

**BASS PRO MILLS DRIVE, FROM HIGHWAY 400 TO WESTON ROAD MUNICIPAL CLASS  
ENVIRONMENTAL ASSESSMENT**

Appendix O Consultation

## **Appendix O.5 TECHNICAL ADVISORY COMMITTEE**



## Robinson, Jennifer

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**From:** Robinson, Jennifer  
**Sent:** Thursday, March 5, 2020 3:32 PM  
**To:** mislam@trca.on.ca  
**Cc:** Addley, Diana; Eserdebe, Hilda; Cholewa, Peter  
**Subject:** 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; islam\_tac\_let\_fnl\_20200305.pdf

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, as well as invite a representative from your organization to participate as a member of the Technical Advisory Committee (TAC).

We kindly request that you indicate your interest in the study and/or TAC by returning the attached reply form to us before **Friday, March 27, 2020**.

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



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March 5, 2020

Suzanne Bevan  
Infrastructure Planning and Permits Senior Planner  
Toronto and Region Conservation Authority

Re: City of Vaughan  
Municipal Class Environmental Assessment  
Bass Pro Mills Drive, Highway 400 to Weston Road

Dear Suzanne,

As indicated in the attached notice, the City of Vaughan (City) has initiated a Municipal Class Environmental Assessment (Class EA) study for the proposed extension of Bass Pro Mills Drive between Highway 400 and Weston Road. The study will fulfill the requirements for Schedule 'C' projects as outlined in the Municipal Engineers Association Municipal Class EA guidelines (October 2000, as amended in 2007, 2011, and 2015).

The purpose of this letter and attached notice is to inform your agency of this study and to invite a representative to participate as a member of the Technical Advisory Committee (TAC). The TAC will meet in advance of key decision points to review and discuss study area conditions, key study findings and specific issues or concerns that your organization may have.

We kindly request that you indicate your interest in the study and/or TAC by completing and returning the enclosed reply form to the undersigned before Friday, March 27, 2020. If this notice has reached you in error, we would appreciate it if you could forward this request to the appropriate contact within your organization or advise the undersigned.

We look forward to your reply. Should you have any questions, please do not hesitate to contact the undersigned at (905) 415-6401 or [Diana.Addley@stantec.com](mailto:Diana.Addley@stantec.com).

Yours truly,

**Stantec Consulting Ltd.**

A handwritten signature in blue ink, appearing to read "D. Addley".

Diana Addley,  
Senior Environmental Planner

cc: Hilda Esedebe, P.Eng., City of Vaughan  
Peter Cholewa, P.Eng., Stantec Consulting Ltd.



TECHNICAL ADVISORY COMMITTEE (TAC) - REPLY FORM (Please Print)

Re: City of Vaughan  
Municipal Class Environmental Assessment  
Bass Pro Mills Drive, Highway 400 to Weston Road

Date: -----

Name: -----

Title: -----

Agency: -----

Address: -----

----- Postal Code: -----

Phone: ----- Fax: -----

Email: -----

Does your agency wish to be kept informed of the study? (Circle Yes or No)

Yes                      No

Does your agency wish to participate as a member of the Technical Advisory Committee? (Circle Yes or No)                      Yes                      No

Comments: -----

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Please return this form to the contact below by Friday, March 27, 2020.

**Diana Addley**, Senior Environmental Planner  
**Mailing Address:** 300W-675 Cochrane Drive, Markham, ON L3R 0B8  
**Email Address:** [Diana.Addley@stantec.com](mailto:Diana.Addley@stantec.com)

*With the exception of personal information, all comments will become part of the public record.*

## Technical Advisory Committee Meeting 1

Bass Pro Mills Drive Extension, Municipal Class Environmental Assessment / 16054006/IM-7212-10

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**Date/Time:** September 9, 2020 / 1:30 PM

**Virtual Platform:** Microsoft Teams

**Next Meeting:** TBD

**Attendees:** Hilda Esedebe (City of Vaughan)  
Cynthia Patterson (City of Vaughan)  
Shahrzad Davoudi-Strike (City of Vaughan)  
Ruth Rendon (City of Vaughan)  
David Marcucci (City of Vaughan)  
Nicholas Cascone (City of Vaughan)  
Petr Emelianov (City of Vaughan)  
Selma Hubjer (City of Vaughan)  
Katrina Guy (City of Vaughan)  
Sunil Kumar (City of Vaughan)  
Andy Lee (City of Vaughan)  
Dorothy Kowpak (City of Vaughan)  
Frank Marzo (City of Vaughan)  
Christopher Tam (City of Vaughan)  
Justin Wong (City of Vaughan)  
Peter Cholewa (Stantec Consulting Ltd.)  
Diana Addley (Stantec Consulting Ltd.)  
Arash Mirhoseini (Stantec Consulting Ltd.)  
Heather Glass (Ministry of Transportation)  
Jordan Lee (Ministry of Transportation)  
Aaron Janke (Ministry of Transportation)  
Johnson Lau (Ministry of Transportation)  
June Little (Toronto and Region Conservation Authority)  
Manirul Islam (Toronto and Region Conservation Authority)  
Suzanne Bevan (Toronto and Region Conservation Authority)  
Harsimrat Pruthi (Toronto and Region Conservation Authority)  
Stephen Bohan (Toronto and Region Conservation Authority)  
Steve Mota (York Region)  
Colin Wong (York Region)  
Tim Kwan (York Region)  
Yvonne Kaczor (York Region)  
Mehrak Hakimi (York Region)

**Absentees:** Margie Chung (City of Vaughan)  
Carlos Couto (City of Vaughan)  
Frank Facchini (City of Vaughan)  
Christian Guerette (City of Vaughan)  
Mike Doyle (City of Vaughan)  
Fausto Filipetto (City of Vaughan)  
Michael Habib (City of Vaughan)  
Lauren Crawford (York Region)  
Diana Kakamousias (York Region)  
Zaka Uddin (Ministry of Transportation)

**Distribution:** Attendees and Absentees

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**Action:**

**Item:**

The City and Stantec introduced the study team and provided a brief overview of the Bass Pro Mills Drive Municipal Class Environmental Assessment (MCEA) study. Stantec shared a presentation related to the MCEA, including a summary of the study background, existing environmental information collected to date, the proposed field investigation schedule, the preliminary evaluation of alternative solutions and associated evaluation criteria, preliminary design criteria and next steps.

Info

It was noted that this study builds upon the Vaughan Mills Centre Secondary Plan (VMCSP), and that the future extension is envisaged to include an enhanced boulevard, transit amenities and active transportation facilities.

**Landscape Master Plan**

The City is currently undertaking the Vaughan Mills Centre Public Realm and Streetscape Plan (PRSP) for the VMCSP plan area, and it was noted that the project team for that assignment has developed, and in the process of reviewing, conceptual cross-sections for the future extension of Bass Pro Mills Drive. The concepts include drainage swales and reduced traffic lanes (beyond what is proposed as part of the VMCSP), and the PRSP project team would appreciate the details of the geotechnical and hydrogeological investigations to determine the feasibility of some features. The timing of these investigations was also being sought. Stantec noted that the Bass Pro Mills Drive MCEA is in the early stages of the process, and as access to private properties has not been granted, the timing of these investigations are not known.

It was noted that PRSP is anticipated to be completed within one year. Stantec requested a copy of the preliminary concept for consideration.

The project teams for the City's VMCSP, PRSP and Bass Pro Mills Drive MCEA assignments will coordinate with each other regarding their respective studies, although it was noted that the VMCSP was outside the Bass Pro Mills Drive MCEA process.

City/Stantec

**Langstaff Road MCEA**

York Region provided a brief overview of York Region's Langstaff Road MCEA. It was noted that the study area limits consist of Langstaff Road, from Weston to Hwy 7.

As part of this assignment, York Region is proposing: to widen Langstaff Road, between Weston Road and Jane Street, from 4 lanes to 6 lanes. In addition, a new link, situated between Jane Street and Keele Street, including an overpass of the CN MacMillan Rail Yard is being reviewed. From Keele Street to Dufferin, Langstaff Road is proposed to be widened from 2 to 6 lanes. There are no plans for road widening between Dufferin Street and Highway 7. Sidewalk and streetscaping improvements are also proposed.

**Action:**

**Item:**

To date, the project team has held two open houses, and is working towards posting the Environmental Study Report for public review by the end of 2020 or early 2021; however, due to the scale/size of the project, the timing is difficult to confirm at this time.

It was noted that the Langstaff Road MCEA project team is still in discussions with MTO regarding the Highway 400 interchange improvements, as these are also under consideration as part of the study. It was noted that these discussions have been slow but are progressing, and that they are hoping to hold their last meeting with them by next month. York Region noted that the preliminary concept plans will be shared with the City, as it is understood that the Highway 400 interchange improvements could impact the Bass Pro Mills Drive MCEA. These plans may be shared within a few months/before the end of 2020.

York Region/City

**Weston Road Widening**

York Region provided a brief summary of the future plans for Widening Weston Road. York Region noted that the design and construction of this project is within York Region's 10-year capital plan, and that the expected construction timing is approximately 2027.

The project was planned as part of a previous Individual Environmental Assessment, and includes the widening of Weston Road to 6 lanes. York Region will work with the Bass Pro Mills Drive project team to help to define a new intersection location.

York Region/City/Stantec

**Vaughan Mills Centre Secondary Plan**

The City provided an overview on the status of appeals to the VMCSPP. It was noted that there a number of appeals related to the land use planning on east and west sides of 400. However, many of the appeals concerning the lands on the east side of Highway 400 have been resolved through the LPAT. It was noted that the board approved the land use designations for some of those sites, although some are unresolved. A date is tentatively scheduled for October; however, opposition from the land owners situated on the east side of Highway 400 are not anticipated.

Info

The City noted that there are three landowners/appellants within the VMCSPP area on the west side of Highway 400. These landowners represent the majority of the lands within this portion of the area. A change in designation to permit 50% of the lands fronting onto Weston Road for residential purposes is being sought, as these lands are currently designated for non-residential uses.

It was further noted that the appellants submitted a request through York Region's conversion report, although this was not supported. In addition, the policy department took this report to City Council; however, City Council also did not support the conversion of these lands. York Region Council will make the final determinations. If final York Region Council approval is granted, the City will move forward with approvals for the VMCSPP policies. Since there is City

**Action:**

**Item:**

Council approval of the VM CSP, this needs to be taken into account. It was also clarified that the Official Plan Amendment 450 has been surpassed.

The proposed realignment of the Black Creek tributary was also discussed. It was noted that appellants are proposing a watercourse shift to the west; however, this is pending the LPAT decision, which will be confirmed through the 2<sup>nd</sup> phase of the hearing.

Info

Toronto and Region Conservation Authority (TRCA) requested a meeting between TRCA and the project team before the preliminary design is finalized to review the study findings and associated recommendations. The project team agreed that a meeting with TRCA would be beneficial at this stage in planning.

City/Stantec

**Traffic Analysis**

Project team presented the transportation study undertaken for the existing conditions and future base conditions of the Study Area. Some of the questions and comments raised with respect to the traffic analysis for this study included:

- Consideration for roundabouts at the new intersection with Weston Road. It was noted that this type of intersection will be considered, although these intersection treatments take up a significant amount of property, but that this will be considered when intersection options are reviewed.
- The study should consider collision rates. Stantec will review the collision rate and will compare it to the City averages.
- Consider including the Highway 400 mainline in the model development process. Stantec stated that Highway 400 mainline and ramps were included in the model; however, the calibration and validation only performed for the Highway ramps based on available data. Any impacts from ramps to Highway mainline will be reviewed and mitigated to ensure Highway operations will not be impacted.
- Chris Tam, City of Vaughan Traffic Engineer, requested the draft Transportation/Traffic Analysis Report for the study for review/comment.

City/Stantec

Stantec

Info

City

The meeting adjourned at 3:00 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.



**Diana Addley**

Senior Environmental Planner  
Phone: 905-415-6401  
Email: [diana.addley@stantec.com](mailto:diana.addley@stantec.com)

Attachment: Technical Advisory Committee Meeting 1 Presentation (revised based on comments received)



# **Bass Pro Mills Extension**

Highway 400 to Weston Road  
Schedule C Municipal Class Environmental Assessment

## **Technical Advisory Committee #1**

September 9, 2020

# Agenda



Introductions



Study Overview



Preliminary Traffic/Transportation Analysis



Problems and Opportunities



Nature & Timing of Field Work



Existing Study Area Conditions



Evaluation of Alternative Solutions



Draft Design Criteria



Project Schedule/Timelines



Next Steps

# Study Overview

The City of Vaughan is undertaking a Municipal Class Environmental Assessment study for the proposed extension of Bass Pro Mills Drive, from Highway 400 westerly to Weston Road. This extension would provide a new major collector roadway that unites neighbourhoods from Weston Road to Jane Street, redistributes east-west traffic and alleviates congestion on Rutherford Road.

An enhanced boulevard could accommodate new York Region Transit amenities, a pedestrian friendly multi-use trail, as well as on-street cycling facilities.

The proposed extension of Bass Pro Mills Drive is envisaged to support future development in the study area, including the employment and intensification plans developed as part of the Vaughan Mills Centre Secondary Plan (VMCSP).



# Vaughan Mills Centre Secondary Plan

The City of Vaughan adopted the Vaughan Mills Centre Secondary Plan (VMCSP) in 2012 to establish a framework for land use planning in the area and to guide future development planning within the subject lands.

As part of the VMCSP, recommendations for transportation improvements within the study area were developed based on an assessment of:

- Future land use
- Forecasted population and employment growth
- Projected future traffic volumes
- Existing and future roadway operations
- Roadway engineering design criteria
- Technical evaluation of transportation options
- Feedback received from the public, agencies and landowners/developers



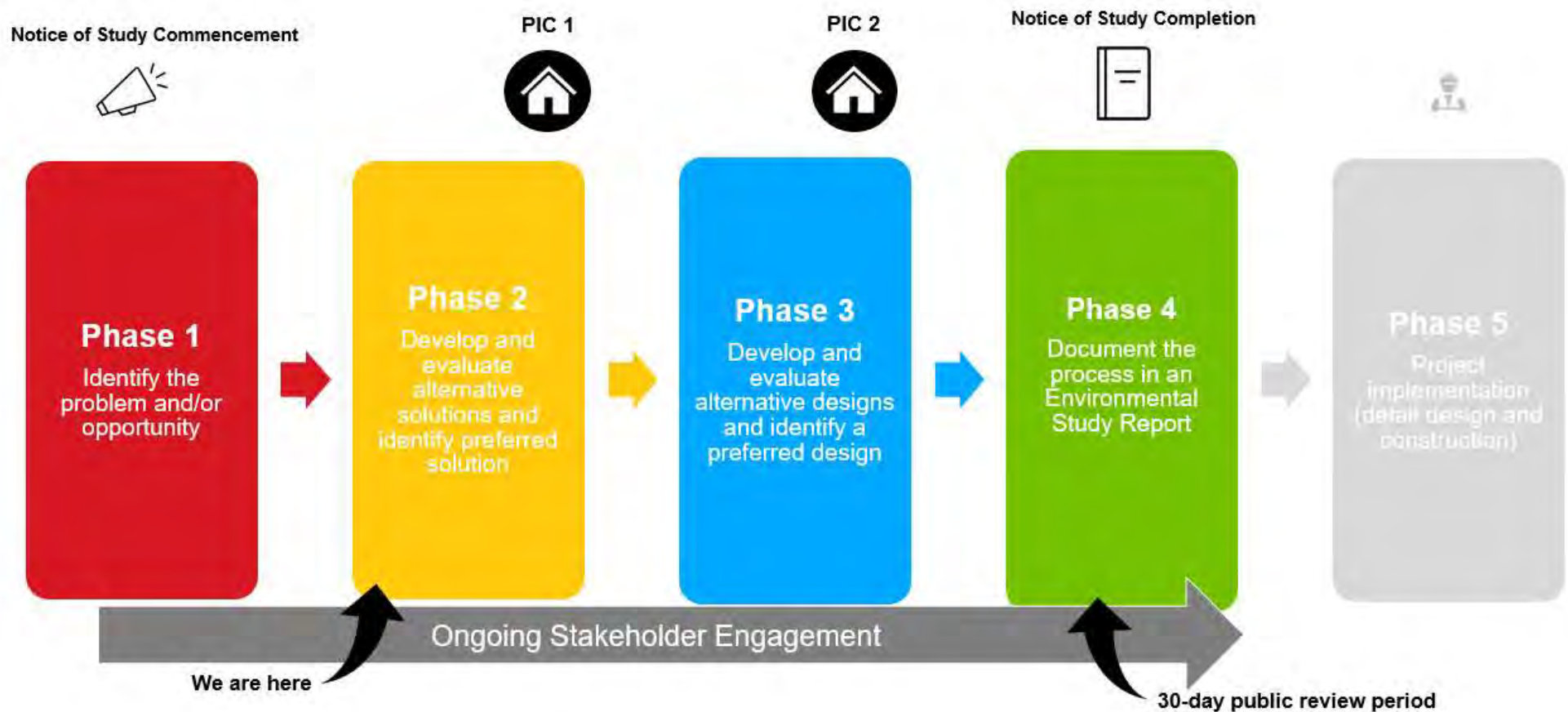
The extension of Bass Pro Mills Drive was recommended in the VMCSP, consisting of a wide, visually appealing streetscape with a multi-use trail and on-street cycling facilities along the new road right-of-way.

# Municipal Class Environmental Process

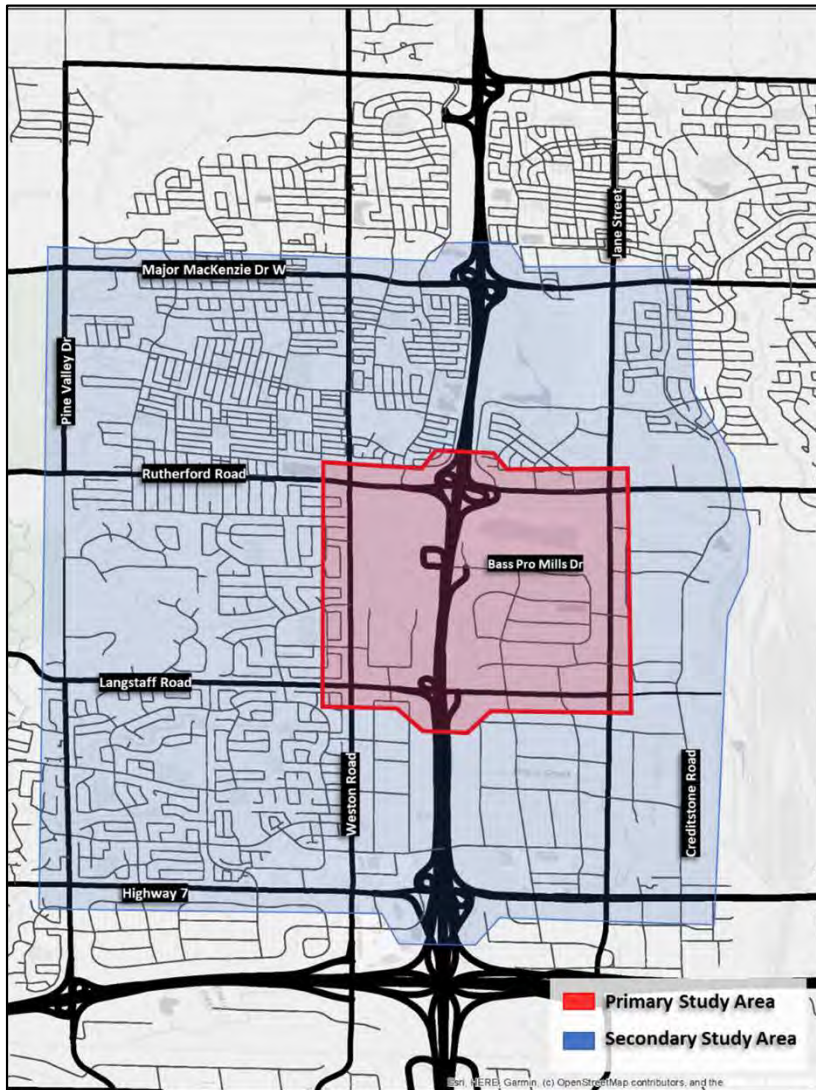
Municipal planning for infrastructure improvements must be completed in accordance with the Municipal Engineers Association's Municipal Class Environmental Assessment (MCEA) document (October 2000, as amended in 2015). This is an approved process under the Environmental Assessment Act.



The proposed extension of Bass Pro Mills Drive classifies as a Schedule C project. These projects are required to follow Phases 1 through 4 of the MCEA process.



# Transportation Analysis Study Areas



## Primary Study Area (area in red)

- Area in which a microsimulation model was developed – this is where the greatest transportation impact will be experienced as a result of the Bass Pro Mills extension
- Bounded by Weston Road to the west, Jane Street to the east, Langstaff Road to the south, and Rutherford Road to the north

## Secondary Study Area (area in blue)

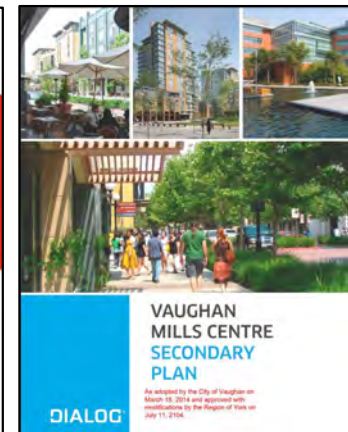
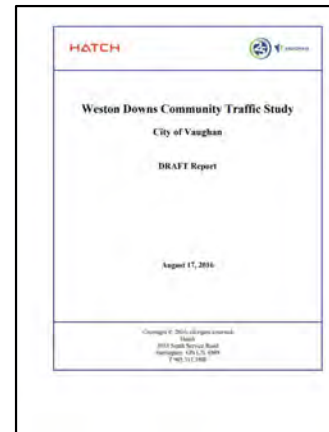
- Area used for the macro modelling (using MTO's Greater Golden Horseshoe Model, Version 4) review and inputs for microsimulation model development
- Bounded by Pine Valley Drive to the west, Credit Stone Road to the east, Highway 7 to the south, and Major Mackenzie Drive West to the north

# Background Studies

A number of background studies from adjacent areas were considered for this study, including:

- Weston Downs Traffic Study
- Vaughan Mills Centre Secondary Plan
- Vaughan Mills Centre Public Realm Strategy and Streetscape Master Plan
- Weston Road Design and Construction
- Langstaff Road Environmental Assessment

Road network solutions for the Bass Pro Mills Extension will consider the impacts on Jane, Weston, Rutherford, Langstaff and Weston Downs to manage planned growth in these surrounding areas.



# Existing Transportation Network

## Road Network

The road network includes the following major roads:

- Rutherford Road
- Jane Street
- Bass Pro Mills Drive
- Langstaff Road
- Weston Road
- Highway 400

The study area is car-oriented and auto use makes up over 90% of trips to/from Vaughan Mills Mall and over 85% of total trips in the City of Vaughan.

	Transit	Cycling	Auto	Walk	Other
<b>AM Peak Period</b>					
Vaughan Mills Mall	5%	2%	91%	2%	0%
City of Vaughan	5%	0%	85%	7%	2%
<b>PM Peak Period</b>					
Vaughan Mills Mall	6%	0%	94%	0%	0%
City of Vaughan	9%	0%	89%	1%	0%

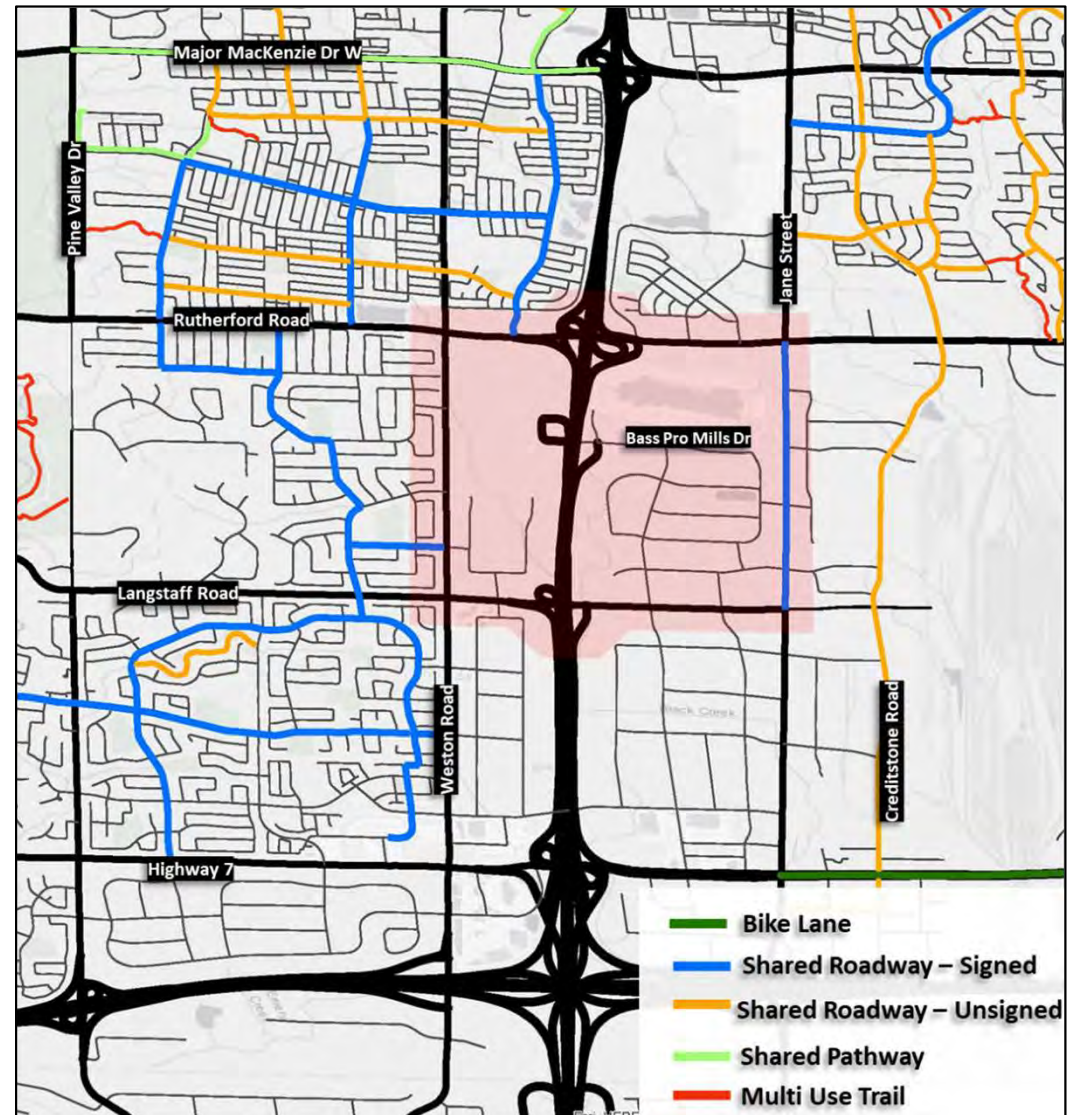


# Existing Transportation Network

## Active Transportation Network

The active transportation network includes:

- limited cycling or multi-use paths;
- one shared roadway with sharrows on Jane Street and an unsigned bike route on Springdale Road;
- sidewalks throughout; and
- only 4% active mode share to/from Vaughan Mills Mall during the AM peak and 0% during the PM peak.



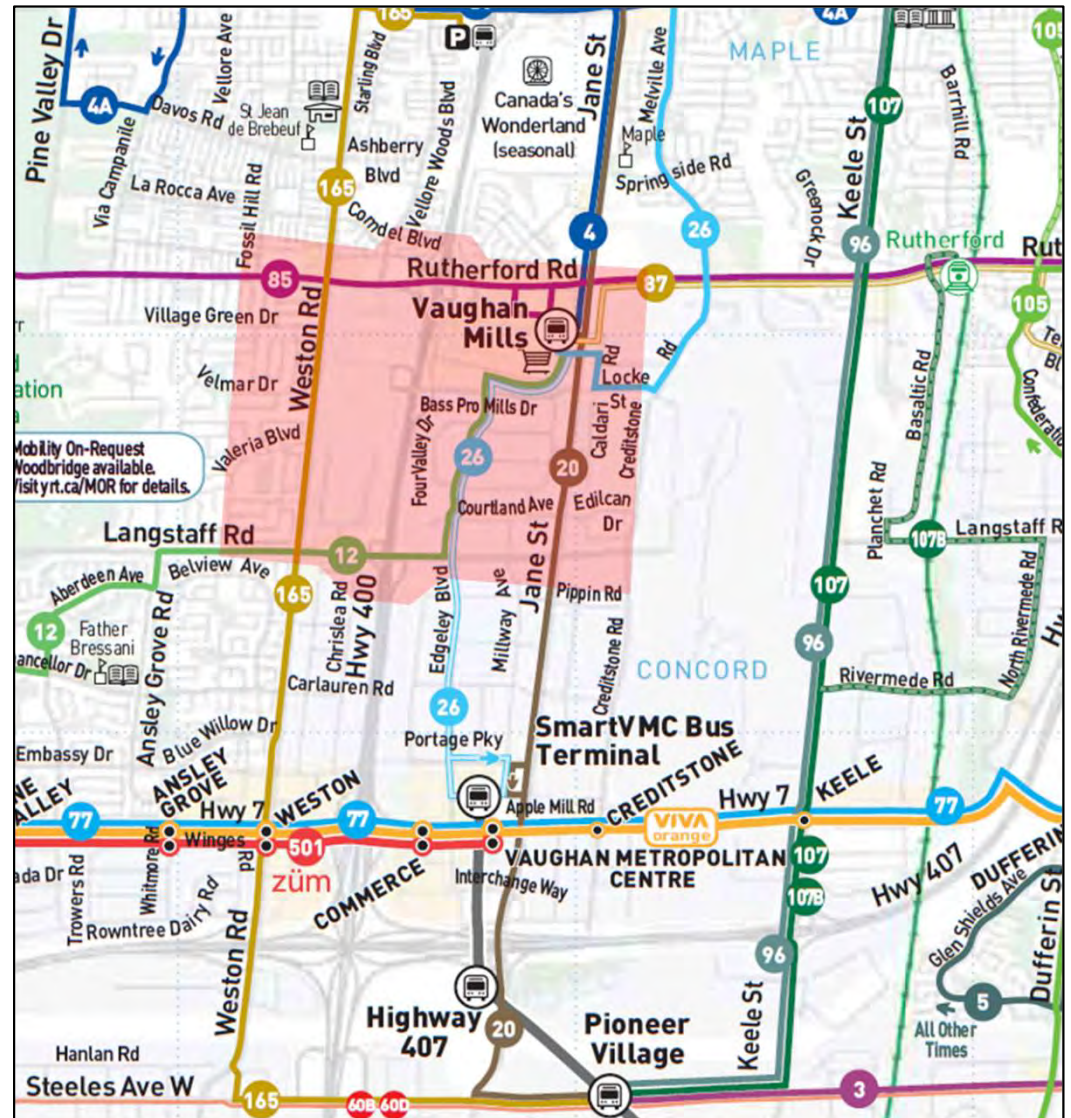
# Existing Transportation Network

## Transit Network

The transit network includes:

- eight York Region Transit (YRT) routes;
- connections to TTC, Mississauga Transit, Brampton Transit and GO Transit in the surrounding area; and
- frequent service on route 20 Jane (every 15 minutes or better).

Route Number/ Name	Frequency Weekday AM (minutes)	Frequency Weekday PM (minutes)
4 - Major Mackenzie	30	30
12 - Pine Valley	30	30
20 - Jane	12	13
21 - Vellore	60	60
26 - Maple	27	30
85 - Rutherford	27	24
87 - Autumn Hill	35	40
165 - Weston	30	35



# Existing vs. Future Baseline Analysis

## Future Land Use and Transportation Network

- Currently based on 2031/2041 baseline land use and transportation network scenarios from MTO's Greater Golden Horseshoe Model
- Vehicular growth based on baseline land use scenario are as follows:
  - AM peak hour: +2.5%/annum (2020 to 2031), +0.7%/annum (2031 to 2041)
  - PM peak hour: +2.0%/annum (2020 to 2031), +0.7%/annum (2031 to 2041)

# Existing vs. Future Baseline Analysis

## Transportation Analysis – Global Network Operations

- Analysis based on microsimulation model
- Future Baseline 2031/2041 scenarios show significant deterioration in major performance metrics in the Primary Study Area when compared to Existing Conditions:
  - E.g. Vehicle travel time: +84% / +103% in the AM, +75% / +82% in the PM

AM Peak Hour	Existing 2020	Future Baseline 2031	Future Baseline 2041
Delay (s/km)	51.1	158.8	140.13
Total Travel Time (veh-h)	2,411	4,448	4,902
Speed (km/h)	48.9	31.8	29.7

PM Peak Hour	Existing 2020	Future Baseline 2031	Future Baseline 2041
Delay (s/km)	79.4	147.1	153.4
Total Travel Time (veh-h)	2,820	4,940	5,136
Speed (km/h)	45.73	37.6	36.5

# Existing vs. Future Baseline Analysis

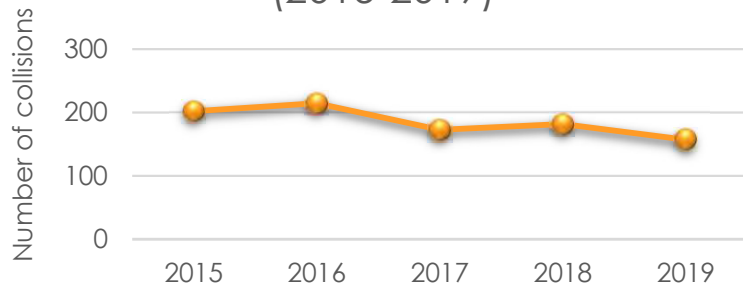
## Transportation Analysis – Major Intersection Operations

- Analysis based on microsimulation model
- Many intersections show significantly worse level of service (LOS) in the Future Baseline 2031/2041 scenarios when compared to Existing Conditions
- Table shows LOS results at 6 of the major intersections in the study area

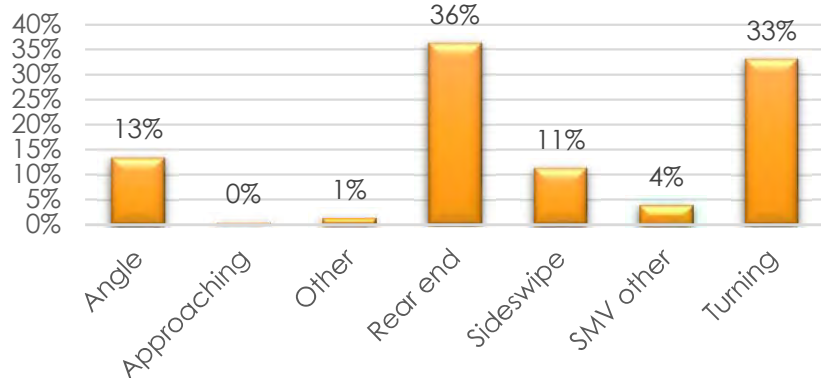
Intersection	Existing 2020				Future Baseline 2031				Future Baseline 2041			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
Rutherford Road at Vellore Woods Blvd.	29	C	24	C	120	F	75	E	100	F	76	E
Rutherford Road at Canada's Wonderland Drive / Hwy 400 Northbound Off-Ramp	20	B	20	C	90	F	47	D	89	F	44	D
Rutherford Road at Julliard Drive	18	B	23	C	61	E	79	E	43	D	82	F
Rutherford Road at Jane Street	43	D	46	D	78	E	100	F	68	E	90	F
Langstaff Road at Hwy 400 Northbound Off-Ramp	51	D	17	B	531	F	91	F	181	F	83	F
Langstaff Road at Weston Road	38	D	51	D	398	F	155	F	130	F	218	F

# Existing Safety Analysis

Total Intersection Collisions  
(2015-2019)



Impact Type(2015-2019)



## Collisions at Intersections

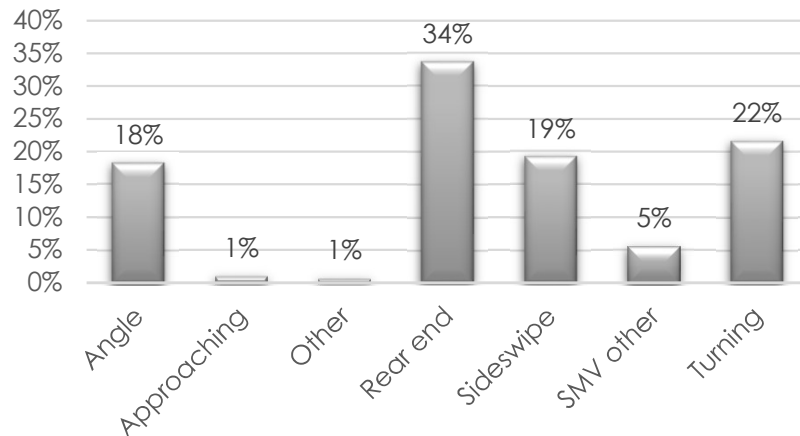
- Number of collisions at intersections has shown a slight downward trend with a 25% reduction from 2015 to 2019
- Primary impact type was rear-end (36%), followed by turning and angle collisions which accounted for 33% and 13%, respectively
- 27% of collisions resulted in non-fatal injury. There were no fatal injuries reported during the data period and 73% of the collisions resulted in Property Damage Only (PDO)
- Given the number of rear-end collisions, we can assume that congestion is the main underlying cause to the collisions. No other issues were identified

# Existing Safety Analysis

Total Midblock Collisions  
(2015-2019)



Impact Type(2015-2019)



## Collisions at Mid-Block

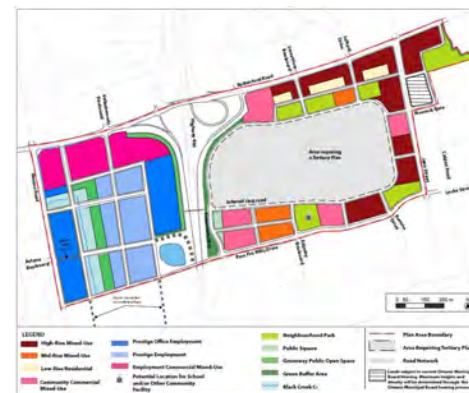
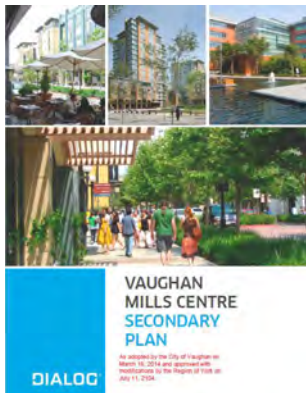
- Number of collisions at mid-block has remained similar from 2015 to 2019, with a slight peak in 2017
- Primary impact type was rear-end (34%), followed by turning and sideswipe collisions which accounted for 21% and 20%, respectively
- 21% of collisions resulted in non-fatal injury. There were no fatal injuries reported during the data period and 79% of the collisions resulted in Property Damage Only (PDO)
- Given the number of rear-end collisions, we can assume that congestion is the main underlying cause to the collisions. No other issues were identified

# Problems and Opportunities

## Problem and Opportunity Statement:

The purpose of this study is 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 to:

- provide a new east-west multi-modal connection between Highway 400 and Weston Road, including a new route connection for York Region Transit (YRT);
- help distribute east-west traffic and alleviate congestion along Rutherford Road to the north;
- support future growth and development within the plan area; and,
- develop a safe and comfortable environment for active transportation users.





# Technical and Environmental Studies

A number of technical and environmental studies are planned as part of this MCEA, including but not limited to:

- Traffic operations
- Socio-economic
- Terrestrial and aquatics
- Cultural heritage
- Archaeology
- Contamination
- Stormwater management
- Fluvial geomorphology
- Geotechnical
- Hydrogeological
- Noise
- Air quality
- Climate change



The findings of these studies will be documented and appended to the Environmental Study Report.

# Nature & Timing of Field Work

A series of environmental studies are being completed as part of this study to assess and confirm the existing study area conditions. Fieldwork has been delayed as requests for Permission-to-Enter (PTE) private property have not been responded to. The timing of field work is anticipated to be conducted as follows:

- **Fluvial Geomorphological Assessment** – observation of the function, condition and composition of watercourses which may involve the collection of data with hand-held equipment and taking photographs **(Fall 2020)**
- **Archaeological Investigation** – identification of potential archaeological resources through pedestrian survey and by hand digging small test pits on agricultural properties **(Fall 2020)**
- **Terrestrial and Aquatic surveys** – visual survey and assessment of the site involving the collection of data on watercourses, wetlands, vegetation, incidental wildlife observations, and aquatic species. Surveys may involve photographing, recording sounds and mapping areas of vegetation and fish and wildlife habitat **(Late Summer/Fall 2020 and Spring/Summer 2021)**
- **Geotechnical and Hydrogeological Investigation** – advance boreholes using a truck or small track-mounted drilling rig to investigate soil and/or groundwater conditions. Also involves the collection of groundwater level data from monitoring wells installed as part of the drilling **(Spring 2021)**



# Existing Study Area Conditions

Desktop studies have been completed to date, including:

- Socioeconomic Review
- Cultural Heritage Overview and Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) Checklist
- Natural environment review
- Archaeological review

## Socioeconomic

- Along with lands south of Rutherford Road, only remaining agricultural designated lands within this area of City
- Primarily residential to west, and mix of chain commercial, service commercial, and industry/office uses to north, south, and east

## Natural Environment

- Much of study area consists of meadow communities, including some shallow marsh communities.
- Potential for habitat of several significant species, including turtle nesting/wintering habitat.
- Black Creek tributary is located on the west side of the study area which flows south connecting to the Humber River
- Tributary is likely to support warmwater fish species
- Field investigations will be undertaken to confirm presence/absence of potentially significant wild habitat and/or species within the study area.

## Cultural Environment

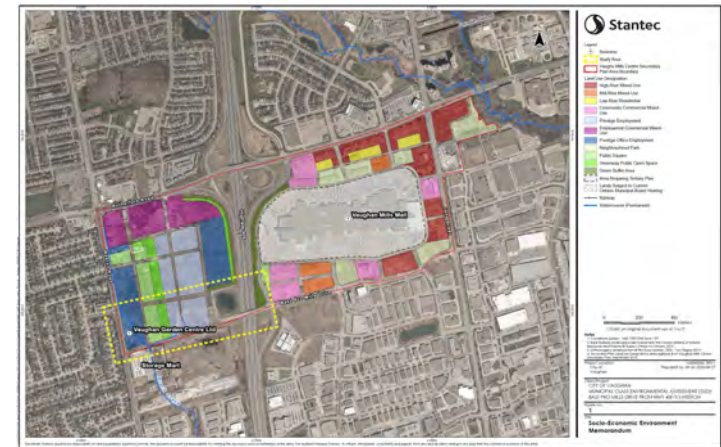
- No built heritage and/or cultural heritage landscapes present within or adjacent to the study area

## Archaeology

- Large portions having potential for recovery of archaeological resources

## Utilities

- Possible cell tower, Enbridge and Hydro One confirmed absence of facilities, some info received for Weston



# Evaluation Criteria

The following criteria was used to carry out the preliminary evaluation of alternative solutions:

## **Transportation**

- Safety
- Active Transportation
- Transit
- Traffic Operations
- Enhance Emergency Vehicle Response/Access
- Road Network Compatibility/Connectivity

## **Socio-Economic Environment**

- Accessibility
- Impacts to Entrances/Access to Private Properties
- Property Acquisition Requirements
- Provincial Planning Objectives
- Municipal Planning Objectives
- Compatibility with Existing and Proposed Development
- Business Operations
- Noise
- Community Access during Construction Phase

## **Cultural Environment**

- Archaeological Resources
- Built Heritage Resources and Cultural Landscapes


























## **Natural Environment**

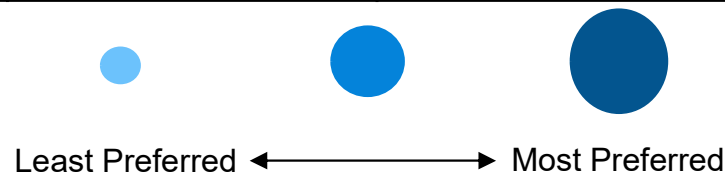
- Fisheries and Aquatic Habitat
- Surface Water Quality/Quantity
- Vegetation
- Wildlife Habitat
- Air Quality
- Climate Change

## **Technical**

- Impacts to utilities
- Construction Feasibility
- Stormwater/Drainage Quality/Quantity
- Cost

# Preliminary Evaluation of Alternative Solutions - Summary

Criteria	Do Nothing	Improve Transit, Employ Travel Demand Management Measures	Intersection and/or Operational Improvements	Improve Existing East West Roadways in Area	Extend Bass Pro Mills Drive to Weston Road
Transportation					
Socio-Economic					
Cultural Environment					
Natural Environment					
Technical					
Summary Recommended to be carried forward?	<b>No</b> Does not address the problems and opportunities	<b>Yes</b> Within the overall strategy	<b>Yes</b> Within the overall strategy	<b>No</b> Subject to separate studies	<b>Yes</b> Carried forward as Recommended Solution



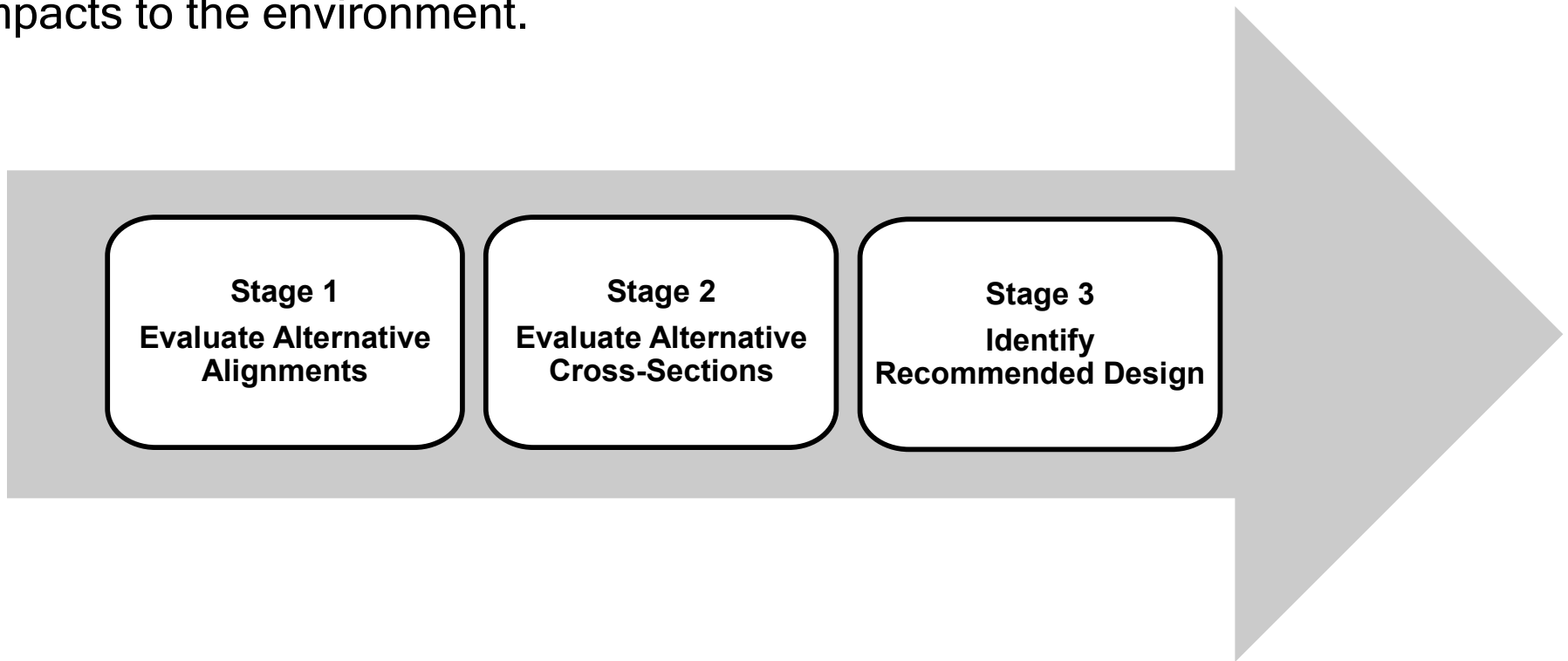
# Recommended Solution

Based on the findings of the Evaluation of Alternative Solutions, extending Bass Pro Mills Drive to Weston Road is recommended based on the following key rationale:

- Provides the best opportunity to improve travel safety, enhance the pedestrian environment, support the development of new multi-modal transportation connections, provide an alternative east-west route and alleviate traffic congestion for the long-term
- Highest potential to increase accessibility, improve access to private property, support existing and future development and is in line with municipal and provincial planning objectives
- Provides the best opportunity to increase resilience to climate change, improve air quality and implement surface water control measures.
- Although the cost is moderate to high compared to the other alternatives, there are limited impacts to utilities or the disruption of traffic operations as the construction activities would be generally limited to undeveloped lands.

# Evaluation Approach - Recommended Design

A staged approach will be used to identify and evaluate alternative design concepts, and to identify a recommended design that is cost effective, provides safe and functional traffic operations, improves local access, and minimizes impacts to the environment.



# Draft Design Criteria

Major collector with multiuse path  
(30 metre right-of-way)



Vaughan Mills Centre Secondary Plan, Section D: Major Collector Special Condition (Bass Pro Mills)



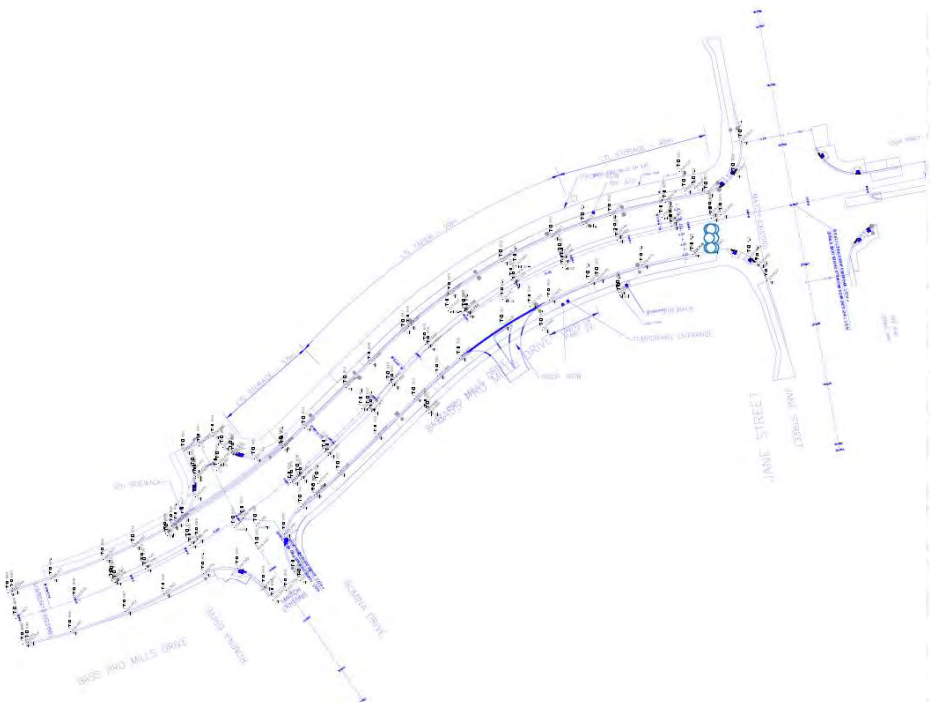
# Draft Design Criteria

As-Built Drawing  
Bass Pro Mills Extension to Janes Street

City of Vaughan – Road Design Guidelines  
Bass Pro Mills Drive

Criteria	Assumption/Standard	Reference
Design Speed	70km/h	
Classification	Collector	City of Vaughan Official Plan, Section 4.0 - Transportation, Subsection 4.2, Subsubsection 4.2.1
Min. Stopping Sight Distance	110m	City of Vaughan Design Criteria, Section 3.0 - Roads, Subsection 3.2, Subsubsection 3.2.3, Table 3.0
Min. Horizontal Curve Radius	190m	City of Vaughan Design Criteria, Section 3.0 - Roads, Subsection 3.2, Subsubsection 3.2.3, Table 3.0
K-Crest min.	22m	City of Vaughan Design Criteria, Section 3.0 - Roads, Subsection 3.2, Subsubsection 3.2.3, Table 3.0
K-Sag Min.	15m	City of Vaughan Design Criteria, Section 3.0 - Roads, Subsection 3.2, Subsubsection 3.2.3, Table 3.0
Min. C/L Grade	0.5%	City of Vaughan Design Criteria, Section 3.0 - Roads, Subsection 3.2, Subsubsection 3.2.3, Table 3.0
Max. C/L Grade	5%	City of Vaughan Design Criteria, Section 3.0 - Roads, Subsection 3.2, Subsubsection 3.2.3, Table 3.0
<b>Lane Width (measured to Face of Curb)</b>		
Through Lane	3.5m*	York Region Road Design Guidelines, Version 1.22, Page 52
Curb Lane	3.75m*	York Region Road Design Guidelines, Version 1.22, Page 52
Dedicated Right / Left Turn Lane	3.5m*	York Region Road Design Guidelines, Version 1.22, Page 53
Dedicated Cycling Facility/Bike Lanes	2.0m (1.5 cycling lane, with 0.5m buffer)	York Region Road Design Guidelines, Version 1.22, Page 17
Sidewalks	2.0m (min.)	City of Vaughan Standard Drawings E-1
Sidewalks grade	2%	City of Vaughan Design Criteria, Section 3.0 - Roads, Subsection 3.3, Subsubsection 3.3.2
Median	Curbed: 2.0m (min.) Slab: 1.4m (min.)	York Region Road Design Guidelines, Version 1.22, Page 21
Boulevard	3.5m (min.) 5.0m (std.)	York Region Road Design Guidelines, Version 1.22, Page 54
Splash Pad	0.75m	City of Vaughan Standard Drawings B-8
Multi-Use Path	3.0m (max.)	York Region Road Design Guidelines, Version 1.22, Page 65
Crossings	-	City of Vaughan Standard Drawings D-1

\*to be confirmed with the City of Vaughan



# Project Schedule / Timelines

Key Point in Study Process	Approximate Timing
✓ Notice of Study Commencement	<b>March 5, 2020</b>
Stakeholder Group Mtg 1	September 14, 2020
Public Information Centre 1	<b>Fall 2020</b>
Public Information Centre 2	<b>Spring 2021</b>
Draft Preliminary Design	May 2021
Final Preliminary Design	October 2021
Draft Environmental Study Report (City, MECP, TRCA, York Region)	October 2021
Notice of Completion/Final ESR/ 30-day Public Review Period	<b>December 2021</b>

Other meetings will be held with the TAC and SG at key points in the study process

# Next Steps

- Review and consider feedback following today's meeting
- Initiate field investigations (subject to receipt of Permissions to Enter private property)
- Hold individual meetings with stakeholders (as needed)
- Confirm the problems and opportunities and Preferred Solution
- Prepare for Public Information Centre 1
- Issue draft PIC 1 materials for Stakeholder Group review and comment
- Attend PIC 1 (tentatively scheduled for Fall 2020)

**Hilda Esedebe, P.Eng.**

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# Questions?

## Robinson, Jennifer

---

**From:** Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>  
**Sent:** Thursday, June 3, 2021 9:52 AM  
**To:** Manirul Islam  
**Cc:** Suzanne Bevan; Cholewa, Peter; Addley, Diana; Robinson, Jennifer; Hubjer, Selma; Cascone, Nicholas; Gallagher, Tim  
**Subject:** RE: CFN 61893 Bass Pro Mills EA - Black Creek  
**Attachments:** TRCA May 25, 2021 Meeting Minutes-CFN 61893 Bass Pro Mills EA.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hello Manirul,

Thanks again for coordinating the May 25, 2021 meeting with TRCA staff to discuss the City's Bass Pro Mills Environmental Assessment Study and the proposed approach to the Black Creek.

Please find attached the final draft meeting notes for your review and circulation to the appropriate TRCA staff.

Kindly advise if there are any questions or comments.

Regards,

**Hilda Esedebe**, P.Eng., MBA, M.Sc.  
**Transportation Project Manager**  
**Infrastructure Planning and Corporate Asset Management**  
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---

**From:** Manirul Islam <Manirul.Islam@trca.ca>  
**Sent:** Thursday, May 20, 2021 11:23 AM  
**To:** Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>  
**Cc:** Suzanne Bevan <Suzanne.Bevan@trca.ca>; Peter.Cholewa@stantec.com; Diana.Addley@stantec.com; 'Robinson, Jennifer' <Jennifer.Robinson@stantec.com>; Hubjer, Selma <Selma.Hubjer@vaughan.ca>; Cascone, Nicholas <Nicholas.Cascone@vaughan.ca>  
**Subject:** [External] Re: CFN 61893 Bass Pro Mills EA - Black Creek

Hi Hilda:  
Good to hear from you- we are well at here, hope you as well.

I have hold staff for Tuesday (May 25) from 11:00 am to 12:00 pm; and for Thursday (May 27) from 11:00 am to 12:00 pm.

Please let me know the option that works for you better. The meeting will be on MS Team.

It would be helpful if you could provide a little background ahead of the meeting to help us better understand the scope of the meeting.

Thank you,  
Manirul

---

**From:** Esedebe, Hilda

**Sent:** May 18, 2021 11:25 PM

**To:** Manirul Islam

**Cc:** Suzanne Bevan ; [Peter.Cholewa@stantec.com](mailto:Peter.Cholewa@stantec.com) ; [Diana.Addley@stantec.com](mailto:Diana.Addley@stantec.com) ; 'Robinson, Jennifer' ; Hubjer, Selma ; Cascone, Nicholas

**Subject:** CFN 61893 Bass Pro Mills EA - Black Creek

Hello Manirul,

I hope this emails finds you well.

The City would like to schedule a meeting with TRCA staff to discuss the Black Creek realignment as it pertains to the Bass Pro Mills Environmental Assessment. Kindly provide availabilities for this week or next week for consideration.

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](mailto:hilda.esedebe@vaughan.ca)

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## BASS PRO MILLS EXTENSION EA PROJECT MEETING

Consultation with TRCA (CFN 61893)

**Date/Time:** May 25, 2021 / 11:00 AM

**Place:** Microsoft Teams Meeting

**Attendees:** Islam Manirul (TRCA)  
 Bruna Peloso (TRCA)  
 Mark Howard (TRCA)  
 Stephen Bohan (TRCA)  
 Alison MacLennan (TRCA)  
 Hilda Esedebe (City of Vaughan)  
 Selma Hubjer (City of Vaughan)  
 Nicholas Cascone (City of Vaughan)  
 Peter Cholewa (Stantec)  
 Diana Addley (Stantec)  
 Tim Gallaher (Stantec)

**Distribution:** All Attendees

Discussion Items:	Action:
<p><b>Agenda and Introduction</b></p> <ul style="list-style-type: none"> <li>The purpose of the meeting was to provide an update to the TRCA in relation to the City of Vaughan’s Bass Pro Mills EA Study and discuss Black Creek and the EA Study approach to an interim crossing of the existing Black Creek and alternatives for potential ultimate realignment of the Black Creek, and to receive initial feedback on the concepts being considered.</li> <li>The City provided an overview of the EA project and a summary as to where the project is within the Class C process with a PIC #2 planned for Summer 2021.</li> <li>The VMCSPP developers have made proposals to the City in relation to zoning, a road network and a realignment of the Black Creek, and the City is currently considering these plans and concepts for a Black Creek realignment to a new ultimate location.</li> <li>The land use set forth on the west side of Highway 400 within the planning area is currently under appeal.</li> <li>The City advised that the MCEA for the Bass Pro Mills Drive extension should be completed this year to help to inform the development process but noted the appeal process presents a challenge.</li> <li>The land use appeal hearings are anticipated to be concluded this year or early next year.</li> <li>Stantec noted that the Region of York 2011 <i>Western Vaughan Transportation Improvements Individual Environmental Assessment</i> proposed a widening of Weston Road. The Region is planning to widen Weston Road in 2027, which would require that the Black Creek current alignment be conveyed within a culvert. Stantec suggested that a holistic approach be taken to include the Region on consideration for a realignment of the</li> </ul>	

Discussion Items:	Action:
<p>Black Creek that may suit all parties. York Region has representation on the study's Technical Advisory Committee.</p>	
<p><b>Floodplain Management</b></p> <ul style="list-style-type: none"> <li>• TRCA indicated that in addition to the Black Creek there is a north tributary situated south of Rutherford Road that connects to the Black Creek and another south tributary that emerges from a wetland located just north of a Bass Pro Mills alignment that is being considered. TRCA also indicated that another wetland exists south of the contemplated road alignment and it would be important to maintain connectivity between these two (2) wetlands.</li> <li>• The City noted that the north tributary is not shown within the Secondary Plan. Stantec noted that the south tributary has been identified within the desktop HydroG study for the project. It was noted that the EA team were unable to secure PTE's and therefore desktop reviews were only conducted. Field studies were conducted where accessible from public lands.</li> <li>• The HydroG study is currently being reviewed by the City and will be forwarded to TRCA for further review and TRCA comment.</li> <li>• Regulated Area on TRCA website is generally a pre-screening tool. Black Creek and the wetland within the study area lies within the TRCA's Regulated Area, even though it is not shown on the website tool.</li> <li>• Black Creek is currently a regulated watercourse that doesn't appear to include any existing conditions hydraulic model through the Study Area. A 1-Dimensional HEC-RAS model currently extends to a point approximately 500 m downstream of the Study Area. The TRCA indicated that the HEC-RAS model should be extended to the upstream side of the future right-of-way (ROW) limits to help support with hydraulic sizing recommendations.</li> <li>• Stantec will be taking a 'flexible' approach to the ultimate watercourse crossing location since the timing for development of immediately adjacent lands is currently unclear. As such, Stantec intends to size a hydraulic crossing, in accordance with TRCA watercourse crossing guidelines, at the existing (in-situ) location. In addition, alternative conceptual option(s) will also be identified to support the future Secondary Plan and to illustrate how the future Black Creek relocation alignment could be accommodated by the Bass Pro Mills Extension.</li> <li>• The crossing/hydraulic sizing recommendations could be replicated at alternate locations, provided there are no horizontal or vertical inconsistencies</li> <li>• The watercourse crossing location will need to be confirmed during detailed design and at a time when the adjacent development applications, associated land uses and construction timing is better understood.</li> <li>• TRCA agreed to proposed approach, provided considerations are made for the tributary and wetland areas.</li> <li>• During the virtual meeting, TRCA circulated:             <ul style="list-style-type: none"> <li>▪ TRCA Crossing Guidelines (2015)</li> <li>▪ CVC Fish and Wildlife Crossing Guidelines</li> <li>▪ Channel Modifications Design Submission Requirements</li> </ul> </li> </ul>	<p>Stantec</p>



Discussion Items:	Action:
<p><b>Stormwater Management</b></p> <ul style="list-style-type: none"> <li>• The following relevant SWM Criteria were discussed/confirmed during the meeting:               <ul style="list-style-type: none"> <li>▪ Water Quality Control: MECP Level 1 (Enhanced) Treatment to achieve 80% TSS Removal Efficiency</li> <li>▪ Water Quantity Control: Unit-release rates for Sub Basin 46 (Equation G) of the Humber River Watershed shall be required.</li> <li>▪ Water Balance: Best Efforts to achieve a post-development to pre-development water balance with a minimum 5 mm retention target.</li> <li>▪ Erosion Control: 5 mm of on-site retention.</li> </ul> </li> <li>• The SWM strategy will include independent solutions to service the future ROW corridor. Opportunities for potential combined SWM facilities that service both Bass Pro Mills Drive and the adjacent Secondary Plan Area will remain open for further discussion/confirmation during detailed design.</li> <li>• VMOSP developers' plans are showing a proposed new SWM pond facility on the north side of the Bass Pro Mills Extension mid-way between Weston Road and Highway 400.</li> </ul>	Stantec
<p><b>Fluvial Geomorphology</b></p> <ul style="list-style-type: none"> <li>• Field assessments have been undertaken from adjacently (publicly accessible) lands due to lacking Permission-to-Enter (PTE) from existing landowners.</li> <li>• Given the highly disturbed nature of the existing site, Stantec will be developing an empirically derived meander belt width for Black Creek. The TRCA acknowledged this as an appropriate approach given the limited natural information available within the Study Area.</li> <li>• Similarly, since there is no PTE, detailed onsite measurements of the existing channel is not possible. As a result, Stantec will be applying regional regression equations to establish/confirm the design bankfull discharge.</li> <li>• The City and TRCA confirmed that there is no background fluvial-geomorphic information available for the recent downstream developed lands.</li> <li>• Stantec noted that the realignment options through the adjacent Secondary Plan will only be reviewed to ensure feasibility and functionality (i.e. positive drainage, connectivity, etc.) and that there will not be any conceptual design of these realigned corridors as part of the roadway Class EA.</li> </ul>	Stantec
<p><b>Natural Environment</b></p> <ul style="list-style-type: none"> <li>• Valley and Stream Corridors and Fish Crossing Guidelines will need to be met for the project</li> <li>• TRCA noted that wetland on north side of proposed ROW is connected to south wetland on adjacent property – this will need consideration as noted.</li> <li>• There are two potential Headwater Drainage Features (HDF) along Black Creek (within the future Bass Pro Mills ROW and the other further north just south of Rutherford Road). The TRCA acknowledged the lack of PTE to do specific field assessments for these features. As such, the TRCA recommended the use of 'precautionary recommendations' in any supporting background reports. Stantec agreed and also added that these recommendations could be adjusted based on better information at detailed design.</li> <li>• The TRCA also noted the potential constraint of a wetland/marsh feature within the future ROW. The management of the wetland/marsh area will also need to apply 'precautionary recommendations. Stantec acknowledged this approach and noted that staff have been</li> </ul>	Stantec

May 25, 2021

BASS PRO MILLS EXTENSION EA PROJECT MEETING

Page 4 of 4

<b>Discussion Items:</b>	<b>Action:</b>
onsite undertaking various field assessments from adjacent lands (including amphibian surveys) and will be undertaking Significant Wildlife Habitat and breeding bird surveys in June and July 2021. These recommendations will be outlined in background reports.	

The meeting adjourned at 12:00PM

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.**

**Peter Cholewa, P. Eng.,**

## Robinson, Jennifer

---

**From:** Hilda Esedebe <Hilda.Esedebe@vaughan.ca>  
**Sent:** Wednesday, July 7, 2021 3:03 PM  
**To:** Christopher Tam; Couto, Carlos; Guy, Katrina; Frank Facchini; Andy Lee; Ruth Rendon; Cascone, Nicholas; David Marcucci; Dorothy Kowpak; Petr Emelianov; Justin Wong; Fausto Filipetto; Sunil Kumar; Cynthia Patterson; Shahrzad Davoudi-Strike; 'Mota, Steve'; 'Wong, Colin'; 'Kwan, Tim'; 'Crawford, Lauren'; Manirul Islam; 'Suzanne Bevan'; Glass, Heather (MTO); Mike Doyle; 'Kaczor, Yvonne'; 'Kakamousias, Diana'; 'Lau, Johnson (MTO)'; 'Aaron.Janke@ontario.ca'; 'Zaka.Uddin@ontario.ca'; Margie Chung; Michael Habib; Gurnick Perhar; Sharon Walker; 'So, Richard'; Cimpan, Cristina; Diego Velasquez  
**Cc:** Cholewa, Peter; Addley, Diana; Robinson, Jennifer; Selma Hubjer; Mirhoseini, Arash  
**Subject:** Bass Pro Mills EA - TAC - Meeting 2

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hello all,

I hope this email finds you well.

As you are aware, the City of Vaughan is undertaking a Municipal Class Environmental Assessment (MCEA) study for the proposed extension of Bass Pro Mills Drive, between Highway 400 and Weston Road. As part of the consultation process, the first Technical Advisory Committee (TAC) meeting was held on September 9, 2020, to present and obtain feedback on the study background, preliminary existing environmental information, preliminary traffic analysis, preliminary evaluation of alternative solutions, project schedule and next steps in the MCEA process. Since PIC 1 concluded in January, 2021, the study team has completed a number of environmental investigations, traffic analysis, the preliminary evaluation of alternative alignments and alternative cross-sections and identified a recommended design.

The study team wishes to invite you to the second TAC meeting for the Bass Pro Mills Drive MCEA Study **the week of July 26, 2021**. The purpose of this second meeting is to provide you with an update on the study progress, share the information to be presented as part of PIC 2 (planned for August, 2021) and gather any feedback you and/or your organization may have.

It would be appreciated if you could indicate your availability to attend this virtual meeting by using the link below to access a spreadsheet that offers alternative dates and times for this important meeting. After accessing this spreadsheet, please enter your full name and enter 'Y' (yes/available) or 'N' (no/unavailable) within the applicable cells to indicate your availability for the dates and times provided. Following the confirmation of availability, a formal meeting invitation, agenda and presentation will be provided in advance of the meeting to facilitate discussions.

### [Technical Advisory Group Poll](#)

Please let us know should you have any questions, comments and/or concerns. **Your response would be most appreciated by July 12, 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](mailto:hilda.esedebe@vaughan.ca)

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## Robinson, Jennifer

---

**From:** Hilda Esedebe <Hilda.Esedebe@vaughan.ca>  
**Sent:** Tuesday, August 10, 2021 3:31 PM  
**To:** Cholewa, Peter; Addley, Diana; Robinson, Jennifer; Selma Hubjer; Mirhoseini, Arash; Christopher Tam; Couto, Carlos; Guy, Katrina; Frank Facchini; Andy Lee; Ruth Rendon; Cascone, Nicholas; David Marcucci; Dorothy Kowpak; Petr Emelianov; Justin Wong; Fausto Filipetto; Sunil Kumar; Cynthia Patterson; Shahrzad Davoudi-Strike; 'Mota, Steve'; 'Wong, Colin'; 'Kwan, Tim'; 'Crawford, Lauren'; Manirul Islam; 'Suzanne Bevan'; Glass, Heather (MTO); Mike Doyle; 'Kaczor, Yvonne'; 'Kakamousias, Diana'; 'Lau, Johnson (MTO)'; 'Aaron.Janke@ontario.ca'; 'Zaka.Uddin@ontario.ca'; Margie Chung; Michael Habib; Gurnick Perhar; Sharon Walker; 'So, Richard'; 'Cimpan, Cristina'; Diego Velasquez; 'Mikolajczak, Margaret (MTO)'; 'Lee, Jordan (MTO)'  
**Cc:** Burke, Wendy; Grant Moffatt; Ash Faulkner; 'Harsimrat Pruthi'  
**Subject:** RE: Bass Pro Mills EA - TAC - Meeting 2  
**Attachments:** BassProMillsEA\_tac\_2\_Final\_20210727.pdf; basspro\_tac2\_mtg\_min\_final dft\_20210810.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hello all,

Please find attached the Notes from the July 27, 2021 TAC Meeting 2 for the Bass Pro Mills Environmental Assessment Study. **Please review and provide any comments by August 19, 2021.** If no comments are received, the minutes will be considered final.

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](mailto:hilda.esedebe@vaughan.ca)

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---

**From:** Hilda Esedebe  
**Sent:** Thursday, August 5, 2021 5:33 PM  
**To:** 'Cholewa, Peter' <Peter.Cholewa@stantec.com>; 'Addley, Diana' <Diana.Addley@stantec.com>; 'Robinson, Jennifer' <Jennifer.Robinson@stantec.com>; Selma Hubjer <Selma.Hubjer@vaughan.ca>; 'Mirhoseini, Arash' <Arash.Mirhoseini@stantec.com>; Christopher Tam <Christopher.Tam@vaughan.ca>; Carlos Couto <Carlos.Couto@vaughan.ca>; Katrina Guy <Katrina.Guy@vaughan.ca>; Frank Facchini <Frank.Facchini@vaughan.ca>; Andy Lee <Andy.Lee@vaughan.ca>; Ruth Rendon <Ruth.Rendon@vaughan.ca>; Nicholas Cascone <Nicholas.Cascone@vaughan.ca>; David Marcucci <David.Marcucci@vaughan.ca>; Dorothy Kowpak <Dorothy.Kowpak@vaughan.ca>; Petr Emelianov <Petr.Emelianov@vaughan.ca>; Justin Wong <Justin.Wong@vaughan.ca>; Fausto Filipetto <Fausto.Filipetto@vaughan.ca>; Sunil Kumar <Sunil.Kumar@vaughan.ca>; Cynthia Patterson <Cynthia.Patterson@vaughan.ca>; Shahrzad Davoudi-Strike <Shahrzad.Davoudi-Strike@vaughan.ca>;

'Mota, Steve' <Steve.Mota@york.ca>; 'Wong, Colin' <Colin.Wong@york.ca>; 'Kwan, Tim' <Tim.Kwan@york.ca>; 'Crawford, Lauren' <Lauren.Crawford@york.ca>; 'Manirul Islam' <Manirul.Islam@trca.ca>; 'Suzanne Bevan' <Suzanne.Bevan@trca.ca>; 'Glass, Heather (MTO)' <Heather.Glass@ontario.ca>; Mike Doyle <Mike.Doyle@vaughan.ca>; 'Kaczor, Yvonne' <Yvonne.Kaczor@york.ca>; 'Kakamousias, Diana' <Diana.Kakamousias@york.ca>; 'Lau, Johnson (MTO)' <Johnson.Lau@ontario.ca>; 'Aaron.Janke@ontario.ca' <Aaron.Janke@ontario.ca>; 'Zaka.Uddin@ontario.ca' <Zaka.Uddin@ontario.ca>; Margie Chung <Margie.Chung@vaughan.ca>; Michael Habib <Michael.Habib@vaughan.ca>; Gurnick Perhar <Gurnick.Perhar@vaughan.ca>; Sharon Walker <Sharon.Walker@vaughan.ca>; 'So, Richard' <Richard.So@york.ca>; 'Cimpan, Cristina' <Cristina.Cimpan@york.ca>; Diego Velasquez <Diego.Velasquez@vaughan.ca>; 'Mikolajczak, Margaret (MTO)' <Margaret.Mikolajczak@ontario.ca>; 'Lee, Jordan (MTO)' <Jordan.Lee@ontario.ca>  
**Cc:** 'Burke, Wendy' <Wendy.Burke@stantec.com>; Grant Moffatt <Grant.Moffatt@vaughan.ca>; Ash Faulkner <Ash.Faulkner@vaughan.ca>; Harsimrat Pruthi <Harsimrat.Pruthi@trca.ca>  
**Subject:** RE: Bass Pro Mills EA - TAC - Meeting 2

Hello all,

This is just a reminder regarding my email below. Thanks to those who participated during last week's TAC 2 meeting for the Bass Pro Mills Environmental Assessment Study and provided great feedback. Any further comments will be appreciated **by tomorrow**, as the Project Team plans for the upcoming online PIC.

Regards,

**Hilda Esedebe**, P.Eng., MBA, M.Sc.  
**Transportation Project Manager**  
**Infrastructure Planning and Corporate Asset Management**  
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**City of Vaughan | Infrastructure Development**  
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1  
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---

**From:** Hilda Esedebe  
**Sent:** Tuesday, July 27, 2021 10:33 AM  
**To:** 'Cholewa, Peter' ; 'Addley, Diana' ; 'Robinson, Jennifer' ; Selma Hubjer ; 'Mirhoseini, Arash' ; Christopher Tam ; Carlos Couto ; Katrina Guy ; Frank Facchini ; Andy Lee ; Ruth Rendon ; Nicholas Cascone ; David Marcucci ; Dorothy Kowpak ; Petr Emelianov ; Justin Wong ; Fausto Filipetto ; Sunil Kumar ; Cynthia Patterson ; Shahrzad Davoudi-Strike ; 'Mota, Steve' ; 'Wong, Colin' ; 'Kwan, Tim' ; 'Crawford, Lauren' ; 'Manirul Islam' ; 'Suzanne Bevan' ; 'Glass, Heather (MTO)' ; Mike Doyle ; 'Kaczor, Yvonne' ; 'Kakamousias, Diana' ; 'Lau, Johnson (MTO)' ; 'Aaron.Janke@ontario.ca' ; 'Zaka.Uddin@ontario.ca' ; Margie Chung ; Michael Habib ; Gurnick Perhar ; Sharon Walker ; 'So, Richard' ; 'Cimpan, Cristina' ; Diego Velasquez ; 'Mikolajczak, Margaret (MTO)' ; Lee, Jordan (MTO)  
**Cc:** Burke, Wendy ; Grant Moffatt  
**Subject:** RE: Bass Pro Mills EA - TAC - Meeting 2

Hello all,

Please find attached the presentation slides for today's (1:30pm) Technical Advisory Committee (TAC) 2 Meeting for the Bass Pro Mills Extension Environmental Assessment (EA) Study. Thanks in advance for your participation. The project team would appreciate **comments by August 6, 2021** to facilitate the project schedule as we approach the second Public Information Center (PIC). The Recommended Plan is included in the slides and can also be viewed as a separate pdf at this link;  <https://vaughancloud->

[my.sharepoint.com/:b/g/person/hilda\\_esedebe\\_vaughan\\_ca/ETkPfPeJSyFOgG9t9AHnYVYBu2PwAmkN6nLGmxjVYJAgpg?e=CQtBFV](https://my.sharepoint.com/:b/g/person/hilda_esedebe_vaughan_ca/ETkPfPeJSyFOgG9t9AHnYVYBu2PwAmkN6nLGmxjVYJAgpg?e=CQtBFV)

Kindly let me know if you have any questions and thanks again for your participation.

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](mailto:hilda.esedebe@vaughan.ca)

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-----Original Appointment-----

**From:** Hilda Esedebe

**Sent:** Wednesday, July 14, 2021 4:34 PM

**To:** 'Cholewa, Peter'; 'Addley, Diana'; 'Robinson, Jennifer'; Selma Hubjer; 'Mirhoseini, Arash'; Christopher Tam; Carlos Couto; Katrina Guy; Frank Facchini; Andy Lee; Ruth Rendon; Nicholas Cascone; David Marcucci; Dorothy Kowpak; Petr Emelianov; Justin Wong; Fausto Filipetto; Sunil Kumar; Cynthia Patterson; Shahrzad Davoudi-Strike; 'Mota, Steve'; 'Wong, Colin'; 'Kwan, Tim'; 'Crawford, Lauren'; 'Manirul Islam'; 'Suzanne Bevan'; 'Glass, Heather (MTO)'; Mike Doyle; 'Kaczor, Yvonne'; 'Kakamousias, Diana'; 'Lau, Johnson (MTO)'; 'Aaron.Janke@ontario.ca'; 'Zaka.Uddin@ontario.ca'; Margie Chung; Michael Habib; Gurnick Perhar; Sharon Walker; 'So, Richard'; 'Cimpan, Cristina'; Diego Velasquez; Mikolajczak, Margaret (MTO); Lee, Jordan (MTO)

**Cc:** Burke, Wendy; Grant Moffatt

**Subject:** Bass Pro Mills EA - TAC - Meeting 2

**When:** Tuesday, July 27, 2021 1:30 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).

**Where:** Microsoft Teams Meeting

Presentation materials to follow.

---

## Microsoft Teams meeting

**Join on your computer or mobile app**

[Click here to join the meeting](#)

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## Technical Advisory Committee Meeting 2

Bass Pro Mills Drive Extension, Municipal Class Environmental Assessment / 16054006/IM-7212-10

---

Date/Time: July 27, 2021 / 1:30 PM

Virtual Platform: Microsoft Teams

Next Meeting: TBD

Attendees: Hilda Esedebe (HE) (City of Vaughan)  
Shahrzad Davoudi-Strike (SDS) (City of Vaughan)  
Ruth Rendon (RR) (City of Vaughan)  
David Marcucci (DM) (City of Vaughan)  
Nicholas Cascone (NC) (City of Vaughan)  
Petr Emelianov (PE) (City of Vaughan)  
Selma Hubjer (SH) (City of Vaughan)  
Sunil Kumar (SK) (City of Vaughan)  
Dorothy Kowpak (DK) (City of Vaughan)  
Christopher Tam (CT) (City of Vaughan)  
Ash Faulkner (AF) (City of Vaughan)  
Carlos Couto (CC) (City of Vaughan)  
Frank Facchini (FF) (City of Vaughan)  
Gurnick Perhar (GP) (City of Vaughan)  
Sharon Walker (SW) (City of Vaughan)  
Peter Cholewa (PC) (Stantec Consulting Ltd.)  
Diana Addley (DA) (Stantec Consulting Ltd.)  
Arash Mirhoseini (AM) (Stantec Consulting Ltd.)  
Wendy Burke (WB) (Stantec Consulting Ltd.)  
Heather Glass (HG) (Ministry of Transportation)  
Jordan Lee (JL) (Ministry of Transportation)  
Aaron Janke (AJ) (Ministry of Transportation)  
Johnson Lau (JL) (Ministry of Transportation)  
Margaret Mikolajczak (MM) (Ministry of Transportation)  
Zaka Uddin (ZU) (Ministry of Transportation)  
Manirul Islam (MI) (Toronto and Region Conservation Authority)  
Harsimrat Pruthi (HP) (Toronto and Region Conservation Authority)  
Steve Mota (SM) (York Region)  
Colin Wong (CW) (York Region)  
Tim Kwan (TK) (York Region)  
Cristina Cimpan (CRC) (York Region)  
Richard So (RS) (York Region)  
Mike Doyle (MD) (City of Vaughan Fire Services, Deputy Fire Chief)

Absentees: Cynthia Patterson (City of Vaughan)  
Katrina Guy (City of Vaughan)  
Margie Chung (City of Vaughan)  
Michael Habib (City of Vaughan)  
Yvonne Kaczor (York Region)  
Lauren Crawford (York Region)  
Suzanne Bevan (Toronto and Region Conservation Authority)  
Diana Kakamousias (York Region)

Distribution: TAC Members and Attendees

---



**Action:**

**Item:**

The study team opened the TAC 2 meeting with a quick introduction and shared a presentation related to the study background and feedback to date, existing ecological features, the identification and evaluation of alternative design concepts, the preliminary findings of the traffic analysis, the proposed approach to stormwater and headwater drainage feature management, and potential impacts and mitigation measures associated with the project.

Info

Following the presentation, a question-and-answer session was held, the results of which are summarized herein.

**Technically Recommended Cross-Section Design**

- SDS asked if they were able to comment on the widths within the Technically Recommended Design Cross-Section. If not, they would accept the recommended design.
- HE indicated that the study team did their best to match the Urban Design team's provided cross-section for the ongoing Vaughan Mills Streetscape Study. While this cross-section is the currently Technically Recommended Design, it is still subject to public and agency review and will be made available for public review via Public Information Centre (PIC) 2.
- SDS acknowledged this and asked if it would be possible to make any small changes.
- PC noted that the cross-section width has been established however that comments are welcomed.

Info

Info

**Transportation Design Considerations**

- AJ asked if the study team has considered making the cyclist lane into a bidirectional path, especially at the Highway 400 structure.
- PC confirmed that as per OTM 18, 3 m is the minimum required width for a multi-directional pathway. If it was reduced to below 3 m it would be tight for passing users. A single-directional path was considered and showed to have a number of benefits, and was consistent with the City's Pedestrian and Bicycle Master Plan.
- It was further noted that the objective is not to significantly impact the existing Highway 400 structure. If the path width was increased to 3m, that would impact the lateral clearance requirements as well; however, it was agreed that these details could be confirmed during detail design.
- MTO noted that meeting their design standards will be desired throughout the partial interchange.
- AJ asked what type of analysis was completed for the left turn lane onto Fishermen's Way to ensure that there were no impacts to the ramp operations.
- PC indicated that Stantec's Traffic team (AM) would have to look into this further. Stantec considered rationalizing that intersection to help mitigate drivers going in the wrong direction. As such, the north ramp was not altered significantly. However, MTO's feedback on this is welcomed.
- MTO will review what's permitted/not permitted and will provided feedback and confirm the Technically Recommended Design's compliance with MTO's standards.

Info

Info

Info

Stantec

**Action:**

**Item:**

- AJ confirmed that the City will have to upgrade the whole intersection to meet AODA standards. MTO's signal expert will need to look into this further during Detail Design. MTO  
Info
- HE confirmed that a copy of the TAC 2 meeting presentation and separate PDF of Plan and Profile was provided to attendees for review and comment in advance of the meeting. Info
- MM indicated that MTO will circulate the materials amongst their internal staff and provide comments back to the City. Info
- JL asked if the west ramp terminal and on-ramp to Highway 400 is signalized, and if a signal warrant was done at this location now that the extension will connect to Weston Road. Info
- AM confirmed that the study team began with an unsignalized intersection and evaluated traffic volumes. Option A is not signalized, but Option B is. Using a microsimulation model (during peak AM/PM times), the results do not indicate that a signal is warranted at this location. However, it should be noted that this is just a concept of these intersections which are still subject to further review with the development in the area. Info
- CT asked that the study team clarify spaces around the curb. For example, there is a splash strip and another dimension that is 4.5 m. It was asked if there was 1 m between the lane and the trees/streetlights. Info
- The study team confirmed that there is 3.5 m to the edge of the pavement, and that there is 1 m between the lane and the trees/streetlights (0.5m strip and a 0.5m buffer). The curb lane width to face of the curb is closer to 3.8 m, and a 3.5 m wide edge of pavement and a 0.9 m gutter pan. Info
- MTO noted that the figure shows a road opposed to an on-ramp at the existing loop ramp location, and that it is not typical to have a new road extension from such a location. Info
- HE confirmed that this was the configuration of the road network approved as part of the 2014 VMCSMP. However, the VMCSMP is currently under appeal and the decision is not know at this time. Info
- MTO was part of the VCSMP development/discussion and the City moved forward with what was approved. Info

**Weston Road Considerations**

- SM suggested showing a fully signalized intersection, raised centre median, and turning lanes at Weston Road as part of the Technically Recommended Design. Info
- HE confirmed that the study team is doing their best to coordinate the Weston Road DD and Bass Pro Mills EA as the consultant is the same. However, the City is not showing design details for Weston Road until they have been shared with the public by the Weston Road DD project team Info
- SM indicated that the provided improvements don't allow viewers to interpret that there will be any future improvements on Weston Road. It is incumbent on the City to show this even though it's conceptual, that a northbound through lane will be implemented once the new intersection with Bass Pro Mills Drive is in place. Info
- HE indicated that showing this would be problematic for the landowner to the south until redevelopment details are confirmed as well as if the right turn lane goes onto Weston Road. Info

**Action:**

**Item:**

- SM indicated that it would be appreciated that any changes at the Weston Road intersections be shown in the PIC presentation before this information goes public. Info
- The spacing to Astona Boulevard was discussed. It was noted that the distance between Astona Boulevard and the proposed new intersection of Bass Pro Mills Drive with Weston Road may be less than the minimum standard (i.e., 260 m, centre to centre). PC to provide York Region with an updated image with these dimensions. Info
- SM advised that this would need to be further reviewed by York Region's traffic staff, and that this would be relevant to the evaluation of alternatives. Info

**Tributaries**

- MI asked about the second tributary in the area. HE noted that the tributary is located further north outside of the immediate study area.

The meeting adjourned at 3:00 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.



**Diana Addley**

Senior Environmental Planner

Phone: 905-415-6401

Email: [diana.addley@stantec.com](mailto:diana.addley@stantec.com)

Attachment: Technical Advisory Committee Meeting 2 Presentation



# Bass Pro Mills Extension

Highway 400 to Weston Road  
Schedule C Municipal Class Environmental Assessment

Technical Agency Committee Meeting 2  
July 27, 2021



# Agenda

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- Introductions
- Background and Public Feedback to Date
- Traffic Analysis
- Natural Environment Conditions
- Evaluation of Alternative Designs
- Technically Recommended Design
- Stormwater Management Approach
- Potential Impacts and Mitigation Measures
- Next Steps

# Study Overview

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The City of Vaughan is undertaking a Municipal Class Environmental Assessment study for the proposed extension of Bass Pro Mills Drive, from Highway 400 westerly to Weston Road. This extension would provide a new major collector roadway that unites neighbourhoods from Weston Road to Jane Street, redistributes east-west traffic and alleviates congestion on Rutherford Road.

An enhanced boulevard could accommodate new York Region Transit amenities, a pedestrian friendly multi-use trail, as well as on-street cycling facilities.

The proposed extension of Bass Pro Mills Drive is envisaged to support future development in the study area, including the employment and intensification plans developed as part of the Vaughan Mills Centre Secondary Plan (VMCSP).

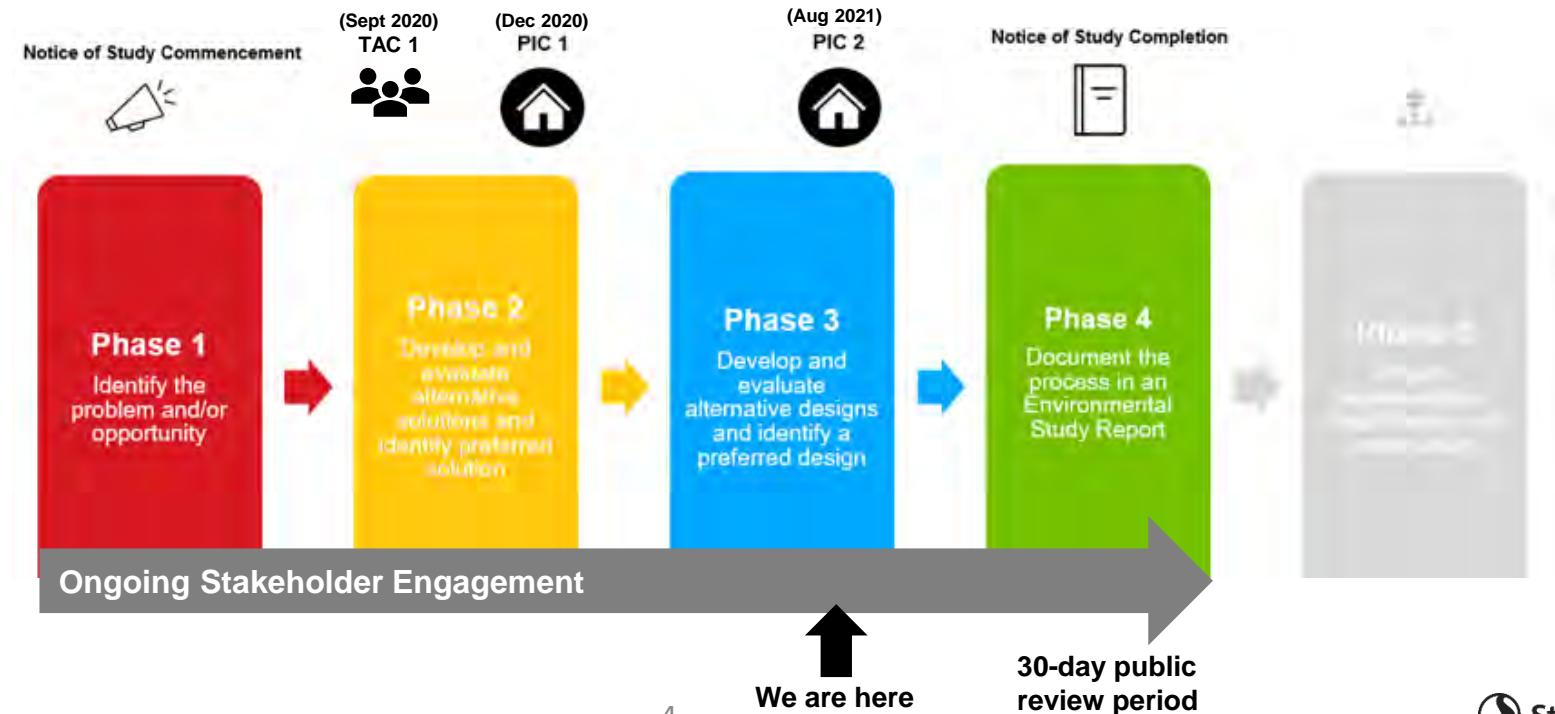


# Municipal Class Environmental Process

Municipal planning for infrastructure improvements must be completed in accordance with the Municipal Engineers Association’s Municipal Class Environmental Assessment (MCEA) document (October 2000, as amended in 2015). This is an approved process under the Environmental Assessment Act.



The proposed extension of Bass Pro Mills Drive classifies as a Schedule ‘C’ project. These projects are required to follow Phases 1 through 4 of the MCEA process.



# What Have We Heard?

Online Public Information Centre (PIC) 1 was held from **December 3, 2020** until **January 8, 2021**. There were 471 unique visitors to the study website and over 100 responses received during the Online PIC comment period. Comment themes included:

- Concern for increased traffic congestion and lack of alternative routes within the study area.
- Concern that an extension of Bass Pro Mills Drive will encourage east-west traffic through the Weston Downs community or increase traffic on an already congested Weston Road.
- Suggestions that there is a greater need for alleviation of north-south traffic rather than east-west traffic, primarily on Weston Road.
- Need for pedestrian and cyclist friendly routes within the study area (i.e., through separated bike lanes and the implementation of sidewalks, multi-use paths and wider boulevards)
- Concern regarding the impact to the environment, wildlife, and noise/air pollution.
- Desire for wider boulevards with trees/streetscaping.
- Roundabouts on the potential Bass Pro Mills extension may alleviate congestion that would otherwise build up at traffic lights.
- Implementation of a Highway 400 northbound ramp could reduce traffic congestion
- While 86% of respondents use public transportation less than once per month, 37% of respondents indicated that there is a lack of public transportation options available within the study area





# Simulation of Future Transportation Options

## Option 0

- Future Base Conditions (2031 and 2041 horizons)
- 2041 horizon show impacts from Langstaff Road extension to Highway 7 and its widening between Weston Road and east of Jane Street

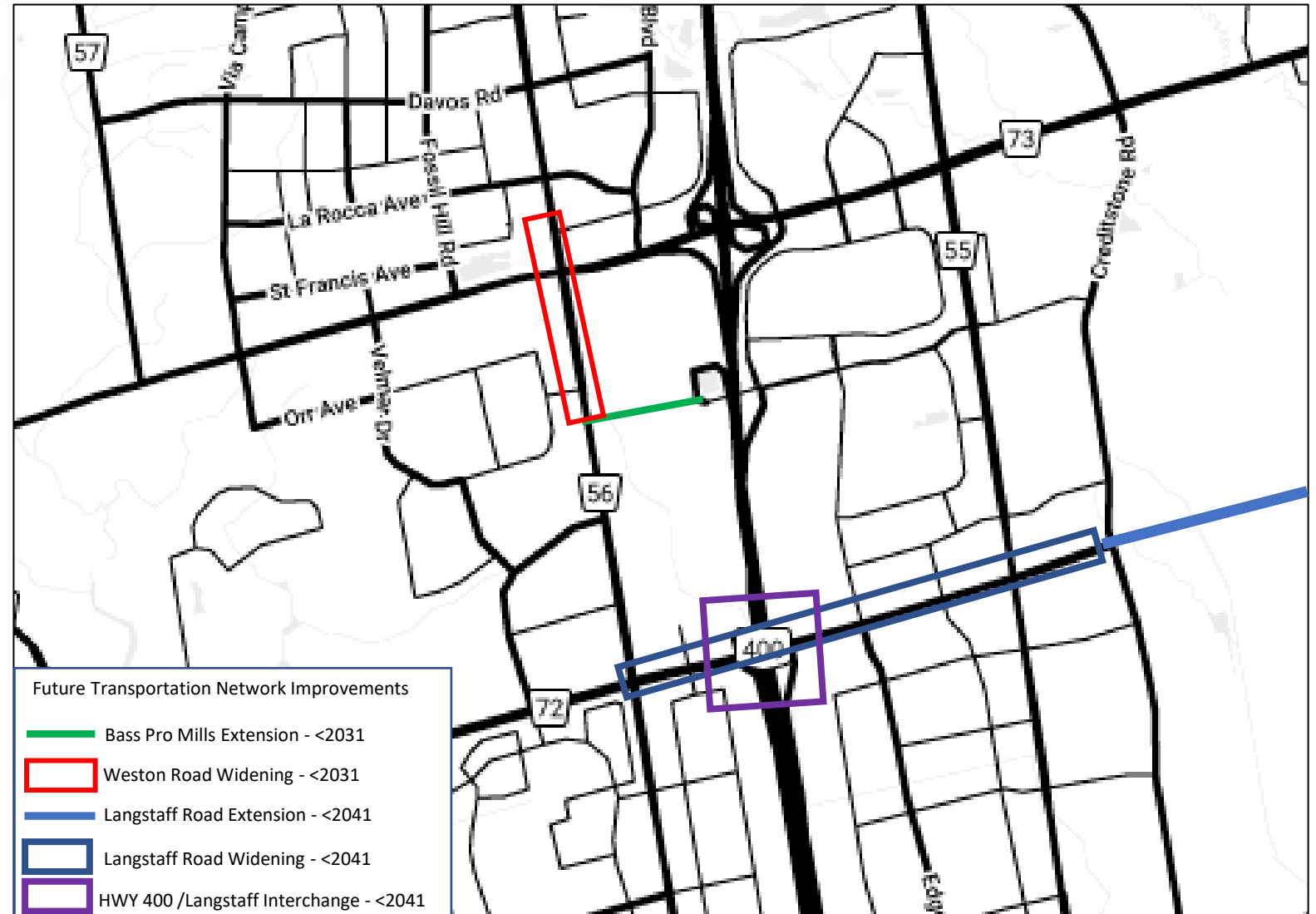
## Option A

- Future Conditions with Bass Pro Mills Drive extension (2031 and 2041 horizons)
- Includes Bass Pro Mills Drive Extension and Weston Road Widening north of Bass Pro Mills Extension to Hawkview Boulevard

## Option B

- Future Conditions with Bass Pro Mills Drive extension and VMCSP (2031 and 2041 horizons)
- Includes 2014 Vaughan Mills Centre Secondary Plan road network and trips

# Transportation Network Improvements



# Vaughan Mills Centre Secondary Plan

Vehicular trips associated with the 2014 Vaughan Mills Centre Road Network were modelled as part of **Option B** (Future Conditions with Bass Pro Mills Drive extension and VMCS (2031 and 2041 horizons) in study area



VMCS Future Trips	AM Peak		PM Peak	
	Inbound	Outbound	Inbound	Outbound
<b>East of Highway 400</b>	852	828	1,183	1,277
<b>West of Highway 400</b>	2,839	468	996	2,970
<b>Total</b>	3,691	1,296	2,179	4,247

# Transportation Network Assessment

## Transportation Analysis – Study Area Network Delay Performance

- Transportation simulation results showed that Option A (Bass Pro Mills Drive Extension and Weston Road Widening) will result in overall delay reduction and transportation operational improvement in the study area
- The proposed improvements in Option A will result in around 10% improvement in 2031 horizon and above 22% improvement in 2041 horizons
- The main reason will be the better connectivity and higher capacity provided in the road network.



Horizon Year	Peak Hour	Delay Values			Delay Reduction%	
		Option 0	Option A	Option B	Option A	Option B
2031	AM	125	113	130	-10%	4%
	PM	149	133	136	-11%	-9%
2041	AM	152	113	135	-26%	-11%
	PM	137	106	117	-22%	-15%

# Transportation Network Assessment

## Transportation Analysis – Study Area Network Delay Performance

- A comparison of LOS results along Weston Road shows improvements in operations while further traffic will be served in Option A

Intersection	Future Base 2031				Option A 2031				Option B 2031			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS
Weston Road at Rutherford Road	118	F	133	F	113	F	140	F	136	F	123	F
Weston Road at Astona Blvd	20	C	81	F	27	C	79	E	23	C	61	E
Weston Road at Bass Pro Mills Drive	NA	NA	NA	NA	50	D	83	F	45	D	57	E
Weston Road at Greenpark Crestmount	82	F	130	F	86	F	28	C	114	F	30	C
Weston Road at Langstaff Road	112	F	165	F	89	F	114	F	137	F	151	F

# Transportation Network Assessment

## Transportation Analysis – Study Area Network Delay Performance

- A comparison of LOS results along Weston Road in 2041 horizon shows improvements in operations while further traffic will be served in Option A

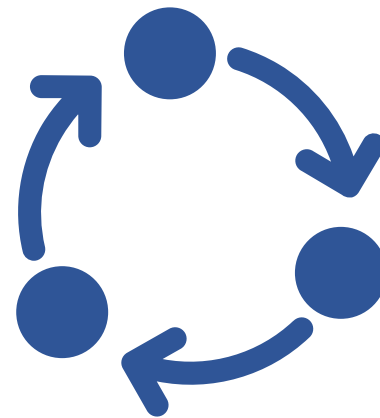
Intersection	Future Base 2041				Option A 2041				Option B 2041			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS
Weston Road at Rutherford Road	163	F	125	F	103	F	100	F	148	F	105	F
Weston Road at Astona Blvd	51	D	30	C	59	E	12	B	30	C	11	B
Weston Road at Bass Pro Mills Drive	NA	NA	NA	NA	57	E	23	C	38	D	36	D
Weston Road at Greenpark/Crestmount	113	F	28	C	111	F	15	B	76	E	15	B
Weston Road at Langstaff Road	270	F	242	F	113	F	114	F	112	F	130	F

# Roundabout Screening

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An initial alternative was reviewed to include a roundabout at the intersection of Bass Pro Mills Drive Extension and Weston Road.

This alternative was not selected to proceed based on its limitations and disadvantages including; additional spatial and right of way requirements, operational challenges related to the unequal approach traffic volumes that can increase delays and queue lengths and pedestrian crossing and cyclist challenges.



# Natural Environment - Background

## Background/Desktop Review





### Terrestrial

- Lies within TRCA Regulated Area
- MASM1-12 (shallow marsh community)
- Potential habitat for bats and bird SAR
- Candidate SWH for amphibians, breeding birds, crayfish, reptiles
- Turtle nesting
- Seeps and springs

### Aquatic

- Black Creek permanent watercourse with warm thermal regime
- Assumed to provide direct fish habitat
- No aquatic SAR documented in/near this reach



Legend	
	Watercourse (Permanent)
	Subject Property
	Study Area
	ELC
ELC Code	
CVC_1	- Business Sector
CVC_2	- Light Industry
CVL_1	- Transportation
CVR_3	- Single Family Residential
MASM1-12	- Common Reed Mineral Shallow Marsh Type
ME	- Meadow
SA	- Shallow Water



# Natural Environment – Site Surveys

## Site Observations

- Site visits in April, May, June and July 2021
- No significant findings
- ELC established
- No breeding birds

## Headwater Drainage Features Assessment

- limited to desktop review

### 1) Black Creek

- Roadside ditch, lack of vegetated buffer

### 2) Wetland Vegetation Community

- MASM1-12 (shallow marsh community)
- No amphibians
- Short hydroperiod assumed (site access required to confirm)
- Hydrologic connection to south wetland

### 3) Connecting Channel

- Between Wetland and Black Creek



Wetland and Connecting Channel will follow Wetland Management Recommendations set forth in HDF Assessment Guidelines (TRCA & SVS 2014)

# City of Vaughan Design Criteria

Criteria	City of Vaughan Major Collector Roadway
Design Speed	70 km/hour
Posted Speed	50 km/hour
Through Lane Width	3.3 m
Curb Lane Width	3.5 m
Buffer between Cyclists and Clearways	Minimum 0.5 m
Sidewalk Width	Minimum 1.5 m and 2.0 m adjacent to curb
Cycle Tracks	1.8 m one-way, 3.0 m two-way

# Evaluation Process

A staged approach was used to identify and evaluate alternative design concepts, and to identify a recommended design that is cost effective, provides safe and functional traffic operations, improves local access, and minimizes impacts to the environment.

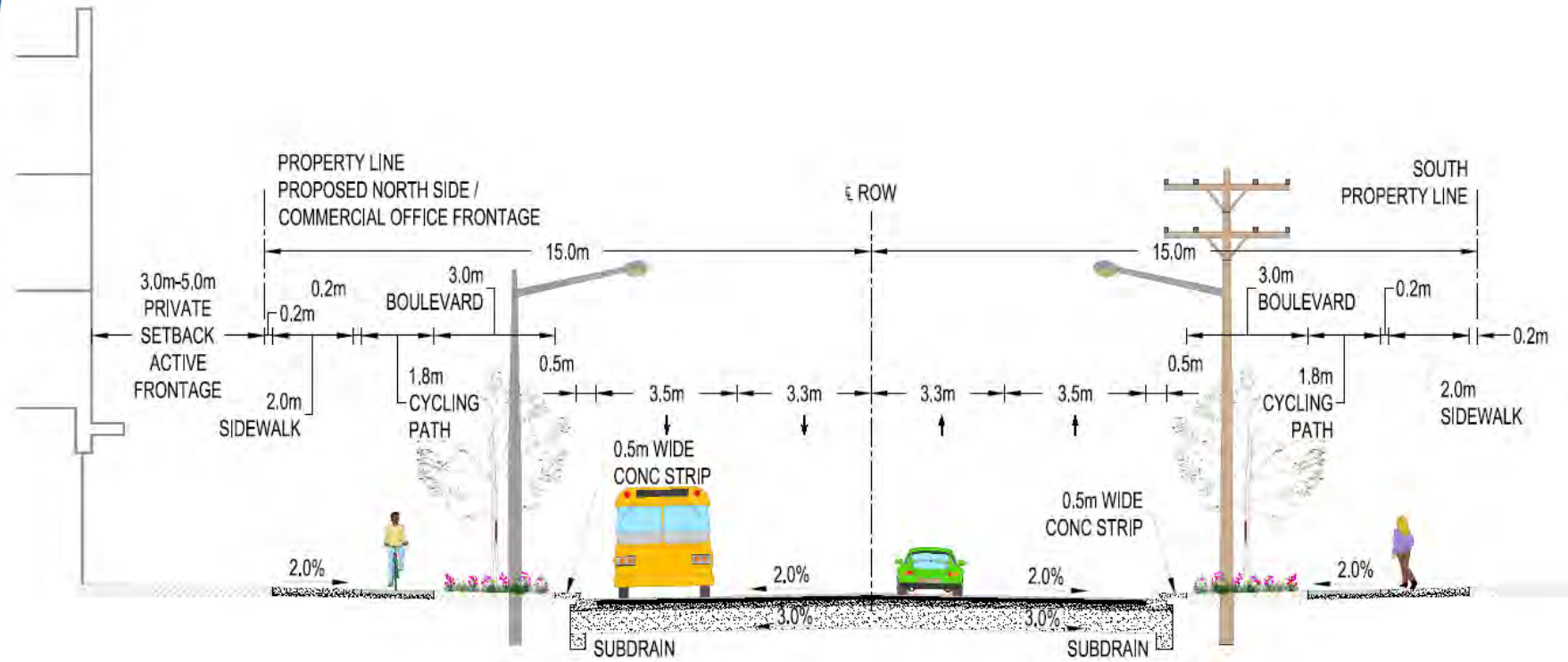
**Stage 1**  
**Evaluate**  
**Alternative**  
**Cross-Sections**

**Stage 2**  
**Evaluate**  
**Alternative**  
**Alignments**

**Stage 3**  
**Identify Technically**  
**Recommended**  
**Design**

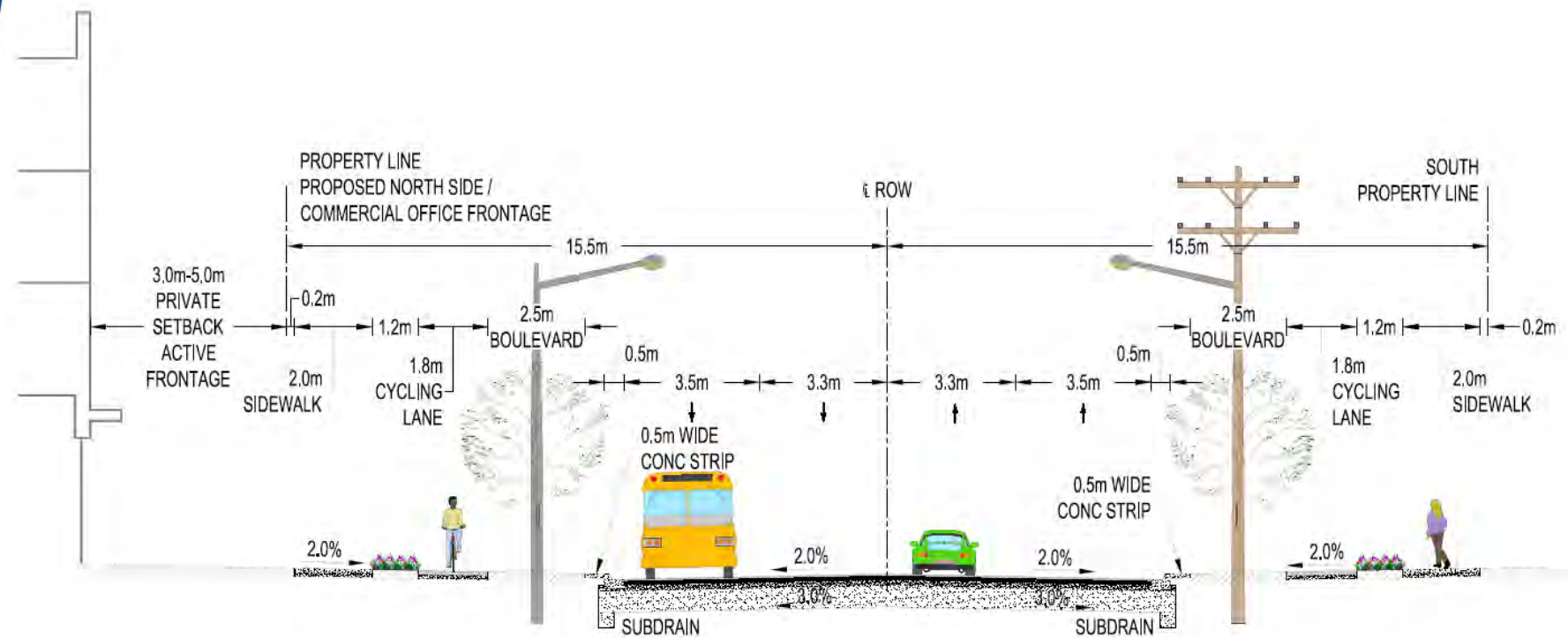
# Alternative Cross-Sections

## Alternative Cross-Section 1A



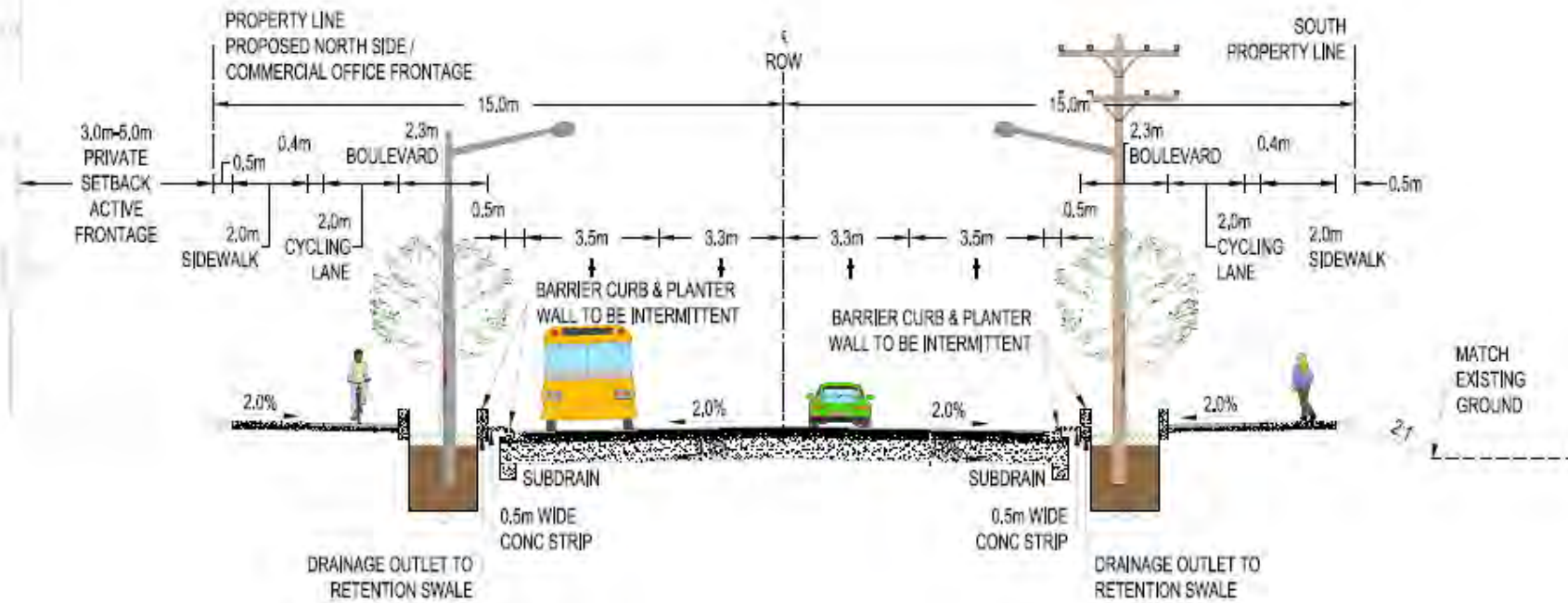
# Alternative Cross-Sections

## Alternative Cross-Section 2A



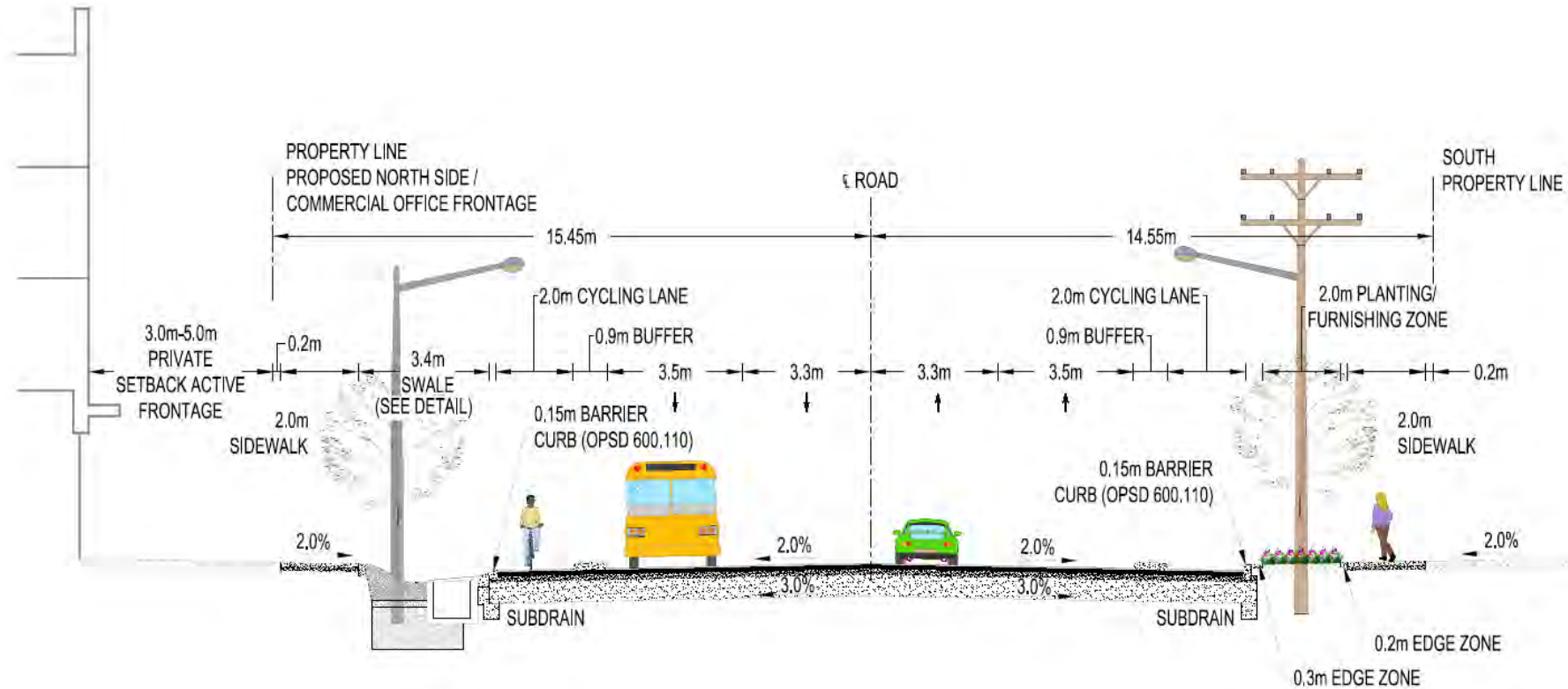
# Alternative Cross-Sections

## Alternative Cross-Section 3A



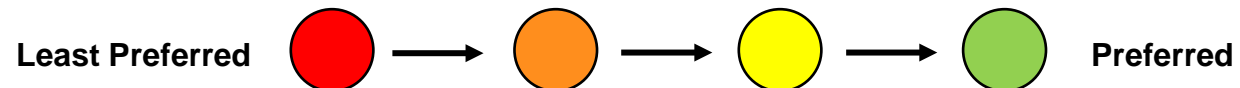
# Alternative Cross-Sections

## Alternative Cross-Section 4A



# Evaluation of Alternative Cross-Sections

Criteria Category	1A	2A	3A	4A
Technical				
Transportation				
Socio-Economic				
Natural Environment				
<b>Overall Conclusion</b>	Not Recommended	Not Recommended	Technically Recommended Design	Not Recommended





# Recommended Cross-Section

---

Alternative 3A was selected because it:

- Is consistent with City design standards and vision for the community and public realm, as well as the recommendations of the VMCSPP
- Has a moderate capital cost and operations and maintenance cost
- Offers safe and comfortable environment for both cyclists and pedestrians
- Provides opportunities to create a pedestrian friendly space through streetlighting, wayfinding, accessible street furniture, etc.
- Has high potential to accommodate municipal infrastructure, utilities and streetlighting
- Has high potential to accommodate green infrastructure through the implementation of a retention swale on both sides of the ROW

# Alternative Alignments

**Alignment Alternative 'A'**



**Alignment Alternative 'B'**



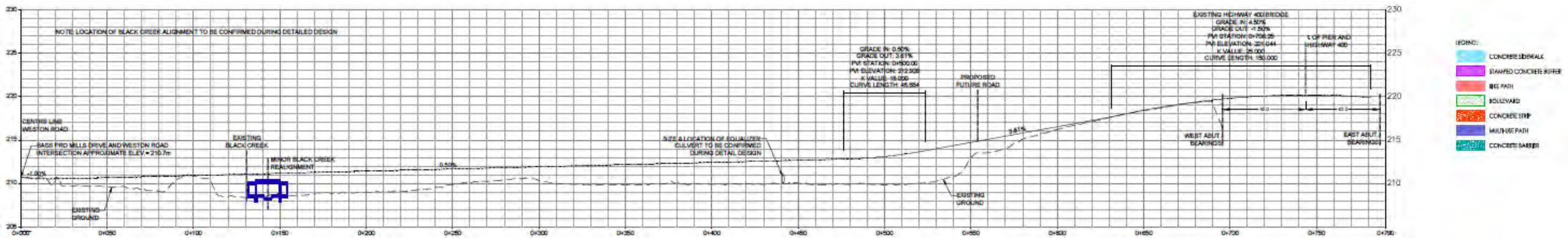
# Evaluation of Alternative Alignments

Criteria Category	Alternative A (Straight Connection to Weston Rd)	Alternative B (Astonia Blvd Connection)
Technical	Preferred	Least Preferred
Cultural Heritage	Preferred	Least Preferred
Socio-Economic	Preferred	Least Preferred
Natural Environment	Preferred	Least Preferred
Overall Conclusion	Recommended	Not Recommended

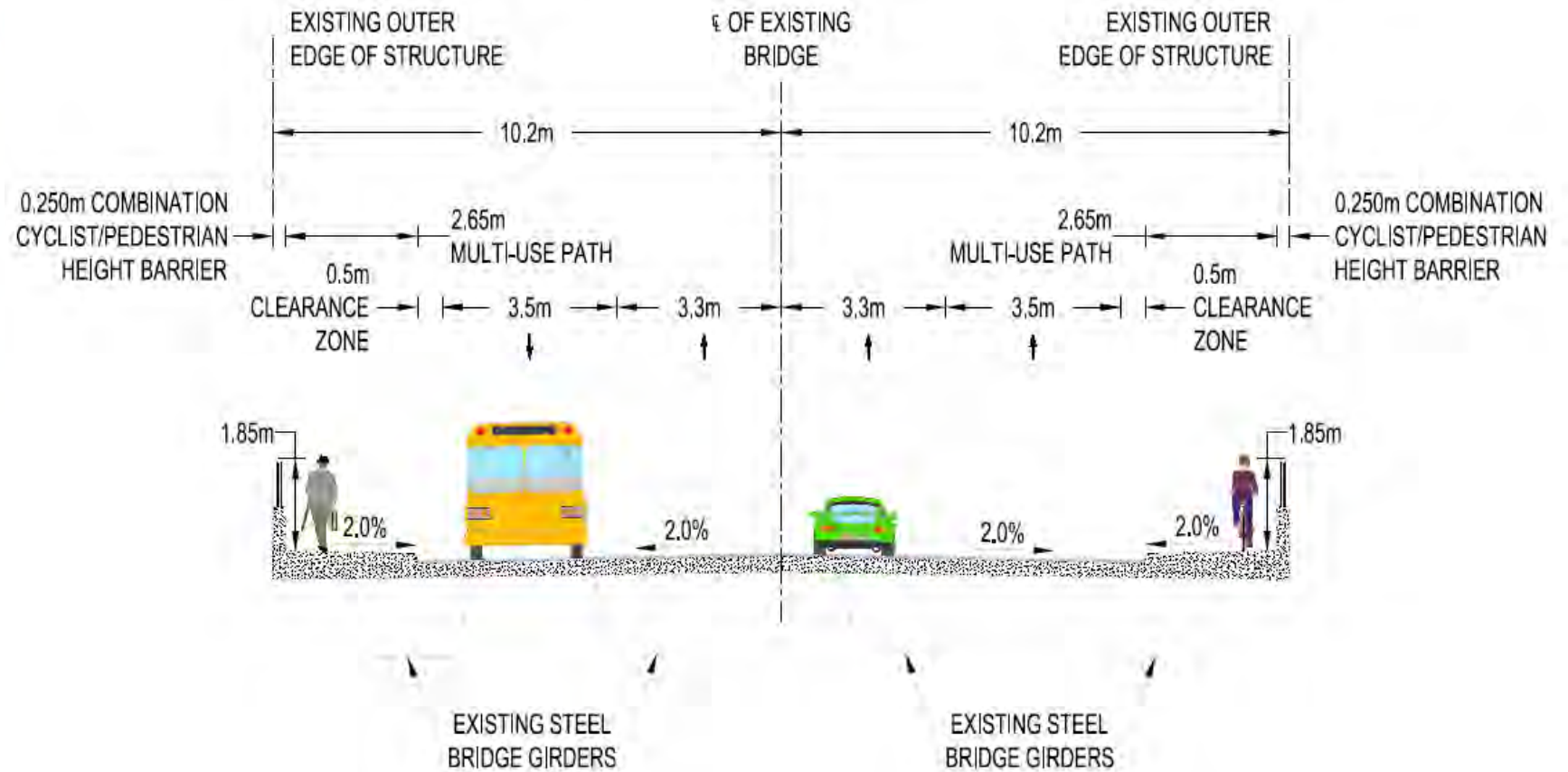
**Alignment Alternative A** is recommended because:

- Avoids direct connection to adjacent residential areas, less traffic infiltration anticipated
- Aligns with City’s vision set forth in VM CSP
- Lower potential environmental impacts (archaeological, natural heritage)
- Lower anticipated capital, operations and maintenance cost
- Less impacts to private property

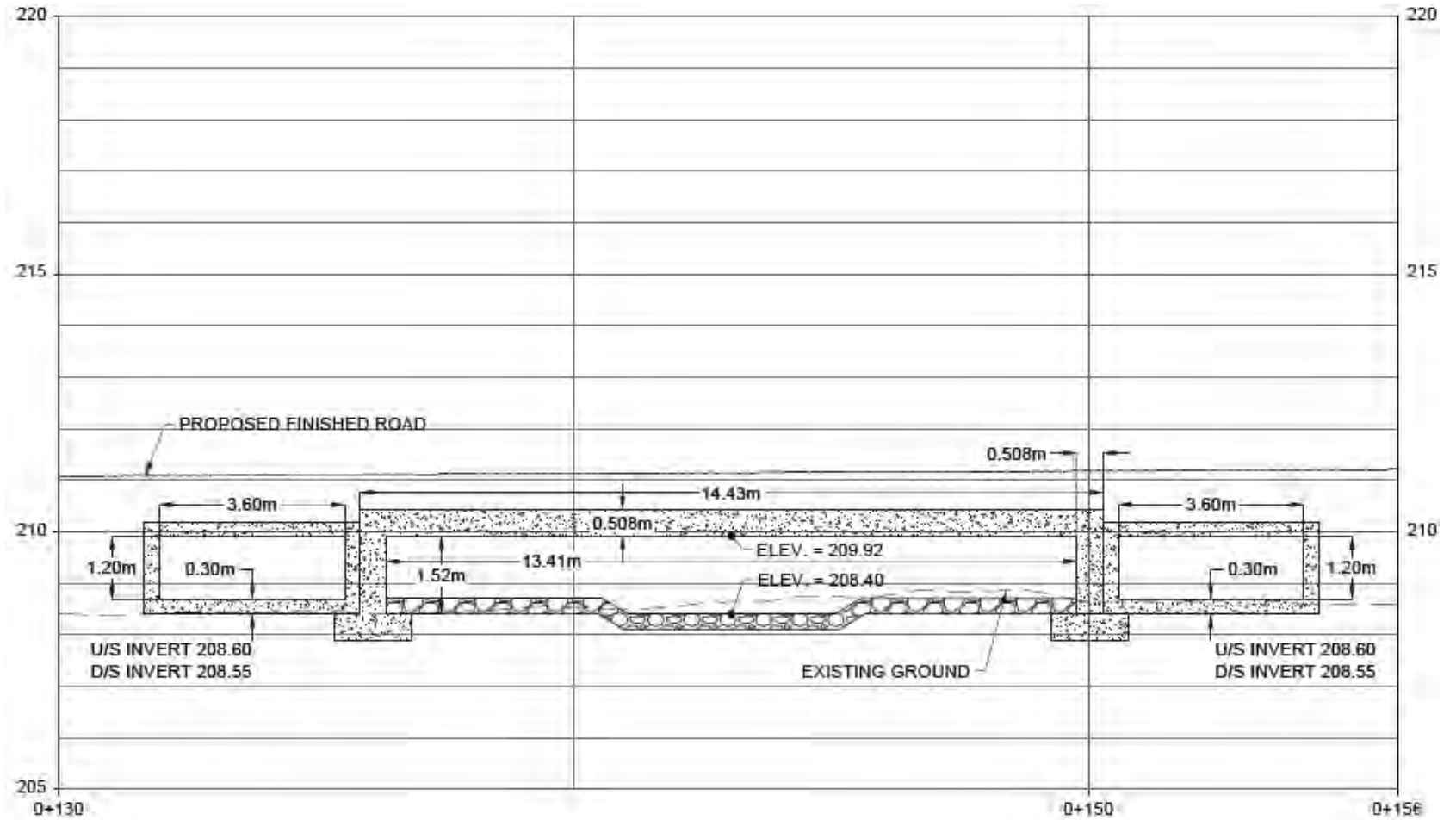
# Technically Recommended Design



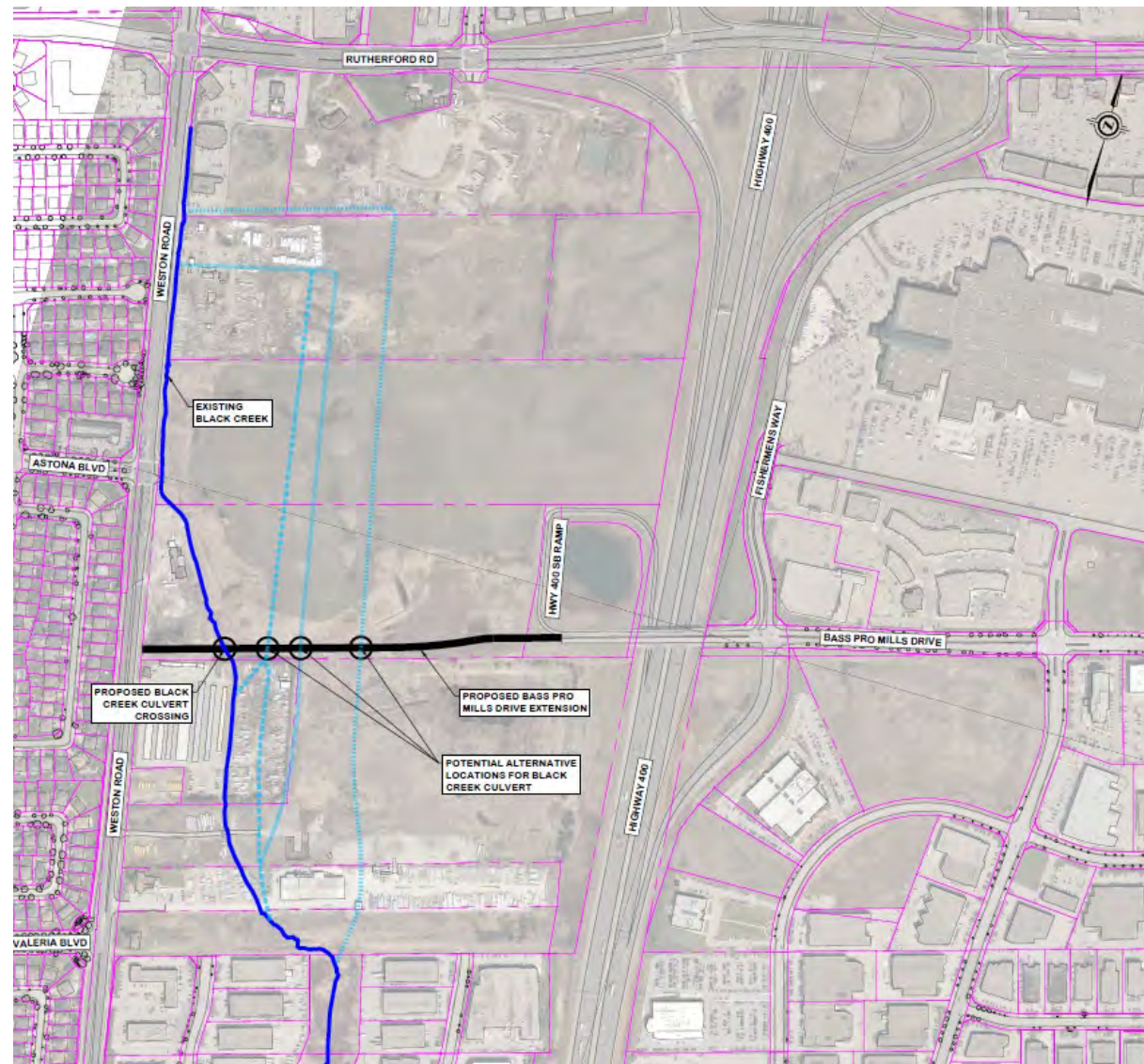
# Recommended Design – Highway 400 Bridge



# Proposed Black Creek Culvert

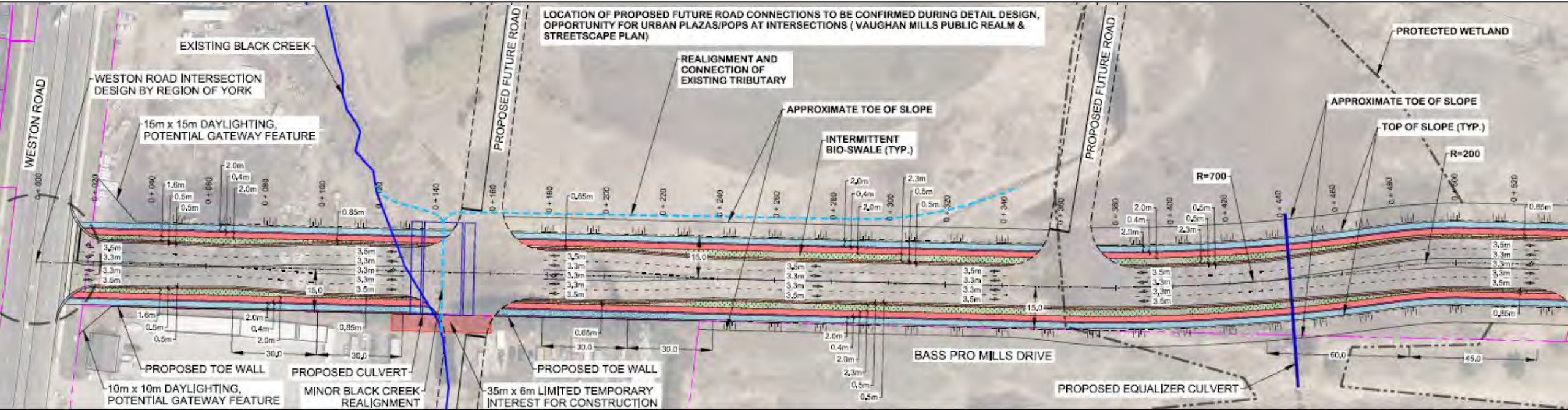


# Potential Future Black Creek Culvert Locations



- Final land use configuration not known
- Anticipated to be confirmed during detail design
- Potential creek alignments to be confirmed during detail design

# Headwater Drainage Feature Management Proposed Approach





# Environmental Impacts & Mitigation

Potential Impact	Preliminary Proposed Mitigation Measures and Commitments
<b>Aquatic Environment</b>	<ul style="list-style-type: none"> <li>Black Creek assumed to provide direct fish habitat. New crossing of Black Creek will be designed to accommodate meandering channel design with vegetated buffer to north and south.</li> </ul>
<b>Trees/Vegetation</b>	<ul style="list-style-type: none"> <li>Vegetation and tree removal will be minimized to the extent possible. New streetscape features (grass, trees, vegetation) will be implemented as part of preferred design.</li> </ul>
<b>Wildlife/Habitat/Wetland</b>	<ul style="list-style-type: none"> <li>Breeding bird surveys to confirm presence/absence of breeding birds and OWES Wetland Evaluation to delineate wetland boundaries and confirm absence of amphibians.</li> <li>Wetland connection to Black Creek will be maintained via drainage ditch situated along north side of new right-of-way.</li> <li>Wetland connection to south will be maintained via equalization culvert</li> </ul>
<b>Archaeology</b>	<ul style="list-style-type: none"> <li>Stage 1 Archaeological Assessment (AA) identified the potential for the recovery of archaeological resources.</li> <li>Stage 2 AA will be undertaken during detail design. No construction activities will take place until the Ministry of Sport, Heritage, Tourism and Culture Industries have confirmed in writing that all archaeological licensing and technical review requirements have been satisfied.</li> </ul>
<b>Property</b>	<ul style="list-style-type: none"> <li>Impacts to some private property has been identified in association with the Technically Recommended Design.</li> <li>Property impacts will be minimized to the extent possible during detail design, in consultation with affected property owners.</li> </ul>
<b>Noise</b>	<ul style="list-style-type: none"> <li>A Noise Assessment is being completed in accordance with Provincial guidelines to determine if measures are required to mitigate potential increases in traffic noise.</li> </ul>
<b>Air Quality</b>	<ul style="list-style-type: none"> <li>An Air Quality Assessment is being completed in accordance with Provincial guidelines to assess the potential changes in local and regional air quality, and to determine mitigation measures as required.</li> </ul>

# Next Steps

- Hold Online PIC 2 (August 19, 2021 – September 16, 2021)
- Review and consider feedback following the comment period
- Confirm the Technically Recommended Design
- Prepare Environmental Study Report (ESR)
- Issue Notice of Study Completion and 30-day ESR public review period (November 2021)

We would greatly appreciate receiving any comments or question you may have by **August 6, 2021**.

**Hilda Esedebe, P.Eng.**

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Project Manager  
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E: [Diana.Addley@stantec.com](mailto:Diana.Addley@stantec.com)



Thank you for attending!



## Robinson, Jennifer

---

**From:** Addley, Diana  
**Sent:** Tuesday, September 15, 2020 2:35 PM  
**To:** Robinson, Jennifer  
**Subject:** FW: Bass Pro Mills EA - TAC 1

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

[Hi Jenn – please file with TAC/agency comments](#)

---

**From:** Esedebe, Hilda <Hilda.Esedebe@vaughan.ca>  
**Sent:** Tuesday, September 15, 2020 2:20 PM  
**To:** 'Uddin, Zaka (MTO)' <Zaka.Uddin@ontario.ca>  
**Cc:** Glass, Heather (MTO) <heather.glass@ontario.ca>; Janke, Aaron (MTO) <Aaron.Janke@ontario.ca>; Cholewa, Peter <Peter.Cholewa@stantec.com>; Addley, Diana <Diana.Addley@stantec.com>  
**Subject:** RE: Bass Pro Mills EA - TAC 1

Thanks for letting us know Zaka.

**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](mailto:hilda.esedebe@vaughan.ca)

**City of Vaughan | Infrastructure Development**  
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1  
[vaughan.ca](http://vaughan.ca)



---

**From:** Uddin, Zaka (MTO) <[Zaka.Uddin@ontario.ca](mailto:Zaka.Uddin@ontario.ca)>  
**Sent:** Tuesday, September 15, 2020 9:23 AM  
**To:** Esedebe, Hilda <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>  
**Cc:** Glass, Heather (MTO) <[Heather.Glass@ontario.ca](mailto:Heather.Glass@ontario.ca)>; Janke, Aaron (MTO) <[Aaron.Janke@ontario.ca](mailto:Aaron.Janke@ontario.ca)>  
**Subject:** [External] RE: Bass Pro Mills EA - TAC 1

Hi Hilda,

I was on vacation last week and therefore could not attend the September 9<sup>th</sup> meeting. However, I have reviewed the presentation and do not have any comments at this time.

Regards,  
Zaka

---

Zaka Uddin | Traffic Specialist | Traffic Engineering Central 1 | Design & Engineering | Ministry of Transportation  
159 Sir William Hearst Avenue | 6<sup>th</sup> Floor | Downsview, Ontario M3M 1J8 | 📞 P: (416) 235-3522 | 📠 F: (416) 235-4097 | ✉️ [zaka.uddin@ontario.ca](mailto:zaka.uddin@ontario.ca)

## Robinson, Jennifer

---

**To:** Hilda Esedebe  
**Subject:** RE: Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo

---

**From:** Mikolajczak, Margaret (MTO) <[Margaret.Mikolajczak@ontario.ca](mailto:Margaret.Mikolajczak@ontario.ca)>  
**Sent:** Tuesday, September 21, 2021 10:57 AM  
**To:** Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>  
**Cc:** Glass, Heather (MTO) <[Heather.Glass@ontario.ca](mailto:Heather.Glass@ontario.ca)>; Szymanski, Frederic (MTO) <[Frederic.Szymanski@ontario.ca](mailto:Frederic.Szymanski@ontario.ca)>; Janke, Aaron (MTO) <[Aaron.Janke@ontario.ca](mailto:Aaron.Janke@ontario.ca)>; Uddin, Zaka (MTO) <[Zaka.Uddin@ontario.ca](mailto:Zaka.Uddin@ontario.ca)>  
**Subject:** [External] FW: Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo

Hi Hilda,

We have reviewed your September 14, 2021 submission and have following comments.

This bridge is the provincial bridge so, it has to meet our standards. MTO's comments/concerns have to be addressed in the updated design and submitted to MTO for review and comments. For detail comments, please refer to the attachment.

Thank you

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

Phone: 416-235-4269  
Fax: 416-265-4267  
Cell # 437-833-9462

---

**From:** Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>  
**Sent:** September 14, 2021 6:28 PM  
**To:** Glass, Heather (MTO) <[Heather.Glass@ontario.ca](mailto:Heather.Glass@ontario.ca)>  
**Cc:** Cholewa, Peter <[Peter.Cholewa@stantec.com](mailto:Peter.Cholewa@stantec.com)>; Addley, Diana <[Diana.Addley@stantec.com](mailto:Diana.Addley@stantec.com)>; Robinson, Jennifer <[Jennifer.Robinson@stantec.com](mailto:Jennifer.Robinson@stantec.com)>; Lau, Johnson (MTO) <[Johnson.Lau@ontario.ca](mailto:Johnson.Lau@ontario.ca)>; Janke, Aaron (MTO) <[Aaron.Janke@ontario.ca](mailto:Aaron.Janke@ontario.ca)>; Uddin, Zaka (MTO) <[Zaka.Uddin@ontario.ca](mailto:Zaka.Uddin@ontario.ca)>; Mikolajczak, Margaret (MTO) <[Margaret.Mikolajczak@ontario.ca](mailto:Margaret.Mikolajczak@ontario.ca)>; Lee, Jordan (MTO) <[Jordan.Lee@ontario.ca](mailto:Jordan.Lee@ontario.ca)>  
**Subject:** RE: Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo

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

Hello Heather,

This is just a reminder regarding the 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](mailto:hilda.esedebe@vaughan.ca)

**City of Vaughan | Infrastructure Development**  
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1  
[vaughan.ca](http://vaughan.ca)



---

**From:** Hilda Esedebe  
**Sent:** Thursday, August 19, 2021 7:55 AM  
**To:** 'Glass, Heather (MTO)' <[Heather.Glass@ontario.ca](mailto:Heather.Glass@ontario.ca)>  
**Cc:** Cholewa, Peter <[Peter.Cholewa@stantec.com](mailto:Peter.Cholewa@stantec.com)>; Addley, Diana <[Diana.Addley@stantec.com](mailto:Diana.Addley@stantec.com)>; Robinson, Jennifer <[Jennifer.Robinson@stantec.com](mailto:Jennifer.Robinson@stantec.com)>; 'Lau, Johnson (MTO)' <[Johnson.Lau@ontario.ca](mailto:Johnson.Lau@ontario.ca)>; 'Aaron.Janke@ontario.ca' <[Aaron.Janke@ontario.ca](mailto:Aaron.Janke@ontario.ca)>; 'Zaka.Uddin@ontario.ca' <[Zaka.Uddin@ontario.ca](mailto:Zaka.Uddin@ontario.ca)>; 'Mikolajczak, Margaret (MTO)' <[Margaret.Mikolajczak@ontario.ca](mailto:Margaret.Mikolajczak@ontario.ca)>; 'Lee, Jordan (MTO)' <[Jordan.Lee@ontario.ca](mailto:Jordan.Lee@ontario.ca)>  
**Subject:** Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo

Hello Heather,

I hope this email finds you well.

Please find attached the draft Highway 400 Crossing Memo which describes the options reviewed for the Bass Pro Mills Drive Extension Environmental Assessment Study and identifies the recommended option. It incorporates comments received during the July 27, 2021 TAC 2 Meeting.

Kindly review and advise if MTO has any comments. A response would be much appreciated **by September 16, 2021**.

Please do not hesitate to contact me with 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](mailto:hilda.esedebe@vaughan.ca)

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This e-mail, including any attachment(s), may be confidential and is intended solely for the attention and information of the named addressee(s). If you are not the intended recipient or have received this message in error, please notify me

## MTO Review

MTO reviewed all four proposals from the consultant, and found the following:

### Road Classification (TAC-Design Supplement GDG Exhibit 2-G)

Option 1 and Option 2 from **Crossing Assessment Report – Draft Structural Memo** indicates that the road is classified as Urban Local Undivided, however, this road should be classified as Urban Collector Undivided with a design speed of 70 km/h (UCU 70) similar to Option 3 and Option 4 of the Memo.

### Lane Widths (MTO Design Supplement Exhibit 4-B)

Lane widths of 3.5 m are required.

**Exhibit 4-B**  
**LANE WIDTH FOR UNDIVIDED URBAN ROADS**

Design Speed km/h	Traffic Volume for Design Year				
	AADT				
	>6000	3000-6000	2000-3000	1000-2000	<1000
	DHV				
	>600	300-600	200-300	100-200	<100
80	3.5 - 3.75*	3.5 - 3.75*	3.5	-	-
60-70	3.5	3.5**	3.25	3.25	-
50	-	-	3.0	3.0	-
40-50	-	-	-	-	2.75 - 3.0*
No. of lanes	4	2 - 4**	2	2	2

Notes:

- Minimum lane width for all paved 2-lane King's Highways is 3.5 m
- For design use DHV if available
- \*Upper value is desirable, lower value is acceptable
- \*\*Four lanes are appropriate in the upper part of this traffic range where there is a measurable capacity deficiency with only two lanes

**Shoulders** (MTO Design Supplement Exhibit 4-U; (Formerly 4-O))

Shoulders of varying widths are required:

**Exhibit 4-U**

**MINIMUM HORIZONTAL CLEARANCE AT BRIDGES ON LOCAL AND COLLECTOR URBAN ROADS**

Roadway	Design Speed (km/h)	Short Overpass (<50m)			Long Overpass (>50m)			Underpass		
		Left (m)	Right (m)		Left (m)	Right (m)		Left (m)	Right (m)	
			No Sidewalk	Sidewalk (A)		No Sidewalk	Sidewalk (A)		No Sidewalk	Sidewalk (A)
Undivided Local	30	-	1.00	0.50	-	1.00	0.50	-	1.25	1.00
	40	-	1.00	0.50	-	1.00	0.50	-	1.25	1.00
	50	-	1.00	0.50	-	1.00	0.50	-	1.25	1.00
Undivided Collector	50	-	1.00	0.50	-	1.00	0.50	-	1.75	1.00
	60	-	1.00	0.50	-	1.00	0.50	-	1.75	1.00
	70	-	1.25	1.00	-	1.50	1.00	-	2.00	1.00
	80	-	1.25	1.00	-	1.50	1.00	-	2.50	1.00
Divided Collector	50	1.25	1.25	0.50	1.00	1.00	0.50	1.50	1.75	-
	60	1.25	1.50	0.50	1.00	1.00	0.50	1.50	1.75	-
	70	1.50	2.00	1.00	1.00	1.50	1.00	1.50	2.00	-
	80	1.50	2.00	1.00	1.00	1.50	1.00	1.50	2.00	-

Notes:

- A. If a barrier is to be placed between the sidewalk and roadway, then clearance should be the same as when there are no sidewalks
- For short overpasses (<50m) shoulder widths should be carried across bridge.
- All clearances should meet minimum requirements for sight distance



## Path Widths (Bikeways Design Manual Table 5-2)

Two-way shared use AT Paths (referred to Multi-Use Path in the Structural Memo) require 3.0 m of width. This does not include clearances from barriers.

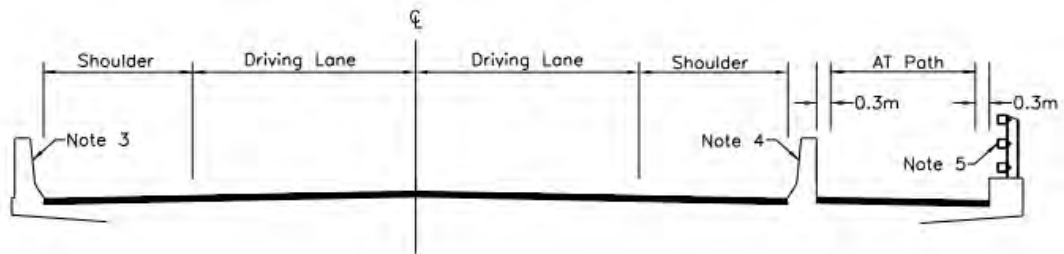
**Table 5-2 – Suggested Minimum and Desired Lane Widths for Active Transportation Paths**

Classification	Desired Width	Suggested Minimum Width in Constrained Corridors
One-way AT Path with Sidewalk (bicycle path width only)	2.0 m	1.8 m
Two-way AT Path with Sidewalk (bicycle path width only)	4.0 m	3.0 m
Two-way Shared Use AT Path	4.0 m	3.0 m <sup>1</sup>
Two-way In-Boulevard AT Path Separated by a Roadside Ditch	4.0 m	3.0 m <sup>1</sup>

<sup>1</sup>This suggested minimum can be reduced to 2.4 m in constrained corridors over short distances.

## Barrier (Bikeway Design Manual Figure 4.64)

On a bridge, AT Paths require a barrier. \*Please note that an approved separator barrier by MTO may differ from what is represented in the image below.



Notes:

3. Traffic Barrier unless shoulder(s) are designated and signed for use by cyclists on structure, in which case Combination Traffic/Bicycle Barrier
4. Traffic Barrier
5. Combination Pedestrian/Bicycle Barrier

**Figure 4.64 – Structure Cross-Sections with Signed Bicycle Facilities on Designated Cycling Routes**

## **MTO's Opinion**

The design of the roadway classification and the structural cross section is represented out of context (not provided) from the overall requirement and purposes of Bass Pro Mills Drive and given the length and connection to a freeway and significant terminating arterial roads - Weston Road to the west and Jane Street to the east, MTO believes that Bass Pro Mills Drive will be classified as a 70 km/hr urban collector undivided road (UCU 70).

Considering that MTO believes the roadway should be classified as a collector road, MTO does not recommend proceeding with Option 1 or Option 2.

Option 3 does not meet the required widths for an AT Path (3.6 m), nor does it include the required barrier, and the proposed shoulders are 0.5 m smaller than required. To meet the required widths, the bridge deck would have to be widened by 5.2 m.

A separate AT path, as proposed in Option 4 would need to have a width of 3.6 m from barrier to barrier (4.1 m inclusive of barriers). A total width of 4.6 m (5.1 inclusive) is desired. The AT Path proposed on the side of the roadway is absent a barrier and required shoulder, and would require widening to 3.6 m. To meet the required widths, the bridge deck would have to be widened by 1.34 m.

In all four options, the lane width is required to be 3.5 m. None of the options meet this requirement.

MTO would like further clarification on the travel directions shown in the four cross section drawings in the Structural Memo, as they are not consistent with two lanes travelled in each direction.

MTO would like clarification from the City of Vaughan the planned classification of Bass Pro Mills Drive, as to whether it is a local, collector, or arterial road; as the shoulder width for the three different classifications vary from 1.0 m to 2.4 m.

Henry Badilla – Senior Designer, Central Region

Mina Sandiford Day – Senior Designer, Central Region

## Robinson, Jennifer

---

**From:** Hilda Esedebe <Hilda.Esedebe@vaughan.ca>  
**Sent:** Wednesday, November 24, 2021 11:36 PM  
**To:** Glass, Heather (MTO)  
**Cc:** 'Mikolajczak, Margaret (MTO)'; Frederic.Szymanski@ontario.ca; Janke, Aaron (MTO); Uddin, Zaka (MTO); Addley, Diana; Cholewa, Peter; Robinson, Jennifer; 'Lee, Jordan (MTO)'; 'Lau, Johnson (MTO)'  
**Subject:** FW: Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo  
**Attachments:** Bass Pro - Proposed Bridge Modifications.pdf; Bass Pro Plan-Plan & Profile.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Heather,

Thank you for MTO's comments in relation to the draft Highway 400 Crossing Memo which was provided to MTO to describe the options reviewed under the Bass Pro Mills Drive Extension Environmental Assessment (EA) Study for the existing bridge at Highway 400, including the recommended option for the EA preliminary design.

Although the bridge is a City of Vaughan asset, we understand that because the bridge crosses Highway 400,, the structure is subject to Ministry review and requirements due to provincial Controlled Access Highway jurisdiction, and therefore MTO standards and TAC requirements are to be incorporated into the EA planning study.

We have reviewed MTO's comments/concerns and feel that we have addressed these comments within the attached revised preliminary design and bridge cross-section.

The revised submission considers Bass Pro Mills as an Urban Collector Undivided with a design speed of 70 km/h (UCU 70), with 3.5 m lane widths as outlined within MTO's Design Supplement Exhibit 4-B. A shoulder clearance of 1 meter is provided per MTO Design Supplement Exhibit 4-U, with 3.6 m raised sidewalks on each side of the structure, with parapet wall, for combination traffic/bicycle rail. These net modifications amount to a widening of the existing bridge by 5 meters, which is proposed on the south side of the structure by introducing a new girder line.

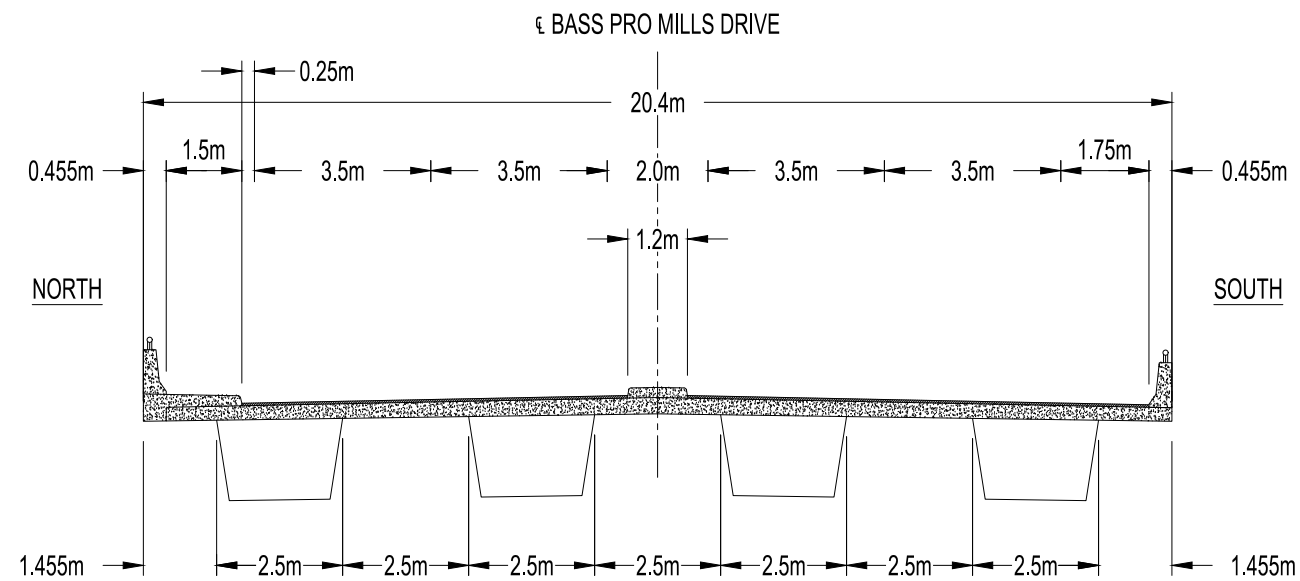
In the Plan & Profile drawing, the continued functionality of the existing ramp to southbound Highway 400 is being maintained, with new traffic from eastbound Bass Pro having direct access to the ramp. This new intersection will be signalized due to traffic study recommendations.

At the highway northbound off ramp to the Fishermans Way intersection, the Plan & Profile drawing provides for active transportation (sidewalk and separate cycling path) on both sides of the roadway between the bridge structure and Fishermans Way. There are no provisions for a separate eastbound left turn lane, nor are any needed changes or modifications being shown, both for the roadway and boulevard, east of Fishermans Way.

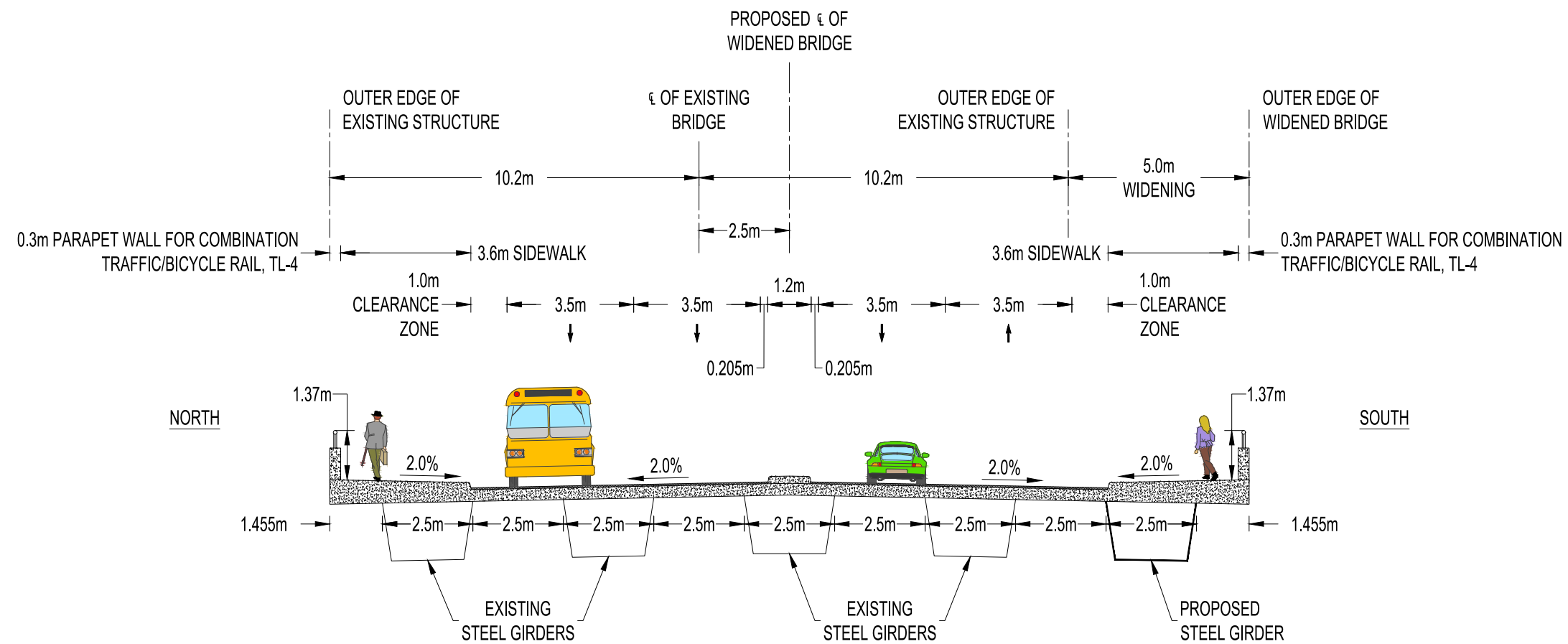
Our EA study is nearing completion and we would appreciate MTO's early review of this resubmission.

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](mailto:hilda.esedebe@vaughan.ca)



EXISTING TYPICAL SECTION - BASS PRO MILLS DRIVE BRIDGE OVER HIGHWAY 400



PROPOSED TYPICAL SECTION - BASS PRO MILLS DRIVE BRIDGE OVER HIGHWAY 400

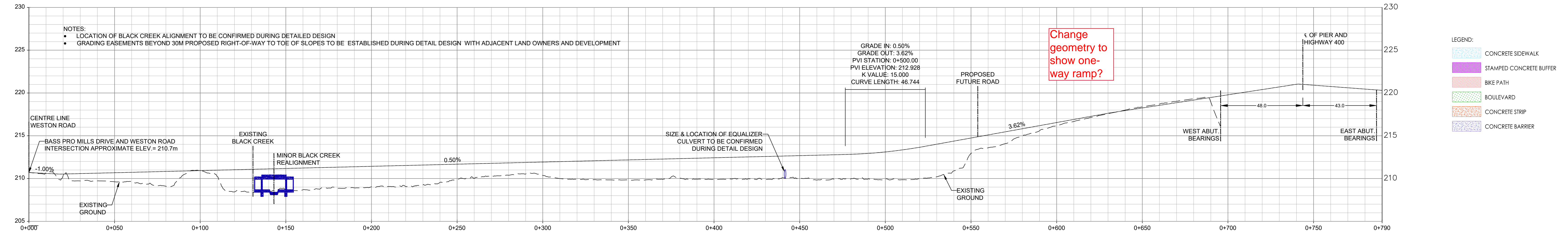
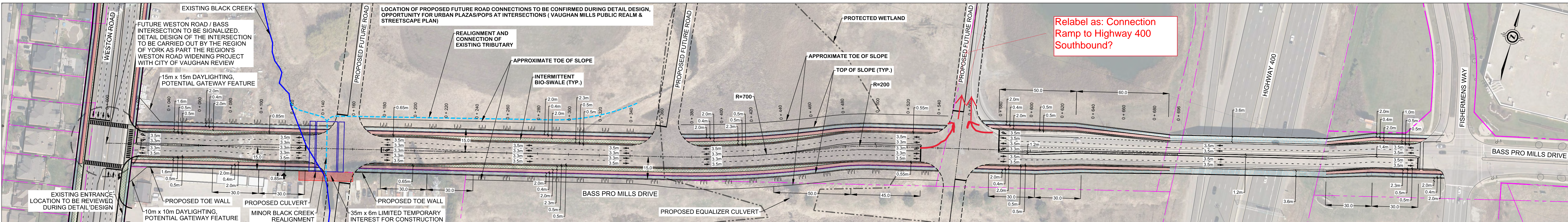
NOT TO SCALE

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  
SECTION AT HIGHWAY 400 BRIDGE



- LEGEND:**
- CONCRETE SIDEWALK
  - STAMPED CONCRETE BUFFER
  - BIKE PATH
  - BOULEVARD
  - CONCRETE STRIP
  - CONCRETE BARRIER

## Robinson, Jennifer

---

**To:** Hilda Esedebe  
**Subject:** RE: [External] Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo

---

**From:** Mikolajczak, Margaret (MTO) <[Margaret.Mikolajczak@ontario.ca](mailto:Margaret.Mikolajczak@ontario.ca)>  
**Sent:** Thursday, January 13, 2022 3:55 PM  
**To:** Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>  
**Cc:** Day, Mina (MTO) <[Mina.Day@ontario.ca](mailto:Mina.Day@ontario.ca)>; Szymanski, Frederic (MTO) <[Frederic.Szymanski@ontario.ca](mailto:Frederic.Szymanski@ontario.ca)>; Glass, Heather (MTO) <[Heather.Glass@ontario.ca](mailto:Heather.Glass@ontario.ca)>; Molai, Sam (MTO) <[Sam.Molai@ontario.ca](mailto:Sam.Molai@ontario.ca)>  
**Subject:** [External] Bass Pro Mills Extension EA - Draft Highway 400 Crossing Memo

Hi Hilda, please find below Ministry comments:

### Structural Office:

Is it that if you are adding a girder anyway, we think you should just build a dedicated AT bridge to the south of the existing bridge. Bass Pro itself doesn't need any work based on age and condition. It will end up less expensive overall and make it a more pleasant experience for AT users on the south side of Bass Pro Mills. Keep normal sidewalk on the north side and full separated MUP on the south side along Bass Pro Mills. It would avoid the jog in the road at the east side of Hwy 400. Why spending money to reconfigure a bridge that doesn't actually need any work yet?

### Foundation Office

An assessment is required to determine the additional loadings on the foundations and whether the existing foundation has the capacity to withstand the additional loading.

## Highway Engineering Review of Bass Pro Mills Extension

### Review Rationale

Upon reviewing the cross section and plan and profile drawings, MTO has concluded that what is labelled "Sidewalk" in the proposal is an active transportation path.

This conclusion comes due to

- The width of the transportation path
- The existence of an active transportation path on the bridge approaches
- The selection of barrier as a "parapet wall for combination traffic/bicycle rail"

As the design domain and applications heuristics (section 4.10.1.2 of the design supplement) state that "The cross section elements of roads on and under bridges should match those of the approach roadway", design review will reflect the parameters for an active transportation path.

## General

The material contained in this section is intended to assist the designer when designing cross sections where bridges, retaining walls or other structures are required. This section gives direction in setting structure dimensions that influence geometric design of horizontal alignment, vertical alignment and cross sections.

In general:

- Bridges should be designed to match the geometric requirements of the roadway.
- Where practicable, the horizontal centerline alignment on bridges should be on tangent or of constant curvature.
- The cross section elements of roads on and under bridges should match those of the approach roadway.
- Sag curves on bridges should be avoided as much as possible.

## MTO Review

MTO reviewed the proposal from the consultant and City of Vaughan, and found the following:

### Active Transportation Path Width (Bikeways Design Manual Table 5-2)

The proposed width of 3.6 m for the active transportation path satisfies the requirements set out in table 5-2. This width cannot be decreased, as the barriers require clearances.

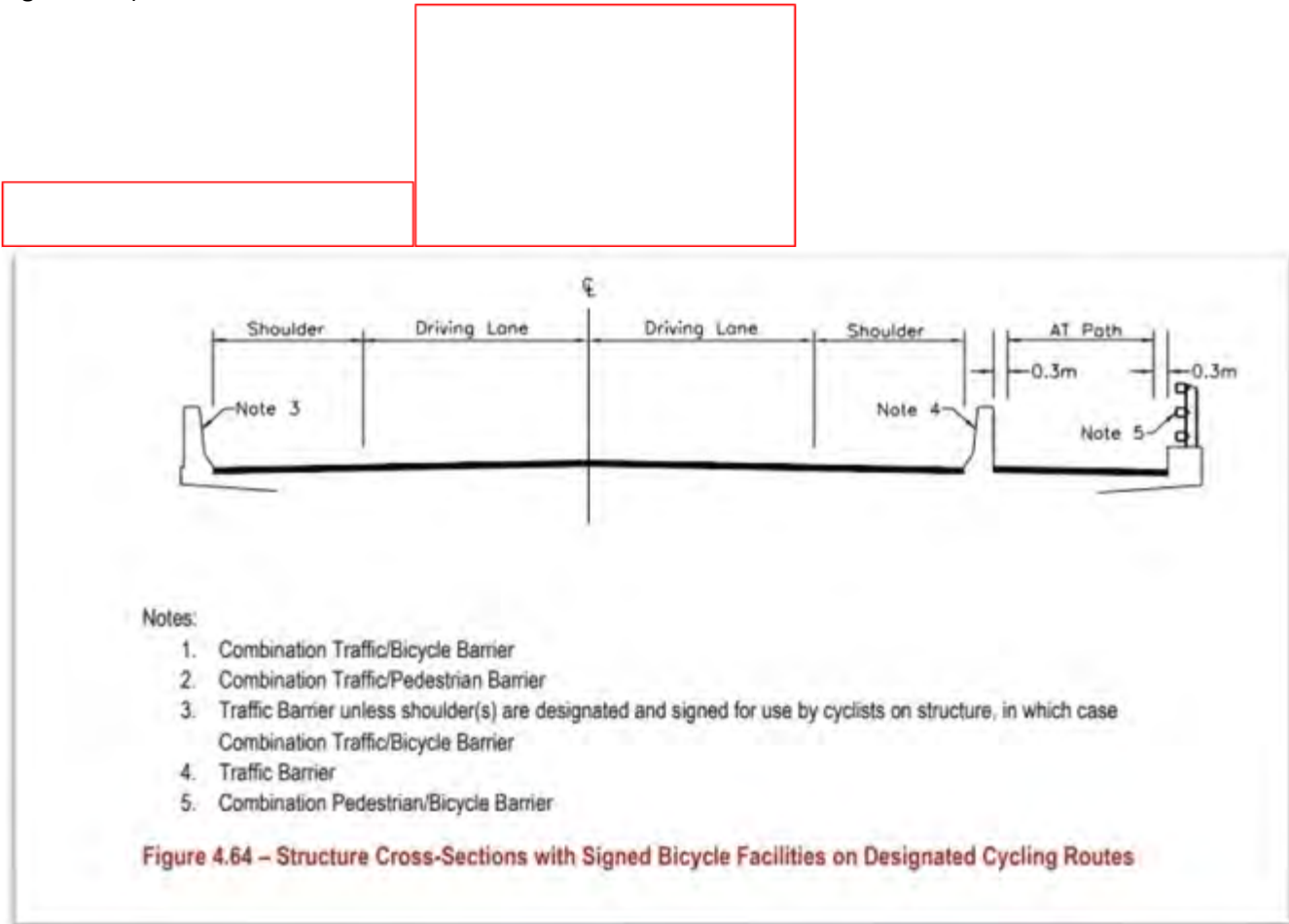
**Table 5-2 – Suggested Minimum and Desired Lane Widths for Active Transportation Paths**

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One-way AT Path with Sidewalk (bicycle path width only)	2.0 m	1.8 m
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Two-way Shared Use AT Path	4.0 m	3.0 m <sup>†</sup>
Two-way In-Boulevard AT Path Separated by a Roadside Ditch	4.0 m	3.0 m <sup>†</sup>

<sup>†</sup>This suggested minimum can be reduced to 2.4 m in constrained corridors over short distances.

## Barriers (Bikeway Design Manual Figure 4.64)

A barrier is **required**, with 0.3 m clearance between the barrier and the active transportation path, as prescribed in Figure 4.64).



Further review with MTOs Structural Office is required as to the selection of MTO acceptable barriers.



## Lane Widths (MTO Design Supplement Exhibit 4-B)

The proposed lane width of 3.5 m satisfies the requirements in Exhibit 4-B.



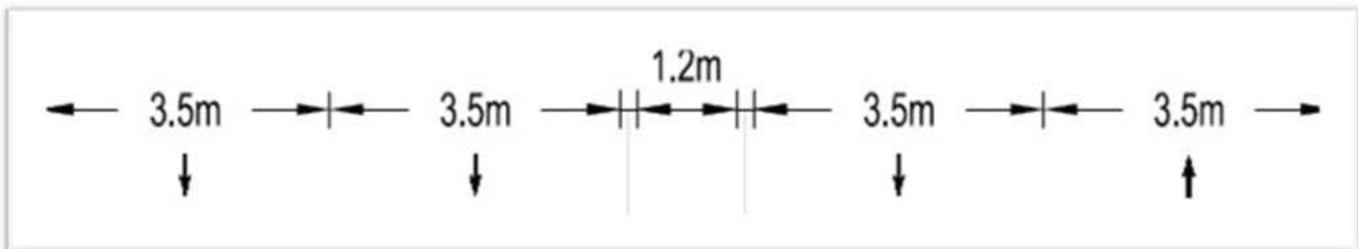
**Exhibit 4-B**  
**LANE WIDTH FOR UNDIVIDED URBAN ROADS**

Design Speed km/h	Traffic Volume for Design Year				
	AADT				
	>6000	3000-6000	2000-3000	1000-2000	<1000
	DHV				
	>600	300-600	200-300	100-200	<100
80	3.5 - 3.75*	3.5 - 3.75*	3.5	-	-
60-70	3.5	3.5**	3.25	3.25	-
50	-	-	3.0	3.0	-
40-50	-	-	-	-	2.75 - 3.0*
No. of lanes	4	2 - 4**	2	2	2

**Notes:**

- Minimum lane width for all paved 2-lane King's Highways is 3.5 m
- For design use DHV if available
- \*Upper value is desirable, lower value is acceptable
- \*\*Four lanes are appropriate in the upper part of this traffic range where there is a measurable capacity deficiency with only two lanes

Traffic direction requires clarification.



## Horizontal Clearances (MTO Design Supplement Exhibit 4-U)

The proposed width of the 1.0 m horizontal clearance to the active transportation path (right) **does not** satisfy the requirements in exhibit 4-U. A width of 1.5 m is required, due to the existence of a barrier.



### Exhibit 4-U

#### MINIMUM HORIZONTAL CLEARANCE AT BRIDGES ON LOCAL AND COLLECTOR URBAN ROADS

Roadway	Design Speed (km/h)	Short Overpass (<50m)			Long Overpass (>50m)			Underpass		
		Left (m)	Right (m)		Left (m)	Right (m)		Left (m)	Right (m)	
			No Sidewalk	Sidewalk (A)		No Sidewalk	Sidewalk (A)		No Sidewalk	Sidewalk (A)
Undivided Local	30	-	1.00	0.50	-	1.00	0.50	-	1.25	1.00
	40	-	1.00	0.50	-	1.00	0.50	-	1.25	1.00
	50	-	1.00	0.50	-	1.00	0.50	-	1.25	1.00
Undivided Collector	50	-	1.00	0.50	-	1.00	0.50	-	1.75	1.00
	60	-	1.00	0.50	-	1.00	0.50	-	1.75	1.00
	70	-	1.25	1.00	-	1.50	1.00	-	2.00	1.00
	80	-	1.25	1.00	-	1.50	1.00	-	2.50	1.00
Divided Collector	50	1.25	1.25	0.50	1.00	1.00	0.50	1.50	1.75	-
	60	1.25	1.50	0.50	1.00	1.00	0.50	1.50	1.75	-
	70	1.50	2.00	1.00	1.00	1.50	1.00	1.50	2.00	-
	80	1.50	2.00	1.00	1.00	1.50	1.00	1.50	2.00	-

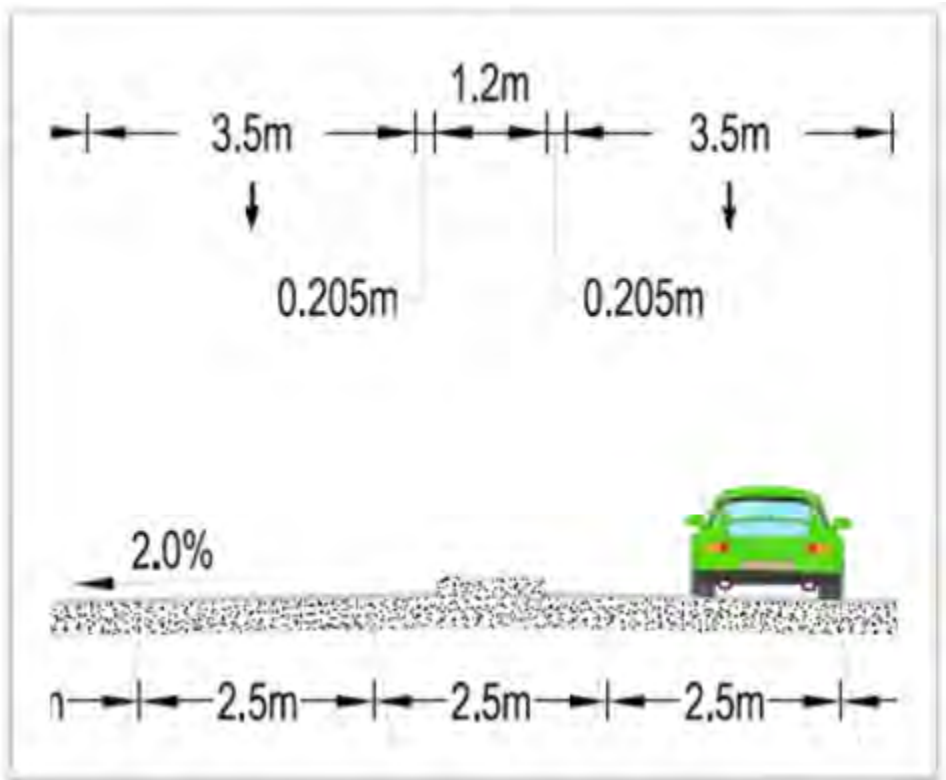
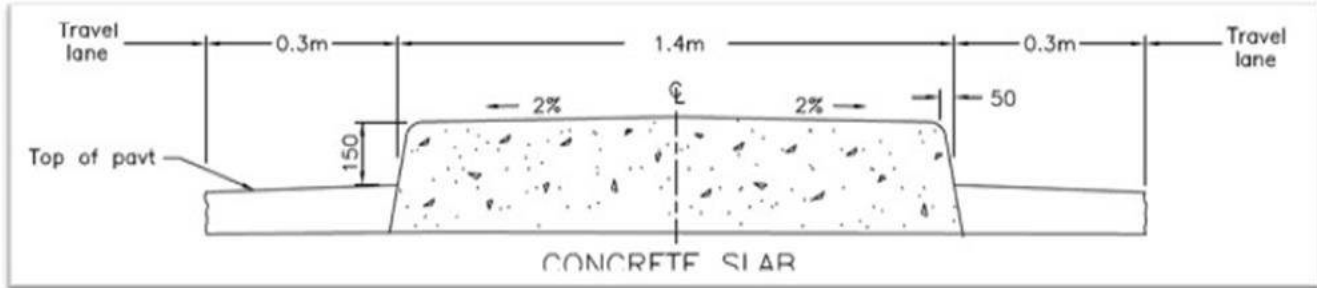
**Notes:**

- A. If a barrier is to be placed between the sidewalk and roadway, then clearance should be the same as when there are no sidewalks
- For short overpasses (<50m) shoulder widths should be carried across bridge.
- All clearances should meet minimum requirements for sight distance

## Traffic Island Width and Clearances (MTOD 504.010)

The proposed traffic island width of 1.2 m **does not** satisfy the requirements in MTOD 504.010. A width of 1.4 m is required.

The proposed width of the 0.205 m horizontal clearance (image below) to the traffic island (left) **does not** satisfy the requirement in MTOD 504.010. A width of 0.3 m is required and this extends to the bridge's cross sectional elements matching those of the roadway approaches.



## MTO's Opinion

The proposals presented address some of MTO's concerns from the previous draft structural memo, namely lane widths and active transportation path widths.

The following design proposals require explanation or revision:

- Presence and selection of barriers
- Horizontal clearance to the active transportation path
- Horizontal clearance to the traffic island
- Width of the traffic island

Ultimately, MTO requires a barrier separator across a structure to separate Active Transportation paths from adjacent traffic.

It should be clarified as to why two "multi-use sidewalks" are required across the bridge to begin with. What needs to be studied more (see image below) is why there is such a path(s) along the north side of the bridge and between the ramp terminal on the east and the 400 access road on the west. There is very high volumes of turning traffic from N-W on the east side and both from E-N & W-N on the west side thus not ideal to have both intersection with so many vehicles travelling across two separate pathways - both a sidewalk and bike lane. This is an ill-conceived design and creates potential operational and safety issues MTO will inherit in the future (at our ramp termina on the east). In addition, a very wide sidewalk across the bridge is not permitted as the City has no ability to control the behaviour of cyclist and other active transportation uses when they reach it and are attempting to cross the bridge thus a single purpose sidewalk will not be respected by its users and MTO is inheriting a dangerous and non-conformant situation.



Mina Sandiford Day – Senior Designer, Central Region

## Referenced Documents

- MTO Bikeways Design Manual (March 2014)
- MTO Design Supplement for Geometric Design Guide (GDG) for Canadian Roads (April 2020)
- MTOD 0504.0100, (Rev. 0, February 2016)

Hilda, please call me if you have any questions my **cell # 4378339462**

Thank you

**Margaret Mikolajczak, C.E.T.**

**Senior Project Manager**

Ministry of Transportation

Corridor Management Section

159 Sir William Hearst Avenue, 7<sup>th</sup> Floor

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## 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

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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 Supplement Exhibit 4-U / TA 4.10.1 (60 Design)
Compliance	Yes	Yes	Yes	Yes	Yes

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](mailto:hilda.esedebe@vaughan.ca)

**City of Vaughan | Infrastructure Development**  
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1  
[vaughan.ca](http://vaughan.ca)



---

**From:** Mikolajczak, Margaret (MTO) <[Margaret.Mikolajczak@ontario.ca](mailto:Margaret.Mikolajczak@ontario.ca)>  
**Sent:** Thursday, March 10, 2022 4:40 PM  
**To:** Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto: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](mailto:Hilda.Esedebe@vaughan.ca)>  
**Sent:** March 10, 2022 2:36 PM  
**To:** Mikolajczak, Margaret (MTO) <[Margaret.Mikolajczak@ontario.ca](mailto:Margaret.Mikolajczak@ontario.ca)>  
**Cc:** Glass, Heather (MTO) <[Heather.Glass@ontario.ca](mailto:Heather.Glass@ontario.ca)>; Janke, Aaron (MTO) <[Aaron.Janke@ontario.ca](mailto:Aaron.Janke@ontario.ca)>; Uddin, Zaka (MTO) <[Zaka.Uddin@ontario.ca](mailto:Zaka.Uddin@ontario.ca)>; Szymanski, Frederic (MTO) <[Frederic.Szymanski@ontario.ca](mailto:Frederic.Szymanski@ontario.ca)>; Van Voorst, John (MTO) <[John.VanVoorst@ontario.ca](mailto:John.VanVoorst@ontario.ca)>; Sadek, Sandra (MTO) <[Sandra.Sadek@ontario.ca](mailto:Sandra.Sadek@ontario.ca)>; Day, Mina (MTO) <[Mina.Day@ontario.ca](mailto:Mina.Day@ontario.ca)>  
**Subject:** RE: [External] Bass Pro Mills Extension EA - Draft Highway 400 Crossing

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

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](mailto:hilda.esedebe@vaughan.ca)

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2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1  
[vaughan.ca](http://vaughan.ca)





---

**From:** Mikolajczak, Margaret (MTO) <[Margaret.Mikolajczak@ontario.ca](mailto:Margaret.Mikolajczak@ontario.ca)>  
**Sent:** Wednesday, March 9, 2022 4:33 PM  
**To:** Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>  
**Cc:** Glass, Heather (MTO) <[Heather.Glass@ontario.ca](mailto:Heather.Glass@ontario.ca)>; Janke, Aaron (MTO) <[Aaron.Janke@ontario.ca](mailto:Aaron.Janke@ontario.ca)>; Uddin, Zaka (MTO) <[Zaka.Uddin@ontario.ca](mailto:Zaka.Uddin@ontario.ca)>; Szymanski, Frederic (MTO) <[Frederic.Szymanski@ontario.ca](mailto:Frederic.Szymanski@ontario.ca)>; Van Voorst, John (MTO) <[John.VanVoorst@ontario.ca](mailto:John.VanVoorst@ontario.ca)>; Sadek, Sandra (MTO) <[Sandra.Sadek@ontario.ca](mailto:Sandra.Sadek@ontario.ca)>; Day, Mina (MTO) <[Mina.Day@ontario.ca](mailto: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 our 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 VMCSPP 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, 7<sup>th</sup> Floor  
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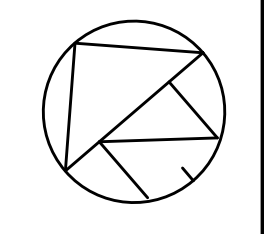
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 REVISED BY: MODIFIED: Apr 27, 2022 - 6:13pm

PR-0-707  
 BB-05  
 MINISTRY OF TRANSPORTATION, ONTARIO

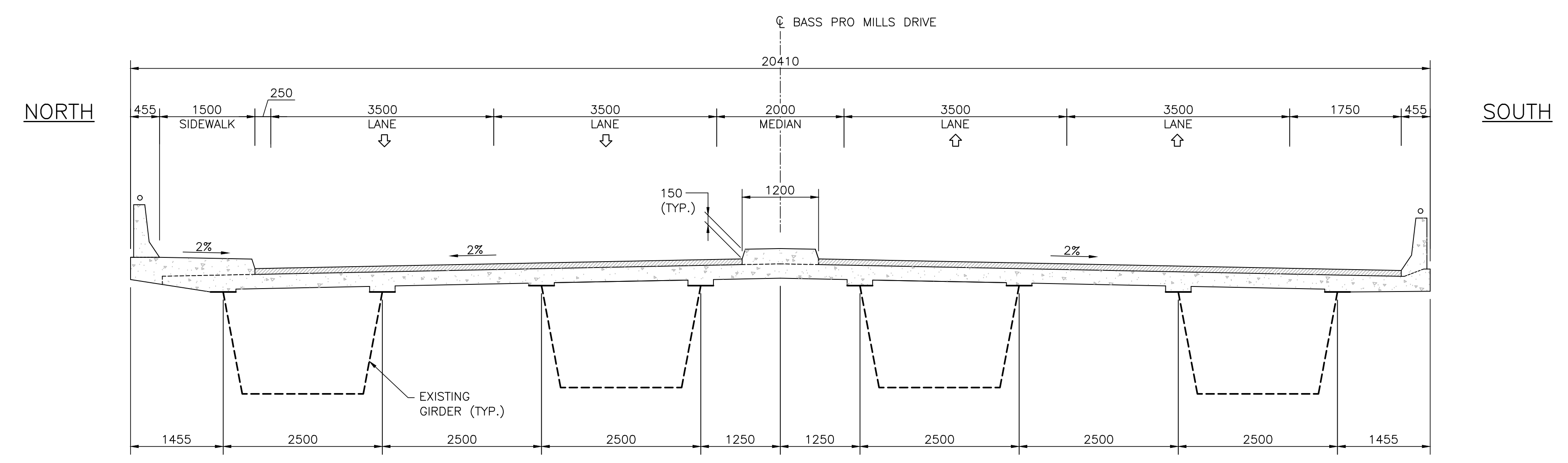
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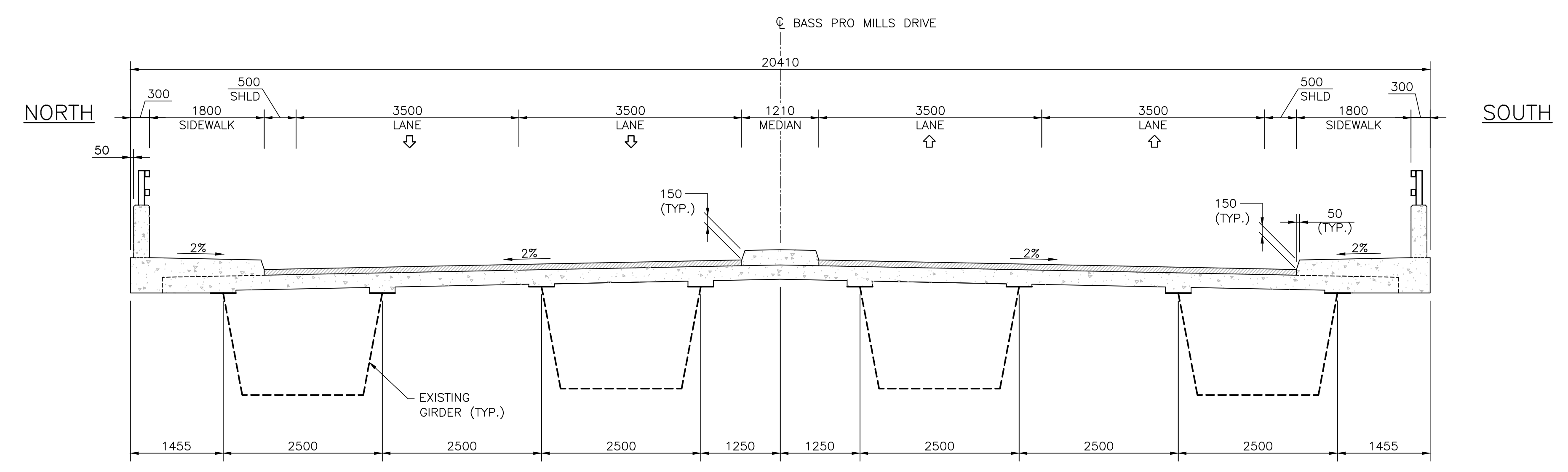


CITY OF VAUGHAN  
 HIGHWAY 400  
 BASS PRO MILLS DRIVE  
 DECK CROSS SECTION

SHEET



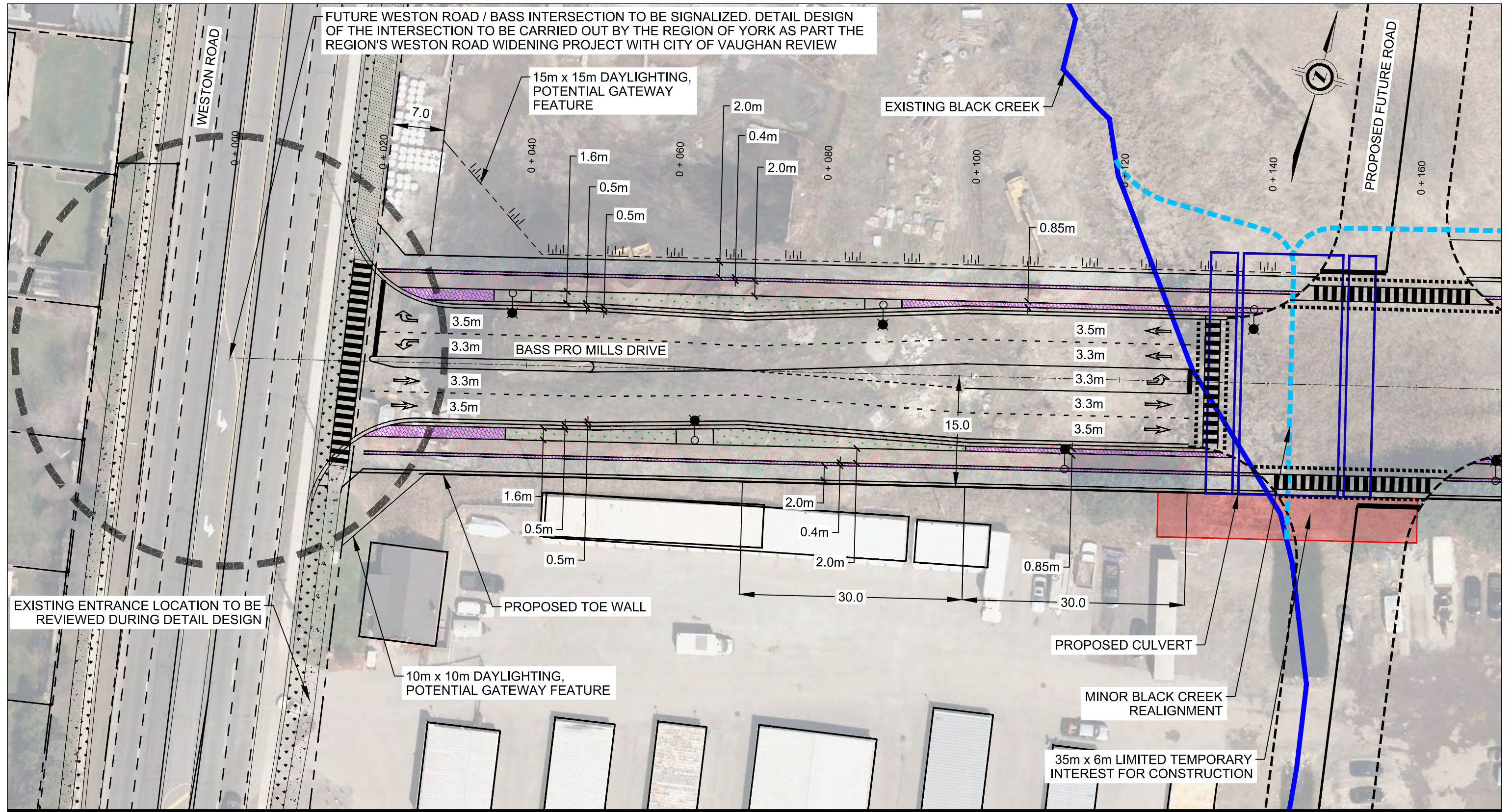
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**PROPOSED SECTION**  
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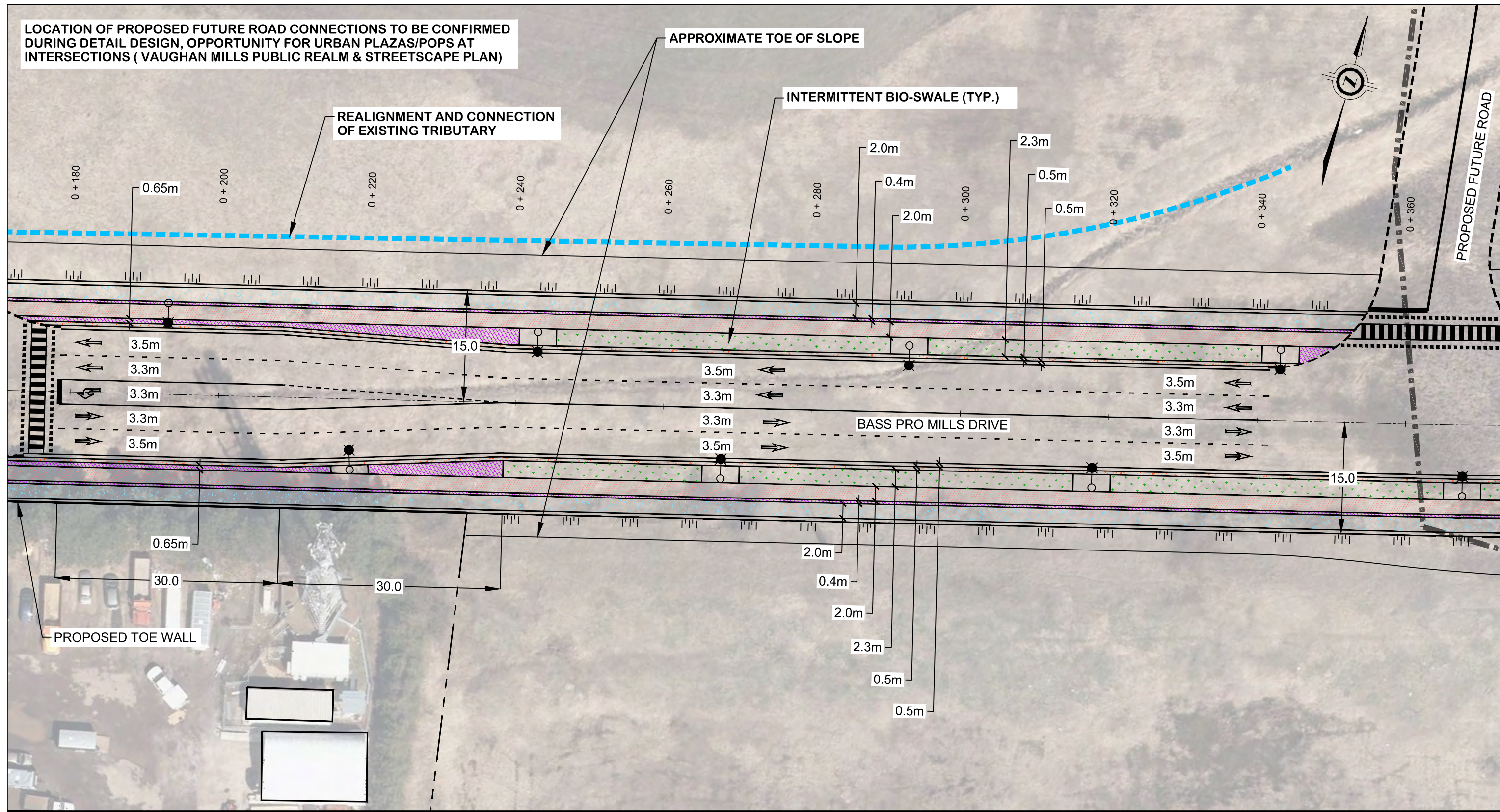
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	DRAWN	A.K.L.	CHK	SITE	STRUCT	SCHEME DWG



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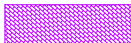



	CONCRETE SIDEWALK		CONCRETE STRIP
	STAMPED CONCRETE BUFFER		CONCRETE BARRIER
	BIKE PATH		
	BOULEVARD		

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)



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

LEGEND:

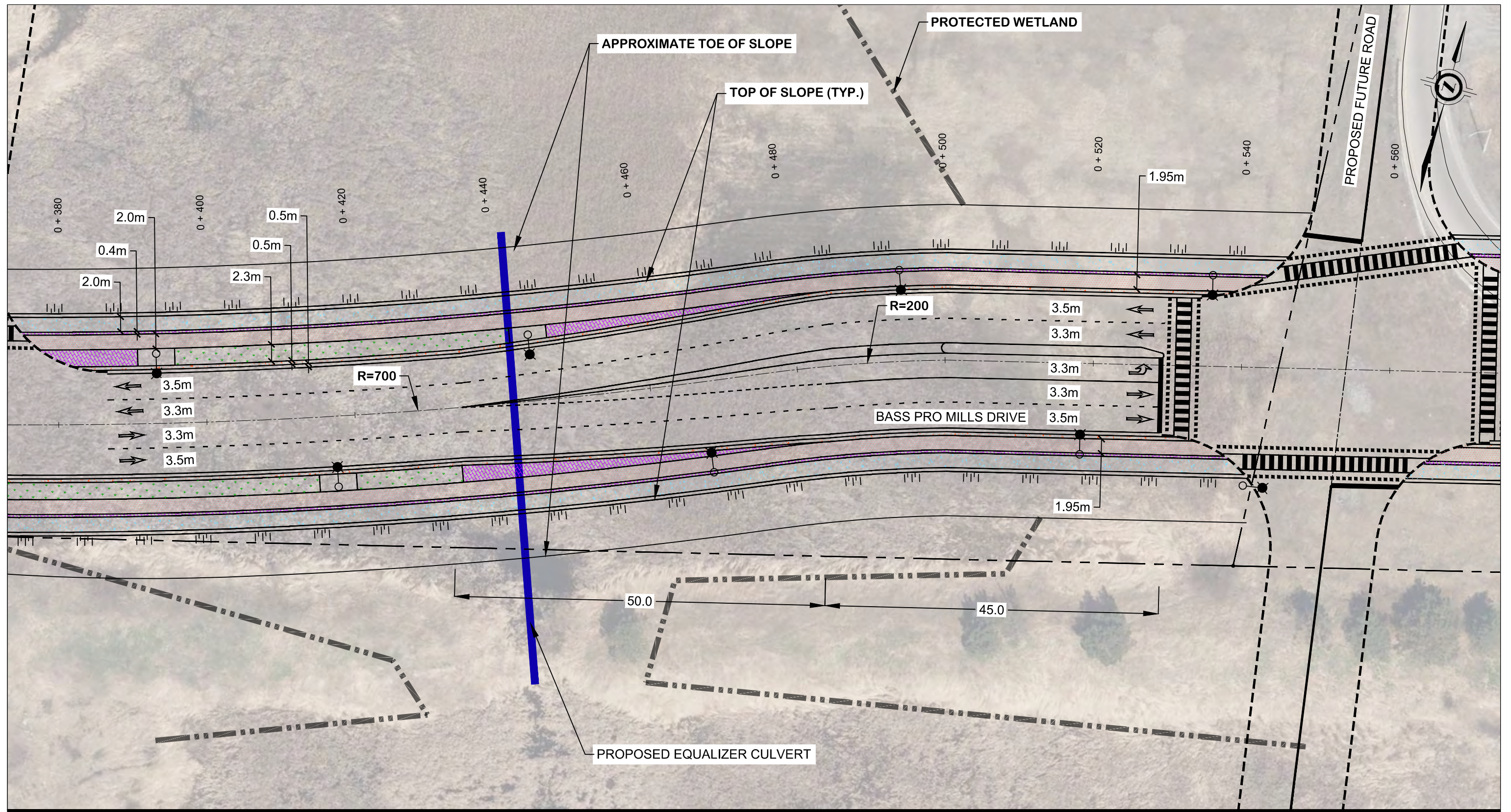
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|  | BIKE PATH               |   |                  |
|  | BOULEVARD               |   |                  |

Client/Project  
CITY OF VUAGHAN

Figure No.  
PLAN - 2

Title  
ENVIRONMENTAL ASSESSMENT

Scale  
1:500



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

LEGEND:

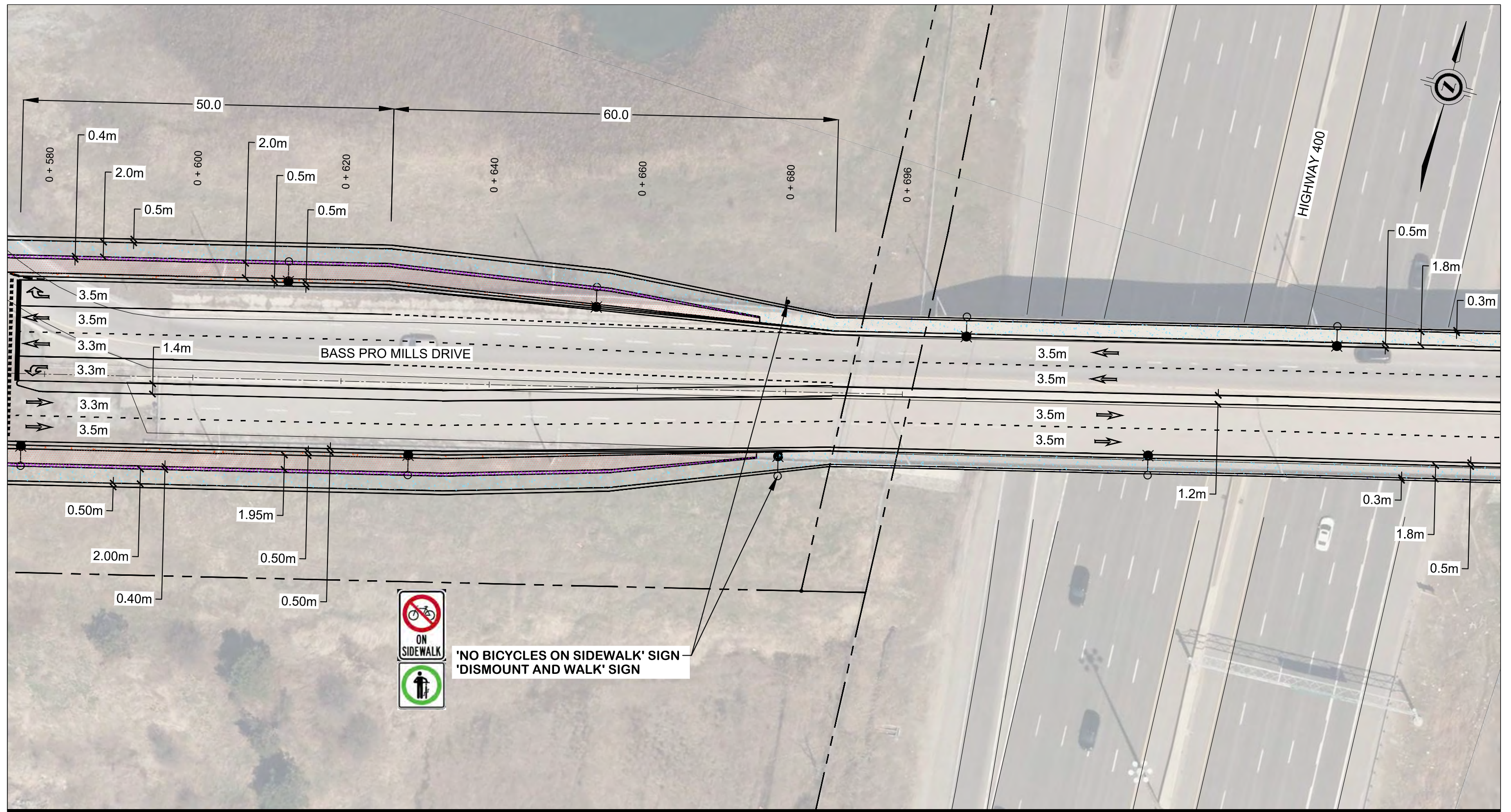
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|  | BIKE PATH               |  |                  |
|  | BOULEVARD               |  |                  |

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 CITY OF VUAGHAN

Figure No.  
 PLAN - 3



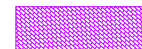


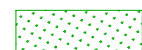
Title  
 ENVIRONMENTAL ASSESSMENT

Scale  
 1:500



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Markham ON  
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LEGEND:

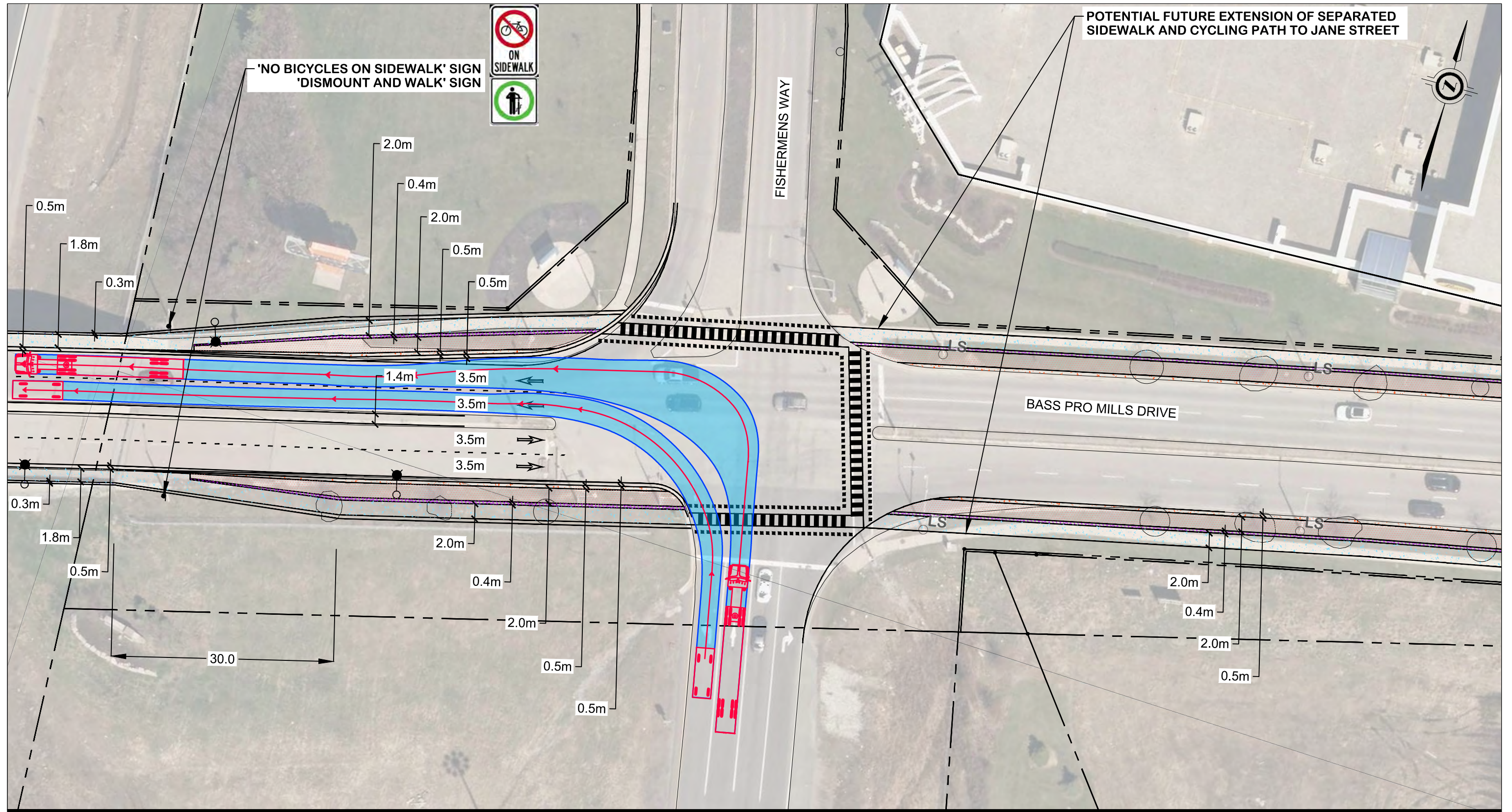
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|  | STAMPED CONCRETE BUFFER |  | CONCRETE BARRIER |
|  | BIKE PATH               |   |                  |
|  | BOULEVARD               |   |                  |

Client/Project  
CITY OF VUAGHAN

Figure No.  
PLAN - 4



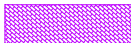



Title  
ENVIRONMENTAL ASSESSMENT

Scale  
1:500



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LEGEND:

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

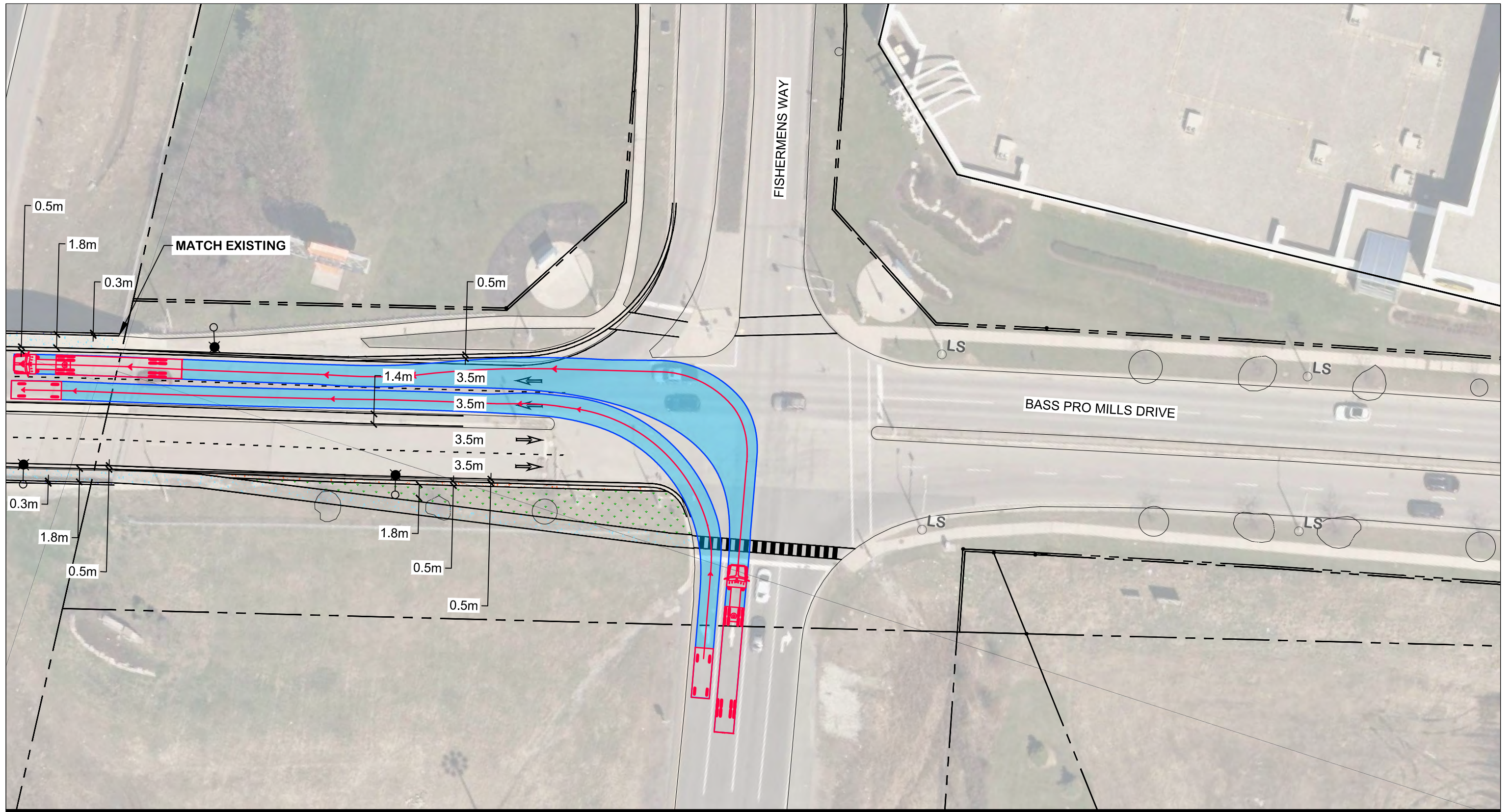
Client/Project  
CITY OF VUAGHAN

Figure No.  
PLAN - 5



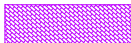



Title  
ENVIRONMENTAL ASSESSMENT

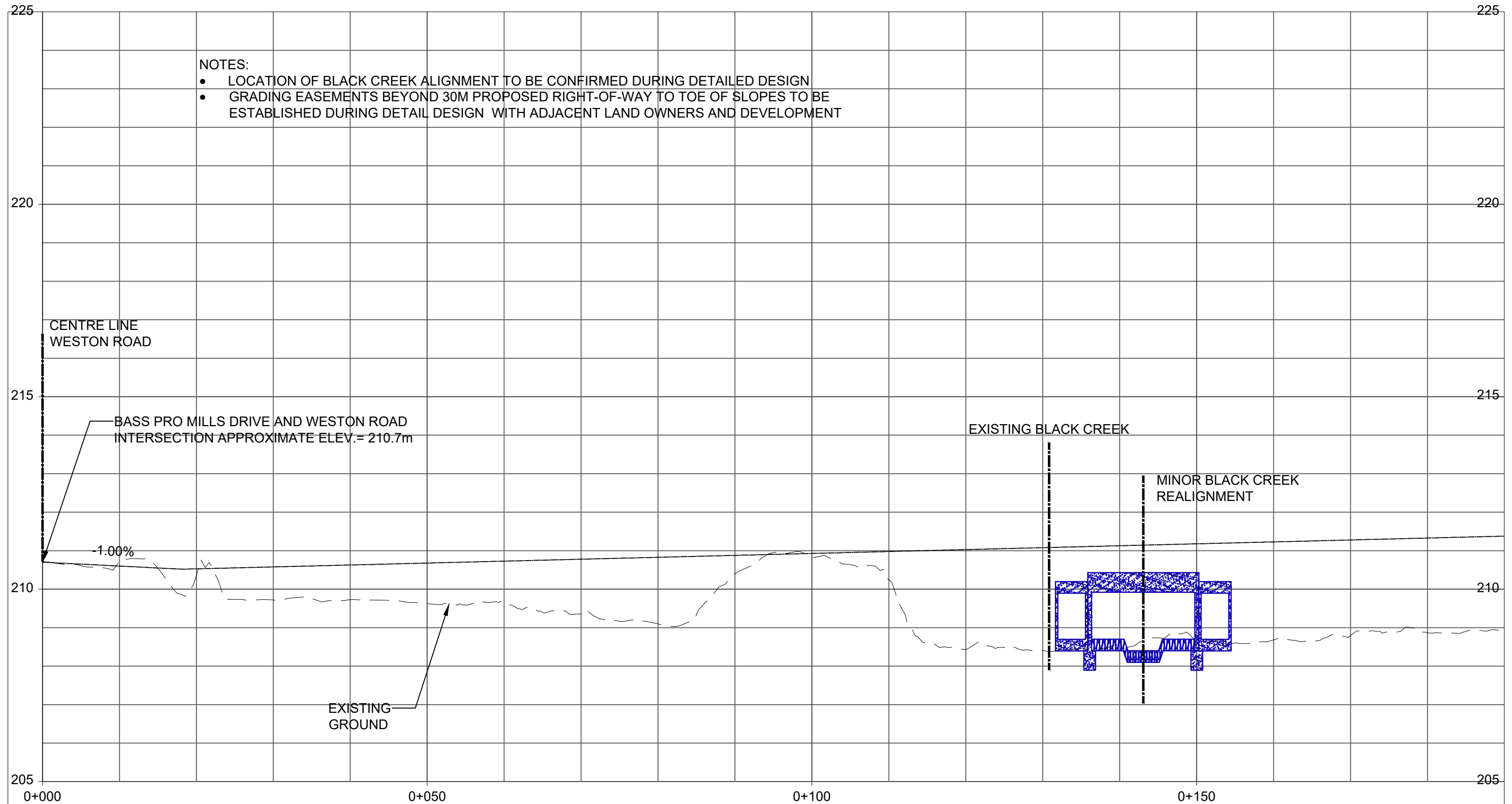
Scale  
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LEGEND:

- |   |                         |   |                  |
|---|-------------------------|---|------------------|
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|  | STAMPED CONCRETE BUFFER |  | CONCRETE BARRIER |
|  | BIKE PATH               |   |                  |
|  | BOULEVARD               |   |                  |



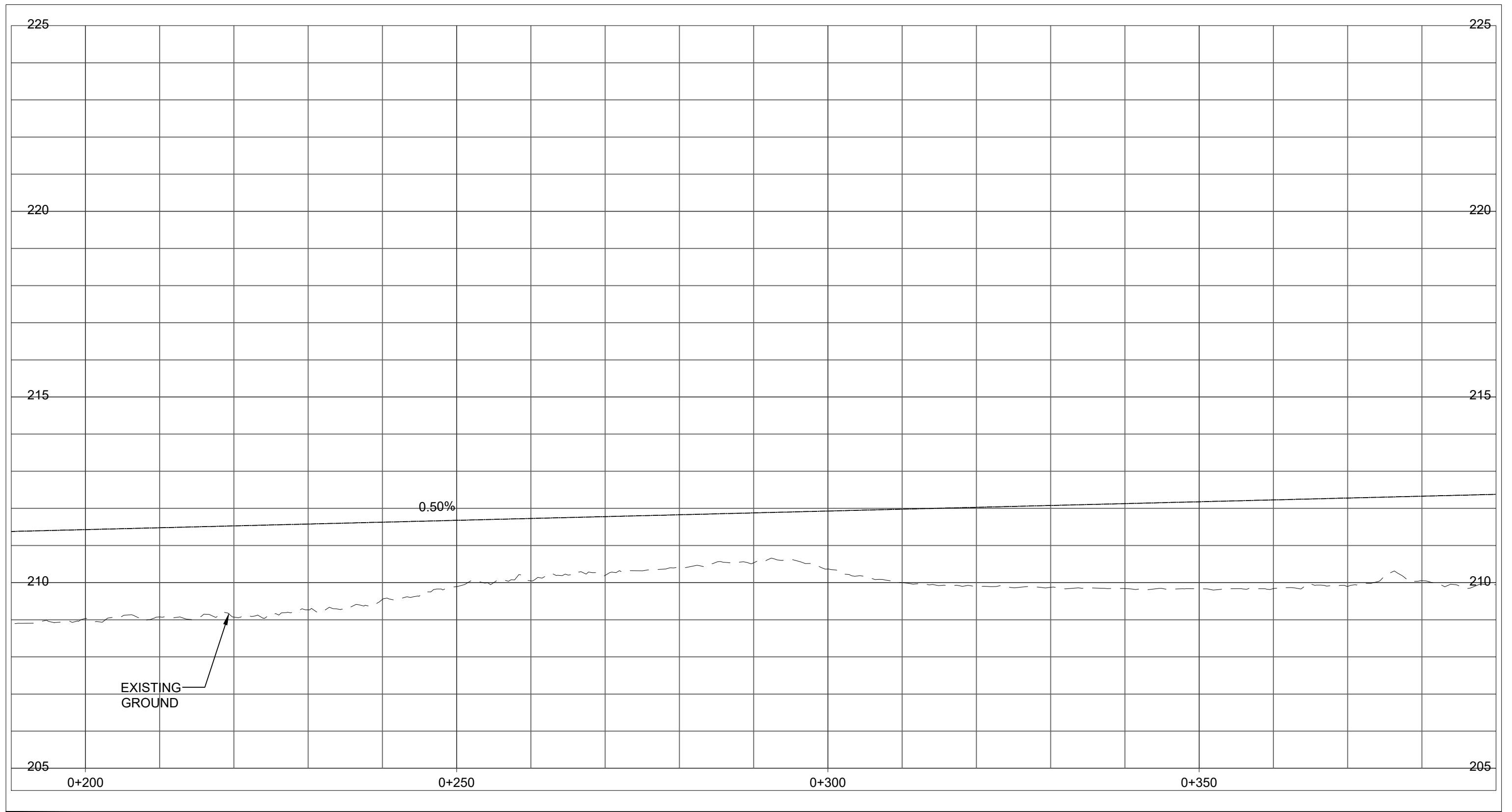
300-675 Cochrane Drive, West Tower  
 Markham ON  
 www.stantec.com

Client/Project  
 CITY OF VUAGHAN

Figure No.  
 PROFILE - 1

Title  
 ENVIRONMENTAL ASSESSMENT

Scale  
 1:500



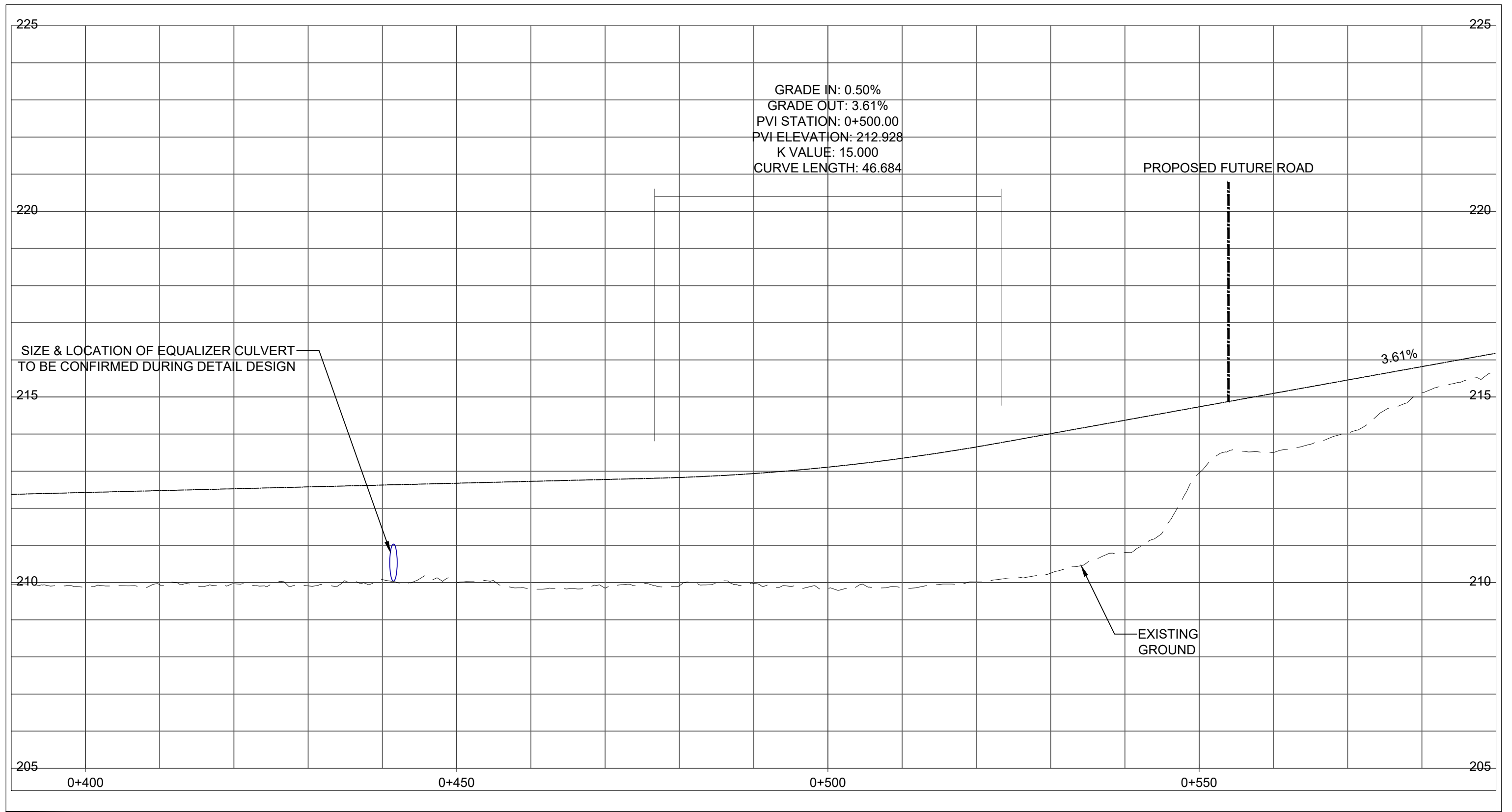
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 CITY OF VUAGHAN

Figure No.  
 PROFILE - 2

Title  
 ENVIRONMENTAL ASSESSMENT

Scale  
 1:500



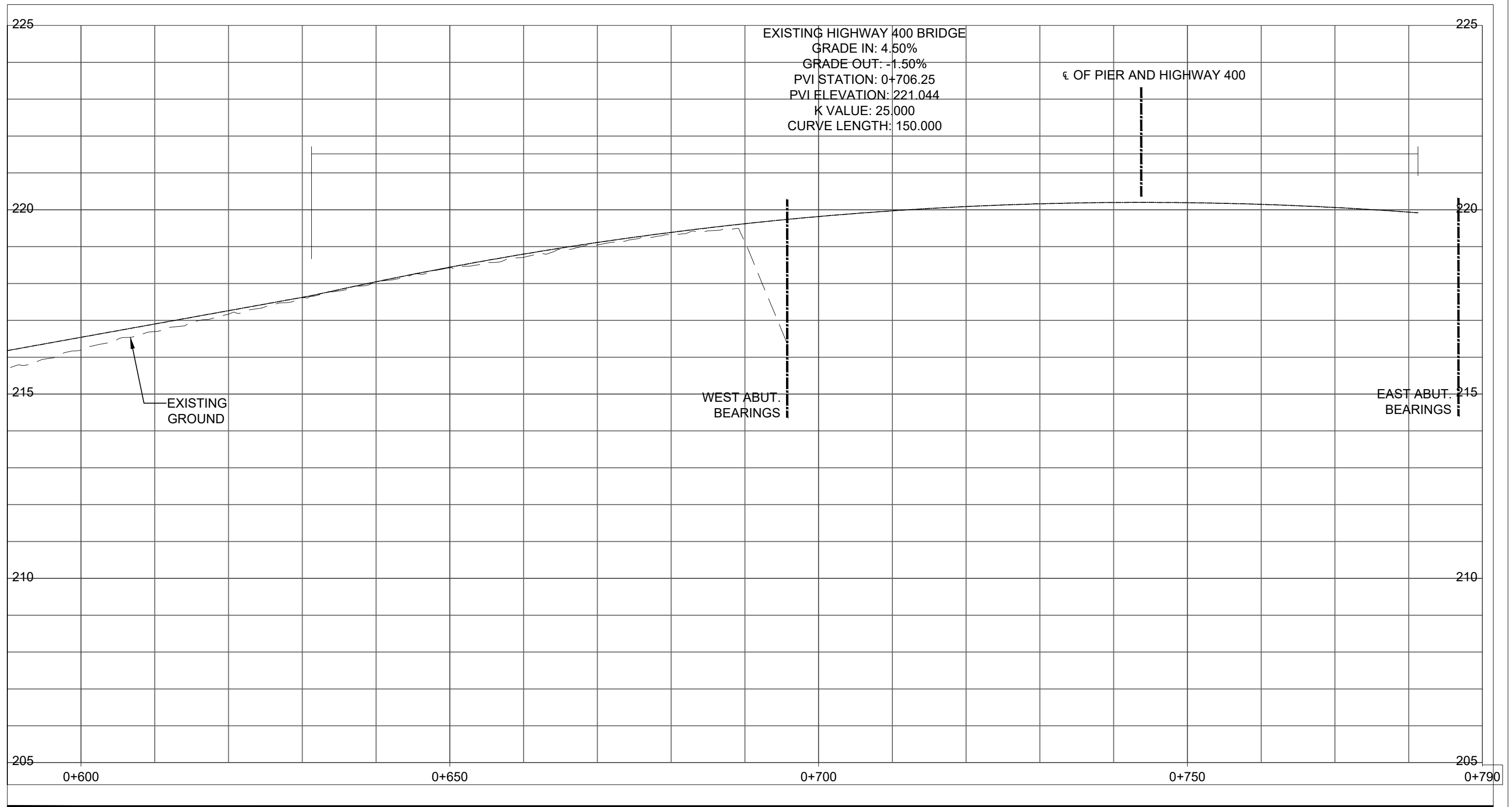
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 CITY OF VUAGHAN

Figure No.  
 PROFILE - 3

Title  
 ENVIRONMENTAL ASSESSMENT

Scale  
 1:500



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 CITY OF VUAGHAN

Figure No.  
 PROFILE - 4

Title  
 ENVIRONMENTAL ASSESSMENT

Scale  
 1:500

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"<sup>1</sup>.

**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

---

<sup>1</sup> Nazir Lalani and Kristopher Gunterson, Countermeasures Prove Effective in Reducing Bicycle Collisions, [www.ite.org](http://www.ite.org), May 2018

**Design and Contract Standards Office #2018-07**

- 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.

A handwritten signature in black ink, appearing to read "Phil Hutton". The signature is written in a cursive, flowing style.

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

cc: Distribution List

## **Design and Contract Standards Office #2018-07**

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## Design and Contract Standards Office #2018-07

### 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:** Tuesday, September 21, 2021 12:00 PM  
**To:** So, Richard; 'Mota, Steve'; 'Wong, Colin'; 'Kwan, Tim'; Robinson, Jennifer; tina.wang@york.ca; Thiru, Piragal; Cholewa, Peter; Addley, Diana; Mirhoseini, Arash; Selma Hubjer; Lucchese, Gregory; michael.marino@york.ca  
**Cc:** 'Crawford, Lauren'; Hertel, Tamas; 'Kakamousias, Diana'; Bartek Komorowski; Costa, Nelson; Patel, Tushar; Cimpan, Cristina  
**Subject:** RE: Bass Pro Mills EA, Region's Capital Planning and Delivery Branch Comments  
**Attachments:** 160540006Bass Pro Mills EA\_mtg\_min\_yr\_20210909.pdf; Weston Road Intersection with Bass Pro (002).pdf

Hello all,

Please find attached the minutes of the September 9<sup>th</sup>, 2021 meeting with York Region regarding the Bass Pro Mills Environmental Assessment Study.

Kindly review and advise if there are any comments. If none are received by September 28<sup>th</sup>, 2021, the minutes will be considered final.

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](mailto:hilda.esedebe@vaughan.ca)

**City of Vaughan | Infrastructure Development**  
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1  
[vaughan.ca](http://vaughan.ca)



-----Original Appointment-----

**From:** Hilda Esedebe  
**Sent:** Tuesday, August 31, 2021 3:07 PM  
**To:** Hilda Esedebe; Cimpan, Cristina; So, Richard; 'Mota, Steve'; 'Wong, Colin'; 'Kwan, Tim'; 'Kakamousias, Diana'; Robinson, Jennifer; 'Kaczor, Yvonne'; tina.wang@york.ca; Costa, Nelson; Patel, Tushar; Thiru, Piragal; Cholewa, Peter; Addley, Diana; 'Mirhoseini, Arash'  
**Cc:** 'Crawford, Lauren'; Selma Hubjer; Hertel, Tamas; Lucchese, Gregory  
**Subject:** Bass Pro Mills EA, Region's Capital Planning and Delivery Branch Comments  
**When:** Thursday, September 9, 2021 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).  
**Where:** Microsoft Teams Meeting

# Microsoft Teams meeting

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[Click here to join the meeting](#)

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---

**From:** Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>

**Sent:** Wednesday, August 25, 2021 12:38 PM

**To:** Cimpan, Cristina <[Cristina.Cimpan@york.ca](mailto:Cristina.Cimpan@york.ca)>; So, Richard <[Richard.So@york.ca](mailto:Richard.So@york.ca)>; 'Mota, Steve' <[Steve.Mota@york.ca](mailto:Steve.Mota@york.ca)>; 'Wong, Colin' <[Colin.Wong@york.ca](mailto:Colin.Wong@york.ca)>; 'Kwan, Tim' <[Tim.Kwan@york.ca](mailto:Tim.Kwan@york.ca)>; 'Crawford, Lauren' <[Lauren.Crawford@york.ca](mailto:Lauren.Crawford@york.ca)>; 'Kakamousias, Diana' <[Diana.Kakamousias@york.ca](mailto:Diana.Kakamousias@york.ca)>; Bartek Komorowski <[Yvonne.Kaczor@york.ca](mailto:Yvonne.Kaczor@york.ca)>; [tina.wang@york.ca](mailto:tina.wang@york.ca); Costa, Nelson <[nelson.costa@york.ca](mailto:nelson.costa@york.ca)>; [tusher.patel@york.ca](mailto:tusher.patel@york.ca)

**Cc:** Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>; Cholewa, Peter <[Peter.Cholewa@stantec.com](mailto:Peter.Cholewa@stantec.com)>; Addley, Diana <[Diana.Addley@stantec.com](mailto:Diana.Addley@stantec.com)>; Robinson, Jennifer <[Jennifer.Robinson@stantec.com](mailto:Jennifer.Robinson@stantec.com)>

**Subject:** RE: Bass Pro Mills EA, Region's Capital Planning and Delivery Branch comments

Hello all,

The Project Team for the Bass Pro Mills Environmental Assessment Study would like to meet with York Region staff to discuss the comments noted in the email below, which followed the July 27 TAC 2 Meeting.

Kindly complete the poll below or at this link ([View/vote in browser](#)) to advise of your availability on September 8 and 9, 2021. Your response would be appreciated **by August 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](mailto:hilda.esedebe@vaughan.ca)

**City of Vaughan | Infrastructure Development**

2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1

[vaughan.ca](http://vaughan.ca)



---

**From:** Cimpan, Cristina <[Cristina.Cimpan@york.ca](mailto:Cristina.Cimpan@york.ca)>

**Sent:** Wednesday, July 28, 2021 2:58 PM

**To:** Cholewa, Peter <[Peter.Cholewa@stantec.com](mailto:Peter.Cholewa@stantec.com)>

**Cc:** So, Richard <[Richard.So@york.ca](mailto:Richard.So@york.ca)>; Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>

**Subject:** [External] Bass Pro Mills EA, Region's Capital Planning and Delivery Branch comments

Hi Peter,

Please see below the comments from Region's CPD Branch :

- Spacing between the identified future Bass Pro Mills intersection and the existing Astonia Blvd intersection does not meet York Region minimum spacing requirements for adjacent signalized intersections. What are the potential intersection operation conditions/issues (i.e. exiting Astonia and weaving across three lanes to head east on Bass Pro etc.) that will need to be assessed as part of the EA
- Bass Pro EA needs to assess the future intersection configuration of Bass Pro extension with Weston Road (i.e. traffic signals, AODA features, cross walks, LT/RT lanes, centre median etc.). It should be noted that the Region is currently designing the widened of Weston Road to 6 lanes through the future Bass Pro extension. The future Bass Pro intersection being planned by the City was not shown on the Bass Pro Mills EA drawing and needs to be assessed/developed by the City as part of the EA to connect with the Region's 6 lane widening.
- Close proximity of the Bass Pro Mills intersection to the existing commercial driveway on Weston Road for storage site will create traffic operational issues for left turn traffic on Weston Road trying to access the commercial driveway. This has not been addressed in the traffic analysis/assessment study. Also, any future accesses should also be addressed in the traffic analysis/assessment study
- The Region's Traffic Safety/Operations should be consulted/circulated related to any traffic analysis/assessment study as part of the EA (i.e. [Tina.Wang@york.ca](mailto:Tina.Wang@york.ca) Traffic Engineer, [Nelson.costa@york.ca](mailto:Nelson.costa@york.ca) Traffic Safety and [Tushar.patel@york.ca](mailto:Tushar.patel@york.ca) Road Operations)

Regards,  
Cristina

**Cristina Cimpan, P. Eng.** | Planning and Design Coordinator | Capital Planning and Delivery Branch, Transportation Services Department

---

The Regional Municipality of York | Courier Address: 90 Bales Dr. E., East Gwillimbury, ON L0G 1V0 | Mailing Address: 17250 Yonge Street | Newmarket, ON L3Y 6Z1

O: 1-877-464-9675 ext. 75390 | [cristina.cimpan@york.ca](mailto:cristina.cimpan@york.ca) | [www.york.ca](http://www.york.ca)

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Bass Pro Mills Drive Extension, Municipal Class Environmental Assessment  
 Stakeholders Group – Region of York Meeting

Date/Time: September 9, 2021 / 11:00 AM  
 Place: Microsoft Teams  
 Next Meeting: TBD  
 Attendees: **York Region:** Tim Kwan (TK), Gregory Lucchese (GL), Michael Marino (MM), Steve Mota (SM), Richard So (RS), Piragal Thiru (PT), Tina Wang (TW), Colin Wong (CW)  
**City of Vaughan:** Hilda Esedebe (HE), Selma Hubjer (SH)  
**Stantec:** Peter Cholewa (PC), Arash Mirhoseini (AM), Diana Addley (DA)  
 Absentees: N/A  
 Distribution: All Attendees

**Item:** **Action:**

## Introduction

TAC Meeting 2 was held on July 27, 2021 to inform stakeholders of the progress to date and outline the evaluation and selection of a preferred preliminary design for the MCEA study of the extension of Bass Pro Mills Drive between Highway 400 and Weston Road.

Info

On July 28, 2021 the Region of York provided comments in relation to the TAC 2 presentation on the following matters, which formed the discussion summarized herein:

- 1.) Spacing between the identified future Bass Pro Mills intersection and the existing Astona Boulevard intersection and potential intersection operation conditions/issues (i.e., weaving).
- 2.) Future intersection configuration of Bass Pro extension with Weston Road (i.e., traffic signals, AODA features, cross walks, LT/RT lanes, centre median). Presentation of the future Bass Pro extension within the Bass Pro Mills EA Study.
- 3.) Proximity of the Bass Pro Mills intersection to the existing commercial driveway on Weston Road for the Storage Mart site
- 4.) Circulation of related traffic analysis/assessment studies to the Region of York.

Info

## Discussion

### 1.) Intersection Spacing

Stantec presented a plan (attached) that indicated the centre line to centre line distance between the proposed Bass Pro Mills Drive/Weston Road intersection and Astona Boulevard/Weston Road intersection locations would be

Info

**Item:**

**Action:**

approximately 243 m, and the distance between curb returns would be approximately 196 m.

Per Region intersection spacing guidelines for a 60 km/hr design speed, the spacing between curb returns is indicated as 215 m minimum if safety and operational criteria are met.

Stantec indicated that based on traffic modeling, the weave demand between Bass Pro Mills Drive and Astona Boulevard would be 165 movements in the AM (southbound from Astona Boulevard) and 75 movements in the PM (northbound to Astona Boulevard). Given these modeling results, it was noted that the weave movement was very low and it was noted that the weave movement may be assisted by traffic signal timing (Bass Pro Mills Drive to be signalized) and/or right turn restrictions on red (provided intersection traffic capacity is not compromised). Stantec noted that with the emerging VMCS, access side friction on the east side of Weston Road, between Bass Pro Mills and Astona Boulevard, would be eliminated, easing the weave movement.

Info

Stantec noted that the 2041 horizon year was considered in the analysis.

Info

The Region inquired regarding the outcome of the modelling (i.e., 75 veh/hr movements from Bass Pro Mills Drive onto Astona Boulevard), and whether it could be presumed to be residential, not traffic infiltration. Stantec confirmed that the modelling used existing condition traffic counts within the calibration but did not quantify what was residential versus traffic infiltration.

Info

Stantec noted that alternative alignments (and associated intersection locations) for the proposed extension were reviewed, including alignments beyond the study area; however, these were screened out due to the impacts (property, cost, ability to promote City vision for area development, impacts to businesses, etc.). The preferred alignment only impacts one property.

Info

The City further noted that an alignment alternative to connect at Astona Boulevard was evaluated and ranked lower than the proposed alignment due to lack of compatibility with the VMCS, and in response to the concerns raised by the Weston Downs community regarding traffic infiltration, and the City of Vaughan's Council position on an alignment directly to Astona Boulevard. The evaluation of alternative alignments table considers a range of evaluation criteria, including compatibility with the VMCS. The evaluation process will also be documented within the Environmental Study Report (ESR).

Info

HE indicated that the traffic report will also address the merits/disadvantages of each alignment to support the preferred recommended alignment and will be provided to the Region for review.

Info

**Item:**

**Action:**

**2.) Configuration of Future Intersection**

Info

The Region of York noted that they are planning to widen Weston Road from the proposed future Bass Pro Mills Drive intersection to north of Rutherford Road in 2027.

There was a consensus that the City's Bass Pro Mills Drive MCEA study and preliminary design plans are to show the general lane configuration layout on Weston Road, traffic medians and notes to the effect that the proposed future intersection will be signalized.

Stantec

Stantec noted that the active transportation facilities within the Weston Road boulevard will not be depicted within the preliminary design plans, as these facilities are pending the design of Weston Road by the Region.

Info

It was agreed that the preliminary design plans should generally show what was presented along Weston Road as part of the Individual EA, noting that the design details will be coordinated between the Region and the City during the detail design phase of Bass Pro Mills Drive extension project.

Info

**3.) Storage Mart Site Access**

Stantec

Stantec indicated that the existing/only access point to the Storage Mart property from Weston Road would be an issue in relation to the distance from the Bass Pro Mills Drive intersection and traffic median on Weston Road.

Stantec noted that a separate meeting has been scheduled with the Storage Mart property owners for September 22<sup>nd</sup>; at which time the relocation of the existing access further to the south will be discussed.

Info

Stantec to advise the Region of any outcomes/resolutions after the meeting with the property owner, or if arrangements are proposed for a relocation of the existing entrance.

Stantec

**4.) Traffic Study**

Stantec indicated that the traffic report will discuss justification where minimum technical guidelines are not satisfied.

Stantec to circulate the draft traffic report to the Region, prior to the formal circulation of the draft Environmental Study Report (ESR) to agencies/stakeholders for review and comments.

Stantec

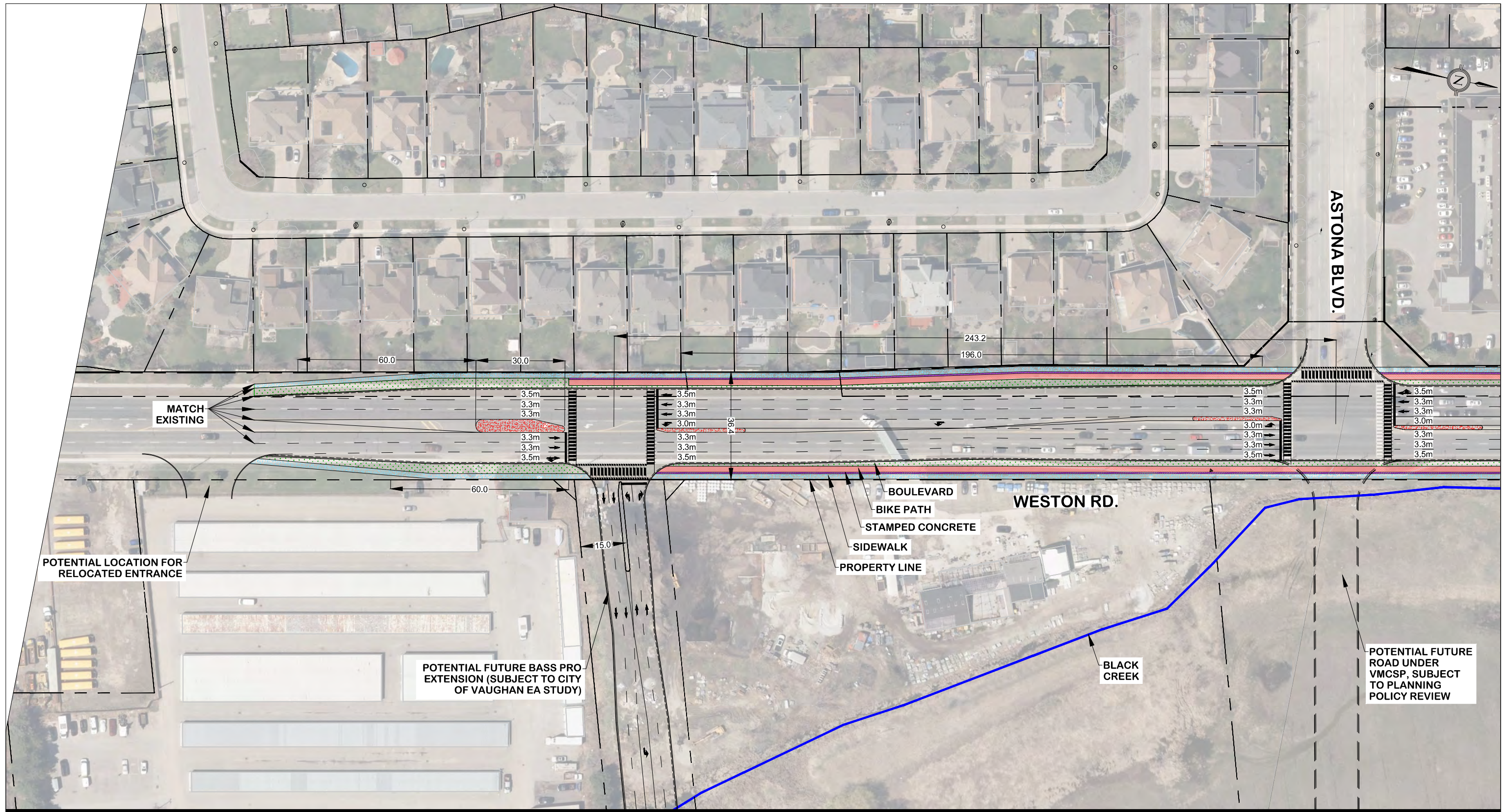
The meeting adjourned at 12:00 PM

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.






**Peter Cholewa, P.Eng.**

Senior Associate, Transportation

Peter.Cholewa@stantec.com



LEGEND:

	CONCRETE SIDEWALK
	STAMPED CONCRETE BUFFER
	BIKE PATH
	BOULEVARD
	CONCRETE TRAFFIC MEDIAN

- NOTES:
1. LOCATION FOR UTILITIES TO BE DETERMINED DURING DETAIL DESIGN
  2. BUS STOP LOCATIONS AND DESIGN TO BE DETERMINED AT ALL EXISTING AND PROPOSED FUTURE LOCATIONS
  3. LOCATION OF RETAINING WALLS TO MINIMIZE GRADING AND PROPERTY IMPACTS TO BE DETERMINED DURING DETAIL DESIGN



## Robinson, Jennifer

---

**From:** Hilda Esedebe <Hilda.Esedebe@vaughan.ca>  
**Sent:** Tuesday, September 21, 2021 12:37 PM  
**To:** Bartek Komorowski  
**Cc:** Kakamousias, Diana; Cholewa, Peter; Addley, Diana; Robinson, Jennifer  
**Subject:** RE: Bass Pro Mills EA, Region's Capital Planning and Delivery Branch Comments

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Good Afternoon Yvonne,

Thank you for your comments. Responses are below:

1. This project is further north beyond the Bass Pro Mills EA Study limits.
2. This comment has been noted and will be reviewed by the project team.

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](mailto:hilda.esedebe@vaughan.ca)

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---

**From:** Kaczor, Yvonne <Yvonne.Kaczor@york.ca>  
**Sent:** Tuesday, September 21, 2021 12:10 PM  
**To:** Hilda Esedebe <Hilda.Esedebe@vaughan.ca>  
**Cc:** Kakamousias, Diana <Diana.Kakamousias@york.ca>  
**Subject:** [External] RE: Bass Pro Mills EA, Region's Capital Planning and Delivery Branch Comments

Good Afternoon Hilda,

On behalf of Sustainable Mobility I would like provide a couple of comments:

1. The detailed design of Active Transportation Facility (In boulevard cycle tracks) on Weston Rd between Major Mackenzie Dr and Teston Rd are being currently undertaken by the City of Vaughan
2. At the intersection of Bass Pro and Weston Road, combined crossrides at all legs of the intersection are being required as per Region's policy and standards.

Should you have any questions please let me know

Regards,

**Yvonne Kaczor, M.Eng., P.Eng.** | Senior Active & Sustainable Transportation Specialist, Transportation and Infrastructure Planning, Transportation Services

The Regional Municipality of York | 17250 Yonge Street | Newmarket, ON L3Y 6Z1  
1-877-464-9675 ext. 75564 | [yvonne.kaczor@york.ca](mailto:yvonne.kaczor@york.ca) | [york.ca](http://york.ca)

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---

**From:** Hilda Esedebe <[Hilda.Esedebe@vaughan.ca](mailto:Hilda.Esedebe@vaughan.ca)>

**Sent:** Tuesday, September 21, 2021 12:00 PM

**To:** So, Richard <[Richard.So@york.ca](mailto:Richard.So@york.ca)>; Mota, Steve <[Steve.Mota@york.ca](mailto:Steve.Mota@york.ca)>; Wong, Colin <[Colin.Wong@york.ca](mailto:Colin.Wong@york.ca)>; Kwan, Tim <[Tim.Kwan@york.ca](mailto:Tim.Kwan@york.ca)>; Robinson, Jennifer <[Jennifer.Robinson@stantec.com](mailto:Jennifer.Robinson@stantec.com)>; Wang, Tina <[Tina.Wang@york.ca](mailto:Tina.Wang@york.ca)>; Thiru, Piragal <[Piragal.Thiru@york.ca](mailto:Piragal.Thiru@york.ca)>; Cholewa, Peter <[Peter.Cholewa@stantec.com](mailto:Peter.Cholewa@stantec.com)>; Addley, Diana <[Diana.Addley@stantec.com](mailto:Diana.Addley@stantec.com)>; 'Mirhoseini, Arash' <[Arash.Mirhoseini@stantec.com](mailto:Arash.Mirhoseini@stantec.com)>; Selma Hubjer <[Selma.Hubjer@vaughan.ca](mailto:Selma.Hubjer@vaughan.ca)>; Lucchese, Gregory <[Gregory.Lucchese@york.ca](mailto:Gregory.Lucchese@york.ca)>; Marino, Michael <[Michael.Marino@york.ca](mailto:Michael.Marino@york.ca)>

**Cc:** Crawford, Lauren <[Lauren.Crawford@york.ca](mailto:Lauren.Crawford@york.ca)>; Hertel, Tamas <[Tamas.Hertel@york.ca](mailto:Tamas.Hertel@york.ca)>; Kakamousias, Diana <[Diana.Kakamousias@york.ca](mailto:Diana.Kakamousias@york.ca)>; Kaczor, Yvonne <[Yvonne.Kaczor@york.ca](mailto:Yvonne.Kaczor@york.ca)>; Costa, Nelson <[Nelson.Costa@york.ca](mailto:Nelson.Costa@york.ca)>; Patel, Tushar <[Tushar.Patel@york.ca](mailto:Tushar.Patel@york.ca)>; Cimpan, Cristina <[Cristina.Cimpan@york.ca](mailto:Cristina.Cimpan@york.ca)>

**Subject:** RE: Bass Pro Mills EA, Region's Capital Planning and Delivery Branch Comments

**CAUTION!** This is an external email. Verify the sender's email address and carefully examine any links or attachments before clicking. If you believe this may be a phishing email, forward it to [isitsafe@york.ca](mailto:isitsafe@york.ca) then delete it from your inbox. If you think you may have clicked on a phishing link, report it to the IT Service Desk, ext. 71111, and notify your supervisor immediately.

Hello all,

Please find attached the minutes of the September 9<sup>th</sup>, 2021 meeting with York Region regarding the Bass Pro Mills Environmental Assessment Study.

Kindly review and advise if there are any comments. If none are received by September 28<sup>th</sup>, 2021, the minutes will be considered final.

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](mailto:hilda.esedebe@vaughan.ca)

**City of Vaughan | Infrastructure Development**  
2141 Major Mackenzie Dr., Vaughan, ON L6A 1T1  
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## Robinson, Jennifer

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**From:** Hilda Esedebe <Hilda.Esedebe@vaughan.ca>  
**Sent:** Tuesday, September 21, 2021 1:28 PM  
**To:** Manirul Islam  
**Cc:** 'Adam Miller'; 'Harsimrat Pruthi'; 'Suzanne Bevan'; Cholewa, Peter; Addley, Diana; Robinson, Jennifer  
**Subject:** FW: CFN 61893 - Bass Pro Mills EA - TAC - Meeting 2- TRCA's Comments  
**Attachments:** CFN 61893 Bass Pro Mills Extension EA - Comments on TAC 2 and Plan -prfofile.pdf; basspromills\_trca\_comment\_response\_tbl\_eml\_20210921.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hello Manirul,

Please find attached the Project Team's response to TRCA's comments regarding the Bass Pro Mills Environmental Assessment TAC 2 Meeting materials.

If there are any follow up comments/questions, please let me know.

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](mailto:hilda.esedebe@vaughan.ca)

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**From:** Manirul Islam  
**Sent:** Friday, August 6, 2021 11:02 AM  
**To:** Hilda Esedebe  
**Cc:** 'Cholewa, Peter'; Adam Miller; Harsimrat Pruthi; Suzanne Bevan  
**Subject:** [External] RE: CFN 61893 - Bass Pro Mills EA - TAC - Meeting 2- TRCA's Comments

Good morning Hilda.

Please find attached the comments letter on TAC – 2 presentation materials, and plan & profile prepared in support of the Bass Pro Mills Extension EA.

Should you have any question 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

**Bass Pro Mills Drive Extension Between Highway 400 and Weston Road  
Municipal Class Environmental Assessment - Schedule C  
TAC #2 Comment/Response Table - TRCA**

Item #	Date		Comment	Stantec/City of Vaughan Response
1	8/6/2021	Email Following TAC #2	A 14.43 m open bottom structure with 3.6 m closed bottom box culverts on each side shown as the proposed crossing for Black Creek. Please note that the Environmental Study Report should demonstrate that TRCA's Valley and Stream Crossing Guidelines (available at provided link) and CVC's Fish and Wildlife Crossing Guideline (available at provided link) have been considered and implemented in the proposed design.	The Environmental Study Report will demonstrate that the TRCA Valley and Stream Crossing and CVC Fish and Wildlife Crossing Guidelines have been considered as part of the study process, and will continue to be considered throughout the detail design phase of the project.
2	8/6/2021	Email Following TAC #2	Slide 28 shows that relocation of the Black Creek is being proposed. Please note that Fluvial Geomorphology Study and Environmental Study Report (with an environmental impact assessment component) would be required to analyse the feasibility of the relocation as well as analyse potential configuration alternatives. These analyses should consider what is being proposed to the Black Creek, its tributary and connected wetland. a. Please refer the the Channel Modifications Design and Submission Requirements, available at: (link), under Design and Planning Guidelines. b. Please note that the water balance for the wetland (to be retained in the landscape) should be maintained.	<p>As discussed at our May 25, 2021 meeting, realignment options through the adjacent Vaughan Mills Centre Secondary Plan area will be reviewed at a high level to confirm feasibility and functionality; however, conceptual design of the potential future realigned corridors will not be carried out as part of this Municipal Class Environmental Assessment. These investigations will be deferred to such time that land access and the land use configuration is known. As such, this detailed review will be completed by others as part of the Planning Act requirements/Site Plan Application process.</p> <p>A limited Environment Impact Assessment report that addresses potential impacts to natural heritage features in the Study Area based on the preferred alignment is being prepared as part of this study. The report will include information required to prepare the 'Environmental Preservation and Mitigation' Section of TRCA's Channel Modification Design and Submission Requirements. However, it will be noted that some materials are not yet available at this time given the lack of Permission-to-Enter, and that the design is preliminary in nature. As such, the preparation of these materials (i.e., Restoration Plan, Access Routes, Working &amp; Staging Areas, Compensation Measures and Monitoring Plan) will be deferred to the detail design phase of the project, the timing of which is anticipated to begin in 2024. Stantec is also preparing a fluvial geomorphology report that will analyze the crossing and realignment of Black Creek at Bass Pro Mills Drive to the extent possible in the absence of site access. A copy of these reports will be provided for TRCA's review as part of the Draft Environmental Study Report.</p> <p>Stantec will be using the TRCA's risk evaluation to provide appropriate recommendations to protect for the water balance of the wetland feature, as appropriate.</p>

3	8/6/2021	Email Following TAC #2	<p>Please note that the proposed approach impacts Black Creek, a tributary and wetland. It appears that a portion of the wetland will be completely removed. Please demonstrate that avoidance and minimization of impacts to the natural features have been incorporated as much as possible to the proposed design.</p> <p>a. For example both alignments (A and B) shown on Slide 23 are impactful to the top wetland; have other alternatives, which would avoid impacts to the wetland, been considered?</p> <p>i. Also, the proposed Plan Profile shows an "equalizer culvert" to be the connection between the two sides of the wetland - to the north and to the south of the proposed road. While the drawing states that the size &amp; location of equalizer culvert are to be confirmed during detail design, TRCA expects that terrestrial passage is incorporated into this crossing, as per TRCA's Valley and Stream Crossing Guidelines</p> <p>b. For any impacts deemed unavoidable, such as loss of wetland, compensation will be required. Please refer to TRCA's Guideline for Determining Ecosystem Compensation - including replication of Ecosystem Structure and Land Base (available at provided link).</p>	<p>As part of the Municipal Class Environmental Assessment (MCEA) process, all reasonable alternatives are considered. Phase 2 of the MCEA includes consideration of alternatives to the undertaking, many of which would avoid impacts to the existing wetland feature (i.e., Do Nothing; Improve Transit/Employ Travel Demand Management Measures; intersection and/or operational improvements, improving other existing east-west roadways). However, the need and justification for the roadway extension has been demonstrated through the Vaughan Mills Centre Secondary Plan (VMCSP), and the traffic analyses completed as part of this MCEA study. With respect to alternative alignments, 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. Please also note that the wetland feature is situated within the VMCSP area, which is being planned for future employment and office use, subject to future review under the Planning Act process.</p> <p>The TRCA's Guideline for Determining Ecosystem Compensation, including replication of Ecosystem Structure and Land Base will be considered as part of this project. However, the current design is preliminary in nature. Design details, including the suggested terrestrial ecopassage, will be confirmed during detail design, at which time, additional species specific surveys and OWES can also be undertaken.</p>
4	8/6/2021	Email Following TAC #2	<p>TRCA is pleased to see bio-swales incorporated in the proposed road plan. At this time, it is unclear if other SWM controls will be provided to achieve TRCA's criteria for water quantity, quality, and erosion control. TRCA looks forward to reviewing the SWM scheme when it is available.</p>	<p>A copy of the final Stormwater Management (SWM) Report will be provided for TRCA's review as part of the Draft Environmental Study Report.</p>
5	8/6/2021	Email Following TAC #2	<p>A 14.43 m open bottom structure with 3.6 m closed bottom box culverts on each side is shown as the proposed crossing for Black Creek. When available, please provide crossing details such as hydraulic/flood plain modelling and fluvial geomorphic recommendations to demonstrate this proposed structure is in conformance with TRCA's Watercourse Crossing Guide. Please see comments number 1 for further information.</p>	<p>A copy of the Fluvial Geomorphological Assessment and Stormwater Management reports will be provided for TRCA's review as part of the Draft Environmental Study Report.</p>