the meeting **today from 1pm to 2:30pm**. You were included in the meeting invitation and most of the staff you listed were in attendance.

The Bass Pro Mills EA project team will submit the materials that were reviewed during today's meeting for MTO's comment shortly.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Thursday, November 3, 2022 2:01 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Tom.Hewitt@ontarion.ca; Venneri, Rita (MTO) <Rita.Venneri@ontario.ca>; Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Chan, Stanley (MTO) <Stanley.Chan2@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Francolini, William (MTO) <William.Francolini@ontario.ca>; Della Mora, Dan (MTO) <Dan.DellaMora@ontario.ca>; Tomaszewski, Henry (MTO) <Henry.Tomaszewski@ontario.ca>
Subject: RE: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

Hi Hilda, please invite following MTO staff for the up coming meeting:

Tom Hewitt, Rita Venneri, Grobel, Lukasz, Janke, Aaron, Uddin, Zaka, Szymanski, Frederic, Van Voorst, John, Sadek, Sandra, Staley Chan, Day Mina, Molai Sam, Francolini, William, Dan Della Mora, Henry Tomaszewski and I.

Dates:

November: 9, 10, 22, 23, 24, 29, 30

Hilda, please set up the meeting and let us know.

Thank you

Margaret

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: October 13, 2022 6:43 PM
To: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: RE: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission
Importance: High

Good evening Margaret,

City staff would like to meet with you to discuss the Bass Pro Mills bridge crossing.

Kindly provide dates/times within the month that work best for you and we will do our best to accommodate.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

Robinson, Jennifer

From: Molai, Sam (MTO) <Sam.Molai@ontario.ca>
Sent: Thursday, November 3, 2022 7:05 PM
To: Hilda Esedebe; Liu, Karen
Cc: Cholewa, Peter; Mikolajczak, Margaret (MTO); Hewitt, Tom (MTO); Szymanski, Frederic (MTO)
Subject: RE: [External] FW: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission
Attachments: SSD 0110.0022 - 2022-01.pdf; 2021 Inspection Report.pdf

Hi Hilda

Further to our meeting today, please see attached latest bridge inspection report (2021) and SSD for bicycle barrier as already discussed in the meeting. The existing asphalt is in general good condition on the concrete deck and both approach slabs.

Regards
Sam Molai; P.Eng., P.E.
Sr. Structural Engineer – MTO Central Region

CL RAIL SHOP SPLICE
TOP RAIL HSS 152x51x6.4
250
750 (MAX)
℄ POST
℄ POST

CANTILEVER PLAN

840 (MAX)
℄ POST
A TYP
CJP
190 MIN
CJP

STRAIGHT CANTILEVEREND END DETAIL

230 (TYP)
℄ POST
2200 (MAX)
℄ POST
A TYP
CJP
TOP RAIL HSS 152x51x6.4
INTERMEDIATE RAIL HSS 76x51x6.4
10 DIA CIRCULAR DRAIN HOLE (TYP)
POST HSS 102x102x6.4 (TYP)
115 C/C (TYP)
PICKETS 19x19 (TYP)
BOTTOM RAIL HSS 76x51x6.4
TOP OF CURB
TOP OF MUP
190 MIN
CJP
CANTILEVER END POST HSS 76x51x6.4
ANCHORAGE SYSTEM (TYP)
END OF CURB
℄ ANCHORAGE ASSEMBLY AND POST

KINKED CANTILEVER END DETAIL

℄ POST
2200 (MAX)
℄ POST
B TYP
C TYP
12 DIA DRAIN HOLE (TYP)
100 MAX
12 DIA SEMI-CIRCULAR DRAIN HOLE ON OUTSIDE FACE OF POST (TYP)

FIELD SPLICE

RAIL EXPANSION JOINT TO BE LOCATED BETWEEN FIRST POST ON EITHER SIDE OF BRIDGE EXPANSION JOINT (TYP BOTH SIDES)
LARGER OF "J" OR 20mm – TYP BOTH ENDS (SEE EXPANSION JOINT DRAWING)
℄ POST
D TYP
E TYP
600 MIN (TYP)
℄ BRIDGE EXP. JOINT

RAIL EXPANSION JOINT

BARRIER ELEVATION

℄ POST AND RAIL
TOP RAIL
8
1
250
INTERMEDIATE RAIL
POST
PICKET
1150
BOTTOM RAIL
20 DIA ANCHOR BOLTS (TYP)
NYLON WASHER/BUSHING (TYP)
BASE PLATE
GASKET OR COATING
SEE SITE SPECIFIC DRAWINGS FOR CURB DETAILS
ACROW-RICHMOND DGR-1 OR EQUIVALENT
100
100
3
TOP OF MUP
380
300
90 MIN COVER (TYP)

TYPICAL CROSS SECTION

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN
DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

1
3 SIDES
3
TOP RAIL
℄ POST
80
12 DIA SEMI-CIRCULAR DRAIN HOLE
EXTRUDED END CAP 158x58x3
10 (MIN)
85
10 DIA CIRCULAR DRAIN HOLE (TYP)
POST

A END CAP (TYPICAL)

TOP RAIL
EXTRUDED END CAP 3mm THICK (TYP)
CLEARANCE 1mm MAX
58
158
POST

1

NOTES:

1. ALUMINUM RAILING ELEMENTS INCLUDING POSTS PICKETS AND TOP RAIL END CAP SHALL BE 6061-T6 ALLOY HEAT TREATED, CONFORMING TO ASTM B221M. ALUMINUM PLATES SHALL BE 6061-T6 ALLOY HEAT TREATED, CONFORMING TO ASTM B209M.
2. 6351-T6 ALLOY CAN BE SUBSTITUTED FOR 6061-T6 ALLOY.
3. STAINLESS STEEL ANCHORAGE, BOLTS AND WASHERS SHALL CONFORM TO ASTM A593, TYPE 304 OR TYPE 316. NYLON BUSHING AND WASHER SHALL BE PROVIDED TO PREVENT CHEMICAL REACTION BETWEEN ALUMINUM BASE PLATE AND STAINLESS STEEL COMPONENTS.
4. WELDING SHALL CONFORM TO CSA W59.2. FILLER METAL SHALL BE 5356 ACCORDING TO ANSI/AWS A5.10 AND SHALL BE QUALIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA W59.2.
5. RAILING ANCHORAGE TO BE PLACED PRIOR TO CONCRETING.
6. BEDDING GROUT SHALL NOT BE USED UNDER BASE PLATES. THIN PAD OF EPOXY GROUT NOT EXCEEDING 3mm THICKNESS MAY BE USED WHEN REQUIRED FOR FILLING THE VOIDS UNDER THE BASE PLATE.
7. ALUMINUM BASE PLATES SHALL BE SEPARATED FROM CONCRETE SURFACES ACCORDING TO OPSS.PROV 908.
8. AT LEAST TWO POSTS ARE REQUIRED IN RAIL SECTION EITHER SIDE OF AN EXPANSION JOINT AND FIELD SPLICE.
9. BARRIER SECTIONS SHALL BE FABRICATED IN LENGTHS NOT EXCEEDING 7m. EACH SECTION SHALL HAVE AT LEAST THREE (3) POST SPACING.
10. ALL POSTS AND PICKETS SHALL REMAIN VERTICAL AFTER INSTALLATION.
11. PICKETS SHALL BE EQUALLY SPACED IN EACH PANEL AT MAXIMUM 115mm CENTRE TO CENTRE. PICKET SPACING CAN BE ADJUSTED TO SUIT PROJECT SPECIFIC PANEL LENGTHS PROVIDED THAT CLEAR SPACE BETWEEN PICKETS DOES NOT EXCEED 100mm.
12. USE POST SPACING(S) OF 2200mm FOR THE LONGEST POSSIBLE LENGTH OF THE BARRIER. ADJUST THE POST SPACING FOR THE END PANELS TO MEET SITE SPECIFIC LENGTH OF THE BARRIER.
13. ALL DIMENSIONS ARE MEASURED PARALLEL TO TOP OF CURB AND ALONG CENTRELINE OF ANCHOR ROD ASSEMBLIES.

NOTES TO DESIGNER:

1. THIS DRAWING SHALL NOT BE USED IN PEDESTRIAN CONGREGATING AREAS UNLESS PERMITTED BY THE REGIONAL HEAD OF STRUCTURAL ENGINEERING.
2. RAIL EXPANSION JOINT DETAILS ARE ONLY VALID FOR MOVEMENT UP TO 80mm. MAXIMUM PICKET CLEAR SPACE SHALL NOT EXCEED 100mm WITH MAX JOINT MOVEMENT.
3. STRAIGHT CANTILEVER END DETAIL MAY PROVIDE A TRANSITION TO THE ABUTTING APPROACH BARRIER (EXAMPLE: 6"x6" WOOD POST WITH 3-2"x6", OR CEDAR RAILS; STEEL BEAM GUIDE RAIL; OTHER SYSTEMS). THE KINKED CANTILEVER END DETAIL MAY BE CONSIDERED FOR BRIDGES WITHOUT ABUTTING BARRIER. DELETE UNUSED, OPTIONAL CANTILEVER END DETAILS.
4. FOR ANODIZED FINISH OPTION ADD NOTE: "ALL EXPOSED ALUMINUM SHALL BE GIVEN CAUSTIC ETCH FOLLOWED BY AN ARCHITECTURAL CLASS I ANODIC COATING WITH COLOUR CONFORMING TO ALUMINUM ASSOCIATION DESIGNATION AA-M10C22A41. THE COLOUR SHALL BE "CLEAR" AND SHALL MEET STANDARDS SET FORTH BY AAMA 611." ALTERNATIVE COLOURS MAY BE DETERMINED BY THE REGIONAL HEAD OF STRUCTURAL ENGINEERING.
5. FOR POWDER COATING FINISH OPTION ADD NOTE: "ALL EXPOSED ALUMINUM SHALL RECEIVE POWDER COATING COMPLYING WITH AAMA 2605. THE COLOUR SHALL BE ___ AND GLOSS SHALL BE ___." THE SPECIFIC COLOUR AND GLOSS SHALL BE DETERMINED BY THE REGIONAL HEAD OF STRUCTURAL ENGINEERING.
6. THE "NOTES TO DESIGNER" SHALL BE DELETED FROM THIS DRAWING PRIOR TO ISSUING.

℄ POST
170
℄ SPLICE
20 MIN
2
5
3 SIDES
TOP RAIL
60
75
6
TYP
POST
5x5 CHAMFER THIS END ONLY

B TOP RAIL FIELD SPLICE DETAIL (TYPICAL)

℄ EXPANSION JOINT
LARGER OF "J" OR 20mm – TYPICAL BOTH ENDS (SEE DECK EXPANSION JOINT DRAWING)
2
5
3 SIDES
TOP RAIL
51
60
115
5x5 CHAMFER THIS END ONLY

D TOP RAIL EXPANSION JOINT DETAIL (TYPICAL)

℄ POST AND CURB
25 DIA DRAIN HOLE
6
21x24 SLOTTED HOLE (TYP)
POST
PL 25x250x250
OUTSIDE FACE
INSIDE FACE
BASE PLATE
℄ PLATE
12 DIA SEMI-CIRCULAR DRAIN HOLE IN POST
4-20 DIA ANCHOR BOLT WITH NYLON WASHER AND BUSHING FOR ANCHORAGE ASSEMBLY
40
170
250
40
40
170
40
250
380

3

℄ POST
170
℄ SPLICE
20 MIN
2
5
3 SIDES
INTERMEDIATE RAIL
35 (TYP)
60
75
6
TYP
100 MAX
POST
PICKETS
5x5 CHAMFER THIS END ONLY

C INTERMEDIATE RAIL FIELD SPLICE DETAIL
BOTTOM RAIL SIMILAR (TYPICAL)

℄ EXPANSION JOINT
LARGER OF "J" OR 20mm – TYP BOTH ENDS (SEE DECK EXPANSION JOINT DRAWING)
2
5
3 SIDES
INTERMEDIATE RAIL
51
10 (TYP)
60
115
100 MAX
PICKETS
5x5 CHAMFER THIS END ONLY

E INTERMEDIATE RAIL EXPANSION JOINT DETAIL
BOTTOM RAIL SIMILAR (TYPICAL)

TOP RAIL, INTERMEDIATE OR BOTTOM RAIL
6mm WELDED PLATE SLEEVE FOR SLIDING FIT INSIDE OF RAIL, OPTIONAL BENT PLATE AND EXTRUSION SLEEVE NOT SHOWN.
TYP
6
CLEARANCE 1mm MAX
BOTTOM OF RAIL

2

REFER TO THE STRUCTURAL MANUAL FOR PROFESSIONAL ENGINEER STAMPING REQUIREMENTS

STANDARD DRAWING JANUARY 2022	SS110-22
MULTI USE PATH (MUP) BICYCLE BARRIER	

REVISIONS			
	DATE	BY	DESCRIPTION
DESIGN	CHK	CODE CSA S6-19	LOAD – DATE JAN 2022
DRAWN	CHK	SITE	DWG

Ontario Ministry of Transportation

CONT
GWP

SHEET

MULTI USE PATH (MUP) BICYCLE BARRIER

FILE NAME: C:\USERS\WEZAAKV\ONEDRIVE - GOVERNMENT OF ONTARIO\DESKTOP\SS110-22 JAN 2022.DWG
MODIFIED: 2022-03-31 14:44

Ontario

MINISTRY OF TRANSPORTATION

STRUCTURE INSPECTION REPORT

BASS PRO MILLS DRIVE

SITE NUMBER: 37X-1529/B0

INSPECTION DATE: 2021-08-24

Ontario

STRUCTURE INSPECTION REPORT

Site Number: 37X-1529/B0

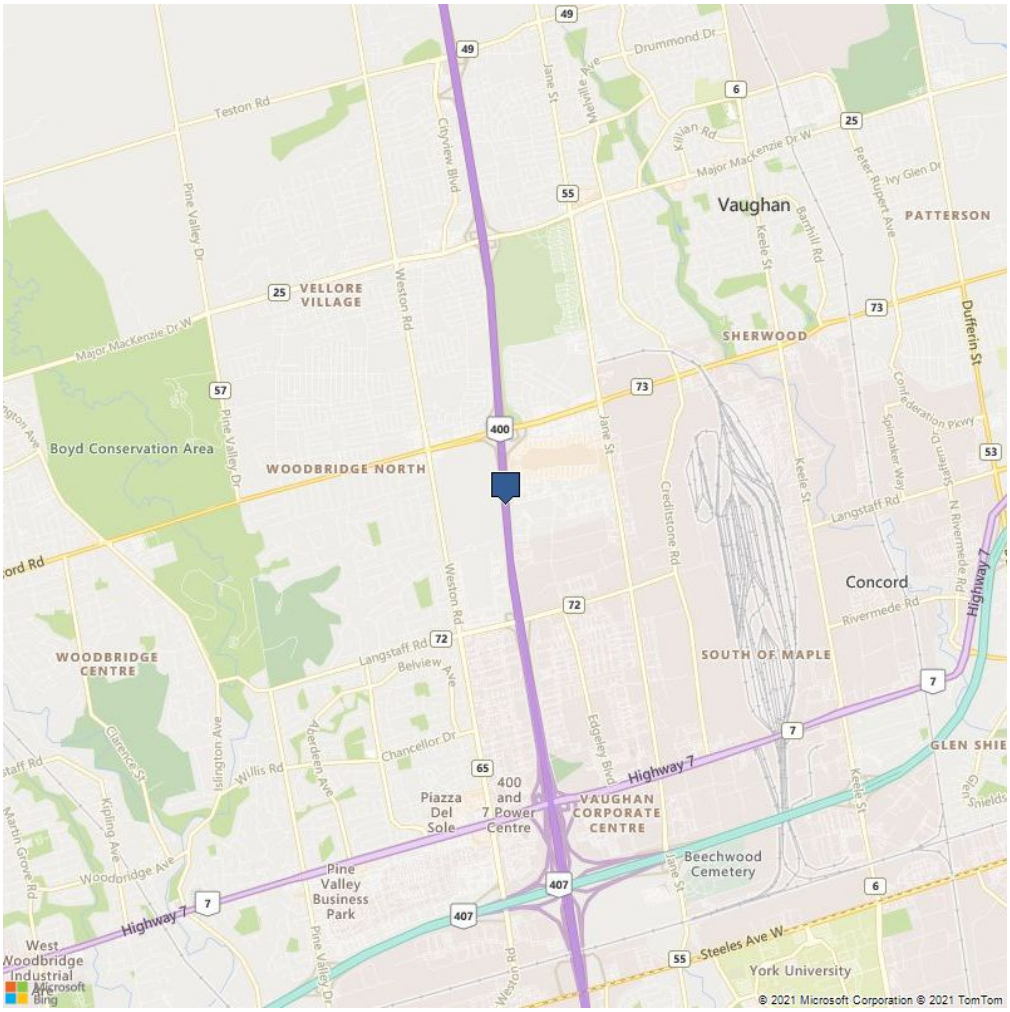
LOCATION			
Main Highway:	400	Location:	HIGHWAY 400, BASS PRO MILLS DRIVE
Region:	Central	Latitude:	43.82070051
Area:		Longitude:	-79.54560287
Township:	VAUGHAN	LHRS:	46822
Current County:		LHRS Offset:	1.293
Old County:		Owner/Custodian:	Provincial
		Inspected by:	MTO
Regional Representative:	Mariusz Kobiela	Admin. System:	MTO

SERVICE ON/UNDER	
Road	400
HV&L Restrictions Point	Hwy 400 - S
Bridge	BASS PRO MILLS DRIVE
HV&L Restrictions Point	Hwy 400 - S
HV&L Restrictions Point	Hwy 400 - N
HV&L Restrictions Point	Hwy 400 - S

Ontario

STRUCTURE INSPECTION REPORT

Site Number: 37X-1529/B0



STRUCTURE INSPECTION REPORT

Site Number: 37X-1529/B0

STRUCTURE INFORMATION			
Year built:	2004		
Year Superstruct. Built:		Interchange number:	
Structure category:	Beam/Girder	Interchange structure #:	
Structure Type 1:	Trapezoidal Girders	Structure Material 1:	Weathering Steel
Structure Type 2:		Structure Material 2:	
Total deck length, m:	92.2		
Overall deck area, sq.m:	1882	Overall struct. width, m:	20.41
Roadway width, m:	16.8	Direction of structure:	
Min. vert. clearance, m:		Skew angle, degree:	11
Heritage Designation:		Fill on structure, m:	
No. of Span:	2	Load Limit, tonnes:	
Span length, m:	Total=91 (1)=48;(2)=43;		

TRAFFIC INFORMATION ON STRUCTURE			
No. of lanes		Traffic directional bound	
Highway class		AADT	
Posted speed, km/h		% trucks	
Operation Status	Open to traffic	Detour distance, m	

CAPTIAL WORK HISTORY

Contract No.	Contract Year	Structure completion year	Work category	Scope of works

ADDITIONAL INVESTIGATION HISTORY

Date	Additional Investigation	Comments

APPRAISAL INDICES AND COMMENTS

fatigue		
Seismic		
Scour		
Flood		
Barrier		
Curb		
Load Capacity	100	

INSPECTION HISTORY

Type	Date	BCI	Special Notes	BCI Justification
Regular OSIM	2006-06-07	100.00		

Regular OSIM	2006-06-09	100.00	Complete internal inspection of box girders in next biennial inspection.--Others in PartyDanny Ochoa, Carlos De melos	
Regular OSIM	2007-10-01	100.00	--Others in PartyGarry Fitchett	
Regular OSIM	2009-10-19	99.80	- Weather Import :Clear - Temperature :1 --Others in PartyLandon Plazek, Andre Dombrowsky	
Regular OSIM	2011-07-07	98.50	-/Work comments :Structure is in good condition with a pothole and exposed slab on the west approach slab and unsealed cracks on westbound lane of deck wearing surface.	
Regular OSIM	2013-09-19	97.90	Beams/MLE's inside boxes continued: Longitudinal stiffeners adjacent to abutments (L=9.95m, W=0.21m, H=0.27m, C=4).--Others in PartyDan Paul, Andre Dombrowsky	
Regular OSIM	2015-08-13	96.90	Box girders inspection on November 9th 2015.--Others in PartyScott Quach, Joel Borcillo, Kyle Martin, Tien Nguyen/Work comments :Bridge is relatively new condition with few minor local defects on componets.	.
Regular OSIM	2017-10-03	96.90	Shoulder Closure conducted on 29 August 2017.--Others in PartyNayanika Habbu /Work comments :The bridge is in excellent to good condition with the exception of minor flaking of patina noted in the underside of girders over traffic lanes. Patch repairs were noted on the deck sidewalk, curbs & median.	The structure is in excellent condition with minor defects noted.
Regular OSIM	2019-07-09	95.78	Bridge is generally in excellent to good condition with local areas of light patina flaking along bottom flange of steel girders over highway 400 northbound and soundbound lanes.	
Regular OSIM	2021-08-24	95.19	Bridge is generally in good condition. Local light spall and delamination on north barrier wall. Local loose sections at both handrailings (East end of north rail and at 15th post from west on south railing). Few local missing bolts on handrailing. Light to medium flaking of girder patina near center pier in both spans. Total Inspection Time: 1hr.	

INSPECTION INFORMATION			
Reg. OSIM Freq, yrs	2	Inspection type	Regular OSIM
Enh. OSIM Freq, yrs	N/A	Inspection year	Odd
Inspector	Scott Quach	Inspection duration, hr	1.00
Supervising Engineer	Scott Quach	Start date	2021-08-24

STRUCTURE INSPECTION REPORT

Site Number: 37X-1529/B0

Others in party	Nerujan Sivanesan	End date	2021-12-08
Firm	Morrison Hershfield Ltd.	Weather	Sunny
Inspection BCI	95.19	Temperature, deg C	29
		Next Inspection date	2023-12-08
BCI Justification			
Special notes			

EQUIPMENT USED / ACCESS INFORMATION	
Enhanced access equipment	
Special access equipment	
Equipment used	Hammer, digital camera and measuring tape.

OVERALL STRUCTURE NOTES			
Overall Comments:	Bridge is generally in good condition. Local light spall and delamination on north barrier wall. Local loose sections at both handrailings (East end of north rail and at 15th post from west on south railing). Few local missing bolts on handrailing. Light to medium flaking of girder patina near center pier in both spans. Total Inspection Time: 1hr.		
Recommended Work on Structures:		Timing:	Comments:

STRUCTURE ELEMENT AND CONDITION DATA						
Element group	Decks		Dimensions		Condition Data	
Element name	Wearing Surface> (Top of Deck)		Units	m	Units	Sq.m
Element type			Length	92.200	Excellent	0
Material	Asphalt		Width	16.800	Good	1494
Location	Top of Deck		Height	0.090	Fair	55
Environment	Severe		Count		Poor	0
Protection system			Inspected	Yes	Total Quantity	1549
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Sealed joints at both deck ends. Fair - Multiple unsealed light to medium longitudinal cracks along deck wearing surface. Majority of the cracks were found along the westbound traffic lanes. (Reference Photos: #3-7 and 29).					
Photo Reference						

Element group	Approaches		Dimensions		Condition Data	
Element name	Wearing surface> (East and West Approaches)		Units	m	Units	Sq.m
Element type			Length	6.000	Excellent	0
Material	Asphalt		Width	18.300	Good	211
Location	East and West Approaches		Height	0.100	Fair	9
Environment	Severe		Count	2	Poor	0
Protection system			Inspected	Yes	Total Quantity	220
Maintenance needs	Maint. Needs - Bridge Cleaning - Remove excess vegetation in front of south barrier wall at east approach. , Maint. Needs - Bridge Surface Repair - Patch local light pothole at end of east approach.		Timing: 2 Year	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Paved over joints and sealed transverse cracks noted at the end of both east and west approaches. Extensive vegetation growth on east approach, in front of south barrier wall. Local light pothole at end of east approach, adjacent to south barrier wall. (Reference Photo: #48 to 51). Fair - Local unsealed light to medium unsealed longitudinal cracks in WBL at both approaches and at east approach in unused south section.					
Photo Reference						

Element group	Decks		Dimensions		Condition Data	
Element name	Deck Top> (Below Asphalt Wearing Surface)		Units	m	Units	Sq.m
Element type	Cast-in-place concrete on supports		Length	92.200	Excellent	1135
Material	Cast-in-place concrete		Width	20.410	Good	747
Location	Below Asphalt Wearing Surface		Height	0.230	Fair	0
Environment	Moderate		Count		Poor	0
Protection system			Inspected	Yes	Total Quantity	1882
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Rating is based on the condition of the asphalt wearing surface. No bottom up defects noted. Some excellent quantities downgraded from excellent to good based on element age and environment.					
Photo Reference						

Element group	Approaches		Dimensions		Condition Data	
Element name	Approach slab> (East and West Approaches)		Units	m	Units	Sq.m
Element type			Length	6.000	Excellent	139
Material	Cast-in-place concrete		Width	19.500	Good	93
Location	East and West Approaches		Height	0.250	Fair	1
Environment	Moderate		Count	2	Poor	1
Protection system			Inspected	Yes	Total Quantity	234
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Some excellent quantities downgraded from excellent to good based on element age and environment. Poor - Rating is based on the condition of the asphalt wearing surface. Poor quantity assigned due to local light pothole at end of east approach.					
Photo Reference						

Element group	Approaches		Dimensions		Condition Data	
Element name	Sidewalk/Curbs> (North Side)		Units	m	Units	Sq.m
Element type			Length	6.000	Excellent	0
Material	Cast-in-place concrete		Width	1.500	Good	19
Location	North Side		Height	0.150	Fair	1
Environment	Severe		Count	2	Poor	0
Protection system			Inspected	Yes	Total Quantity	20
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Few narrow cracks. Vegetation growth noted along curb and barrier wall. Fair - Minor settlement of sidewalk at west approach (Reference Photo: #28).					
Photo Reference						

Element group	Approaches		Dimensions		Condition Data	
Element name	Curb and Gutters> (Median)		Units	m	Units	m
Element type			Length	6.000	Excellent	0
Material	Cast-in-place concrete		Width		Good	16
Location	Median		Height	0.150	Fair	2
Environment	Severe		Count	2	Poor	0
Protection system			Inspected	Yes	Total Quantity	18
Maintenance needs	Maint. Needs - Concrete Repair - Rebuild concrete curb at west approach road.		Timing: 2 Year	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Concrete patch repairs noted at both east and west ends. Fair - Few narrow to medium transverse cracks on top face of curb. Minor settlement of west approach road causing minor height difference at west end of approach and west approach road. Note: Wide crack and very severe delamination on center median curb at west approach road. (Reference Photo: #23, and 30)					
Photo Reference						

Element group	Sidewalks/curbs		Dimensions		Condition Data	
Element name	Curbs> (Median)		Units	m	Units	Sq.m
Element type			Length	92.200	Excellent	0
Material	Cast-in-place concrete		Width	1.200	Good	126
Location	Median		Height	0.150	Fair	12
Environment	Severe		Count	1	Poor	0
Protection system			Inspected	Yes	Total Quantity	138
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Fair - Multiple narrow to medium transverse cracks on center median along entire length of bridge deck. Light scaling and abrasions noted along curb face. (Reference Photo: #29).					
Photo Reference						

Element group	Sidewalks/curbs		Dimensions		Condition Data	
Element name	Sidewalk and medians> (North Side)		Units	m	Units	Sq.m
Element type			Length	92.200	Excellent	0
Material	Cast-in-place concrete		Width	1.500	Good	122
Location	North Side		Height	0.150	Fair	30
Environment	Severe		Count	1	Poor	0
Protection system			Inspected	Yes	Total Quantity	152
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Fair - Multiple narrow to medium longitudinal and transverse cracks on north sidewalk along entire deck length. Minor abrasions along curb face. (Reference Photo: #27).					
Photo Reference						

Element group	Barriers		Dimensions		Condition Data	
Element name	Barrier/Parapet Walls> Interior(North and South Sides)	Interior	Units	m	Units	Sq.m
Element type	Safety Shape with single railing		Length	105.000	Excellent	0
Material	Cast-in-place concrete		Width		Good	207
Location	North and South Sides		Height	1.000	Fair	2
Environment	Severe		Count	2	Poor	1
Protection system			Inspected	Yes	Total Quantity	210
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Fair - Few local narrow to medium vertical cracks. Poor - Light spall on north barrier over highway 400 northbound. Light delam on north barrier at west end of deck (Reference Photo: #25 and 26).					
Photo Reference	26, 25					

Element group	Barriers		Dimensions		Condition Data	
Element name	Barrier/Parapet Walls> Exterior(North and South Sides)	Exterior	Units	m	Units	Sq.m
Element type	Safety Shape with single railing		Length	105.000	Excellent	105
Material	Cast-in-place concrete		Width		Good	70
Location	North and South Sides		Height	0.830	Fair	0
Environment	Moderate		Count	2	Poor	0
Protection system			Inspected	Yes	Total Quantity	175
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Few narrow vertical cracks on both barrier walls. Some excellent quantities downgraded from excellent to good based on element age and environment.					
Photo Reference						

Element group	Barriers		Dimensions		Condition Data	
Element name	Hand Railings> (North and South Sides)		Units	m	Units	m
Element type	Single Railing		Length	104.000	Excellent	0
Material	Steel		Width		Good	206
Location	North and South Sides		Height		Fair	2
Environment	Severe		Count	2	Poor	0
Protection system			Inspected	Yes	Total Quantity	208
Maintenance needs	Maint. Needs - Railing System Repair - Tighten loose railings and replace missing bolts.		Timing: 2 Year		Performance Deficiencies:	
Recommended work			Timing:			
Comments	Fair - Loose south railing and missing bolt at 15th post from west end. Loose railing and missing bolt at east end of north railing. Missing bolt at 10th post from west on north railing. (Reference Photos: #31-33).					
Photo Reference						

Element group	Coatings		Dimensions		Condition Data	
Element name	Railing Systems / Hand Railings> (North and South Sides)		Units	m	Units	Sq.m
Element type	Hot dip galvanizing		Length		Excellent	0
Material			Width		Good	163
Location	North and South Sides		Height		Fair	0
Environment	Severe		Count		Poor	0
Protection system			Inspected	Yes	Total Quantity	163
Maintenance needs			Timing:		Performance Deficiencies:	
Recommended work			Timing:			
Comments	Good - Local areas of light surface rust.					
Photo Reference						

Element group	Beams/MLE's		Dimensions		Condition Data	
Element name	Girders> (Below Deck)		Units	m	Units	Sq.m
Element type	Box/trapezoidal		Length	91.500	Excellent	1618
Material	Weathering steel		Width	1.760	Good	195
Location	Below Deck		Height	1.600	Fair	2
Environment	Benign		Count	4	Poor	0
Protection system			Inspected	Yes	Total Quantity	1815
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Fair - Typical light to medium flaking of patina on obttom flange of girders over Highway 400 NB and SB traffic lanes and shoulder near center pier. One loose bolt on girder hatch (east end hatch, 2nd girder from north) (Reference Photos: #16 to 18).					
Photo Reference						

Element group	Beams/MLE's		Dimensions		Condition Data	
Element name	Inside boxes (sides & bottoms)> (Box Girders)		Units	m	Units	Sq.m
Element type			Length	91.500	Excellent	1784
Material	Steel		Width	1.710	Good	50
Location	Box Girders		Height	1.650	Fair	0
Environment			Count	4	Poor	0
Protection system			Inspected	No	Total Quantity	1834
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Inspected - Not inspected in 2021. Rating carried forward from previous inspection report.					
Photo Reference						

Element group	Beams/MLE's		Dimensions		Condition Data	
Element name	Diaphragms> Intermediate(Between Girders)	Intermediate	Units	m	Units	sq.m
Element type	Cross Type		Length		Excellent	25
Material	Weathering steel		Width		Good	8
Location	Between Girders		Height		Fair	0
Environment	Benign		Count	33	Poor	0
Protection system			Inspected	Yes	Total Quantity	33
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Local areas of light patina flaking (Reference Photo: #14).					
Photo Reference						

Element group	Beams/MLE's		Dimensions		Condition Data	
Element name	Diaphragms> (Inside Box Girders)		Units	m	Units	sq.m
Element type	Other		Length		Excellent	35
Material	Steel		Width		Good	5
Location	Inside Box Girders		Height		Fair	0
Environment	Benign		Count	40	Poor	0
Protection system			Inspected	No	Total Quantity	40
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Inspected - Not part of 2021 inspection. Previous rating carried forward.					
Photo Reference						

Element group	Beams/MLE's		Dimensions		Condition Data	
Element name	Diaphragms> Intermediate(At Piers)	Intermediate	Units	m	Units	sq.m
Element type	I type		Length		Excellent	0
Material	Weathering steel		Width		Good	3
Location	At Piers		Height		Fair	0
Environment	Benign		Count	3	Poor	0
Protection system			Inspected	Yes	Total Quantity	3
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Diaphragm is in good condition, with local areas of light patina flaking.					
Photo Reference						

Element group	Beams/MLE's		Dimensions		Condition Data	
Element name	Diaphragms> (Inside Boxes/Piers)		Units	m	Units	sq.m
Element type	Rectangular-solid		Length		Excellent	3
Material	Steel		Width		Good	1
Location	Inside Boxes/Piers		Height		Fair	0
Environment			Count	4	Poor	0
Protection system			Inspected	No	Total Quantity	4
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Inspected - Not part of 2021 inspection. Previous rating carried forward.					
Photo Reference						

Element group	Coatings		Dimensions		Condition Data	
Element name	Structural Steel> (At Abutments)		Units	m	Units	Sq.m
Element type			Length		Excellent	13
Material			Width		Good	7
Location	At Abutments		Height		Fair	0
Environment	Benign		Count		Poor	0
Protection system			Inspected	Yes	Total Quantity	20
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Light loss of coating at bottom flange of north exterior girder at west end. (Reference Photo: #15).					
Photo Reference						

Element group	Decks		Dimensions		Condition Data	
Element name	Soffit - Thin Slab> Exterior(Underside of Deck)	Exterior	Units	m	Units	Sq.m
Element type			Length	91.000	Excellent	186
Material	Cast-in-place concrete		Width	3.410	Good	124
Location	Underside of Deck		Height		Fair	0
Environment	Moderate		Count		Poor	0
Protection system			Inspected	Yes	Total Quantity	310
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Few local narrow transverse cracks along deck overhangs. Few hairline to narrow vertical cracks on both fascias near deck ends. Some excellent quantities downgraded from excellent to good based on element age and environment.					
Photo Reference						

Element group	Decks		Dimensions		Condition Data	
Element name	Soffit - Thin Slab> Interior(Between Girders)	Interior	Units	m	Units	Sq.m
Element type			Length	91.000	Excellent	520
Material	Cast-in-place concrete		Width	6.450	Good	67
Location	Between Girders		Height		Fair	0
Environment	Benign		Count		Poor	0
Protection system			Inspected	Yes	Total Quantity	587
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Few narrow transverse cracks.					
Photo Reference						

Element group	Decks		Dimensions		Condition Data	
Element name	Soffit - Inside Boxes> (Box Girders)		Units	m	Units	Sq.m
Element type			Length	91.500	Excellent	745
Material	Cast-in-place concrete		Width	2.150	Good	40
Location	Box Girders		Height		Fair	2
Environment			Count		Poor	0
Protection system			Inspected	No	Total Quantity	787
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Inspected - Not part of 2021 inspection. Rating carried forward from previous inspection.					
Photo Reference						

Element group	Abutments		Dimensions		Condition Data	
Element name	Abutment walls> (East and West Sides)		Units	m	Units	Sq.m
Element type	Integral		Length		Excellent	89
Material	Cast-in-place concrete		Width	20.720	Good	51
Location	East and West Sides		Height	3.400	Fair	1
Environment	Benign		Count	2	Poor	0
Protection system			Inspected	Yes	Total Quantity	141
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Local light popout on west abutment below south exterior girder. Typical rust staining on both abutment near girders. (Reference Photo: #40). Fair - Local medium vertical crack on west abutment at 3rd girder from north (Reference Photo: #41).					
Photo Reference						

Element group	Abutments		Dimensions		Condition Data	
Element name	Wingwalls> (All Quadrants)		Units	m	Units	Sq.m
Element type	Reinforced concrete		Length	6.400	Excellent	31
Material	Cast-in-place concrete		Width		Good	20
Location	All Quadrants		Height	2.000	Fair	0
Environment	Benign		Count	4	Poor	0
Protection system			Inspected	Yes	Total Quantity	51
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Few narrow vertical cracks and local rust stains noted along the construction joint location.					
Photo Reference						

Element group	Piers		Dimensions		Condition Data	
Element name	Shafts/columns/Pile Bents> (Below Deck)		Units	m	Units	Sq.m
Element type	Concrete circular columns		Length		Excellent	0
Material	Cast-in-place concrete		Width	1.200	Good	75
Location	Below Deck		Height	5.000	Fair	0
Environment	Severe		Count	4	Poor	0
Protection system			Inspected	Yes	Total Quantity	75
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Few local hairline to narrow vertical cracks.					
Photo Reference						

Element group	Piers		Dimensions		Condition Data	
Element name	Caps> (Below Deck)		Units	m	Units	Sq.m
Element type			Length	18.500	Excellent	78
Material	Cast-in-place concrete		Width	1.400	Good	23
Location	Below Deck		Height	1.250	Fair	1
Environment	Benign		Count	1	Poor	0
Protection system			Inspected	Yes	Total Quantity	102
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Fair - Local hairline to narrow surface stained cracks on north face of pier cap (Reference Photo: #36).					
Photo Reference						

Element group	Piers		Dimensions		Condition Data	
Element name	Bearings> (Below Deck)		Units	m	Units	Each
Element type	Elastomeric pad		Length		Excellent	6
Material			Width		Good	2
Location	Below Deck		Height		Fair	0
Environment	Benign		Count	8	Poor	0
Protection system			Inspected	Yes	Total Quantity	8
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Bearings are in excellent to good condition. No deformation or cracks noted.					
Photo Reference						

Element group	Foundations		Dimensions		Condition Data	
Element name	Foundation (below ground level)> (Abutment and Piers)		Units	m	Units	N/A
Element type	Unknown		Length		Excellent	0
Material	Other		Width		Good	3
Location	Abutment and Piers		Height		Fair	0
Environment			Count		Poor	0
Protection system			Inspected	No	Total Quantity	3
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Inspected - No observable performance defects.					
Photo Reference						

Element group	Embankments & Streams		Dimensions		Condition Data	
Element name	Embankments> (All Quadrants)		Units	m	Units	Each
Element type			Length		Excellent	0
Material			Width		Good	4
Location	All Quadrants		Height		Fair	0
Environment			Count	4	Poor	0
Protection system			Inspected	Yes	Total Quantity	4
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Sideslopes are well vegetated. No scour evident.					
Photo Reference						

Element group	Embankments & Streams		Dimensions		Condition Data	
Element name	Slope protection> (In Front of Abutments)		Units	m	Units	Each
Element type	Concrete		Length		Excellent	0
Material			Width		Good	2
Location	In Front of Abutments		Height		Fair	0
Environment			Count	2	Poor	0
Protection system			Inspected	Yes	Total Quantity	2
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Minor movement at top of east slope paving, south end (Reference Photo: #47).					
Photo Reference						

Element group	Embankments & Streams		Dimensions		Condition Data	
Element name	Slope protection> (All Quadrants)		Units	m	Units	Each
Element type	Vegetation		Length		Excellent	0
Material			Width		Good	4
Location	All Quadrants		Height		Fair	0
Environment			Count	4	Poor	0
Protection system			Inspected	Yes	Total Quantity	4
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Sideslopes are well vegetated. No scour evident.					
Photo Reference						

Element group	Accessories		Dimensions		Condition Data	
Element name	Utilities> (Soffit Girders)		Units	m	Units	Each
Element type			Length		Excellent	0
Material			Width		Good	15
Location	Soffit Girders		Height		Fair	0
Environment			Count	15	Poor	0
Protection system			Inspected	Yes	Total Quantity	15
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Lights were not on at the time of inspection.					
Photo Reference						

Element group	Accessories		Dimensions		Condition Data	
Element name	Utilities> (North & South)		Units	m	Units	Each
Element type			Length		Excellent	0
Material			Width		Good	4
Location	North & South		Height		Fair	0
Environment			Count	4	Poor	0
Protection system			Inspected	Yes	Total Quantity	4
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - 2 Light poles near the center of the deck. 2 Light poles near west end of deck. No observed material defects.					
Photo Reference						

Element group	Accessories		Dimensions		Condition Data	
Element name	Utilities> (Interior and Exterior Barriers)		Units	m	Units	Each
Element type			Length		Excellent	0
Material			Width		Good	4
Location	Interior and Exterior Barriers		Height		Fair	0
Environment			Count	4	Poor	0
Protection system			Inspected	Yes	Total Quantity	4
Maintenance needs			Timing:	Performance Deficiencies:		
Recommended work			Timing:			
Comments	Good - Junction box cover plates at the light pole locations. No observed material defects.					
Photo Reference						

Photo #: 01

01 South Elevation

Photo #: 02

02 North Elevation

Photo #: 03

03 Bridge Deck From Southwest Corner

Photo #: 04

04 Bridge Deck From Northwest Corner

Photo #: 05

05 Bridge Deck From Southeast Corner

Photo #: 06

06 Bridge Deck From Northeast Corner

Photo #: 07

07 Unsealed Medium Longitudinal Crack at West End of Deck in WBL

Photo #: 08

08 South Exterior Soffit at West Abutment, Looking East

Photo #: 09

09 South Exterior Soffit at East Abutment, Looking West

Photo #: 10

10 North Exterior Soffit at West Abutment, Looking East

Photo #: 11

11 North Exterior Soffit at East Abutment, Looking West

Photo #: 12

12 Interior Soffit and Girders at West Abutment, Looking East

Photo #: 13

13 Interior Soffit and Girders at East Abutment, Looking West

Photo #: 14

14 Typical Intermediate Diaphragm

Photo #: 15

15 Loss of Protective Coating on Bottom Flange of North Exterior Girder at West End

Photo #: 16

16 Light to Medium Flaking of Patina on 3rd Girder From North at Center Pier (West Span)

Photo #: 17

17 Light to Medium Flaking of Patina on Girder Flange in East Span Near Center Pier

Photo #: 18

18 Loose Bolt on Girder Hatch (2nd Girder From North) at East End

Photo #: 19

19 South Exterior Barrier Wall, Looking East

Photo #: 20

20 North Exterior Barrier Wall, Looking East

Photo #: 21

21 South Interior Barrier Wall, Looking West

Photo #: 22

22 North Interior Barrier Wall and Sidewalk, Looking West

Photo #: 23

23 Center Median at End of West Approach, Looking East

Photo #: 24

24 Center Median at East Approach, Looking West

Photo #: 27

27 Narrow to Medium Longitudinal Crack on North Sidewalk near East End of Deck

Photo #: 28

28 Minor Settlement of West Approach Sidewalk

Photo #: 29

29 Narrow to Medium Transverse Cracks on Center Median (TYP)

Photo #: 30

30 Wide Crack and Very Severe Delam on Center Median Curb at West Approach Road

Photo #: 31

31 Missing Bolt and Loose Handrailing at 15th Post From West End (South Railing)

Photo #: 32

32 Missing Bolt and Loose Railing at East End (North Railing)

Photo #: 33

33 Missing Bolt on North Railing at 10th Post From West

Photo #: 34

Photo #: 35

35 Center Pier, Looking West

Photo #: 36

36 Hairline to Narrow Surface Stained Cracks on North Face of Pier Cap

Photo #: 37

37 Center Pier Bearing (TYP)

Photo #: 38

38 West Abutment

Photo #: 39

39 East Abutment

Photo #: 40

40 Light Popout On West Abutment Near South End

Photo #: 41

41 Medium Vertical Crack on West Abutment at 3rd Girder From North

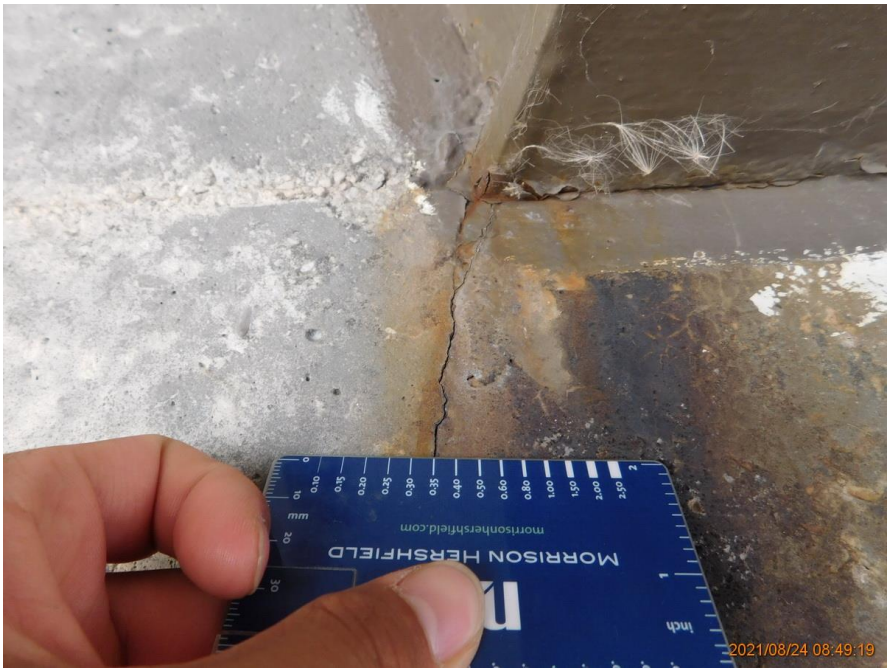


Photo #: 42

42 Southeast Wingwall

Photo #: 43

43 Northwest Wingwall

Photo #: 44

44 Southwest Wingwall

Photo #: 45

45 Northeast Wingwall

Photo #: 46

46 West Concrete Slope Protection

Photo #: 47

47 Minor Movement South End of East Concrete Slope Paving

Photo #: 48

48 West Approach, Looking North

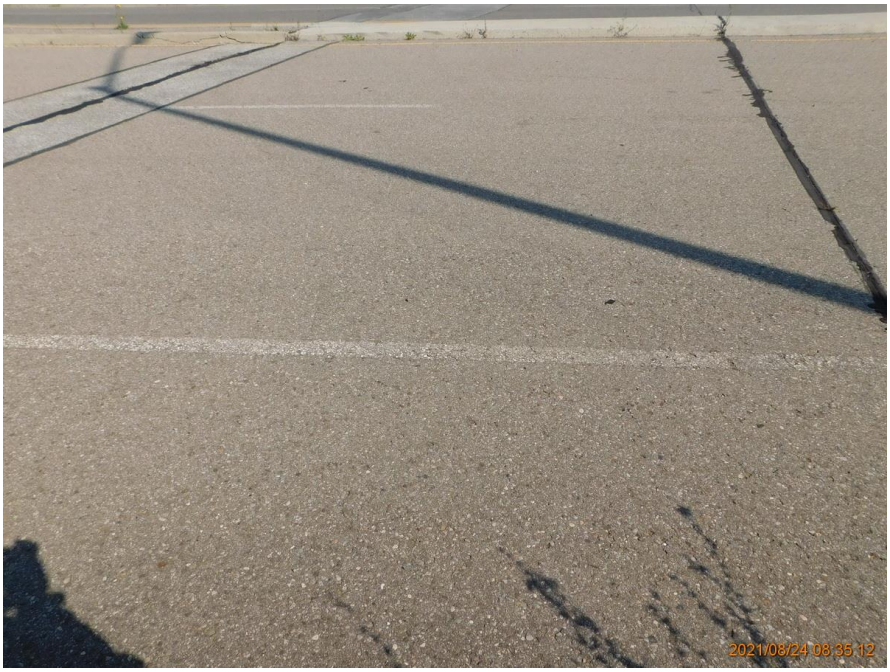


Photo #: 49

49 West Approach, Looking South

Photo #: 50

50 East Approach at Center Median, Looking North

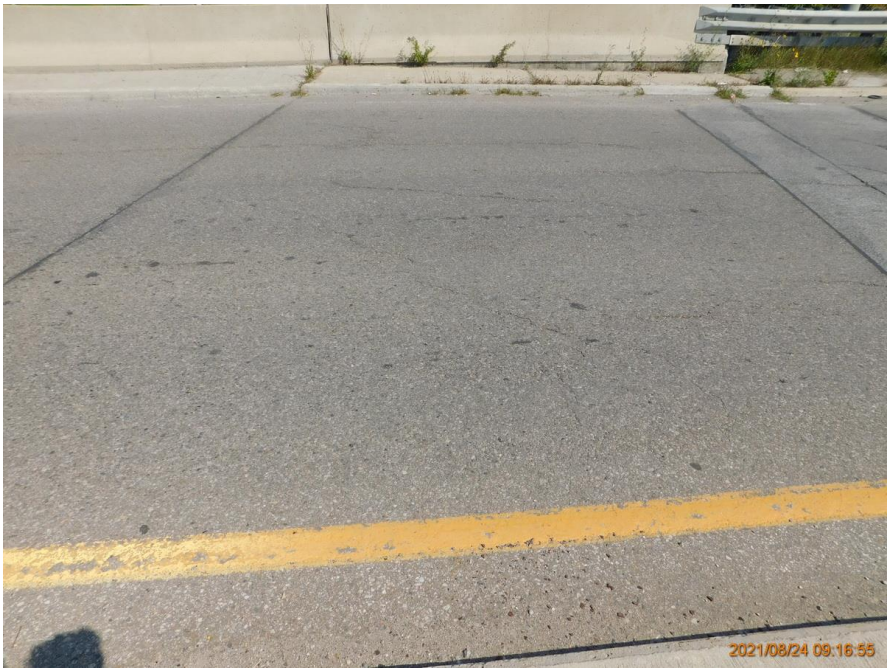


Photo #: 51

51 East Approach at Center Median, Looking South

Photo #: 52

52 Local Light Pothole at End of East Approach, Adjacent to South Barrier Wall

Photo #: 25

25 Light Spall on North Barrier Over Highway 400 NB

Photo #: 26

26 Light Delam on North Barrier Wall at West End of Deck

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: December 14, 2022 1:57 PM
To: Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Tomaszewski, Henry (MTO) <Henry.Tomaszewski@ontario.ca>; Francolini, William (MTO) <William.Francolini@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Della Mora, Dan (MTO) <Dan.DellaMora@ontario.ca>; Chan, Stanley (MTO) <Stanley.Chan2@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Liu, Karen <Karen.Liu@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>; Robinson, Jennifer <Jennifer.Robinson@stantec.com>; Christopher Tam <Christopher.Tam@vaughan.ca>
Subject: RE: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission
Importance: High

Good afternoon Tom/Margaret and MTO staff,

This is a gentle reminder regarding the November 22, 2022 submission for the Bass Pro Mills Extension EA project (email below and attached), which followed the November 3 meeting. A response was kindly requested from MTO by December 13, 2022 (yesterday).

The 30-day public review period for the Environmental Study Report (ESR) was completed on September 19, 2022 with no Section 16 order requests. The City endeavours to work with MTO towards reaching an acceptable General Arrangement (GA) for the Bass Pro Mills bridge over Highway 400, before advancing to the next phase of detailed design, which the City is looking to do next year.

Kindly advise when the City can expect a response from MTO staff.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Hilda Esedebe
Sent: Tuesday, November 22, 2022 7:13 PM
To: Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Cc: Tomaszewski, Henry (MTO) <Henry.Tomaszewski@ontario.ca>; Francolini, William (MTO) <William.Francolini@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Sadek, Sandra (MTO) <Sandra.Sadek@ontario.ca>; Day, Mina (MTO) <Mina.Day@ontario.ca>; Uddin, Zaka (MTO) <Zaka.Uddin@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Della Mora, Dan (MTO) <Dan.DellaMora@ontario.ca>; Chan, Stanley (MTO) <Stanley.Chan2@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Liu, Karen <Karen.Liu@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>;

Robinson, Jennifer <Jennifer.Robinson@stantec.com>
Subject: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission
Importance: High

Good evening Tom/Margaret and MTO staff,

Thank you once again for meeting with the City and EA project team on November 3, 2022 as we endeavour to resolve MTO's concerns with the preferred design that was included within the Bass Pro Mills Extension EA Study Environmental Study Report (ESR). Towards reaching an acceptable General Arrangement (GA) for the Bass Pro Mills bridge over Highway 400, the study team developed two (2) additional cross-section options which were discussed with MTO on November 3rd and are provided for MTO's further consideration. Minutes of the meeting are attached for convenience.

The underlying objective for extending Bass Pro Mills Drive is to alleviate area traffic congestion, provide east-west connectivity between Jane Street and Weston Road and to promote emerging area development at a cost that provides value for money, functionality, and safety. To provide means for Active Transportation (AT) at the bridge structure, the City wishes to proceed with providing provisions for AT within the existing bridge GA and currently provided width of the superstructure, without a significant, and costly, widening of the structure. The City appreciates MTO's comments in relation to the preferred design that was included within the ESR; however, widening the bridge is not possible at this time due to timing, funding constraints and economic uncertainty. MTO Design and Contract Standards Office #2018-07 discusses incorporating cycling facilities into bridge rehabilitation projects and recognizes that it is not always feasible to apply design guidelines, and therefore consideration can be given to aspects slightly less than design guidelines.

Attached are the two (2) Options discussed for MTO's further consideration.

Option A

This option provides for a 2.705m multi-use-path on the north side and a 1.705m sidewalk on the south side within the structure. This option provides an economical and functional solution within the superstructure space available. Traffic lanes are MTO Standard 3.5m with 500mm clearance on each side. MTO Standard combination traffic/cyclingTL-4 railing with concrete end wall (SSD 110-36) walls are provided on both outer edges of the structure.

No median is provided across the bridge deck; however traffic medians will be provided at the Bass Pro Mills / Highway 400 off ramp intersection and proposed intersection west of Highway 400, as shown in the attached plan related to Option A.

At our meeting, MTO indicated that at the time the Bass Pro Mills bridge was constructed, a centre median was provided to discourage traffic from using the unopened eastbound lanes. Owing to the circumstance that the bridge has no longitudinal joint and that traffic circulation associated with Highway 400 and the bridge structure will be partial and limited to Highway 400 northbound off ramp and Highway 400 southbound on ramp only, need to prevent wayward vehicle movements (i.e. U-turns) via a traffic median is markedly reduced and effectively achievable through roadway signage since the Bass Pro Mills Drive bridge does not provide typical full interchange movements.

Option B

Including 300mm clearances, this option effectively provides a 3.6m multi-use-path (MUP) on the north side and no AT facility or sidewalk on the south side of the structure.

An MTO Standard (SSD 110-110) intermediate barrier wall is provided between the raised multi-use-path and the westbound traffic. Traffic lanes are MTO Standard 3.5m with 840mm clearance on the west side and on the east side. New MTO Standard SS110-22 for pedestrian/cycling height (1.4m) barrier is provided on the north side, while MTO Standard combination traffic/cyclingTL-4 railing with concrete end wall (SSD 110-36) is provided on the south side, despite no AT facility or sidewalk being on the south side.

Again, as cited under Option A, no median across the bridge deck is provided and traffic medians will be provided at the Bass Pro Mills / Highway 400 off ramp intersection and proposed intersection west of Highway 400, as shown in the attached plan related to Option B.
The 840mm clearances are slightly less than the 1m minimum shoulder clearance indicated within MTO Design Supplement Exhibit 4-U for Undivided Collector 60 km/hr. Design Speed. The desired 1m clearance is marginally reduced to accommodate Standard MTO barrier walls on the structure.

The City requests MTO to consider these Options with the view that there are constraints (physical and financial) at the Bass Pro Mills bridge over Highway 400 and that the City, through these options, has endeavored to carry and apply as many central design guidelines as possible within elements to deliver the Bass Pro Mills project objectives, and yet maintain functionality, safety and value for money. The City trusts that MTO Design and Contract Standards Office document (2018-07) provides flexibility and the ability for the City and MTO to reach a compromise with an agreeable solution to carry forward into detail design. A response from the MTO is kindly requested by **December 13th, 2022**.

Best Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

Stantec

Meeting Notes

MTO Meeting

Bass Pro Mills Drive Extension, Municipal Class Environmental Assessment / 16054006/IM-7212-10

Date/Time: November 3, 2022 / 1:00 PM

Platform: Microsoft Teams

Attendees: Sam Molai (MTO)
Sandra Sadek (MTO)
Tom Hewitt (MTO)
Lukasz Grobel (MTO)
Frederic Szymanski (MTO)
John Van Voorst (MTO)
Zaka Uddin (MTO)
William Francolini (MTO)
Dan Della Mora (MTO)
Hilda Esedebe (City of Vaughan)
Christopher Tam (City of Vaughan)
Peter Cholewa (Stantec Consulting Ltd.)
Diana Addley (Stantec Consulting Ltd.)
Karen Liu (Stantec Consulting Ltd.)
Jenn Robinson (Stantec Consulting Ltd.)

Absentees: Margaret Mikolajczak (MTO)
Mina Day (MTO)
Aaron Janke (MTO)

Distribution: All Attendees and Absentees

Introduction:

The City introduced the study team and provided a brief overview of the preferred design that was included within the Bass Pro Mills Drive Municipal Class Environmental Assessment (MCEA) study Environmental Study Report (ESR). Info

It was noted that this study builds upon the 2014 Vaughan Mills Centre Secondary Plan (VMCSP), and that the future Bass Pro Mills Drive intersections with the potential future roadways and loop ramp to southbound Highway 400 shown within the preferred design are based upon the VMCSP; however, the location of these future intersections are subject to the ongoing Planning Act appeals process between the City and landowners/developers. It was also noted that the ultimate location of the Black Creek culvert is also subject to the ongoing VMCSP appeals process.

The City stated that separated cycling facilities and sidewalks cannot be carried across the existing bridge structure due to the width constraints of the bridge. As such, the preferred design included 1.8 m sidewalks on both sides of the existing bridge.

Understanding that MTO had further comments on the preferred design that was included within the ESR, the study team developed two additional cross-section options for MTO to consider.

Option A: 3.0 m MUP on the north side of the structure, 1.8 m sidewalk on the south side of the structure.

- While it is not ideal, the City intends to have signage on either side of the bridge instructing cyclists on the south side to use the provided crossings to the north side of the bridge where a MUP would be provided. The study team arrived at this solution due to the current budget available, as widening the structure is not economically feasible. However, the intention is to provide the most functional solution given the space available.
- The City noted that this option is similar to other projects within the area, including the Burnhamthorpe Road EA for an overpass over Highway 403, which was completed in 2019. The Burnhamthorpe Road EA structure had a very similar cross-section, structure width and posted/design speeds.
- MTO asked if the study team had reviewed the height of the barrier parapet walls along the MUP, as these are often not high enough on existing structures. The height of the parapet wall would need to be 1.4 m at minimum. MTO has a standard drawing for this, which was previously forwarded to the City.
  - The City noted that this drawing was received, and that the height of the railing can be adjusted to accommodate MTO's standard railing height on the MUP side of the structure. — Stantec
  - Stantec indicated that the study team had been using MTO's standard drawing from 2019 which indicated a standard height of 1.37 m. MTO is to provide this 2022 standard drawing to the City and Stantec. — MTO
- MTO asked if the City's intention is to submit the Option A and Option B cross-sections to MTO for internal review following this meeting.
  - The City confirmed that they will submit a package with both options to MTO for review and comment following this meeting. However, since the ESR has already been filed and so much time has been spent on past reviews, the intention behind this meeting is to receive as much feedback as possible from MTO to move the project along, discuss concerns and come to a mutually beneficial solution as soon as possible. — Info
  - MTO noted that ideally MTO will need to have time to review the new options in further detail internally.
- MTO indicated that the presented drawing states that this is an "Interim Solution". What would the ultimate solution look like? A raised median is MTO standard, however; this feature is not included within this solution.
  - The City confirmed that there was an error on the presented drawing and that there will be no interim and ultimate solution. Stantec will revise this drawing prior to providing to MTO for review. If selected, this option would be an ultimate solution. — Stantec
- The City asked why a centre median is considered to be MTO standard. There are other examples of projects within MTO jurisdiction which have not included a centre median, such as the Burnhamthorpe Road EA and at King Road and Highway 400. The City would like to understand from a technical perspective why one would be required as the median on the existing Bass Pro Mills Drive bridge was put in place as the eastbound lanes were closed and this was to control and deter vehicles from travelling westbound in the eastbound portion of the bridge. The study team was

unable to find any record of a centre median being an official MTO standard and this space could be more useful in providing safe and comfortable active transportation (AT) facilities.

  - MTO confirmed that the existing centre median was implemented to discourage traffic from using the unopened eastbound lanes, and to mitigate how many options motorists have when moving through the interchange (i.e., avoiding unsafe turning movements and U-turns). These medians are also used in some instances where bridges have a longitudinal joint in the middle to allow for expansion/contraction, although it is understood that the Bass Pro Mills Drive bridge median does not serve this purpose. MTO recognizes that the Bass Pro Mills Drive bridge is not a full interchange due to the placement of the ramps. Info
  - The City confirmed that their position is that the approximately 1.2 m that a centre median would require could be better used for AT facilities.

- MTO noted that they will want to examine this option in further detail in terms of traffic operations. A centre island would help control turning movements from the dual left turn lanes from the south to the east/west ramp by forcing traffic to avoid the island. Without the island there is a risk that vehicles may cut in, resulting in potential collisions.
  - The City confirmed that this should not be an issue as a centre island is still being provided at the ramps, it just isn't carried across the full length of the bridge structure. There will be a centre island at the dual left turning point.
- MTO inquired about the proposed future road on the west side of the bridge. If this is deemed part of the ramp it will fall under MTO jurisdiction.
  - The City stated that MTO's previous comments regarding this future roadway/ramp have been noted within the ESR and will be further considered throughout detail design. However, the road configuration/future intersection locations shown within the preferred plan are preliminary in nature and are based on the 2014 VMCSP which is subject to the ongoing Planning Act appeals process. If the extension of Bass Pro Mills Drive was to be completed today, it would tie into the existing ramp location. The future roadways will not be built until the appeals process is complete. As such, these intersection locations are subject to change under the Planning Act application process.
- MTO noted that the province does not have the ability to be flexible in their policies and standards and that they need to be consistent across their facilities. MTO understands what the City is trying to achieve; however, MTO will need to review these options in further detail. It was further noted that when MTO rehabilitates this bridge in 10-15 years, they can't be expected to be upheld to different standards.
  - The City understands and appreciates the MTO's offer to review these options in greater detail. Recognizing the width constraints of the existing bridge, the City is doing its best to fit as many key elements as possible within the existing structure and is hopeful that an agreeable solution can be reached.
- Due to the location of the ramps, turning movements are limited leading up to and over the structure. Stantec asked MTO to confirm if a centre median is an MTO standard or if this is a preference.

  - MTO confirmed that this is an MTO standard, and that generally all new MTO structures have them. MTO is prepared to consider the City's solution; however, the proposed design options need to be reviewed internally in further detail.
  - The City noted that MTO Design and Contract Standards Office #2018-07 discusses incorporating cycling facilities into bridge rehabilitation projects and recognizes that it is not always feasible to apply design guidelines, and therefore consideration can be given to aspects slightly less than design guidelines.

- MTO noted that in Highway and structure planning studies, they are commonly asked by municipal staff to incorporate AT facilities across bridge structures. However, if MTO endorses a design such as these options today, in 20-30 years when the next round of major expansions occurs along Bass Pro Mills Drive, these issues become an MTO inherited problem with the potential for increased accidents/incidents.
  - The City noted that it is recognized that this isn't an ideal design by MTO or City standards and appreciates that the City and MTO are working together to come to a compromise. It is also understood that a future opportunity to provide all the facilities the City and MTO would be ideal; however, widening the bridge is not possible at this time due to timing and funding constraints. The City would like to maintain the impression that they are willing to work with MTO on this in the future.
- MTO noted that typically when an ideal solution cannot be reached, an interim and ultimate solution is provided.
- MTO asked if the north side of the bridge structure is intended to be cycling facilities only, or a MUP.
  - The City confirmed that this would be a combined MUP and that the package sent to MTO to review will be revised to state this. Stantec
- MTO questioned whether it was realistic to assume that cyclists will adhere to the signage on the south side of the structure and cross to continue across the MUP to the north. Often cyclists ignore this signage and continue across the sidewalk as it is the path of least resistance.
  - The City agreed that this is a possibility, but that the City would do their best in terms of guidance and signage to discourage this behaviour. This scenario for AT facilities is not uncommon. Info
- MTO asked if the City had considered separating cyclists from pedestrians on either side of the road along the entirety of the roadway extension to avoid crossing issues at the bridge?
  - The City confirmed that the study team considered bidirectional cycling pathways along the Bass Pro Mills Drive as part of the evaluation of cross-section alternatives. However, this configuration posed a number of concerns at intersection locations and are not part of the City's vision as described in the City's Pedestrian and Bicycle Master Plan. The City's preference is to provide separated cycling and bike lanes, and to not have existing bridge structures dictate the provision of AT facilities on City roadways.

Option B: 3.6 m MUP on the north side of the structure, no AT facilities on the south side of the structure.

- The City noted that with Option B all pedestrians and cyclists would be instructed to crossover to the north to use the MUP to travel across the bridge.
- Stantec noted that Option B would require a cantilever of approximately 300 mm, from the existing 1.455 m to 1.755 m. It was also noted that a structural analysis would be required to be undertaken to verify existing bridge capacity in relation to proposed increase.
  - MTO confirmed that the standard intermediate barrier width is no longer 0.5 m, but now 300 mm.
  - Stantec added that the intermediate separation barrier can now also be 250 mm, which may help mitigate the amount of cantilever required. — Stantec
  - The City noted that the study team will revise the Option B cross-section accordingly, prior to providing to MTO for review. — Info
- MTO stated that the eastbound lanes on the existing bridge that have been unused may be deteriorating. After approximately 20 years since construction, the asphalt surfaces may have begun to dry out without vehicle-use. By the time the City goes to complete this work it may require a rehabilitation, so this impact should be considered.
  - MTO stated that they should have a bridge inspection report available from 2022 and will send to the study team for review. — MTO

    Post Meeting Note: MTO provided the 2022 bridge inspection report to the study team on November 3, 2022.
  - Stantec confirmed that, due to lack of Permission to Enter private property during the EA process, a detailed geotechnical investigation could not be completed. However, the cost estimate provided within the ESR accounts for the stripping, waterproofing and repaving of the original bridge deck. In addition, the cost estimate accounted for the deterioration of the asphalt. — Info
- The City thanked MTO for their time and feedback. The study team will update Options A and B based on today's discussion and will provide to MTO for review and comment. It is hoped that an agreeable solution can be reached and carried forward into detail design. — Stantec

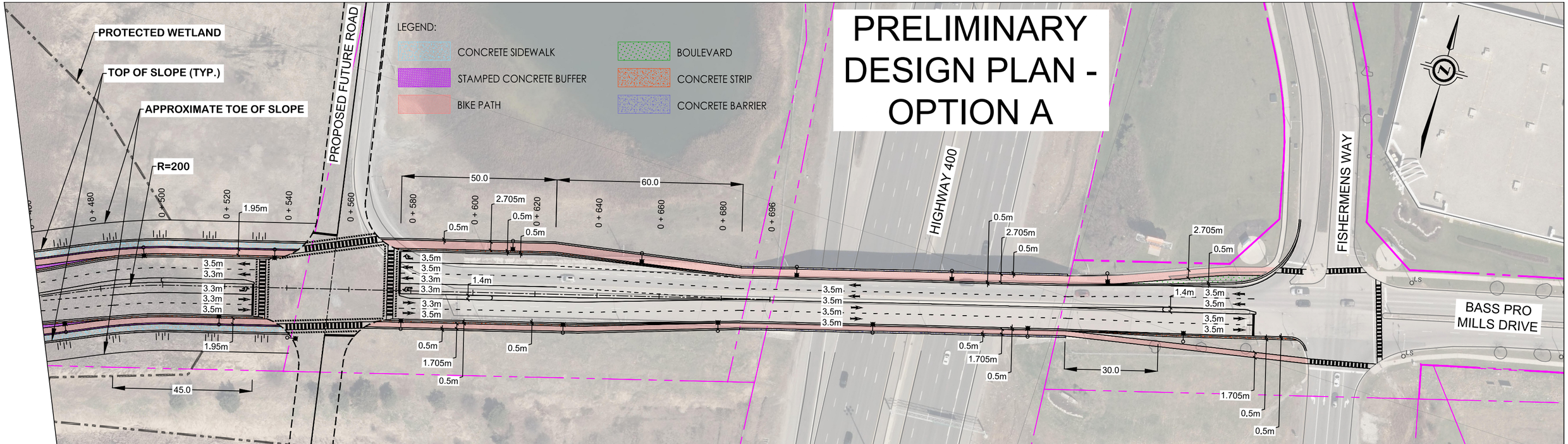
The meeting adjourned at 2:22 PM

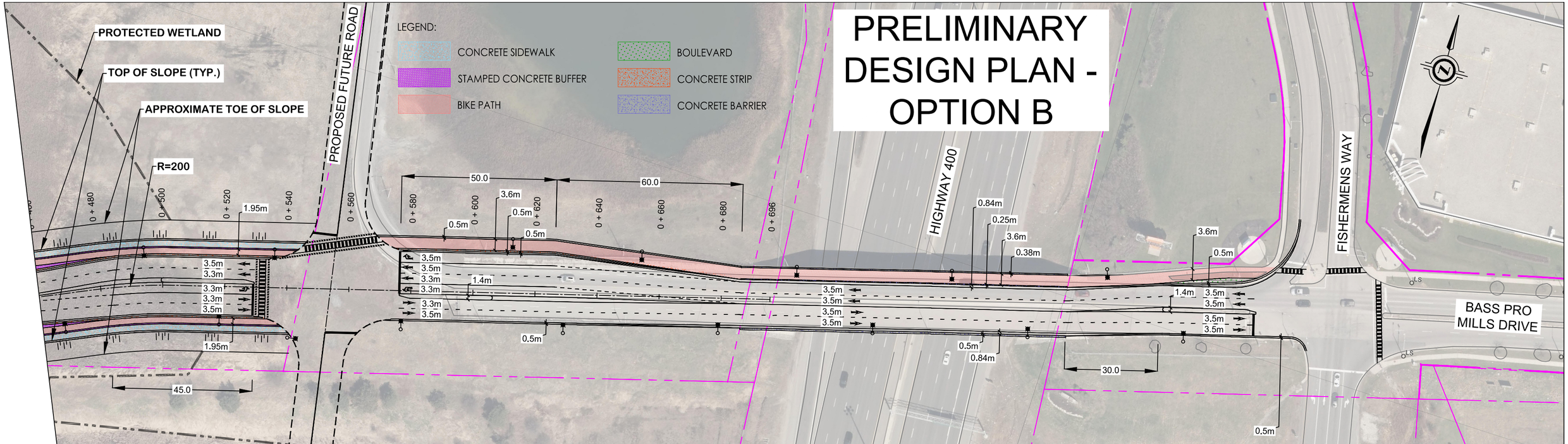
The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

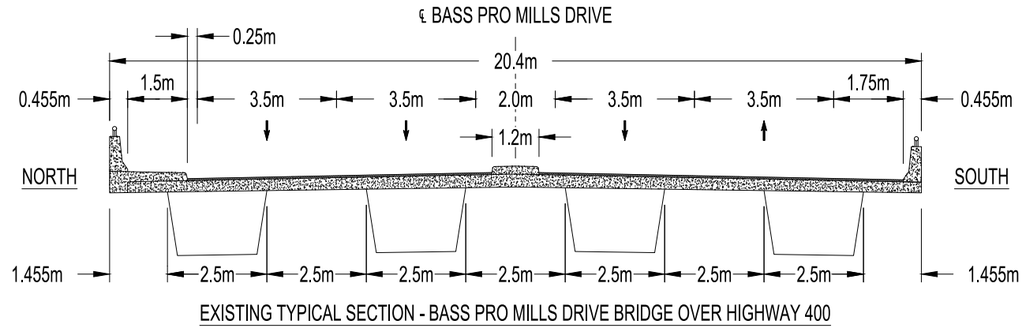
Stantec Consulting Ltd.

Jenn Robinson
Environmental Planner
Phone: 905-944-6232
Email: Jennifer.robinson@stantec.com

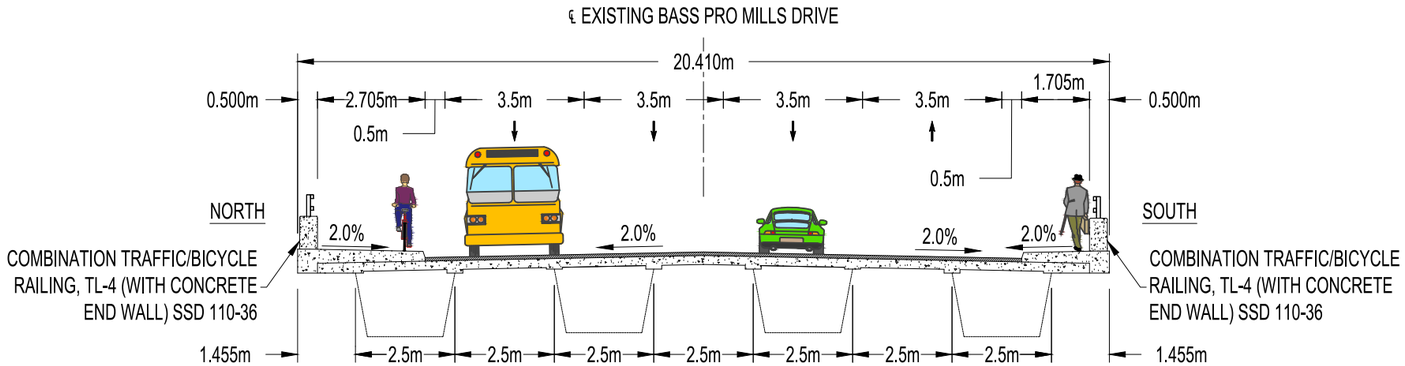
Attachment: Bass Pro Mills Drive bridge over Highway 400 cross-section Option A and Option B


PRELIMINARY DESIGN PLAN - OPTION A
PROTECTED WETLAND
TOP OF SLOPE (TYP.)
APPROXIMATE TOE OF SLOPE
R=200
PROPOSED FUTURE ROAD
HIGHWAY 400
FISHERMENS WAY
BASS PRO MILLS DRIVE
LEGEND:
CONCRETE SIDEWALK
STAMPED CONCRETE BUFFER
BIKE PATH
BOULEVARD
CONCRETE STRIP
CONCRETE BARRIER
0 + 480
0 + 500
0 + 520
0 + 540
0 + 560
0 + 580
0 + 600
0 + 620
0 + 640
0 + 660
0 + 680
0 + 696
50.0
60.0
45.0
30.0
1.95m
2.705m
1.705m
1.4m
0.5m
3.5m
3.3m

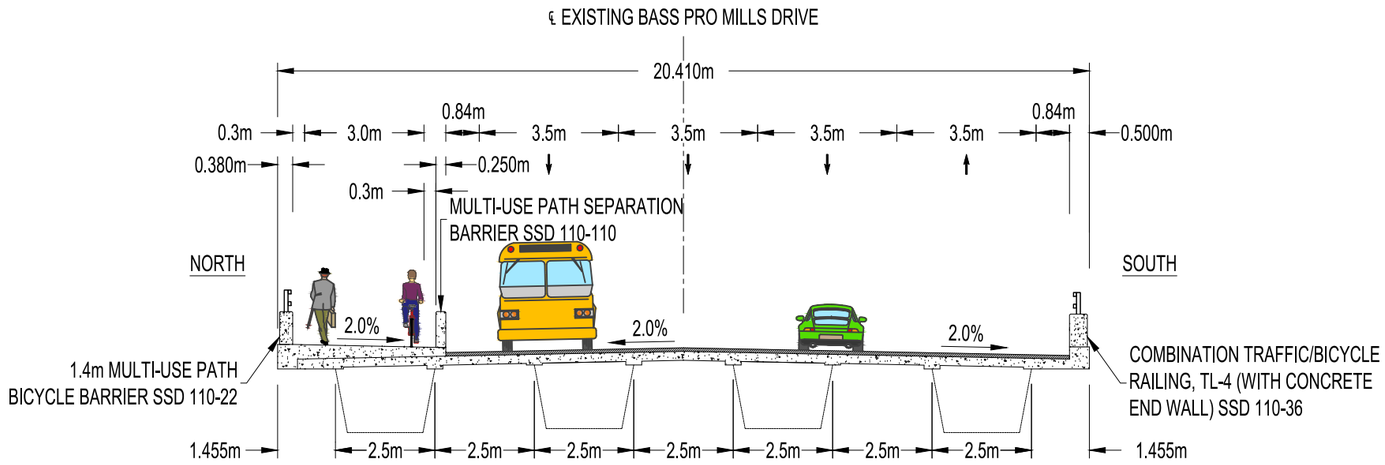

PRELIMINARY DESIGN PLAN - OPTION B
LEGEND:
CONCRETE SIDEWALK
STAMPED CONCRETE BUFFER
BIKE PATH
BOULEVARD
CONCRETE STRIP
CONCRETE BARRIER
PROTECTED WETLAND
TOP OF SLOPE (TYP.)
APPROXIMATE TOE OF SLOPE
R=200
PROPOSED FUTURE ROAD
HIGHWAY 400
FISHERMENS WAY
BASS PRO MILLS DRIVE
0 + 480
0 + 500
0 + 520
0 + 540
0 + 560
0 + 580
0 + 600
0 + 620
0 + 640
0 + 660
0 + 680
0 + 696
1.95m
45.0
50.0
60.0
3.6m
0.5m
1.4m
3.5m
3.3m
0.84m
0.25m
0.38m
30.0



EXISTING TYPICAL SECTION - BASS PRO MILLS DRIVE BRIDGE OVER HIGHWAY 400



BRIDGE CROSS SECTION - OPTION A



BRIDGE CROSS SECTION - OPTION B

NOT TO SCALE

Stantec

Project Location
CITY OF VAUGHAN

Client/Project
CITY OF VAUGHAN
BASS PRO MILLS EXTENSION
SCHEDULE C CLASS EA STUDY

Figure No.
HIGHWAY 400 BRIDGE

Title
PROPOSED BASS PRO MILLS AT HIGHWAY 400 BRIDGE

Design and Contract Standards Office #2018-07

HIGHWAY STANDARDS BRANCH

PROVINCIAL ENGINEERING MEMORANDUM

Design and Contract Standards Office #2018-07, October 22, 2018

Guidelines for Geometric Design of Cycling Facilities within Constrained Right-of-Ways

---

Implementation

This memorandum is effective as of the date of issue.

Background

For planning and geometric design of roadways within provincial highway right-of-ways, the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (2017) in conjunction with the MTO Design Supplement shall be used (HSB PEM DCSO #2017-07). For planning and geometric design of bicycle facilities within provincial highways, the Bikeways Design Manual shall be used (HSB PEM DCSO #2014-04).

To incorporate cycling facilities into rehabilitation projects on municipal roadways crossing provincial highways within provincial highway right-of-ways. It is recognized that it is not always feasible to apply design guidelines that are used for design of provincial highways. For such situations, consideration may be given to using alternative design guidelines or aspects at the lower end of the design domain.

Ontario's cycling strategy, was developed and launched in 2013 to promote cycling and cycling safety in the province. The strategy is a 20-year vision to have cycling recognized as a respected and valued mode of transportation within Ontario. By engaging with stakeholders and communities across the province, a draft province-wide network was identified. Detailed field investigations and feasibility assessments are needed to confirm the existing context and conditions, facility type(s) and estimated cost to implement specific on- and off-road routes identified in the network. There will be cases where various projects will incur challenges within constrained corridors. This memo was developed based on lessons learned from within the Province and ITE case study, "Countermeasures Prove Effective in Reducing Bicycle Collisions"[1].

Policy

For planning and geometric design of cycling facilities crossing provincial highways within provincial highway right-of-ways:

- For new municipal crossing roads and bridges, and widening of existing municipal roads and bridges, design shall be according to the MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads and the Bikeways Design Manual.
- For rehabilitation of existing municipal crossing roads and bridges, follow Appendix A
- Where design parameters other than MTO are proposed, follow HSB PEM DCSO #2018-06
- The side clearance requirements included in Exhibit 4-O and Exhibit 4-P in the MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads are inclusive of and not in addition to the cycling facility

---

[1] Nazir Lalani and Kristopher Gunterson, Countermeasures Prove Effective in Reducing Bicycle Collisions, www.ite.org, May 2018

- HSB PEM DCSO #2017-07 and HSB PEM DCSO #2014-04 are amended by this memorandum to allow consideration and use of alternative design guidelines for design of municipal crossing roadways and bridges including municipal cycling facilities within provincial highway right-of-ways.

Phil Hutton, P. Eng.
Manager, Design and Contract Standards Office

cc: Distribution List

Design and Contract Standards Office #2018-07

Distribution List

Provincial Highways Management Division:
K. Bentley, Executive Director, Chief Engineer

Highway Standards Branch:
D. Remolino, Director, Highway Standards Branch
T. Merlo, Manager, Bridge Office
P. Hutton, Manager, Design and Contract Standards Office
R. Berg, Manager, Geomatics Office
S. Graham, Manager, Traffic Office
B. Lane, Manager, Materials Engineering and Research Office
M. Pearsall, Head, Design Standards Section
K. Kernaghan, Head, Corridor Management & Property Section
W. Roy, Head, Design Innovation Section
L. Vaz, Head, Engineering Specifications and Standards Management Section
M. Pearsall, Head, Design Standards Section

Contract Management and Operations Branch:
T. Tuinstra, Director, Contract Management and Operations Branch
D. Pateman, Manager, Contract Management Office
A. Beaulieu, Manager, Maintenance Office
B. Liegler, Manager, Contract Innovations Office

Regional Managers of Engineering:
M. Nadeau, WR
I. Galloway, NWR
J. Fraser, NER
P. Makula, ER
J. White, CR

Regional Heads of Planning and Design:
M. Favell, WR
B. Stephenson, CR
N. Meyers, ER
J. Asghar, NER(A)
D. Cooper, NWR

Regional Heads of Traffic:
R. Bakalarczyk, WR
A. Beal, CR
C. Klein, ER
D. Herbrand, NER
K. Schmid, NWR

Regional Managers of Operations:
Steve McInnis-WR
Paul Mathur-CR
Rafael Albino-ER
Kevin Morphet-NER
Gary Weiss-NWR

APPENDIX A: Guidance for choice of design parameters

In choosing the design parameters for rehabilitation or retrofitting of existing municipal crossing roads and bridges, for the provision of cycling facilities within constrained corridors, the following considerations should be applied in this order:

1. Use design parameters according to the MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads and design parameters according to the Bikeways Design Manual.
2. If width is an issue, consider a road diet and remove a lane, if possible, to accommodate the cycling facility(ies) on one or both sides of the roadway
3. If width is an issue, consider reallocation of road space and a lane diet as follows:
    a. Consider narrowing features such as centre islands and shoulders as much as possible.
    b. Consider narrowing sidewalks to the minimum allowed by AODA standards.
    c. Considering narrowing lanes to meet widths in the TAC Geometric Design Guide for Canadian Roads, particularly if this allows for the provision for a shared curb lane or the provision of a buffer between the bicycle lane and vehicle lane.
    d. Consider eliminating shoulders and gutter pan offsets.
    e. Identify all conflict zones (e.g. ramp terminals and intersections) and consider the use of green coatings (HSB PEM DCSO #2018-08) to mark conflict zones in advance and downstream of intersections with right turning traffic
    f. Consider pavement markings such as zebra crosswalk markings, bike lane pavement marking, sharrows, or bike legends
    g. Consider further enhancements to further delineate cyclists from vehicles with the use of signs, flexible delineators and in rural applications, consider the use of rumble strips
    h. Appropriate signage to mark the presence of cyclists and pedestrians and signage to prohibit parking,
4. For all features consider using the local municipal road design guidelines issued by the municipality's engineering department.
5. Consider design parameters from standards or guidelines published by another North American jurisdiction with similar climate and operating characteristics.

Robinson, Jennifer

From: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Sent: Thursday, January 5, 2023 11:17 AM
To: Molai, Sam (MTO)
Cc: Mikolajczak, Margaret (MTO); Liu, Karen; Cholewa, Peter; Addley, Diana; Robinson, Jennifer; Hewitt, Tom (MTO)
Subject: RE: [External] RE: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission
Attachments: 160540006 - Bass Pro - Typ.pdf

Hi Sam,

Happy New Year and thank you for your comments. The project team will review.

We are also awaiting a response from MTO staff regarding an approval/preference for either Option A or B.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager
Infrastructure Planning and Corporate Asset Management
905-832-8585, ext. 8484 | hilda.esedebe@vaughan.ca

City of Vaughan I Infrastructure Development
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1
vaughan.ca

From: Molai, Sam (MTO) <Sam.Molai@ontario.ca>
Sent: Thursday, January 5, 2023 10:51 AM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>; Liu, Karen <karen.liu@stantec.com>
Subject: [External] RE: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

Hi Hilda

I have the following comments for the attached submission (Options A & B):

Option A is showing to use combination barrier on both sides of the bridge and no separation barrier is provided. This is correct use of combination barrier. Similarly Option B is calling up to use Multi Use Path Bicycle Barrier which is separated by a traffic separation barrier this is correct as well. I suggest that before finalizing any options consultant should refer to clause 12.4.3.3, 12.4.5.1 and Section 10 of Structural Manual to ensure all other conditions are met. One observation about right side of Option B why the Combination Barrier is being used while there is no MUP/Sidewalk is shown? I think a standard TL4 barrier to be used if it is required by the Code.

Robinson, Jennifer

To: Hilda Esedebe
Subject: RE: [External] RE: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

---

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Tuesday, January 17, 2023 11:57 AM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Venneri, Rita (MTO) <Rita.Venneri@ontario.ca>
Subject: [External] RE: Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

Hi Hilda, sorry for the delay with my response but around Christmas time it is very difficult to get staff responses, a lot of people were away. Anyway, we will have an internal meeting soon, to discuss your submission and then, I will get back to you with our comments.

Thank you

Margaret

Robinson, Jennifer

To: Hilda Esedebe
Subject: RE: [External] Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

From: Mikolajczak, Margaret (MTO) <Margaret.Mikolajczak@ontario.ca>
Sent: Saturday, February 4, 2023 12:35 PM
To: Hilda Esedebe <Hilda.Esedebe@vaughan.ca>
Cc: Hewitt, Tom (MTO) <Tom.Hewitt@ontario.ca>; Grobel, Lukasz (MTO) <Lukasz.Grobel@ontario.ca>; Szymanski, Frederic (MTO) <Frederic.Szymanski@ontario.ca>; Molai, Sam (MTO) <Sam.Molai@ontario.ca>; Francolini, William (MTO) <William.Francolini@ontario.ca>; Pak, Margaret (MTO) <Margaret.Pak@ontario.ca>; Van Voorst, John (MTO) <John.VanVoorst@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>
Subject: [External] Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

Hi Hilda, please find below Ministry comments to your December 2022 submission.

HIGHWAY ENGEENERING

Our general preference is for Option B

Option A

- 2.7m MUP seems narrow to accommodate two way bike traffic and pedestrians and does not comply with MTO Bikeways Design Manual.
- Review and confirm that lane shifts are designed as per TAC standards.
- MTO Bikeways Design Manual Chapter 3 goes through a process for facility selection and consideration for barrier separation. Can you confirm whether barrier separation has been considered and whether it can fit within the cross-section?
- MTO TAC Supplement specifies a horizontal clearance for structures (see p.43). These standards should be reviewed and overall cross section balanced to account for this (if required).
- Please see MTOD 504.01 for median standards that should be used.

Option B

- Option B is generally preferred over Option A.
- Review and confirm that lane shifts are designed as per TAC standards.
- MTO Bikeways Design Manual Chapter 3 goes through a process for facility selection and consideration for barrier separation. Can you confirm whether barrier separation has been considered and whether it can fit within the cross-section?
- MTO TAC Supplement specifies a horizontal clearance for structures (see p.43). These standards should be reviewed and overall cross section balanced to account for this.
- Please see MTOD 504.01 for median standards that should be used.
- Has there been consideration given to locating the MUP on south side of structure? From an operations perspective this could minimize interaction between MUP users and vehicles accessing Hwy 400 SB.

TRAFFIC:

We have reviewed both options and noted the 2.705m wide MUP and 1.705m wide sidewalk are not based on our standards as per MTO Bikeway Design Manual and therefore would not be acceptable.

The discontinuity of bike path on the south side, in both options, would force the cyclists to first cross over to the north side and then back to the south side at the end of the bridge. This change of facility is likely to cause an increase in cross riding at the existing signalized intersection on the east and the proposed future signalized intersection on the west side of the bridge - a situation we would not support.

ENVIRONMENTAL:

We have no comments on the documents. However, Margaret Pak did provide comments on the landscape drawings on what to not place within our ROW but she is not sure if there was a final landscape drawing, so can you provide it over, please?

Should Vaughan wish to re-use excess soil onsite on MTO property (that happens very seldom), **approval must be obtained from MTO Environmental Delivery, prior to reuse. Otherwise, excess soil generated from the project is not to be placed on MTO lands."**

DRAINAGE:

We have no comments.

TRANSPORTATION INFRASTRUCTURE MANAGEMENT:

Please provide response to the below requirements:

Pavement: the crown in the middle of driving lane is unacceptable

Structure: please check the lateral clearances, and all other structure Items

Please check implications from removing the median islands and provide the answer.

With regards to **STRUCTURAL** comments, Sam Molai provided them directly to you.

Thank you

Margaret Mikolajczak, C.E.T.
Senior Project Manager
Ministry of Transportation
Corridor Management Section
159 Sir William Hearst Avenue, 7th Floor
Downsview, Ontario M3M 0B7

Phone: 437-833-9462
Fax: 416-265-4267

Hilda Esedebe

From: Hilda Esedebe
Sent: Wednesday, March 8, 2023 6:32 PM
To: Mikolajczak, Margaret (MTO)
Cc: Hewitt, Tom (MTO); Grobel, Lukasz (MTO); Szymanski, Frederic (MTO); Molai, Sam (MTO); Francolini, William (MTO); Pak, Margaret (MTO); Van Voorst, John (MTO); Janke, Aaron (MTO); Cholewa, Peter; Liu, Karen; Addley, Diana; Robinson, Jennifer; Christopher Tam
Subject: RE: [External] Bass Pro Mills Extension EA - Highway 400 Crossing & Final ESR Submission

Margaret,

Thank you for the Ministry's February 4, 2023 response in relation to the consideration of Options A and B for the Bass Pro Mills bridge crossing over Highway 400. The City is satisfied with MTO's Highway Engineering's general preference for Option B; the preference for Option B is acceptable to the City and towards the conclusion of the Bass Pro Mills EA Study and initiation of the detailed design phase for the project.

The response provided by the Ministry included comments on Option A, however since Option B has been stated to be the general preference, in the interest of updating the ESR for the project accordingly, the project team herein will only address, at this time, the comments in relation to Option B received.

Lane shifts – the needed adjustment to the roadway alignment and lane widths between the approach roadway and bridge structure will be carried out during the detailed design and will follow applicable TAC design guidelines and standards. The design will ensure that 3.5m lane widths are provided with the CAH limit.

Cycling barrier separation - a Multi-Use Path separation barrier is being provided on the north side of the structure. The proposed separation barrier is as per SSD 110-110.

Horizontal clearances – as the Ministry is aware, the EA Study considered various options and GA cross-sections for the Bass Pro Mills bridge, which were widely reviewed and discussed with MTO during the EA process. The cross-section within Option B reflects the compilation of the reviews and meetings conducted and balances the existing structure with the roadway features (lane widths, multi-used-path, barriers) being provided. As the existing bridge is not planned to be widened at this time, vertical clearances are being maintained.

Medians and removal of median from bridge crossing – Standard minimum length (30m) traffic medians will be maintained on Bass Pro Mills at the Fisherman's Way/400 northbound off-ramp intersection. Standard length medians will also be provided on Bass Pro Mills immediately west of the bridge crossing at the connection intersection for Highway 400 southbound access. At a meeting with MTO on November 3, 2022, it was indicated that at the time the Bass Pro Mills bridge was constructed, a centre median was provided between both highway connection ramp points to discourage traffic from travelling in the unopened eastbound lanes. Given that the existing bridge is a single structure (i.e. no longitudinal joint) and that traffic circulation associated with Highway 400 and the bridge structure will be partial and limited to Highway 400 northbound off ramp and Highway 400 southbound on ramp only, need to prevent wayward vehicle movements (i.e. U-turns) via a traffic median is markedly reduced and effectively achievable through roadway signage since the Bass Pro Mills Drive bridge does not provide typical full interchange movements. Under this rational, Option B was presented.

MUP on south side – the EA Study considered a range of scenarios for providing Active Transportation (AT) within the Bass Pro Mills roadway corridor. These scenarios ranged from AT on both sides of the roadway to one side or the other; it also included locations for sidewalk or no sidewalk at all. Separated sidewalk and cycling path were also considered. A MUP on the northside of Bass Pro Mills across the bridge crossing

provides a better social or community benefit since area development (existing Vaughan Mills Mall, proposed Vaughan Mill Centre Secondary Plan) is prevalent on the north side of the corridor. Locating a MUP on the south side, from a traffic perspective, may hinder interaction between MUP users and vehicles exiting Highway 400 northbound to a greater degree than vehicles accessing Highway 400 southbound, where any delays may not be so critical. At the Highway 400 off ramp, queue stacking on the off ramp was considered more of a concern that queue stacking on Bass Pro Mills for access to Highway 400 southbound.

Discontinuity of bike path on the south side - through signage, pedestrians and cyclists will be safely directed to the north side at signalized intersections immediately east and west of the bridge crossing. As noted above, this change of facility will remove any need for cross-ride activity at the existing signalized intersection on the south side east of the bridge, which will promote favourable conditions for traffic circulation at the off ramp.

Landscape drawings – through the detailed design phase, landscape drawing will be prepared and circulated to MTO and other stakeholders through the course of the detailed design review process.

Excess soil – the detail design will address the management of excess soil for compliance under Ont. Reg 406. Through the design review process, approval agencies will be engaged to secure all necessary permits and approvals for the construction to proceed. Although the subject for detail design, given that the proposed road profile between Highway 400 and Weston Road will be higher than existing ground, the project is envisioned to be a 'borrow job'; nevertheless, excess soil and the management of that will be confirmed during detail design.

Crown shift – the detail design for the modification of the existing bridge will address the need to shift of the roadway crown so it is located between the eastbound and westbound lanes. This shift could likely be achieved through asphalt padding or depending on the extent of deck delamination repair that may be needed, screed concrete overlay could be another option to achieve the crown shift. Structural analysis will be needed during detail design to verify the means for achieving the crown shift.

Barriers on structure - MTO advised the project team that a new standard (SSD 110-22) has been adopted which provides for a 1.4m high Multi-Use-Path (MUP) Bicycle Barrier to replace previous standard which provided 1.37m height. The detail design for modifications to the bridge will incorporate SS110-22 for the outer north edge of the structure adjacent to the MUP, SSD 110-110 for separation barrier between MUP and westbound lane and barrier wall with railing, TL-4 (SSD 110-54) for the south side of the bridge.

To this end, the ESR and Appendices which were filed for public comment on August 18, 2022 are being updated to now reflect Option B as the preferred recommended design for the Bass Pro Mills crossing over Highway 400, along with document update to Appendix O – Consultation to include recent consultation with MTO. Through this document change to the ESR, the City now considered the Bass Pro Mill EA Study fully, and finally complete, and cleared to proceed to the detail design phase.

The project team appreciates MTO's participation throughout the EA Study process and indulgence on the particular study issues related to the Highway 400 crossing. Having completed the EA hurdle, the City now looks forward to once again engaging with MTO during the detail design phase for the extension of Bass Pro Mill Drive. For your information, City of Vaughan Council recently endorsed Capital Budget Programming with investment for a number of major infrastructure projects within the City, including the extension of Bass Pro Mills Drive between Highway 400 and Weston Road. Under this financial commitment by City Council, the detail design for the Bass Pro Mills project will be scheduled to start this year in 2023.

Regards,

Hilda Esedebe, P.Eng., MBA, M.Sc.
Transportation Project Manager