VAUGHAN

# COMMITTEE OF THE WHOLE (2) – June 21, 2022

## STAFF COMMUNICATIONS

| Distributed June 10, 2022 | | Subject |
|---|---|---|
| SC1. | Memorandum from the Deputy City Manager, Public Works, dated June 21, 2022. | January 17, 2022 Winter Storm Event |
| **Distributed June 17, 2022** | | |
| SC2. | Memorandum from the Deputy City Manager, Infrastructure Development, dated June 13, 2022. | Kirby Road Widening (Jane to Dufferin) Municipal Class Environmental Assessment Study – Notice of Completion, June 21, 2022 COW (2) |
| SC3. | Memorandum from the Deputy City Manager, Infrastructure Development, dated June 15, 2022. | Committee of the Whole (2), June 21, 2022 - Progress on the Vaughan Transportation Plan |
| SC4. | Memorandum from the Deputy City Manager, Infrastructure Development, dated June 17, 2022. | Bass Pro Mills Drive Extension (Highway 400 to Weston Road) Municipal Class Environmental Assessment (MCEA) Study – Notice of Completion, June 21, 2022 COW (2) |



**Please note there may be further Communications.**

**STAFF COMMUNICATION**
**FOR INFORMATION ONLY**

**SC 1**
**Staff Communication**
**CW (2) - June 21, 2022**

**DATE:** June 21, 2022

**TO:** Honourable Mayor and Members of Council

**FROM:** Zoran Postic, Deputy City Manager, Public Works

**RE:** STAFF COMMUNICATION - Committee of the Whole (2), June 21, 2022
January 17, 2022 Winter Storm Event

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## 1. Purpose

- To follow-up on the January 18, 2022, Committee of the Whole request to report on the January 17, 2022, winter storm event.
- To provide an overview of the timelines for the winter maintenance service level review.
- To outline the strategy to address parked vehicles impacting winter operations.

## 2. Summary

This memorandum provides an update on the City's winter maintenance operations and performance during the January 17, 2022, winter storm event. Also included in this memorandum is an overview of strategy to address the ongoing implications of parked cars on winter operations and key tactics that the City employed this year and will be implementing going forward. A brief update on the winter maintenance service level review that is currently underway will be outlined due to potential future service impacts and service level changes.

- At the January 18, 2022, Committee of the Whole meeting, Council requested that staff report back on how the City performed during the January 17, 2022, winter storm event. In particular, Council requested that an analysis be conducted on any differences in service delivery between the east and west districts.

- The January 17, storm event was the greatest daily snowfall in 14 years and the second most in the past 23 years. The total snowfall received during this one event was more snow than the City received all of January to March of last year.

- Extensive analysis and review was conducted, which indicates that the City performed exceptionally well overall in its response to the January 17, 2022, extreme winter storm event, and minimized risk to the community.

- While services overall were impacted due to the unprecedented snow event, Blocks in Wards 4 and 5, namely Blocks 8, 9, 10 and 18, were impacted more than others. This led to service levels not being able to be maintained for a period of time. The City proceeded to take the following actions:
    - Directed the contractor to return to the blocks where standards were not achieved, to redo the operations at no cost to the City;
    - Assessed liquidated damages;
    - Instructed the contractor to review driver training and standards; and
    - Going forward, the City will develop an extreme weather winter response plan complete with new service levels.

- A service level review is currently underway to review the City's winter maintenance program. The objective of the review is to determine the most appropriate winter maintenance service levels while remaining financially and environmentally prudent. A staff report will be presented in 2023.

- In 2021, additional strategies to address the ongoing issue of parked vehicles blocking winter maintenance activities were implemented and staff continue to plan tactics going forward to ensure a proactive approach. These measures include an even greater focus on enforcement and the development of communications tactics by working with various partners across the City.

## 3. Analysis

**The January 17, 2022, winter storm has seen the greatest daily snowfall in 14 years and the second most snowfall in 23 years with a snow accumulation of up to 40 centimeters**

The January 17, 2022, winter storm was an anomaly that caught numerous municipalities across the GTA by surprise. The City has not experienced this type of a snowfall in the past 14 years and this is the second largest snowfall in the past 23 years. The snow accumulation for this event was as high as 8-10 centimeters per hour with wind gusts of up to 70 kilometers per hour. Snow began on January 16, 2022, at 11:30 p.m. and ended on January 17, 2022, at 6:00 p.m., with blowing snow continuing into the next morning. The City received a total accumulation of snow of up to 40 centimeters in a relatively small timeframe. Prior to this, the City closely monitored the situation and declared its first Significant Weather Event that morning of the snowfall.

**The City followed protocols and procedures closely, however experienced unique challenges related to the severe storm event**

A review of the City's operational response effort indicates that the significant snowfall impacted the City's ability to meet required service levels. As a result of the heavy snowfall in a short period of time and continuous gusting of winds, winter maintenance plowing operations were affected due to poor visibility, making plowing operations significantly

slower than usual. The substantial snowfall also impacted city-wide windrow services where delays were experienced. Sidewalk operations were even more significantly impacted due to several compounding factors of snow removal operations in other areas implicating sidewalks. Moreover, overnight cold temperatures caused freezing of snow and turned snow into ice, further compromising sidewalk clearing operations and causing equipment failures.

**The City was able to minimize risk to the community through proactive and sound operational planning**

The City took a proactive approach in tracking the January 17, 2022, winter storm and declared a significant weather event well in advance, realizing the importance to provide information to the community in a timely fashion. Planning and preparations to strategize on a response strategy occurred prior to the winter storm with various options and risks assessed to ensure the safety of the City's entire network. The City's decision to make safety paramount led to emergency vehicles always being able to access local roads, and residents not becoming stranded on unplowed roads. While the city's strategy to conduct multiple passes on streets impacted windrow clearing operations, it did have the benefits of ensuring the safety of our residents.

**A comprehensive communications plan was developed to respond to the winter weather event**

Prior the declaration of a Significant Weather Event, Public Works worked closely with the Corporate and Strategic Communications department to develop a comprehensive communications plan to respond to the extreme winter event which included a wide range of tactics, such as:

- Updating alerts on vaughan.ca/snow and publishing hero banners;
- Working with Access Vaughan to update the Snow Hotline;
- Issuing public service announcements supported by Council communications packages and social media content;
- City-wide City Hall Connects newsletter;
- Digital sign network priority deployments; and
- Proactive communications to encourage residents not to park on the roads during a snowfall.

The Corporate and Strategic Communications department employed all communications channels to help inform the public of how the significant weather event would impact service levels, in an effort to provide safety tips and guidelines that residents could use to support the City's winter maintenance efforts. Below is an overview of the significant communications conducted to support residents and businesses:

- 17 winter-related public service announcements
- 194 snow-related graphics
- 8 winter-related videos

- 4 on-site photo and video shoots
- 265+ snow-related social media posts
- 161+ citizen responses
- 7,120 views of vaughan.ca/snow
- 360,000 digital sign impressions

The City also conducted numerous briefings with Council Executive Assistants to keep them informed of the situation and plans in place to support both operations and communications.

The City received over 1,900 inquiries and correspondence during the winter storm. The City received numerous inquiries from residents which mainly centered around windrow services, road clearing and status of open case files.

**A post-storm inspection was completed to assess the quality of work in the East and West districts of the City and services were generally the same with a few exceptions**

The City conducted thorough inspections and reviews which concluded that the City's services were consistent within the East and West sides of the City, with the exception of certain locations within certain blocks on the east side blocks 8 and 9 (Steeles to Hwy 407 – Bathurst to Dufferin), block 10 (Hwy 7 to Rutherford, Bathurst to Dufferin) and block 18 (Rutherford to Major Mackenzie, Dufferin to Keele). Due to the significant snowfall and a larger percentage of snow accumulation on the south side of the City, review and analysis shows that standards were not achieved in these locations.

In the locations where standards were not met, the City proceeded to direct the contractor to return to those particular locations and redo operations at no cost to the City. The City also assessed liquidated damages to the contractor, as well as instructing the contractor to review driver training and ensure expectations and standards are clear to all winter maintenance operators.

**Key tactics are being planned on a go-forward basis, including a comprehensive service level review of the City's winter maintenance program**

Staff will be implementing an extreme winter weather response plan by 2023, complete with new service levels similar to what other major municipalities are planning to do considering the severe winter weather event on January 17, 2022, and to ensure that the City is prepared during extreme weather events. The storm severity index will include varying service levels depending on the magnitude of the storm.

A service level review is currently underway, which will ensure that the City has the most appropriate levels of service, while remaining financially and environmentally prudent. The service level review will include a jurisdictional scan of service levels in neighbouring municipalities, current service levels including a review of current practices, options for service changes including looking at efficiencies and to meet future service demands, a risk assessment and cost-benefit analysis, and options for future service levels, e.g.,

options for windrow clearing services and windrow coupling, creation of a winter storm severity index, enhanced education and communication, etc.

**Deterring parked vehicles obstructing winter operations will improve operational efficiencies and the citizen experience**

When parked vehicles prevent winter maintenance contractors from performing winter maintenance activities, contractors notify the City's roads winter maintenance team of a parked vehicle obstruction and provide a location and/or a photo. To ensure that the contractor complies with the performance requirements stipulated in the contract, these road segments are often left untreated and, as a result, not cleared within the standard service level timelines. In those cases, City staff allow time for parked vehicles to move and then have the winter maintenance contractors return to plow those road segments over the subsequent days where possible. If parked vehicles continue to obstruct the roadway, the road segments remain unplowed.

When parked vehicles obstruct snowplows, internal labour, equipment, fuel, and additional contractor costs are incurred as the contractors must return to treat the road segments that were not completed. This delay in service causes a safety risk and inconvenience to road users. This in turn triggers citizen service calls and complaints to the City, and results in additional operational effort for each response. In advance of and during a winter operation, Enforcement Officers respond to calls for service and tag vehicles that will impact winter maintenance operations. The resulting fines serve as a deterrent for future violations.

This year, staff also developed a comprehensive strategy to address parked vehicles on city streets that impact winter maintenance activities, which includes maximizing communication and enforcement efforts, using an evidence-based approach to understanding areas of greatest concern and enhancing cross-departmental and contractor collaboration. Staff have also begun to work with internal partners to explore additional measures that may be considered for upcoming years.

**Previous Reports/Authority**
By-Law 064-2019 - Parking
By-Law 075-2019 – Amendment to Parking By-Law 064-2019

**The City's Parking By-Law 064-2019 prohibits parking in a manner that interferes with the clearing of snow.**

Parking By-Law 064-2019, as amended, defines an Administrative Monetary Penalty (AMP) of $75.00 for incidents where parking interferes with the clearing of snow on City streets. The Parking By-Law states that police or municipal by-law enforcement may tow parked, standing or stopped vehicles that are impeding the operations of the City. Vehicles may be removed, stored in a suitable place, and associated costs and charges applied as a lien on the motor vehicle.

**Staff continue to investigate the impact of parked vehicles on winter maintenance activities and have developed several initiatives to mitigate this impact**

A joint study was completed for the 2019/2020 and 2020/21 winter seasons to understand the impact of increased and more strategic enforcement on winter maintenance activities. As per the City's winter maintenance contract, the winter maintenance contractors are required to note and provide the City with information of all parked vehicles that impact road treatment and clearance. This information is being collected and analyzed to understand the impact on a street-by-street basis. Preliminary data indicates that there are many streets impacted by parked vehicles. It also identifies the streets with the highest percentage of reported issues and enables parking deterrence efforts to be focused where they can have the most impact. Additional data is currently being collected during the 2021/2022 winter season so that Public Works and By-law enforcement can target the appropriate locations to enhance service delivery and citizen experience during winter events.

**An active communication program for citizens was developed to educate residents on the impact of parked cars on winter operations**

Working with the Corporate and Strategic Communications department, the City currently employs a comprehensive approach to distribute winter maintenance information to the community. This includes messaging to educate residents about the importance of clearing streets of parked vehicles, as well as the impact that parked vehicles have on winter maintenance activities. Tactics included, but were not limited to, a comprehensive strategy that used social media outlets, the City's website, eNewsletters, newsletters sent to homes and digital signage, among others. The Corporate and Strategic Communications department also provides packages to Council which include social media and eNewsletter content related to parked vehicles and winter operations.

For the 2021/ 2022 winter season, communication to the public included the following:

1. An informational postcard distributed through Canada Post direct mail to all households advising citizens to keep cars off the street while plows are out;
2. A dedicated winter maintenance section, including service levels and on-street parking messaging in the City Hall Connects Newsletter sent to all homes and businesses;
3. Further optimization of the City's website to share more information such as advising that on-street parking is not permitted, that parking on the road impacts winter maintenance activities, and that there is a potential that vehicles will be ticketed and towed;
4. Use of mobile signage with brief and direct statements to be deployed at strategic locations indicating that vehicles should not be parked on the road when it is snowing;
5. Pre-recorded on-street parking messaging to be released during plowing events on the City's on-hold messaging system through Access Vaughan;
6. Digital signage to be released during plowing events reminding citizens not to park on streets while plows are out; and

7. Leveraging all communications channels to share important messaging regarding not parking on the road during winter maintenance operations.

**Further enhancing cross-departmental and contractor communications**

Public Works staff continue to compile a list of streets where winter maintenance activities were obstructed due to parked vehicles and work with By-law enforcement to proactively target these streets in advance of upcoming winter maintenance operations. This information is also used by Access Vaughan to resolve calls related to incomplete winter operations by communicating with citizen callers during and after a snow event that the sections of certain streets were not treated due to parked vehicle obstructions.

Public Works staff will continue to analyze parked-car data, as provided by the contractors, and provide a list of problematic areas to the City's By-Law enforcement team to focus enforcement efforts in advance of and during winter operations. This data will be used to prepare targeted messaging through direct mail, geo-tagged social media, and web advertising campaigns.

**Proactive methods adopted in 2021-2022 to encourage off-street parking**

The following initiatives were implemented this winter season to encourage off-street parking during winter operations:

1. A pre-season communication blitz was circulated in October 2021.
2. An informational flyer explaining the impacts of parked vehicles on winter maintenance operations was distributed to areas with the highest reported issues prior to the start of the 2021/2022 winter season.

**Additional enforcement measures are being proactively planned and considered for 2022-2023**

Additional measures are being considered based on the results of this winter season's review.

- A pre-season ticketing "blitz" focusing on overnight parking in locations that have been identified as areas of concern for obstructing winter maintenance operations will be considered prior to the start of the 2022-2023 winter season. This initiative will commence with the issuance of warning tickets, escalating to monetary penalties where parking issues obstructing winter maintenance operations persist.

- The City will also work closely with the By-Law & Compliance, Licensing and Permit Services department to consider incorporating increased fines and penalties as part of the comprehensive cross-departmental city-wide Parking Strategy. Staff will carefully monitor to ensure that instances of parked vehicles obstructing winter maintenance operations is, in fact, decreasing, otherwise escalating enforcement action will be considered including an increase to the Administrative Monetary Penalty (AMP) violation for obstructing winter maintenance as well as towing vehicles.

## 4. Conclusion

While the City used sound operational planning and risk analysis during the management of the January 17, 2022, winter storm and significantly reduced safety concerns, additional measures can be employed to further enhance the City's winter maintenance program. The comprehensive service level review underway will help ensure that the City continues to proactively plan and modify services to ensure service excellence and an enhanced citizen experience. Parked vehicles impact winter operations, disrupt operational efficiencies and prevent the delivery of an optimal citizen experience for which several strategies have been identified and implemented to mitigate the impact of parked vehicles.

## **For more information,** please contact:

Peter Pilateris, Director, Transportation and Fleet Management Services, ext. 6141
Gus Michaels, Deputy City Manager, Community Services, ext. 8735
Michael Genova, Chief, Communications and Economic Development, ext. 8027

## **Approved by**

Zoran Postic

Deputy City Manager, Public Works

**STAFF COMMUNICATION**
**FOR INFORMATION ONLY**

**SC 2**
**Staff Communication**
**CW (2) - June 21, 2022**

**DATE:** June 13, 2022

**TO:** Mayor and Members of Council

**FROM:** Vince Musacchio, Deputy City Manager, Infrastructure Development

**RE:** **STAFF COMMUNICATION – Kirby Road Widening (Jane to Dufferin) Municipal Class Environmental Assessment Study – Notice of Completion, June 21, 2022 COW (2)**

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## 1. Purpose

The purpose of this Staff Communication is to provide the Mayor and Members of Council with information regarding the Notice of Completion for the Kirby Road Widening (Jane Street to Dufferin Street) Municipal Class Environmental Assessment (EA) Study. The Environmental Study Report (ESR) is scheduled to be filed and available for a 30-day public review period starting on **June 23, 2022**.

## 2. Analysis

### Background

The City of Vaughan has completed a Schedule 'C' Municipal Class Environmental Assessment study for Kirby Road between Jane Street and Dufferin Street. The EA study is referred to as the Kirby Road Widening EA (Jane to Dufferin). The study reconfirmed the recommendations for the corridor as identified in the City of Vaughan's Transportation Master Plan (2012), York Region's Transportation Master Plan (2016), City's North Vaughan and New Communities Transportation Master Plan (NVNCTMP, 2019), City's Pedestrian and Cyclist Master Plan Update (2020), and has completed Phases 3 and 4 of the Municipal Class EA process for Schedule 'C' projects as outlined in the Municipal Engineers Association (MEA) Municipal Class EA guidelines (October 2000, as amended in 2007, 2011 and 2015).

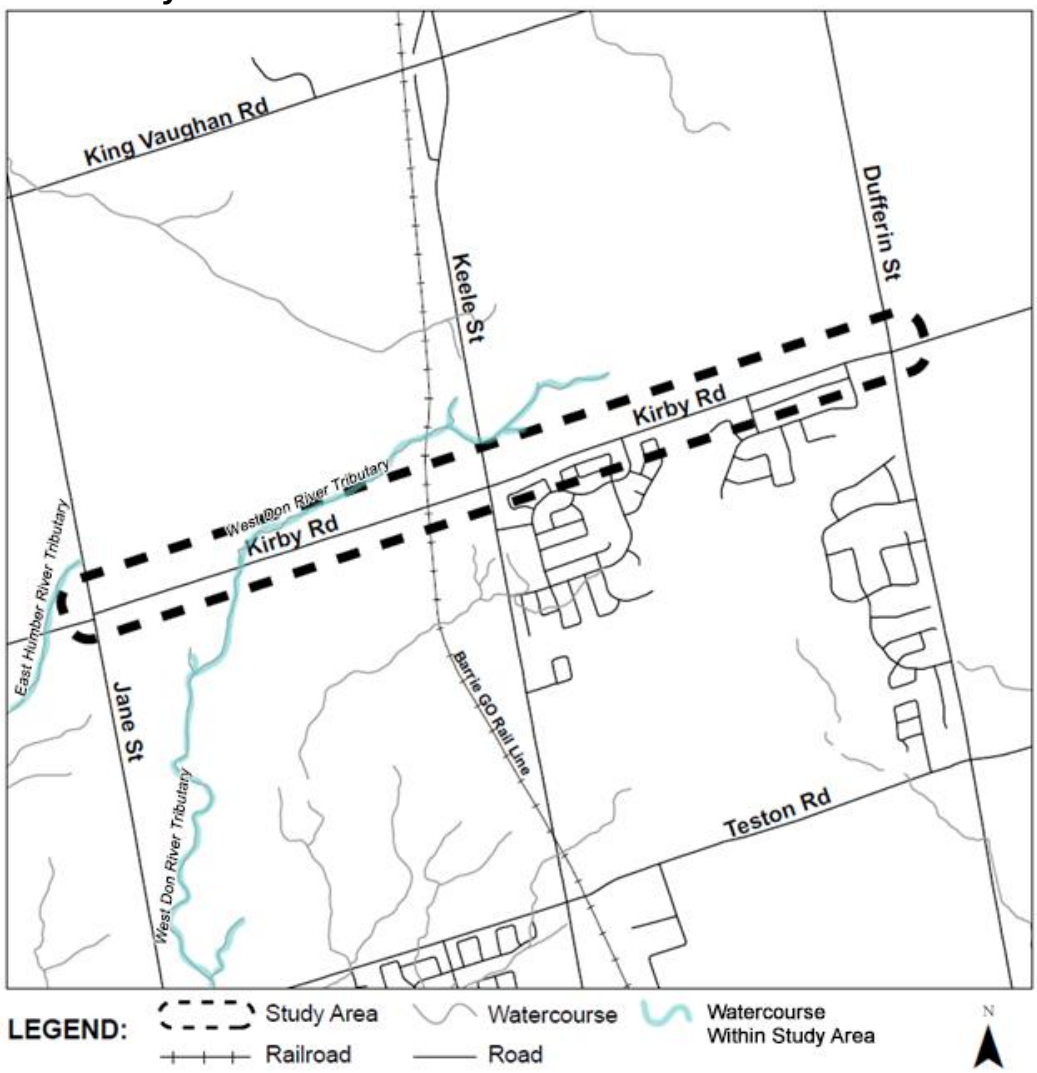
The purpose of the Kirby Road Widening Municipal Class EA study was to determine specific improvements to accommodate the current and future transportation needs of pedestrians, cyclists, transit users and motorists along Kirby Road from Jane Street to Dufferin Street including:

- Widen Kirby Road from two to four lanes and construct to urban arterial standard within a 36m right-of-way
- Grade separate the Barrie GO railway crossing at Kirby Road
- Eliminate the jogged intersection at Jane Street to improve traffic flow
- Improve walking and cycling facilities (active transportation)

## Study Area

The Kirby Road Widening EA study corridor is between Jane Street and Dufferin Street in the City of Vaughan. Kirby Road is a two-lane rural, east-west arterial road. The Kirby Road Widening EA study area spans approximately 4.2 kilometers, as shown in **ES-1** and includes a crossing of the West Don Tributary east of Jane Street, and a crossing of the Barrie GO Rail line west of Keele Street. The East Humber River Tributary is located just west of the study limits.

**ES-1: Study Area**




## Public, Agency, and Indigenous Consultation

Public input was an important part of the Kirby Road Widening EA. The project team engaged the general public, agencies, stakeholders and Indigenous Communities, through mail and email notifications, as well as an online Public Information Centre to ensure opportunities to provide input and voice concerns. Key consultation events undertaken throughout the EA study are listed in **ES-2.**

**ES-2: Summary of Consultation Events**

| Consultation Event | Date |
|---|---|
| Notice of Study Commencement | January 2020 |
| Notice of Online Survey | July 28, 2020 |
| Online Survey | July 28, 2020 to Aug. 21, 2020 |
| Notice of Public Information Centre | June 7, 2021 |
| Public Information Centre | June 7, 2021 to June 30, 2021 |
| Notice of Study Completion | June 23, 2022 |

A variety of methods were used to update and inform the public, agencies, stakeholders, and Indigenous Communities about the study progress, including:

- Letters
- Emails
- Post cards
- Meetings
- Phone calls
- Notices
- Newspaper advertisements
- Project website (www.vaughan.ca/KirbyWidening)
- City of Vaughan Social Media (Facebook, Twitter, Instagram, and LinkedIn)
- City's Website
- Online survey
- Public Information Centre (PIC)

Residents living along the study corridor were in receipt of mailed notices, post cards and letters. Following the study commencement, any individual who expressed interest in the project and requested, was added to the project mailing list (mail or email) to receive regular updates on the study progress.

To maximize public awareness, efforts such as social media posts (Facebook, Instagram, LinkedIn and Twitter), and regular updates to the project website provided information to members of the public interested in the project.

A Technical Advisory Committee (TAC) consisting of key technical agencies was formed for the study. In addition, a Stakeholder Group (SHG), consisting of public representatives who expressed interest in the study, was formed to gather feedback at key milestones in the process.

Indigenous Communities who may have an interest in the study area were identified through correspondence from Ministry of the Environment, Conservation and Parks (MECP)'s response letter to the Notice of Commencement. These communities were included in the mailing list and received study notices through email. They were invited to participate in the study by providing input via direct correspondence with the project team, completion of the Online Survey and also participation in the online Public Information Centre via the project website. The Indigenous Communities contacted are:

- Mississaugas of the Credit First Nation
- Hiawatha First Nation

- Curve Lake First Nation
- Alderville First Nation
- Mississauga's of Scugog Island First Nation
- Huron-Wendat Nation

An online survey was announced in August 2020 through a mailed postcard distribution. The online survey was available on the study website from July 28, 2020 to August 21, 2020 and requested feedback on how the public uses the corridor today, input on identified improvements and preliminary thoughts on initial alternative design concepts and the evaluation criteria. Three hundred and seventy-nine (379) members of the public responded to the online survey.

An online Public Information Centre (PIC) was posted on the City's project website between June 7, 2021 and June 30, 2021. The materials included a PIC presentation with transcript, comment form and PDFs of the recommended typical cross-sections, and plan and profile design plans. Individuals could visit the City website anytime during this period to view the material at their leisure, learn about and share their input on the study findings and recommendations. An online commenting form was available, and additional comments could be emailed to the City. Two hundred and seven (207) users visited the online PIC. Thirty-four (34) members of the public submitted comment forms, three (3) provided comments via email, one (1) via phone call and additional comments were posted on the City's Instagram post.

**Problem and Opportunity Statement**

The need for Kirby Road improvements was identified in the North Vaughan and New Communities Transportation Master Plan (NVNCTMP, 2019), York Region Transportation Master Plan (YRTMP, Update 2016), Vaughan Transportation Master Plan 2012 and the City's Pedestrian and Bicycle Master Plan (PBMP, Update 2020). These studies incorporated feedback from technical agencies, stakeholders and the public throughout the decision-making process. The NVNCTMP and YRTMP fulfilled the requirements of Phases 1 and 2 of the Municipal Class EA process. The EA's Transportation and Traffic Study supplemented the recommendations from the TMPs and confirmed the need for capacity improvements between Jane Street and Dufferin Street, the jog elimination at the Jane Street intersection and grade separation at the Barrie GO Rail crossing of the Kirby Road corridor.

The needs and justification for the Kirby Road Widening corridor as documented in the various TMPs, are summarized as:

Needs:

- Capacity improvements to address existing congestion and future travel demands
- Corridor improvements to support walking and cycling
- Corridor improvements to support transit

Justification:

- NVNCTMP 2019 outlines existing and future traffic capacity deficiencies
- Kirby Road at Jane Street experiences congestion during peak periods
- Existing deficiencies with active transportation and transit network
- Traffic and train volumes are expected to exceed exposure warrant for grade separation. Grade separation improves pedestrian and cyclist safety and reduces delays to transit and traffic along the corridor and is needed to support planned Regional Express Rail (RER)

Based on the findings of the TMPs, Kirby Road widening between Jane Street and Dufferin Street is recommended to improve capacity, address existing congestion and future travel demands, and support walking, cycling and transit.

The following problem and opportunity statement is identified for the Kirby Road corridor between Jane Street and Dufferin Street:

- Provide opportunities to maximize the person-carrying capacity of the Kirby Road corridor between Jane Street and Dufferin Street to accommodate the expansion of the Designated Urban Area and projected travel demands
- Improve pedestrian and cycling facilities and overall active transportation network
- Improve the efficiency and reliability of transit

**Alternative Solutions**

Alternative Solutions are functionally different solutions for approaching and dealing with a problem or opportunity. The Class EA process requires documentation and examination of all reasonable alternatives to address the problem; referred to as Alternative Solutions.

The YRTMP and NVNCTMP analyzed various alternatives which considered the improvements needed along Kirby Road. The alternative solutions considered are:

<u>YRTMP Alternative Solutions (Kirby Road corridor – Project ID 2034):</u>

- Do Nothing
- Optimize existing facility with intersection improvements only
- Urbanize corridor but maintain 2-lane cross-section
- Widen corridor to 4 lanes and construct to urban arterial standard
- Widen parallel/adjacent corridor

<u>YRTMP Alternative Solutions (Barrie GO Grade Separation at Kirby Road - Project ID: 2147):</u>

- Do Nothing
- Improve grade crossing safety
- Transportation improvements to adjacent / parallel corridor
- Construct rail grade separation structure

<u>NVNCTMP Alternative Solutions:</u>

- Do Nothing

- Improvements to other roadways but not Kirby Road
- Widen and Improvements to Kirby Road

The Preferred Solution for Kirby Road between Jane Street and Dufferin Street was identified as:

- Widen Kirby Road from two to four lanes and construct to urban arterial standard within a 36m right-of-way
- Grade separate the Barrie GO railway crossing at Kirby Road
- Eliminate the jogged intersection at Jane Street to improve traffic flow
- Improve walking and cycling facilities (active transportation)

The EA's Transportation and Traffic study assessed and reviewed the recommendations from the TMPs. It considered the existing traffic conditions at the key intersections along the Kirby Road corridor, estimated and examined traffic growth and expected future traffic volumes, analyzed traffic impacts from the future traffic volumes, and identified infrastructure improvements to address the deficiencies and accommodate the future traffic growth for the horizon year of 2031. It confirmed the Preferred Solution recommended by YRTMP and NVNCTMP for the Kirby Road corridor between Jane Street and Dufferin Street.

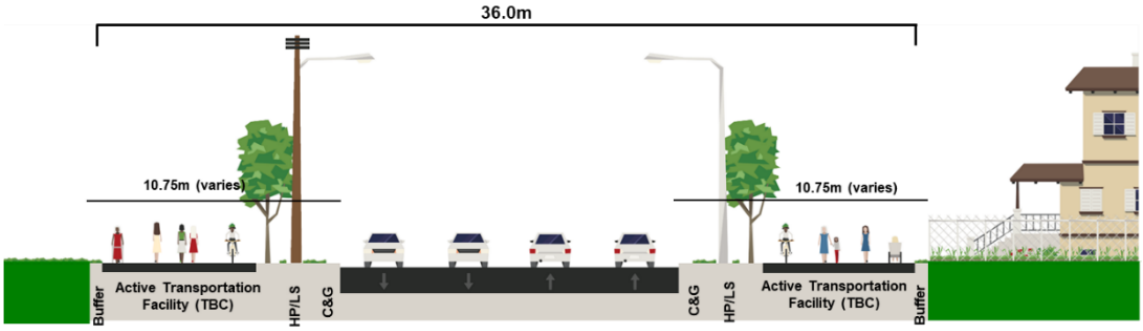
The Preferred Solution was then reviewed against the Problem and Opportunity Statement to ensure that the Preferred Solution aligned with the study opportunities. The Preferred Solution was confirmed to align with the identified opportunities for the Kirby Road Widening EA study as documented in **ES-3** and



**ES-3: Preferred Solution's Alignment with Study Opportunities**

| **Opportunity** | **Preferred Solution's Alignment with Study Opportunities** |
|---|---|
| Provide opportunities to maximize the person-carrying capacity of the Kirby Road corridor between Jane Street and Dufferin Street to accommodate the expansion of the Designated Urban Area and projected travel demands | Provides improved multi-modal transportation link to increase the person-carrying capacity of the corridor via additional vehicular lanes, pedestrian and cycling facilities and opportunities for transit |
| Improve pedestrian and cycling facilities and overall active transportation network | Completes gaps in the existing active transportation network by providing dedicated and continuous facilities for pedestrians and cyclists to improve safety, encourage active travel and reduce vehicular congestion |
| Improve the efficiency and reliability of transit | Supports the development of the frequent transit network |

## ES-4: Preferred Solution




## Alternative Designs

Alternative designs are different concepts developed to implement the preferred solution. This Class EA process examined all reasonable design options; referred to as Alternative Designs as discussed for the following four design sections.

### 1) Active Transportation Facilities

The recommended Active Transportation (AT) solution is to provide continuous cycling and pedestrian facilities along Kirby Road. Four alternative design concepts were developed to address the need for improved pedestrian and cyclist facilities and are:

- Alternative 1: Boulevard Cycle Tracks and Sidewalks, both sides
- Alternative 2: Multi-use Path (two-way shared facility), both sides
- Alternative 3: Multi-use Path One Side, Sidewalk One Side
- Alternative 4: On-road Bike Lane and Sidewalks

Based on the findings of the Active Transportation Alternatives Evaluation, **Alternative 1 - Boulevard Cycle Tracks and Sidewalks, both sides** is recommended as the preferred active transportation alternative because it:

- Separates pedestrians and cyclists from vehicles
- Eliminates conflicts between pedestrians and cyclists with dedicated and separate facilities
- Provides pedestrians and cyclists with direct access to adjacent lands / destinations in both boulevards
- Minimizes potential conflicts at driveways and intersections with one-way cyclist travel

### 2) Roadway Widening

To widen and urbanize Kirby Road to four lanes, three widening alternatives were considered:

- Alternative 1: Widening about the Centreline
- Alternative 2: Widen to the North

- Alternative 3: Widen to the south

Based on the findings of the Roadway Widening Evaluation, **Alternative 1 - Widening About the Centreline** is the recommended widening alternative because it:

- Maximizes the existing right-of-way and balances property impacts where additional property is required
- Provides opportunities to mitigate impacts following the best fit approach (varying boulevard widths and localized shifts in the road centreline) to minimize impacts to the natural environment and avoid residential displacement

**3) Jog Elimination at Jane Street Intersection**

To address the significant delay for drivers and safely accommodate other users (pedestrians and cyclists), three alternatives for the jog elimination of Kirby Road at its intersection with Jane Street were considered and are:

- Alternative 1: Northern Alignment
- Alternative 2: Central Alignment
- Alternative 3: Southern Alignment

Based on the findings of the Jog Elimination Evaluation, **Alternative 2 - Central Alignment** is recommended as the jog elimination alternative because it:

- Provides a new intersection that improves intersection operations and accommodates all users
- Is not anticipated to impact aquatic habitat or provincially significant wetland
- Minimizes impacts to archaeological sites
- Minimizes property impacts to residential properties and active agricultural operations

**4) Barrie GO Rail Corridor Crossing**

To address the recommendation to grade-separate the Barrie GO railway crossing at Kirby Road, the following alternatives were considered:

- Alternative 1 – At-Grade Crossing (maintain the at-grade rail crossing with widened Kirby Road)
- Alternative 2 – Underpass (Rail over Road)
- Alternative 3 – Overpass (Road over Rail)
- Alternative 4 – Hybrid (Hybrid Underpass: Raised rail with lowered road / Hybrid Overpass: Lowered rail with raised road)

Based on the findings of the Barrie GO Rail Crossing evaluation, **Alternative 2 - Underpass (Rail over Road)** is the recommended rail crossing alternative because it:

- Removes rail conflicts with pedestrians and cyclists, and minimizes pedestrian and cyclist travel distance with elevated pedestrian and cyclist platform
- Mitigates vehicle queuing caused by increased GO Train service
- Although the underpass is more costly it allows access to be maintained to adjacent land uses

The recommended typical cross-sections for the corridor were based on a context sensitive approach to balance the needs of the improvements and minimize adverse impacts. In some locations the width of the boulevards and area for street trees/landscaping were reduced to minimize impacts to properties and sensitive natural features. The recommended typical sections were further refined when incorporated into the recommended design.

**Recommended Design**

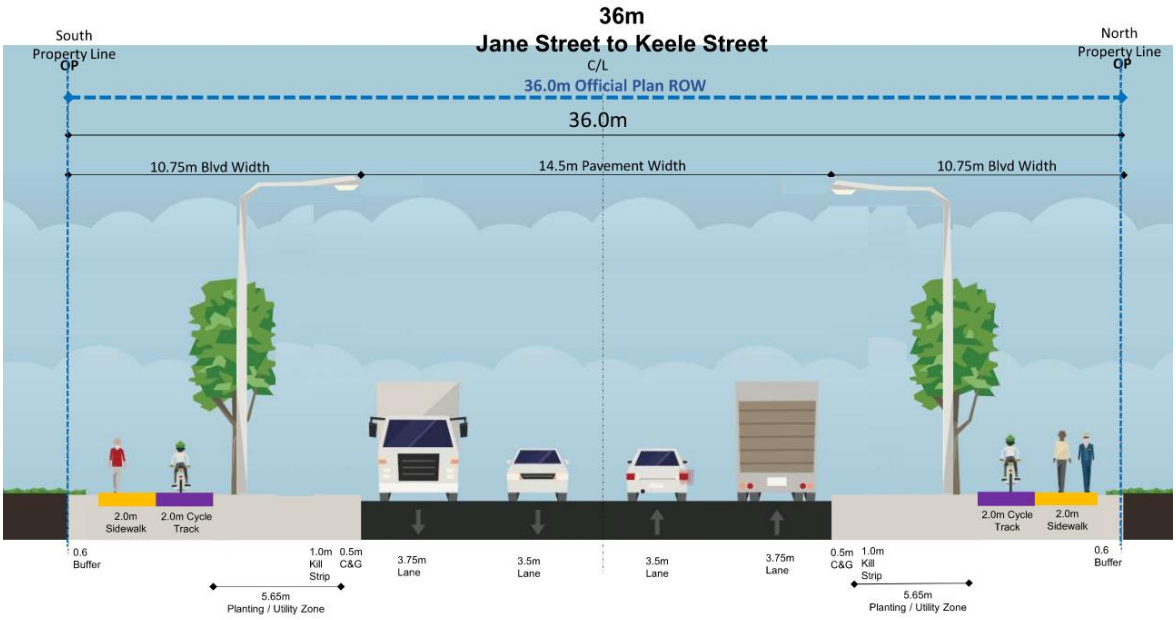
The recommended design of Kirby Road between Jane Street and Dufferin Street was chosen with consideration of transportation service for all road users (pedestrians, cyclists, transit riders, and motorists) and potential impacts to the natural environment, community, cultural heritage, operations, aesthetics, driveway access, property requirements, and capital construction and maintenance costs. It best meets the goals of the project with regards to transportation service improvements, while also considering the overall impact of the project and mitigation measures.

The recommended design includes the following elements:

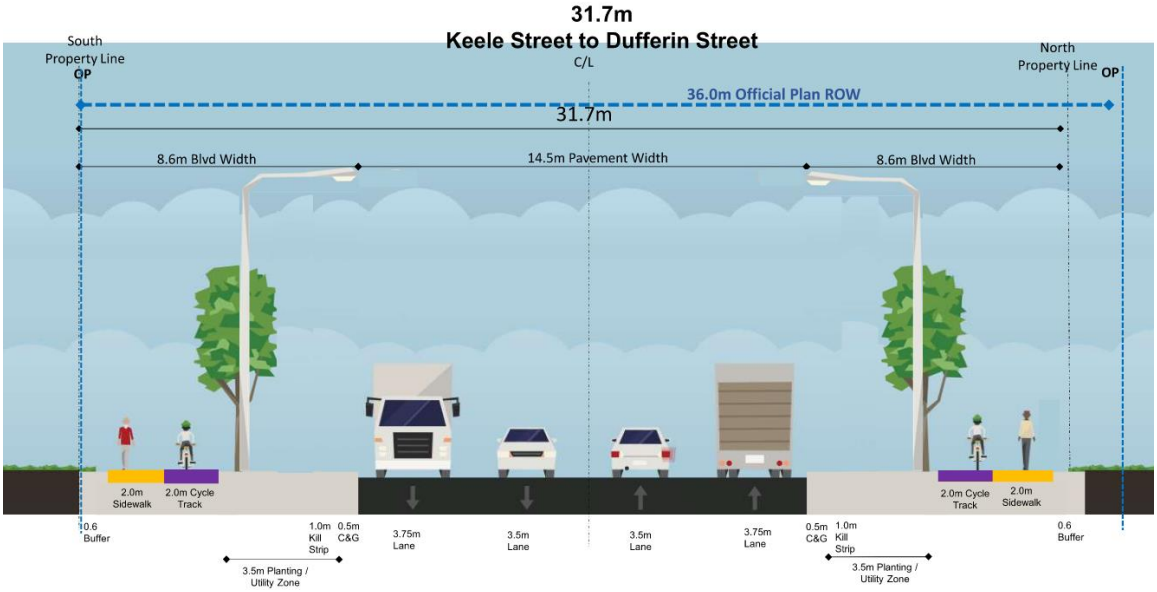
- Four general purpose lanes (two in each direction). Through lanes will be 3.5m and curb lanes will be 3.75m through a fully urbanized corridor
- 5.0m left turn lane (3.3m left turn lane with 1.7m island)
- Separated 2.0m boulevard cycle tracks (traveling in the same direction as the road) and 2.0m sidewalks on both sides of the road
- 0.5m curb and gutter with 0.6m rounding buffer
- Accessibility for Ontarians with Disabilities (AODA) compliant intersections with crossrides at intersections
- Re-aligned Kirby Road at a central new signalized intersection at Jane Street
- Culvert replacement at the Tributary to West Don River
- Underpass structure at Barrie GO Rail Crossing
- Extension of private driveway access to Keele Street
- Illumination along the corridor
- Utility relocations
- Opportunities for streetscaping in the boulevard
- Property requirements with temporary and permanent easements for construction, maintenance, and grading purposes

The typical cross-sections for Kirby Road between Jane Street and Keele Street and between Keele Street and Dufferin Street are illustrated in **ES-5** and **ES-6.**

## ES-5: Typical Cross-Section - Kirby Road (Jane Street to Keele Street)




## ES-6: Typical Cross-Section - Kirby Road (Keele Street to Dufferin Street)




## Preliminary Cost Estimate

Based on preliminary cost estimates, the cost of the recommended improvements is estimated at **$108M**. This preliminary cost estimate includes costs for road work, bridge and retaining wall construction, underpass, utility relocation, addition of streetlights, storm sewers and traffic signals, culvert replacement, landscaping, traffic control, and engineering services; however, property acquisition costs are not included in the estimate.

From the total project costs listed above, implementation of the Underpass will result in costs of approximately **$74M.** This includes the structural (structure of underpass and rail bridge), design and construction administration, and contingency identified costs of the underpass, and retaining walls.

The extent of cost sharing with developers (including stormwater management facilities within the development and storm sewer systems), and with Metrolinx for the underpass design will be confirmed during Detailed Design.

The estimated costs are preliminary only and would be reviewed and confirmed during Detailed Design.

**Potential Environmental Impacts and Mitigation**

Anticipated impacts to the natural, socio-economic, and cultural environments, together with proposed mitigation measures, were identified to address the implementation of the preferred design. Anticipated impacts and proposed mitigation are provided for the following factors:

- Land Use and Socio-Economic Impacts
- Archaeology
- Built Heritage Resources and Cultural Heritage Landscapes
- Noise
- Property Requirements
- Climate Change
- Air Quality
- Source Water Protection
- Streetscaping/Urban Design
- Utilities
- Construction Detours/Temporary Lane Restrictions
- Vegetation and Vegetation Communities
- Fisheries and Aquatic Habitat
- Wildlife and Wildlife Habitat
- Groundwater/Hydrogeology
- Surface Water
- Soil Removal and Contaminants
- Agricultural

**Commitment of Future Work**

This Environmental Study Report (ESR) identifies specific items to be reviewed and confirmed during the Detailed Design phase. Some of these commitments will address specific concerns raised by property owners and review agencies during the EA process. Items to be addressed during Detailed Design phase, include but are not limited to, resolution of outstanding concerns and any permits and approvals.

**Timing of Improvements**

Timing of improvements is to be confirmed during Detailed Design. Construction timing is anticipated to follow the timing outlined in the City's current (2022) Capital Plan. This plan is reviewed and approved by Council annually and is subject to change.

**Next Steps**

The Environmental Study Report (ESR) is scheduled to be filed and available for a 30-day public review period starting on **June 23, 2022**. The Notice of Completion (attachment 1) will be made public via Newspaper ads, the City's official social media platforms, mail outs, and e-blasts, and placed on the study website along with the ESR on June 23, 2022.

For more information, please contact Selma Hubjer, Acting Director, Infrastructure Planning and Corporate Asset Management at extension 8674.

**Attachments:**

1. June 23, 2022 Notice of Completion – Kirby Road Widening EA Study

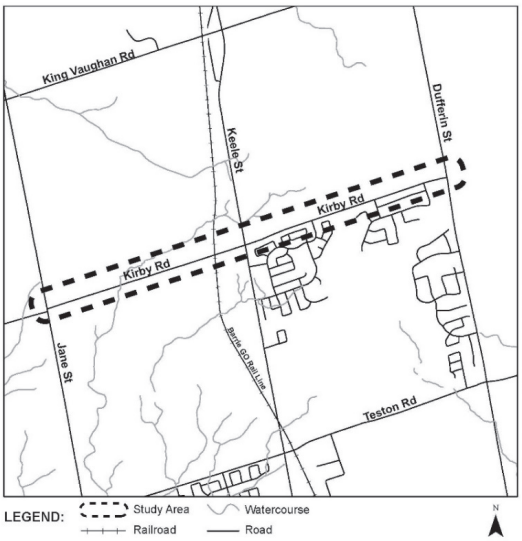
## Approved by:

Vince Musacchio, Deputy City Manager
Infrastructure Planning

VAUGHAN

# NOTICE OF COMPLETION
# MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT (MCEA) STUDY

Kirby Road Widening
between Jane Street and Dufferin Street




## THE STUDY

The City of Vaughan has completed a Municipal Class Environmental Assessment (MCEA) for improvements to Kirby Road between Jane Street and Dufferin Street. These recommendations were made to address capacity and operational improvements identified for Kirby Road and to accommodate planned growth in the City for all transportation modes including pedestrians, cyclists, transit users and motorists.

The recommended Kirby Road improvements include:

- Widening from two (2) to four (4) lanes and urbanization
- In-boulevard cycle tracks and sidewalks (both sides of the road)
- Jog elimination at Kirby Road and Jane Street
- Grade Separation (Underpass) of the Barrie Go Rail line

## STUDY REPORT REVIEW PERIOD

This study was completed in accordance with the planning and design process for Schedule C projects, as outlined in the Municipal Engineers Association (MEA) Municipal Class EA guidelines (October 2000, amended 2007, 2011 and 2015), which is approved under the Ontario Environmental Assessment Act. The Environmental Study Report (ESR) documents the planning, consultation, preliminary design and decision-making process undertaken for the project and is available for review for 30 days starting **June 23, 2022** and ending on **July 22, 2022**. The report can be reviewed and downloaded on the City of Vaughan's website at **www.vaughan.ca/KirbyWidening**.

Please provide written comments and outstanding concerns within the 30-day review period to:

**Hilda Esedebe, P.Eng.**
**City of Vaughan Project Manager**
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1
T: 905-832-8585, ext. 8484
E: Hilda.Esedebe@vaughan.ca

If there are any outstanding concerns regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, a person may request the Minister of Environment, Conservation and Parks to issue a Section 16 Order on those matters for this project. Requests should include the requester contact information and full name. Requests should specify what kind of order is being requested (request for conditions or a request for an individual/comprehensive environmental assessment), how an order may prevent, mitigate or remedy potential adverse impacts on Aboriginal and treaty rights, and any information in support of the statements in the request. This will ensure that the Ministry is able to efficiently begin reviewing the request. The Section 16 Order request must be provided in writing and received by the Minister at the address below no later than July 22, 2022.

**Minister**
Ministry of Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
E-mail: minister.mecp@ontario.ca

**Director**
**Environmental Assessment Branch**
Ministry of Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
E-mail: EABDirector@ontario.ca

A copy of any Section 16 Order request must also be sent to the City of Vaughan project contact above.

This Notice was first issued June 23, 2022

**STAFF COMMUNICATION**
**FOR INFORMATION ONLY**

**SC 3**
**Staff Communication**
**CW (2) - June 21, 2022**

**DATE:** June 15, 2022

**TO:** Mayor and Members of Council

**FROM:** Vince Musacchio, Deputy City Manager, Infrastructure Development

**RE:** **STAFF COMMUNICATION – Committee of the Whole (2), June 21, 2022**
**Progress on the Vaughan Transportation Plan**

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## 1. Purpose

This Staff Communication provides an update to Mayor and Members of Council on the progress of the Vaughan Transportation Plan.

The Vaughan Transportation Plan (VTP) is an update to the 2012 Transportation Master Plan. The VTP defines how people and goods will move within, around and through Vaughan in the future. It describes the overarching vision and objectives of the transportation system, lays the blueprint for where and when the transportation system will be improved, and identifies the policies, guidelines and programs which should be enacted to meet the vision and objectives.

**The vision of the VTP is to provide more choices for how people and goods travel, which will in turn move more people and goods in a sustainable manner, creating a transportation system that is equitable and promotes good health for all users**.

The VTP is being completed in coordination with the Official Plan Review. The recommendations of the plan are expected to be brought to Council for adoption in early 2023.

## 2. Background

**The Vaughan Transportation Plan will create a transportation system that supports a prosperous and sustainable future in Vaughan.**

In A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2020), the provincial government mandates that "…municipalities undertake an integrated approach to land use planning, infrastructure investments, and environmental protection to achieve the outcomes of the (Growth) Plan." The Vaughan Transportation Plan was initiated in late 2019 to continue Vaughan's integrated planning approach for growth that began with Vaughan Tomorrow, Vaughan's 2031 Growth Management Strategy.

The VTP is the guiding document for transportation infrastructure, policy, and programs across the entire City. It integrates the future transportation network with land-use planning and other infrastructure master plans, creating new transportation choices and augmenting existing ones by ensuring future residents and businesses can choose a mode of transportation that best suits their needs.

The VTP has been developed with three key themes in mind: building high-quality and sustainable infrastructure, changing the culture of transportation in Vaughan, and thinking about how future forms of mobility can be harnessed to benefit our citizens. To these ends, the VTP has undertaken a substantial public consultation exercise to gather feedback from citizens on how we can achieve the vision and objectives. Events included:

- An online survey with over 400 responses
- Three pop-up events where conversations were held with over 225 individuals
- Two virtual open houses visited by over 700 users, and two live information meetings with feedback received from over 30 individuals
- Digital advertising campaigns targeted at users located in Vaughan, which received over 200,000 views per campaign
- Seven focus group meetings with stakeholders from major employers, goods movement and logistics companies, the development industry and cycling advocates in Vaughan
- Four “Kitchen Table Guides” completed by ratepayers’ associations
- Multiple workshop sessions with the Older Adult Task Force and the Transportation and Infrastructure Task Force
- Two update reports to Council on the progress of the VTP to date
- Four Technical Advisory Committee meetings with internal and external stakeholders

Each of these engagement sessions involved numerous hours of material preparation and advertising such as roadside signage, digital ads, internal displays, public service announcements, newspaper ads, social media posts, preparation of presentations, and emails to all ratepayers’ groups, indigenous communities, and interested citizens on the mailing list.

## 3. Findings

**Residents and businesses want reliable and frequent transit, and safe and accessible walking and cycling facilities. Fulfilling these desires will directly address frustrations with traffic congestion.**

Experience from North America and around the world show that congestion cannot be addressed by simply building more and wider roads. Ultimately, this approach encourages more driving, which leads to more congestion, in a phenomenon known as “induced demand”.

As a result, providing choices that allow people to drive less is a vital component of managing congestion in Vaughan. The more people who choose to walk, cycle or take transit rather than drive means fewer vehicles on the road, leaving room for those who must drive to get to where they're going.

Recognizing the need to be selective, road improvements will continue to be constructed in new development areas, and targeted improvements are recommended to close gaps in the road network and resolve bottlenecks. Driving will not disappear, but it should no longer be the only reasonable option for the majority of trips in Vaughan.

**To provide choices for how people and goods will travel in Vaughan, the VTP identifies areas of need for all forms of transportation – walking, cycling, transit and automobiles.**

A comprehensive needs assessment of the transportation network, and how it could enable more walking, cycling, transit and automobile trips, was conducted. Based on the needs assessment, potential improvements to the transportation network were identified. A prioritization framework which highlighted areas of greatest need based on transportation, land use, social equity and safety indicators was then applied to the potential improvements to determine which improvements should be built first.

Improvements with the highest priority were then grouped into scenarios to be evaluated by the City's travel demand forecasting model, with the impact of each scenario to all of Vaughan measured for six key objectives:

- Accessible and Connected
- Environmentally Responsible
- Equity
- Financially Sustainable
- Reliable and Resilient
- Safe

Based on the needs assessment, prioritization framework, and scenario evaluation, the preferred transportation network is multi-modal and places the highest priority on improving transit, walking and cycling networks while improving the road network in critical areas which have high-capacity transit routes or new development.

**A culture shift that embraces alternate forms of transportation will encourage the use of new reliable, frequent, safe and accessible infrastructure.**

It is vitally important to educate and encourage citizens to use alternate forms of transportation, recognizing that ingrained habits will not change simply because new infrastructure is available.

The VTP is currently in the process of reviewing and updating Official Plan policies and schedules which, at a high level, identify the City's values with respect to all aspects of transportation. Ensuring that the Official Plan policies and schedules match the current

vision and objectives of the transportation system ensures that all internal and external stakeholders understand and can work together to meet these objectives.

In addition, a long-term transportation education and promotion program is being developed which will identify appropriate opportunities to engage with the public, either as part of existing planned events or as standalone projects, in order to promote the positive benefits of alternative forms of transportation and educate potential users on how they can access these forms of transportation in their local communities.

Changing the culture of transportation from one that is focused on automobiles to one that embraces active transportation and transit is an on-going, generational process. It is expected that education and promotion activities will continue for many years after the VTP is completed.

**The needs of our citizens are always evolving. The VTP has prepared the City to quickly adapt and adjust to new trends, requirements, and on-going growth.**

The transportation needs of today are vastly different than those that were assessed in 2012 when the first transportation master plan was completed. In fact, they have changed substantially since the beginning of the VTP study as a result of the Covid-19 pandemic. The VTP has prepared for the future needs of our citizens by preparing research papers in key areas:

- Transportation data collection and analysis
- Goods movement within and throughout Vaughan
- When and where private streets can be implemented to benefit the City
- New forms of mobility such as electric scooters and cable-propelled transit, and ways to test them through a transportation innovation program
- Transportation infrastructure resilience against climate change, reducing infrastructure failures as a result of climate change
- Maximizing the value of existing and future transportation infrastructure by investigating better uses for infrastructure, such as temporary closures for street festivals and generating revenue from curbside activities like parking

These research papers serve to jump start made-in-Vaughan programs, guidelines, policies and standards, which will help to ensure that as the transportation needs of Vaughan change, the transportation system is able to change with it.

**The development of a comprehensive transportation plan requires extensive and meaningful collaboration with stakeholders. The VTP purposefully aligns with other important City initiatives to push the unified vision of the transportation system forward.**

These aligned initiatives include on-going or adopted projects, future policies or projects, and recommendations from the current Term of Council task forces. Some examples of the collaborative efforts undertaken by the VTP include:

- Collaborating with the MoveSmart Mobility Management Strategy team to identify short and medium-term transportation data collection needs. The short-term needs have been subsequently partially collected by the MoveSmart team.
- Conducting workshops with internal stakeholders to scope and define complete streets in Vaughan, providing valuable input and guidance for the Vaughan Complete Streets Guideline study which is currently underway.
- Recommending the creation of a transportation innovation program, recognizing the need to develop appropriate frameworks for and test new forms of mobility, such as micro-mobility and the proposed micro-mobility framework as communicated to Council in September 2021.
- Recommending the leveraging of existing transportation infrastructure to maximize social and cultural benefits through events such as street festivals, as recommended by the Transportation and Infrastructure Task Force.
- Recognizing the importance of mobility independence for the health and well-being of older adults, as demonstrated by the Older Adult Task Force, recommending on-going collaboration with York Region Transit to enable older adults improved access to transit services.

A number of these initiatives are either underway or are to be initiated by staff in the short-term. These aligned efforts will help to build the ecosystem necessary to create and support the future transportation system envisioned by the VTP.

## 4. Next Steps

The primary components of the VTP are nearing completion. With the identification of the preferred multi-modal transportation network and the finalization of the research papers, the City's existing transportation policies and schedules are being reviewed and updated, and the long-term education and promotion program is being developed. Information on these initiatives will be brought forward to Council for consideration as they are completed.

Furthermore, there are a number of initiatives which are aligned with the VTP and will continue to progress as the VTP is finalized. These include the MoveSmart Mobility Management Strategy, the Vaughan Complete Streets Guidelines study, future updates to the Engineering Design Criteria and Standard Drawings, the future Micro-Mobility Framework, and the Official Plan Review. Staff will continue to identify opportunities and make best efforts to enable collaboration and alignment between City projects to realize the vision of the VTP.

For more information, or to discuss further, please contact Selma Hubjer, Acting Director of Infrastructure Planning and Corporate Asset Management, ext. 8674

**Approved by**

Vince Musacchio, Deputy City Manager
Infrastructure Development

**STAFF COMMUNICATION**
**FOR INFORMATION ONLY**

**SC 4**
**Staff Communication**
**CW (2) - June 21, 2022**

**DATE:** June 17, 2022

**TO:** Mayor and Members of Council

**FROM:** Vince Musacchio, Deputy City Manager, Infrastructure Development

**RE:** **STAFF COMMUNICATION – Bass Pro Mills Drive Extension (Highway 400 to Weston Road) Municipal Class Environmental Assessment (MCEA) Study – Notice of Completion, June 21, 2022 COW (2)**

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## 1. Purpose

The purpose of this staff communication is to provide the Mayor and Members of Council with information regarding the Notice of Completion for the Bass Pro Mills Drive Extension (Highway 400 to Weston Road) Municipal Class Environmental Assessment (MCEA) Study. The draft Environmental Study Report (ESR) is currently under review by various external agencies and the final report is scheduled to be filed and available for a 30-day public review period in July/August 2022.

## 2. Analysis

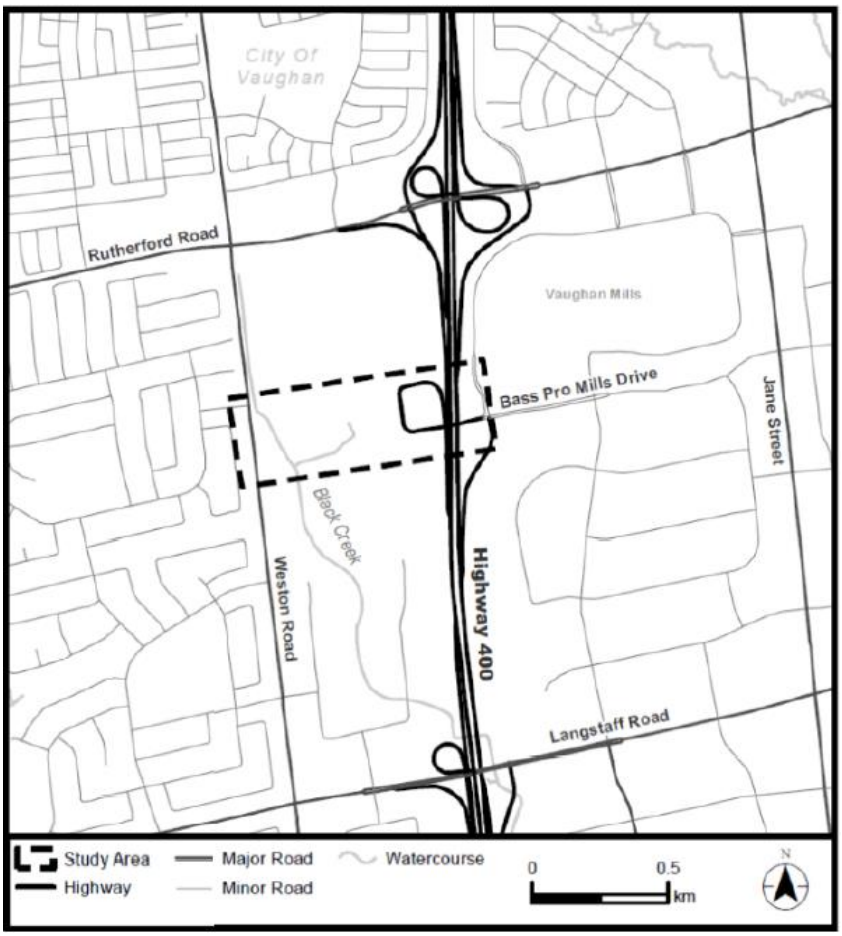
### Background

The City of Vaughan undertook a Municipal Class Environmental Assessment (MCEA) study for the proposed extension of Bass Pro Mills Drive, from Highway 400 westerly to Weston Road. The extension was proposed by the Vaughan Mills Centre Secondary Plan (VMCSP, 2014) to provide a new major collector roadway that unites neighbourhoods from Weston Road to Jane Street, redistributes east-west traffic, provides an alternative route to access the Vaughan Mills Centre Secondary Plan Area and helps to alleviate congestion on the surrounding road network. The proposed extension of Bass Pro Mills Drive is envisioned to support future development within the study area, including the employment and intensification plans that have been developed as part of the VMCSP.

The VMCSP recommends that the roadway extension is a major collector roadway which includes four travel lanes and a cycling lane on each side of the roadway. The VMCSP was adopted by the Municipal and Regional Council in 2014 but is currently subject to appeals at the Ontario Land Tribunal (OLT) relevant to the lands bordered by Weston Road, Rutherford Road, Jane Street and Bass Pro Mills Drive, including the proposed extension. Phase 1 of the OLT hearing has concluded and the decision was that the lands west of Highway 400 are to be maintained for employment uses. The Phase 2 hearing is to address specific land use policies, road locations and the ultimate location for the Black Creek tributary. Negotiations between parties are ongoing.

Based on the existing and future conditions within and surrounding the study area, it was identified that the existing road network provides very limited access to multi-use pathways and/or cycling facilities, and there is significant east-west traffic on Rutherford Road to the north. By establishing a new east-west roadway, an alternative route of travel for vehicular traffic, pedestrians and cyclists could be provided. Additionally, construction of a new east-west roadway could provide another route connection for York Region Transit and help support and service future development planned for the area.

The study area is indicated with the dashed line in the figure below. The primary study area for traffic analysis is generally bound by Weston Road to the west, Jane Street to the east, Langstaff Road to the south, Rutherford Road to the north, and includes Highway 400, as well as all ramps at the Rutherford Road and Langstaff Road interchanges.




This study was conducted in accordance with the MCEA process for Schedule ‘C’ projects as outlined in the Municipal Engineers Association (MEA) MCEA guidelines (October 2000, as amended in 2007, 2011 and 2015). As a Schedule ‘C’ project, the study proceeded under the full planning and documentation process, fulfilling all four phases of the MCEA process.

## 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

## Existing Conditions

The existing Bass Pro Mills Drive terminates at the Highway 400 southbound on-ramp located immediately west of the highway crossing. The existing portion of the roadway consists of two vehicular lanes in each direction (east and west), a sidewalk on the north side of the roadway, and a posted speed limit of 50 km/hr. To establish a better understanding of existing study area conditions, a number of technical and environmental studies were undertaken, as described herein.

A Traffic Impact Assessment was completed as part of this study to evaluate the transportation related impacts associated with the proposed development on the existing study area intersections and boundary road network. The existing traffic conditions indicated that the area is predominantly car-oriented, and the study area intersections do not provide significant cycling or multi-use paths, however the provision of sidewalks are generally abundant. Based on a microsimulation model, the future baseline 2031 and 2041 scenarios showed significant deterioration in major performance metrics within the study area, when compared to the existing conditions.

Natural heritage investigations were conducted to identify constraints and sensitivities and determine the general connectivity of natural features within the study area. A number of field investigations were conducted from the municipal right-of-way (in the absence of permission-to-enter private property) to characterize vegetation communities and complete a wildlife and aquatic habitat assessment. Drainage and groundwater characteristics were also identified and analyzed to determine the flow and connectivity within the study area.

A Stage 1 Archaeological Assessment and Cultural Heritage Overview were completed to determine archeological potential and identify built heritage resources and cultural heritage landscapes within the study area. In the absence of permission-to-enter private property, the site visit for the Stage 1 Archaeological Assessment was completed from the municipal right-of-way.

Noise and Air Quality Assessments were also completed as part of this study to assess the existing conditions within the study area, as well as the potential impacts from the proposed roadway extension on nearby sensitive receptors.

Other studies undertaken include a Climate Change Assessment, Contamination Overview Study, Crossing Assessment, Fluvial Geomorphological Assessment, Geotechnical and Hydrogeological Assessment, and a Socio-Economic Environment review.

## Identification and Evaluation of Alternative Solutions

A series of alternative solutions were identified through a screening process to determine which solution could best meet the objectives as defined by the Problem and Opportunity Statement for this study. The alternatives were then subjected to a detailed comparative evaluation focusing on the ability of each alternative to address the problems and opportunities, as well as the recommendations set forth in the VMCSP. Opportunities to incorporate mitigation measures to offset potential adverse impacts were also considered within the evaluation.

The alternative solutions that were identified and evaluated were:

- Alternative 1: Do Nothing
- Alternative 2: Improve Transit, Employ Travel Demand Management Measures
- Alternative 3: Intersection and/or Operational Improvements
- Alternative 4: Improve Existing East-West Roadways in the Area
- Alternative 5: Extend Bass Pro Mills Drive to Weston Road

Based on the results of the evaluation, **Alternative 5**: extend Bass Pro Mills Drive from Highway 400 westerly to Weston Road, was recommended.

## Identification and Evaluation of Alternative Design Concepts

A staged approach was used to identify and evaluate alternative design concepts, which represent alternative ways of carrying out the preferred solution. The purpose of this approach was to eliminate alternatives that were considered to be significantly disadvantaged relative to other alternatives, in order to streamline and simplify the decision-making process. The evaluation process included the following three stages:

- Stage 1: Identification and Evaluation of Alternative Cross-Sections
- Stage 2: Identification and Evaluation of Alternative Alignments
- Stage 3: Identification of Recommended Design

The detailed evaluation of the alternative cross-sections and alternative alignments was completed using a reasoned argument approach that took into account the technical feasibility of each alternative, as well as their potential to impact the transportation, natural, cultural and socio-economic environments.

### *Stage 1: Identification and Evaluation of Alternative Cross-Sections*

The alternative cross-sections that were identified and evaluated were:

*Alternative Cross-Section 1*

Alternative Cross-Section 1 consists of a 30 m right-of-way, with a 2.0 m wide sidewalk, 0.2m buffer and 1.8 m wide cycling path on either side of the roadway. While there is no formal separation between pedestrians and cyclists, cyclists are separated from vehicular traffic by a 3.0 m boulevard, which would facilitate streetlighting, utilities, and streetscaping opportunities. The roadway has a 1m buffer to the boulevard and four lanes, two 3.5m outer lanes and two 3.3m inner lanes.

*Alternative Cross-Section 2*

Alternative Cross-Section 2 consists of a 31 m wide right-of way, with a 2.0 m wide sidewalk and 1.8 m wide cycling path on either side of the roadway. A 2.5 m wide boulevard is provided as part of this option and offers a 1.2 m landscape buffer between the sidewalk and cycling path. Cyclists and pedestrians are also separated from vehicles by the 2.5 m boulevard, which would also facilitate streetlighting, utilities, and streetscaping. The roadway has a 1m buffer to the boulevard and four lanes, two 3.5m outer lanes and two 3.3m inner lanes.

*Alternative Cross-Section 3*

Alternative Cross-Section 3 consists of a 30 m right-of-way with a 2.0 m wide sidewalk and 2.0 m wide cycling path on either side of the roadway. A 0.4 m wide paved buffer is offered between the sidewalk and cycling path. Cyclists are separated from vehicles by the 2.3 m boulevard, which would also facilitate a bio-retention swale, streetlighting, utilities, and streetscaping. The roadway has a 1m buffer to the boulevard and four lanes, two 3.5m outer lanes and two 3.3m inner lanes.

*Alternative Cross-Section 4*

Alternative Cross-Section 4 consists of a 30 m right-of-way with a 2.0 m wide sidewalk on either side of the roadway. Cycling facilities are provided on either side of the roadway with 2.0 m wide on street cycling lanes that are separated from vehicular traffic by a 0.9 m wide concrete buffer. A 3.4 m wide swale would be incorporated within the north side of the right-of-way, and 2.0 m wide planting/furnishing zone would be provided on the south side. The roadway has two 3.5m outer lanes and two 3.3m inner lanes.

Based on the results of the evaluation, **Alternative 3** was recommended as it was consistent with City's design standards, the vision for the community and Public Realm and Streetscape Plan study being undertaken concurrent to this study, as well as the recommendations made in the approved VMCSP. Alternative 3 is also anticipated to have moderate capital, operational and maintenance costs, and offers a safe and comfortable environment for cyclists and pedestrians.

***Stage 2: Identification and Evaluation of Alternative Alignments***

Based on the recommended cross-section identified through Stage 1 of the evaluation process, the study team proceeded with Stage 2 to identify alternative alignments. Two conceptual alternative alignments for the extension of Bass Pro Mills Drive were identified within the study area:

- Alternative A: a relatively straight connection from the existing Bass Pro Mills Drive west to Weston Road and,
- Alternative B: an ‘S’ curve connection from the existing Bass Pro Mills Drive west to Weston Road, intersecting at Astona Boulevard.

The alternatives were selected based on City of Vaughan Design Standards, the previously approved VMCSP, a desktop review of existing conditions and feedback received in response to public and stakeholder consultation. While consideration was given to other potential alignments, due to significant property impacts and intersection spacing, these alignments were screened out and were not carried forward in the evaluation.

The evaluation of alternative alignments identified **Alternative A**, a relatively straight connection from the existing Bass Pro Mills Drive west to Weston Road, as the recommended alignment as it posed the least impact to the technical, socio-economic, natural and cultural environments given that the majority of the land has been previously disturbed, and the alignment avoided providing a direct route to adjacent residential areas which may have resulted in increased traffic infiltration.

***Stage 3: Identification of Recommended Design***

Following the evaluation of the alternative cross-sections and alternative alignments, **Alternative 3A** was identified as the Technically Recommended Design, which is comprised of the road cross-section of Alternative 3 and roadway alignment of Alternative A.

**Highway 400 Bridge Crossing**

Constructed in 2004, the existing Highway 400 overpass is a two-span slab on a steel box girder bridge with an overall length of 91 m supported on integral abutments. The existing structure has an overall width of 20.41 m, and currently provides for two westbound lanes and two eastbound lanes; however, only the westbound direction is open to traffic for a direct connection to the Highway 400 southbound ramp.

The existing Bass Pro Mills Drive bridge overpass includes a 1.5m raised sidewalk on the north side with a 0.25m buffer, four 3.5m lanes of paved surface, a 1.2m raised median with 0.4m buffers on each side, a 1.75m flush paved shoulder on the south side, and 0.455m concrete barrier walls with railings on both sides of the bridge.

In response to the recommended design for the Bass Pro Mills Drive extension, a number of alternatives were considered to provide for four lanes of traffic (two in each direction) and accommodate Active Transportation (AT) facilities across the Bass Pro Mills Drive bridge over Highway 400. In general, alternatives included ‘do nothing’, modifications to the existing bridge only, widening on one or both sides of the bridge, and adding a separate AT bridge to the north or south. Alternatives were developed in consideration of the existing General Bridge Arrangement, Ministry of Transportation Ontario (MTO) and Transportation Association of Canada (TAC) design guidelines, cost, property impacts, functionality, and safety. The bridge is located within the MTO

Controlled Access Highway (CAH) limit and therefore subject to MTO consultation and requirements.

MTO Design and Contract Standards Office #2018-07 discusses incorporating cycling facilities into bridge rehabilitation projects and restricted areas within provincial highway right-of-way and recognizes that it is not always feasible to apply design guidelines that are used for design of provincial highways or new bridges and for such situations, consideration may be given to apply alternative design guidelines. The MTO policy statement allows the narrowing of such features as centre islands and shoulders. Further, the policy suggests that consideration be given to road diet and removal of lanes, if possible.

Options that did not require any widening of the bridge sub-structure, yet satisfied prevailing criteria, were more economical solutions (estimated costs of $2M +/-) to provide adequate and safe measures for non-vehicle traffic at the bridge crossing. Solutions that entail a widening of the existing bridge or the construction of a separate AT bridge would significantly increase project costs ($10M - $15M) and have property impacts to achieve the study objective, without adding significant benefit to functionality or safety.

The study team also took into consideration timelines associated with MTO planning for the widening of Highway 400 to 10-lanes (with anticipated 2024-2026 construction) and the Region of York planning for the improvement of Langstaff Road and Highway 400 interchange south of Bass Pro Mills Drive, the timing of which is unknown at this time.

Following the evaluation of alternatives and considering feedback from MTO, the public and other stakeholders, the recommended alternative is to avoid a widening of the Bass Pro Mills Drive structure over Highway 400 by modifying the existing bridge.

**Preferred Design**

The preferred design includes an extension of the existing Bass Pro Mills Drive roadway with a generally straight connection to Weston Road with a 30 m right-of-way to accommodate four lanes of vehicular travel (two lanes in each direction), with 3.3 m wide inside lanes and 3.5 m wide outside (curb) lanes. The preferred design will also include a 2.0 m wide sidewalk and 2.0 m wide cycling path on either side of the roadway, a 200 mm wide paved buffer between the sidewalk and cycling path and a 2.5 m boulevard with an intermittent bio-retention swale (adjustments were made to the dimensions for the boulevard and buffer between the cycle track and sidewalk). The preferred design will accommodate space for utilities, and alternating streetlighting and streetscaping along the boulevards. The preferred design includes a new signalized intersection at Weston Road, storm water measures to control water quantity and quality, including an equalizer culvert sized to accommodate wildlife crossings, and a new culvert crossing of the Black Creek tributary at the existing crossing location. The ultimate location for the Black Creek tributary will be subject to outcomes of the ongoing appeals process of the VMCSP. This study reviewed alternative locations for the ultimate creek crossing and all were found to be feasible.

The preferred design for the Highway 400 bridge crossing is to modify the existing structure to provide a 1.8 m wide sidewalk on each side of the roadway, a 500 mm shoulder clearance, four vehicle lanes at 3.5 m wide each (two in each direction), and a raised 1.2 m centre median. These design modifications are based on a 60 km/hour design speed. The bridge will connect to existing sidewalks along the existing Bass Pro Mills Drive on the east side of the bridge.

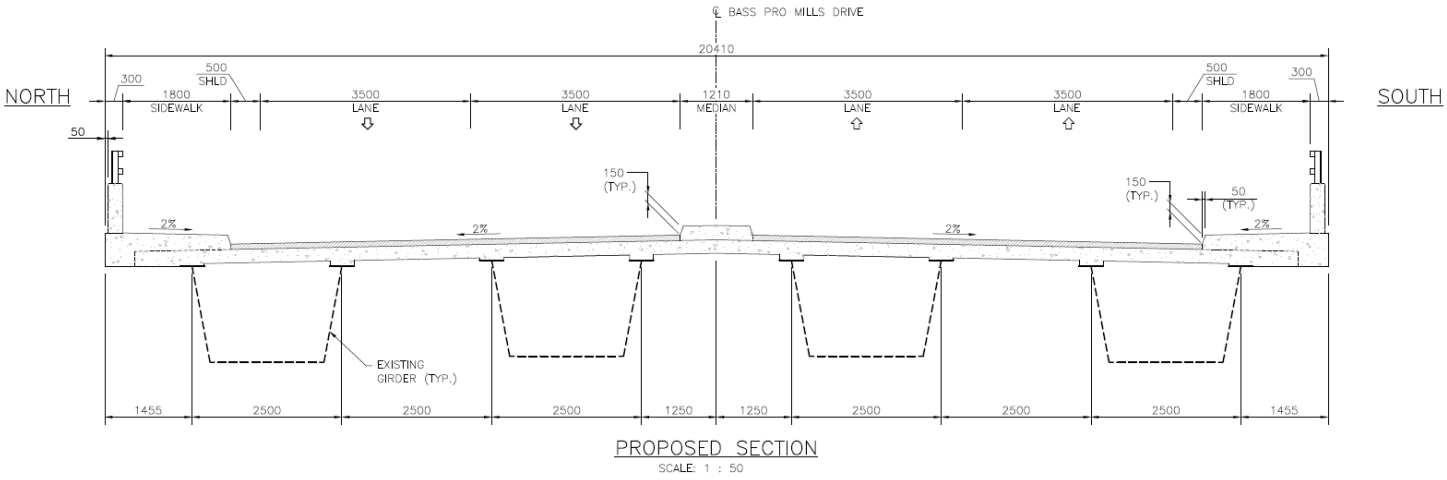
Additionally, it is recommended that signage be posted approaching either side of the bridge advising cyclists to dismount before crossing the structure and that design criteria be further reviewed during detail design in consultation with MTO.

The feasibility of extending the active transportation facilities being proposed as part of the preferred design from east of the Highway 400 bridge easterly to Jane Street was examined as part of this study. The proposed facilities could be accommodated within the existing Bass Pro Mills Drive right-of-way, with some activities required including the relocation of existing streetlights, fire hydrants, and boulevard trees and some modifications at intersections. The preliminary cost estimate for this work is $3 Million.

Preferred Design Cross-Section taken from the Vaughan Mills Centre Public Realm and Streetscape Master Plan Study, consistent with the recommendations of this EA


1. Planned ROW: 30.0 m
2. Pavement Width: 13.6 m
3. Lane Width: 3.5 m curb lanes / 3.3. m travel lanes
4. Overall Boulevard Widths: 8.2 m
5. Clear Sidewalk Width: 2.0 m
6. Cycle Facilities: 2.0 m
7. Curb Extensions: None
8. Green Infrastructure (GI): street trees in open planters; passive irrigation underground storage; bio-retention planters

Preferred Design Cross-Section for the Highway 400 Bridge Crossing as noted in the Environmental Study Report




## Preliminary Cost Estimate

With the exclusion of engineering design, contract administration, property, and utility relocation costs, the preliminary cost estimate associated with implementing the preferred design is **$10,193,625**.

## Consultation

Consultation is an integral component to the MCEA process. An extensive consultation plan was implemented to encourage agencies, Indigenous communities, the public and other stakeholders to provide valuable feedback throughout all stages of the study. Consultation activities associated with this study are summarized below:

- Posting key study milestones on the City's study website (Vaughan.ca/BassProMillsEA), including Notice of Commencement, Public Information Centre (PIC) 1 and PIC 2 and associated summary reports, and Notice of Study Completion.
- Publishing of notices in local newspapers (Vaughan Citizen and Thornhill Liberal newspapers).
- Direct mailing and Canada Post Mail-Drop of notices to relevant review agencies, utilities, Indigenous communities, impacted property owners, stakeholders and the general public.
- Holding Stakeholder Group meetings with local landowners groups, ratepayers association, developers, property owners and members of the public who expressed an interest in the project to share study updates and encourage valuable feedback.
- Holding Technical Advisory Committee meetings with subject matter experts from various City departments, representatives from the Toronto and Region Conservation Authority, York Region and Ministry of Transportation Ontario.

- Holding property owner meetings with landowners who may be impacted as a result of the preferred design to discuss the potential impacts specific to their properties/entrances.
- Holding two online PICs to present and obtain input from the general public, agencies, Indigenous communities and other stakeholders.
- Placement of this ESR on the public record and distribution of the Notice of Study Completion.

**Impacts, Mitigation Commitments and Monitoring**

The potential impacts, proposed mitigation measures and monitoring were determined based on a detailed inventory of the study area environments. The study reviewed commitments to be carried forward into the detail design and implementation phase of the MCEA process (Phase 5). The various environmental sensitivities and areas of concerns related to the preferred design are listed below:

- Individual Trees
- Terrestrial Environment
- Fish/Fish Habitat
- Fluvial Geomorphology
- Archaeology
- Air Quality
- Construction Noise
- Vibration
- Contamination
- Subsurface Conditions
- Excess Soil Management
- Erosion and Sediment Control
- Stormwater/Drainage
- Groundwater
- Utilities
- Property

Permits and approvals to be sought during the detail design phase are identified within the ESR. These commitments have been developed in consideration of the input received from the public, York Region, Toronto and Region Conservation Authority, Ministry of Transportation Ontario, the Ministry of the Environment, Conservation and Parks, and other stakeholders.

**Timing of Improvements**

Timing of improvements is to be confirmed during Detailed Design. Construction timing is anticipated to follow the timing outlined in the City's current (2022) Capital Plan. This plan is reviewed and approved by Council annually and is subject to change.

**Next Steps**

The draft Environmental Study Report (ESR) is currently being reviewed by the appropriate external agencies and the final report is scheduled to be filed and available for a 30-day public review period in July/August 2022. The final Notice of Completion will be made public via Newspaper ads, the City's official social media platforms, mail outs, and e-blasts, and placed on the study website (www.vaughan.ca/BassProMillsea) along with the final ESR.

For more information, please contact Selma Hubjer, Acting Director, Infrastructure Planning and Corporate Asset Management at extension 8674.

## Approved by

Vince Musacchio, Deputy City Manager
Infrastructure Development