Online Open House No. 2 Summary Report

Warden Avenue and Kennedy Road Environmental Assessment Studies between Major Mackenzie Drive and Elgin Mills Road in the City of Markham

The Regional Municipality of York
17250 Yonge Street
Newmarket ON L3Y 6Z1

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R.J. Burnside & Associates Limited
292 Speedvale Avenue West Suite 20
Guelph ON N1H 1C4 CANADA

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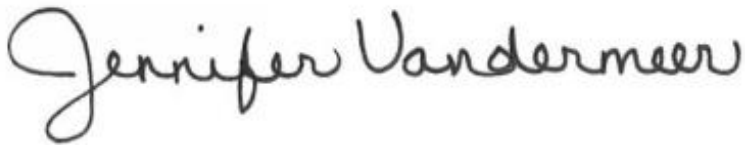
R.J. Burnside & Associates Limited

Report Prepared By:

Deanna De Forest, B.Sc. EP
Senior Environmental Coordinator
DDF:tm

Report Reviewed By:



Jennifer Vandermeer, P.Eng.
Project Manager
JV:tm

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1.0 Introduction and Background

The Regional Municipality of York (York Region) is conducting Schedule C Municipal Class Environmental Assessment (Class EA) Studies in the City of Markham for improvements to Warden Avenue and Kennedy Road between Major Mackenzie Drive and Elgin Mills Road. These studies build on the recommendations from York Region's approved 2016 Transportation Master Plan (TMP) and examines how to complete the identified road and active transportation improvements while lessening environmental impacts.

The 2016 TMP recommended the widening of Warden Avenue and Kennedy Road to four lanes, constructed to an urban arterial standard including curb and gutter, active transportation, streetscaping, and transit. The recommendations were based on the forecasted traffic volumes, which meet the threshold for a four-lane widening. The recommendations of the 2016 TMP for Warden Avenue and Kennedy Road were reconfirmed as part of the current Class EA.

The road improvement planning is being carried out in accordance with the Schedule C requirements (Phases 1 to 4) of the Municipal Engineers Association Municipal Class Environmental Assessment document (October 2000, as amended in 2007, 2011, and 2015), which is approved under the *Ontario Environmental Assessment Act*.

A key component of the studies include consultation with members of the public and stakeholders. This summary report documents the second Online Open House hosted on York Region's website (www.york.ca/WardenKennedyStudy) from November 25, 2022 to January 13, 2023 and summarizes the notification process, information presented, and comments received during the comment period.

2.0 Method of Notification

Details of the date and purpose of the second Online Open House were published in the Markham Economist and Sun on November 10, 2022 and November 17, 2022 promoted through a digital advertising campaign with StarMetroland Media from November 10, 2022 to January 13, 2023 and posted on York Region's website. In addition, roadside signs were placed on Warden Avenue and Kennedy Road in both directions, advertising the Online Open House. A copy of the advertisement is provided in Appendix A. Notification of the Online Open House was also mailed and emailed to regulatory agencies, municipalities, Indigenous communities, businesses, and local residents who live within the Study Area.

3.0 Public Meeting Format

To limit social interactions to reduce community spread of the COVID-19 virus and be consistent with the format of the first Online Open House, the second Online Open House was hosted virtually. The Online Open House included a presentation video with recorded commentary posted on York Region's website for the public to view or download anytime during the open house comment period from November 25, 2022 to January 13, 2023. Presentation materials described the project, the study process and planning context, alternative design concepts, feedback received from the Online Open House No. 1, an evaluation of the alternative design concepts leading to the preferred design concepts and identified next steps in the process. A copy of the presentation is provided in Appendix B. Opportunity for the public to provide feedback was made available through an online comment form and by contacting the Project Team with written comments.

The online comment form provided participants the opportunity to provide input into the Studies and asked participants the following questions:

1. I am interested in this study because: (select one or more)

- Local resident;
- Own a development property;
- Own commercial / industrial property;
- General interest, and;
- Other.

2. How do you currently travel in this area? (select one or more)

- Drive (motor vehicle);
- Cycle;
- Walk;
- Transit (bus), and;
- Other.

3. Please provide comments on the recommended design concept for Warden Avenue in the Study Area.

4. Please provide comments on the recommended design concept for Kennedy Road in the Study Area

5. Please provide any additional comments, questions, or suggestions you would like the Study Team to consider.

4.0 Participation

Online comment forms were received from four members of the public through York Region's website during the open house comment period (Appendix C). The Region also received comments on the project during the open house comment period from the City of Markham. A summary of the comments received from participants and responses provided by the Study Team is documented in the following section.

Where identified on the online comment forms, three of the four public participants indicated interest in the project as a local resident, with one participant indicating a general interest in the project and an interest in active transportation as a member of the Cycling and Pedestrian Advisory Committee.

All four public participants travel in the area by motor vehicle. One participant noted driving, cycling, walking, and riding public transit (bus) in the Study Areas.

5.0 Summary of Comments Received

This section provides an overview of the feedback received from participants during the open house comment period. Comments are reviewed to provide an understanding of stakeholder interests and opinions and feedback in the evaluation of the preferred design concept.

A summary of comments received during the second Online Open House comment period is provided in Table 5.1 under key themes, including:

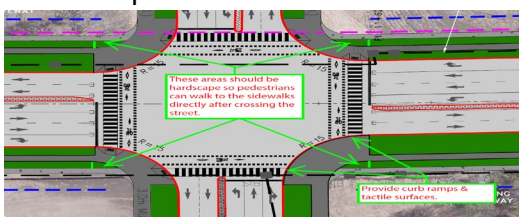
- Boulevard plantings;
- Pedestrian crossings;
- Low Impact Development (LID);
- Active transportation, and;
- Other.

Table 5.1: Participant Comments and Response by Theme

Comment	Response
Boulevard Plantings	
Provide double rows of boulevard trees wherever possible. Trees are recommended to be planted 8 m to 12 m apart (10 m is preferred). Maintain a consistent planting distance wherever possible.	Acknowledged. Boulevard trees are to be planted at regular intervals set back from the curb or other concrete surface (e.g., sidewalk); planting trees closer to concrete surfaces will cause the roots to buckle these surfaces as the trees mature. Therefore, spacing for tree planting is limited to the planted boulevard area, based on a single row of trees.
Indicate aboveground utilities such as hydro poles, light poles, and fire hydrants on the plans as they may impact tree locations.	Acknowledged. Aboveground utilities will be included on the preliminary design plans prepared as part of the EA.
Low Impact Development (LID)	
Show locations of box trenches and bioswales on the roll plans and provide typical streetscape section(s) for review.	The proposed LID features will be shown on the preliminary design plans prepared as part of the EA. LID features will be further refined during Detailed Design.
Consider revising the section or providing a new one to show bioswale design in relation to other proposed street elements. Introduce trees to the boulevard areas that are closer to the curb line.	Based on the stormwater management plans, all LID features in the Warden Avenue corridor are box trenches. As such, the Study Team does not intend to prepare a new concept / section to illustrate the bioswale design. York Region requires a minimum width of 3.4 m for tree

Comment	Response
	planting behind the curb. Based on the preferred design concept cross-section, the boulevard area closer to the curb (softscape) is 2.7 m wide, which is less than York Region's minimum standard for tree planting. Spacing for tree planting is; therefore, limited presently to the 3.5 m planted boulevard area between the sidewalk and cycle track. During the Detailed Design phase of the project, the softscape width will be further reviewed to confirm if additional tree planting can be achieved.
Bioswale design: • Bioswales appear to be next to the curb based on this section (Slide 18); however, the roll plans indicate boulevard planting areas in between the LID feature and curb line (Slides 19 and 21). Please clarify locations of bioswales. • Consider planting trees on the top of the bioswales wherever possible. • Besides meadow flowers and ornamental grasses, consider introducing shrubs to increase planting diversity.	Based on the stormwater management plans, all the LID features in the Warden Avenue corridor are box trenches. A small section of Kennedy Road includes a bioswale. The bioswale design was identified on the preferred design concept Slide from the second Online Open House as an alternative option to the preferred box trench design for areas that have higher water table or limited space. To clarify, the boulevard planting areas are between the sidewalk and the cycle track. Trees should not be planted within LIDs as they will act as dams, clogging up the system. Shrub planting within LIDs along roads is problematic as they will collect / catch more litter and are not able to withstand period flooding. Planting with flowers and grasses can still be diverse with various perennial species in groupings of seven or more per cluster. LID features will be further refined during Detailed Design.
Box trench design: • Would it be possible to raise the grade inside the box trench to avoid uses of guardrails? This also allows pedestrians to better benefit aesthetic values of the flowers and grasses. • Besides meadow flowers and ornamental grasses, consider introducing shrubs to increase planting diversity.	Guardrails are proposed for the inside edge of the box trench to provide a safety barrier between the LID and the cycle track. The depth of the box trench is designed to be below-grade; to provide surface ponding in the box above the filter medium thus providing an opportunity for additional infiltration and quantity control volumes. Shrub planting within LIDs along roads is problematic as they will collect / catch more litter and are not able to withstand periodic flooding. Planting with flowers and grasses can

Comment	Response
	still be diverse with various perennial species in groupings of seven or more per cluster. LID features will be further refined during Detailed Design.
Planting species selection for LID features shall be considered with hardy native / non-invasive plants with a strong root system and the ability to withstand both wet and dry conditions, including salt-tolerant shrubs, herbaceous perennials, and warm and cool weather grasses.	Acknowledged. LID features will be further refined during Detailed Design.
Consider adding LID facilities in marked areas.	LID features have been optimized in the Warden Avenue right-of-way (ROW) to meet water quantity and quality objectives. The proposed locations for LID features, which are illustrated on the stormwater management plans prepared in support of the EA study, are based on groundwater levels. Consideration for adding additional LID features will be made at the Detailed Design stage of the project.
Regarding the proposed LID feature location near the existing culverts under Warden Avenue, there is a proposed headwater drainage feature connecting to the existing culverts under Warden Avenue. LID Designer needs to be aware of the potential space conflict at this location.	There are no LID features proposed at this location due to very high groundwater table. This condition is reflected in the stormwater management plans.
Please clarify drainage at east side of the preferred design concept.	The cross-section provided on Slide 23 was intended to illustrate the constraints posed by the existing cemetery on the east side of Kennedy Road. Grades on the east side of the road corridor at this location are understood to slope toward the east. The preliminary design will illustrate the existing and proposed drainage on the east (and west) sides of Warden Avenue outside the ROW.

Comment	Response
Pedestrian Crossings	
At the intersections, trim the boulevard planting areas that are close to the property line to create direct pedestrian connections from the sidewalks to the crossings. Please see example: 	Acknowledged. Pedestrian connections from the sidewalks to the crossings at intersections will be illustrated on preliminary design plans.
Curb ramps and tactile surfaces should be provided at all crossings.	Acknowledged. Curb ramps and tactile surfaces at crossings will be illustrated on preliminary design plans.
Active Transportation	
In the criteria for evaluating alternatives, there is no assessment of cyclist safety. This appears to be a significant oversight. Respectfully, cyclist safety should be included as an evaluation criterion in all York Region EA's.	Cyclist safety was considered in the earlier stages of the project and built into the development of the alternative design concepts. Each alternative evaluated included boulevard space to allow for separation between motor vehicles, pedestrians, and cyclists to maximize the safety of all users. The preferred design concept further increases the safety of active transportation users by implementing a dedicated cycle track and separated sidewalk.
• Final design of cycling facilities must address the needs of all cyclist categories and requirements for power-assisted e-bikes. Matters that need to be addressed during final design include: • Geometric design of cycling facilities to appropriate criteria for advanced cyclists and e-bike users. • Design criteria should include a minimum 32 km/h design speed (maximum assisted speed allowable in Ontario) to accommodate e-bikes, along with appropriate design parameters for	Acknowledged. Design criteria for the cycle track will be further evaluated during the Detailed Design phase of the project, balancing all user needs.

Comment	Response
minimum horizontal curve radius, vertical curves, and stopping sight distances. • Should appropriate speed-related design criteria not be employed, cycling facilities may be unusable by advanced cyclists and e-bike users in preference to more dangerous on-road cycling. • Cycling facilities should be linear and direct, following the roadway as closely as possible for advanced higher-speed road bicyclists.	
Visibility of cyclists and motorists should be enhanced before intersections to mitigate the risk of left or right turn collisions with turning motorists. Intersection crossing markings should be provided to improve collision avoidance. The Urban Bikeway Design Guide by the National Association of City Transportation Officials provides design guidance. Intersections should be designed to reduce turn conflicts for cyclists and provide connections to intersecting cycling facilities: • Potential conflicts between pedestrians and cyclists at intersections should be assessed and minimized to enhance safety. • Provide paved surfaces for cycling facilities. Since most road bicycles do not have suspension systems, gravel, paving stones, and surfaces like concrete, sidewalks are not suitable for bicyclists traveling at higher speeds.	The Project Team will evaluate potential conflicts to improve safety between all users along the corridor at each intersection, during the Detailed Design phase of the project. Details of material to be used on the cycle track will be evaluated during Detail Design in consultation with the City of Markham.
Per Slides 20 and 22 of the Open House No. 2 package, the preferred intersection treatment at all five signalized intersections on each Warden Avenue and Kennedy Road is a “cross ride”. However, York Region’s Pedestrian and Cycling Planning and Design Guidelines (pages 110 to 114) discuss a preferred option; use of protected intersections with corner refuge islands. To	Acknowledged. The Project Team will evaluate each intersection and crossing details, balancing all user needs during the Detailed Design phase of the project.

Comment	Response
quote from page 110, “The protected intersection is emerging in North America as a preferred higher order intersection treatment…” Please evaluate this concept at some or all signalized intersections.	
Although beyond the scope of this EA, York Region is encouraged to improve cycling facilities along other Regional roads and provide cycle lanes or cycle tracks, where absent. The Warden Avenue and Kennedy Road roll plans clearly illustrate glaringly absent cycling facilities beyond the EA Study Area.	The Project Team acknowledges this is beyond the scope of this EA. Connectivity and transition to existing facilities at the limits of the project is considered during Detailed Design, while also taking into consideration transition to future linkage opportunities recommended by York Region’s Transportation Master Plan and Pedestrian and Cycling Planning and Design Guidelines.
Provide pavement markings for the cycle track to indicate the bike travel directions.	Acknowledged. Symbols indicating direction of bike travel will be illustrated on preliminary design plans.
The preferred minimum width of a bike lane is 2.0 m to allow cyclists to ride side-by-side or pass each other without leaving the bike lane. Cars are wide enough to sit two people next to each other, why should cyclists not be able to ride next to each other? This is important to get more people cycling, including students.	The width of the cycle track was developed using the current York Region Road Design Guidelines, Region Pedestrian and Cycling Planning and Design Guidelines and OTM Book 18 for cycling facilities, while balancing the space available within the municipal ROW to accommodate necessary design features. The final width of the bike lane will be confirmed during Detailed Design, balancing various needs within the boulevard such as sidewalk, tree planting, utilities, and LID features.
Consider introducing street furniture (e.g., benches, bike racks, and trash receptacles) to the corridors, particularly at retail-focused intersections and neighborhood service nodes as identified by the FUA Conceptual Master Plan Community Structure Plan.	Acknowledged. Consideration for street furniture is to be incorporated at the Detailed Design phase of the project.
Three multi-use paths (MUPs) on the collector roads abutting Warden Avenue should be shown on the Warden Avenue Roll Plan.	Acknowledged. The preliminary design will include the MUPs on the collector roads.
The preferred design for Kennedy Road shows active transportation (AT) facilities on the intersecting collector roads. The	Acknowledged. The preliminary design will include the MUPs on the collector roads in coordination with the City and the Developers.

Comment	Response
preferred design for Warden Avenue should also be consistent with Kennedy Road in showing the AT facilities on the intersecting collector roads.	
Other	
Please see attached to the email, a list of development projects that are within the vicinity of the EA.	Acknowledged.
Please ensure that the collector roads intersecting to Warden Avenue are as per the approved collector roads EA.	The locations of the proposed collector roads have been established on our preliminary design plans as per the collector road EA plans supplied by York Region.
Extend roadway and median concepts used on Warden Avenue from Major Mackenzie Drive to 16th Avenue. This design presents itself very well and is capable of handling current and future traffic loads for some time to come and does allow for use of the centre median (paved / lined) as a turning lane over the entire length.	Acknowledged. A centre median concept was evaluated during consideration of design concepts. The preferred design concept for Warden Avenue within the study corridor includes a 1.0 m centre-marked median as it is the least costly option and has the greatest setback of the active transportation facilities from the vehicle travel lanes.
Will the two very large vertical storm sewer cribbing abutting Warden Avenue (west side) in the design area interfere with any width considerations for the roadway / sidewalk / bike path concepts intended?	Drainage has been evaluated during the EA and accommodated within the urban ROW design. Further details will be evaluated at the Detailed Design stage.

6.0 Next Steps

Comments and concerns received during the second Online Open House comment period will be reviewed for incorporation into the evaluation and selection of the preferred design.

Following the approval of the Preferred Design Concept, the planning and decision-making process of the Municipal Class EA will be documented in an Environmental Study Report and made available for public review and comment at the conclusion of the study.

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Appendix A

Newspaper Advertisement

GREAT STREETS
Building Roads that Build Community 2022

NOTICE OF ONLINE OPEN HOUSE #2

Environmental Assessment Study

Warden Avenue and Kennedy Road

Major Mackenzie Drive to Elgin Mills Road

City of Markham

The Regional Municipality of York is conducting Schedule 'C' Municipal Class Environmental Assessment (Class EA) Studies in the City of Markham for improvements to Warden Avenue and Kennedy Road between Major Mackenzie Drive and Elgin Mills Road.

WE WANT TO HEAR FROM YOU

You are invited to take part in the second online open house to learn about the study process, road improvement design options evaluated, preferred design concepts and next steps.

When: View materials from **Friday, November 25, 2022 to Friday, January 6, 2023**

Where: Visit **york.ca/WardenKennedyStudy** to access the online open house materials

Comments: Share your comments through the online open house feedback form or send them to **transportation@york.ca** by Friday, January 6, 2023

Please let us know if you require accommodations to participate. Online materials and an accessible version of this notice is available upon request.

To submit a question, comment or request to be added to the project mailing list, please contact:

York Region Transportation, Public Works
Phone: 1-877-464-9675 ext. 75000
TTY: 1-866-512-6228
Email: transportation@york.ca

To better assist you, please quote **Warden and Kennedy EA Studies** in your inquiry.

This study is being undertaken according to requirements of the *Ontario Environmental Assessment Act*. Personal information submitted (e.g. name, address and phone number) is collected, maintained and disclosed under the authority of the *Ontario Environmental Assessment Act* and the *Municipal Freedom of Information and Protection of Privacy Act* for transparency and consultation purposes. Personal information you submit will become part of the public record that is available to the general public, unless you request that your personal information remain confidential.

This notice was issued on Thursday, November 10, 2022

Wayne Emmerson
York Region Chairman and CEO

York Region

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Appendix B

Display Boards Presentation

GREAT | STREETS
Building Roads that Build Community 2022

MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT STUDIES

Warden Avenue and Kennedy Road from Major Mackenzie Drive to Elgin Mills Road

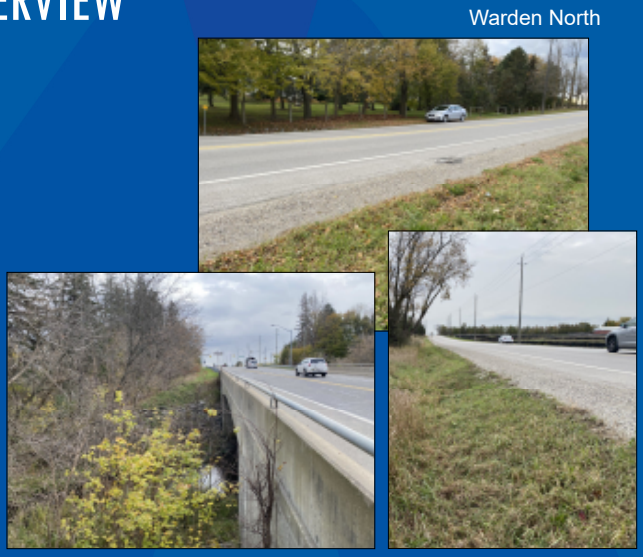
Online Open House #2
November 25, 2022

York Region

1

ONLINE OPEN HOUSE #2 OVERVIEW

- Study areas and objectives
- Municipal Class EA process
- Alternative design concepts
- Feedback: Online Open House #1
- Evaluation of alternative design concepts
- Preferred design concepts
- Next steps



2

Study Areas and Objectives

The Regional Municipality of York is undertaking Schedule C Municipal Class Environmental Assessment (MCEA) Studies for improvements to Warden Avenue and Kennedy Road, between Major Mackenzie Drive East and Elgin Mills Road East, in the City of Markham.

- These studies build on the recommendations from the approved 2016 York Region Transportation Master Plan (TMP)
- Through the MCEA studies, York Region is examining how best to complete the identified road and active transportation improvements while lessening the environmental impacts

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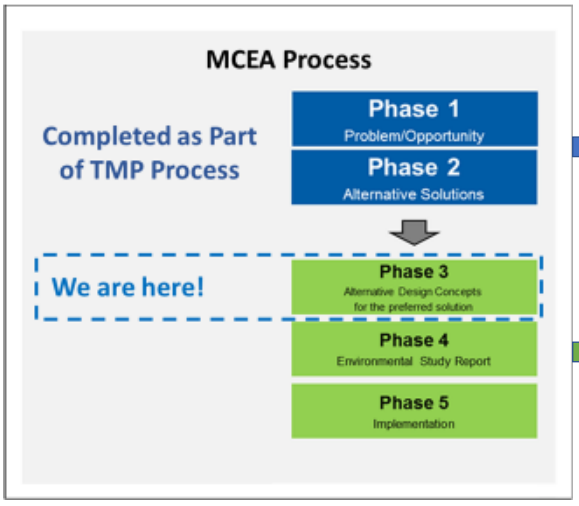
Municipal Class Environmental Assessment Process



Approved 2016 TMP

- Established road needs and justification for the two study corridors
- Completed to a level of detail that meets the requirements for phases 1 and 2 of the MCEA process

Current studies

- Identify and evaluate alternative design concepts for preferred solutions (Phase 3)
- Complete Environmental Study Report (Phase 4)

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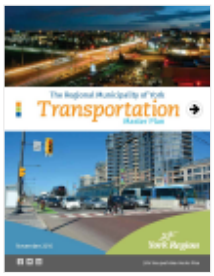
Approved 2016 Transportation Master Plan

The approved 2016 TMP documented broader, Region-wide problems and opportunities, including:

- Creating a road network 'fit for the future'
- Integration of active transportation in urban areas



Problem and opportunities identified in the 2016 TMP for the Warden Avenue and Kennedy Road study areas include:

- Transportation network improvements needed to accommodate expansion of the designated urban area and future travel demands
- Capacity improvements needed to accommodate future travel demands
- Corridor improvements to support walking, cycling and transit access

Current analysis of existing and future traffic and development in the study area corridors have confirmed the problem/opportunities identified in the approved 2016 TMP.

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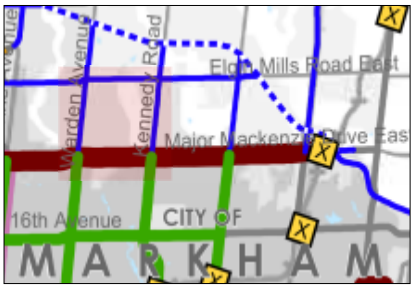
Preferred Solutions (approved 2016 TMP)

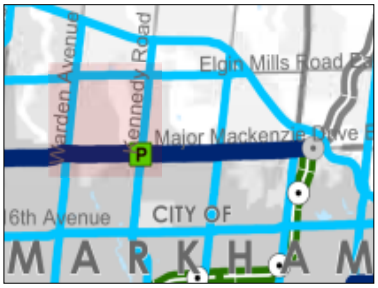
- Widen to two lanes in each direction and construct to urban arterial standards
- Opportunity to improve transit network
- Opportunity to improve walking and cycling facilities

Lane improvement



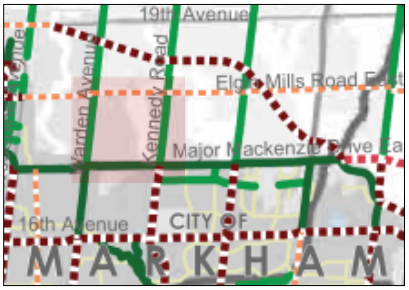
Source: Map 8, Proposed 2041 Road Network (2016 TMP)

Transit improvement



Source: Map 7, Proposed 2041 Road Network (2016 TMP)

Active transportation improvement



Source: Map 9, Proposed 2041 Cycling Network (2016 TMP)

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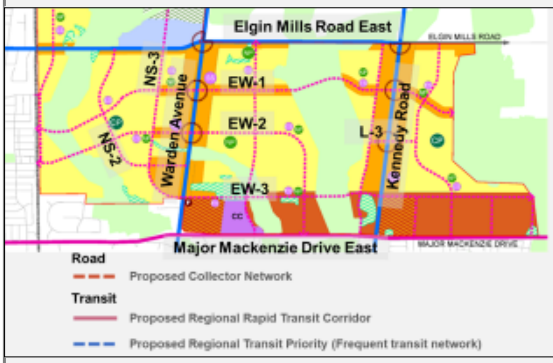
Additional Recommendations for Warden Avenue and Kennedy Road

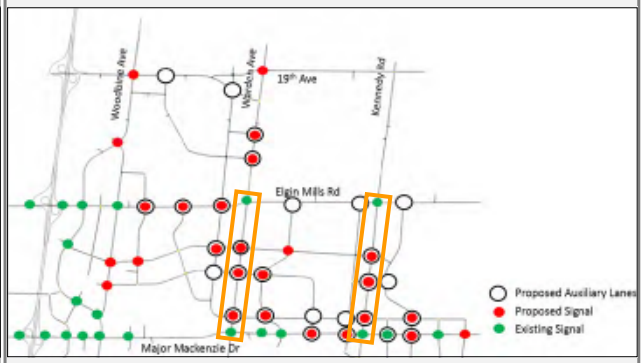
The City of Markham's Future Urban Area Conceptual Master Plan

Recommended comprehensive collector road network of road and active transportation infrastructure



Proposed Community Structure Plan (Conceptual Master Plan)
Adapted from: Future Urban Area Conceptual Master Plan Volume 2 (October 2018)

Anticipated signals in support of future development and travel demands



Proposed Signal and Intersection Configuration
Source: Future Urban Area Conceptual Master Plan Volume 2 (October 2018)

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ALTERNATIVE DESIGN CONCEPTS

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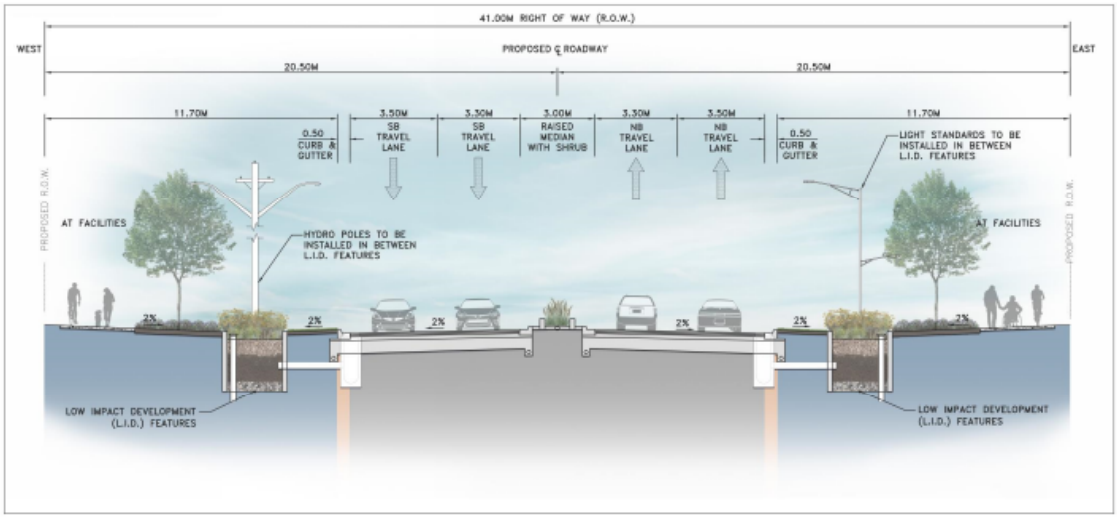
Alternative Design Concept 1



WARDEN AVENUE AND KENNEDY ROAD

TYPICAL 4-LANE CROSS SECTION | WITH 3.0M MEDIAN ISLAND

BURNSIDE

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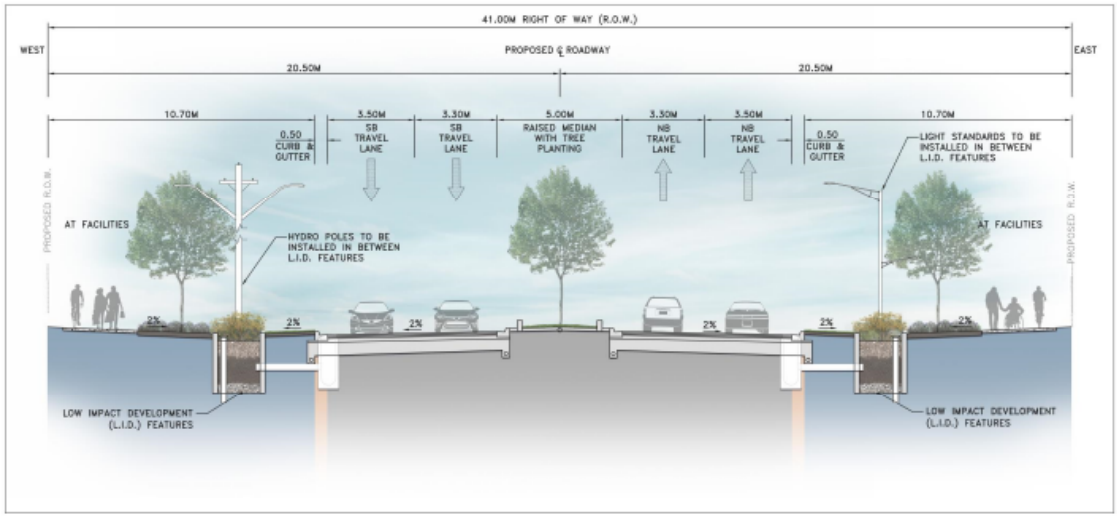
Alternative Design Concept 2



WARDEN AVENUE AND KENNEDY ROAD

TYPICAL 4-LANE CROSS SECTION | WITH 5.0M MEDIAN ISLAND

BURNSIDE

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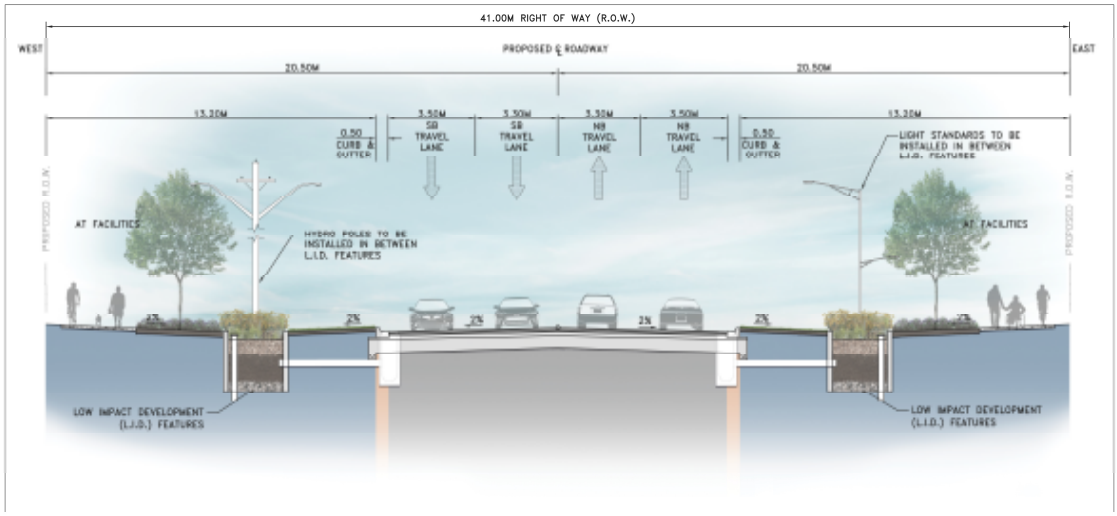
Alternative Design Concept 3



WARDEN AVENUE AND KENNEDY ROAD
TYPICAL 4-LANE CROSS SECTION | WITHOUT MEDIAN ISLAND

BURNSIDE

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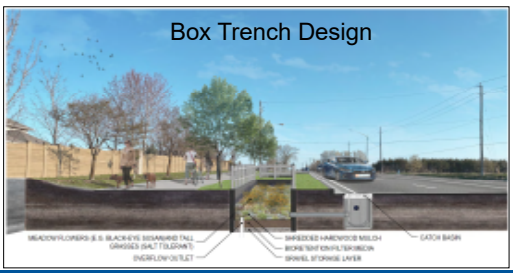
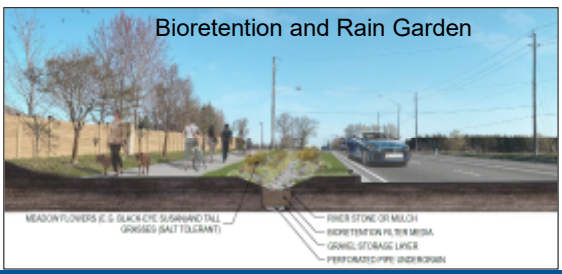
Low Impact Development (LID) Measures

LID uses cost-effective construction and building methods to store, filter and infiltrate rainwater and snow melt into the ground. LID measures are necessary to consider for all road widening projects to address increased impervious (does not allow water to pass through) surfaces and improve sustainable and climate adaptive solutions. Some example designs that are feasible for road improvement projects and are being considered for Warden Avenue and Kennedy Road, including:

- Box Trench Design
- Vegetated/Bio Swale Design
- Bioretention and Rain Garden Design
- Infiltration trenches and soak-aways
- Permeable pavement
- Above-ground rainwater harvesting tanks
- Underground storage tanks





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Your Feedback

Online Open House #1

Online Open House #1 was hosted on the Region's website from **February 24, 2022 to March 24, 2022**

The project webpage was **viewed 1,125 times** during this period

Online comment forms were received from **24 members of the public**. Where identified, most participants indicated an interest in the project as a local resident

A summary of written comments with responses was provided in an Online Open House #1 Summary Report posted on the study webpage, **york.ca/WardenKennedyStudy**

Comments received included the following general themes:

- Traffic (speed, flow, signals)
- Safety
- Active transportation
- Impact to the environment, including trees

Stakeholder Advisory Committee

- Consideration of impacts from road salt and other solubles (e.g. nitrates)
- Impact of adjacent corridor improvements
- Assessment of accurate vehicle traffic volumes
- Consideration of active transportation

Technical Advisory Committee

- Directing stormwater run-off
- Impact of centre median on access for emergency service vehicles
- Preference for separation of sidewalk and cycle track and preferred width of 1.8m cycle track

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Evaluation Criteria

The alternative design concepts in the study areas were evaluated relative to each other against a set of criteria. Evaluation criteria are provided below under each of the project environments:

Natural environment
- Potential impact to vegetation and designated natural features
- Potential impact to wildlife, aquatic habitat and habitat of species at risk
- Potential impact to water resources and drainage
- Potential climate change impact and resilience
- Potential impact from contaminated sites

Socio-cultural environment
- Potential impact to heritage resources (e.g. archaeology, cultural heritage)
- Nuisance impacts (e.g. noise, visual, or construction impacts)
- Land acquisition needs, impacts to driveway access
- Conformity to municipal and agency policy
- Connectivity and safety

Engineering environment
- Level of service / traffic congestion
- Speed management
- Traffic safety
- Design constraints
- Utility impacts
- Constructability

Financial environment
- Estimated capital costs
- Estimated operation and maintenance costs
- Property acquisition costs

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Evaluation of Alternative Design Concepts - Warden Avenue

To view the complete evaluation, visit www.york.ca/media/109571

Criteria for Evaluating Alternatives	Alternative Design Concept 1 Construction of typical 4-lane road with 3.0m median island.	Alternative Design Concept 2 Construction of typical 4-lane road with 5.0m median island.	Alternative Design Concept 3 Construction of typical 4-lane road with limited marked median island.
Natural Environment	◑	◑	◑
Socio-Cultural Environment	◕	◑	◕
Engineering Environment	◕	◕	◕
Financial Environment	◕	◑	●
Overall Summary	**More Preferred**	**Least Preferred**	**Most Preferred**

Order of Preference:

Most Preferred ● More Preferred ◕ Somewhat Preferred ◑ Less Preferred ◔ Least Preferred ○

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Evaluation of Alternative Design Concepts - Kennedy Road

To view the complete evaluation, visit www.york.ca/media/109566

Criteria for Evaluating Alternatives	Alternative Design Concept 1 Construction of typical 4-lane road with 3.0m median island.	Alternative Design Concept 2 Construction of typical 4-lane road with 5.0m median island.	Alternative Design Concept 3 Construction of typical 4-lane road with limited marked median island.
Natural Environment	◑	◑	◑
Socio-Cultural Environment	◕	◑	◕
Engineering Environment	◕	◕	◕
Financial Environment	◕	◑	●
Overall Summary	**More Preferred**	**Least Preferred**	**Most Preferred**

Order of Preference:

Most Preferred ● More Preferred ◕ Somewhat Preferred ◑ Less Preferred ◔ Least Preferred ○

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Evaluation of Alternative LID Design Concepts

To view the complete evaluation, visit https://www.york.ca/media/109581 and www.york.ca/media/109576

Criteria for Evaluating Alternatives	Indicators	Option 1: Box Trench Design	Option 2: Vegetated / Bio Swale Design	Option 3: Bioretention and Rain Garden Design	Option 4: Infiltration trenches and soak-aways	Option 5: Underground storage tanks
Natural Environment	Ecological Benefit, Soil Permeability, Impacts to Groundwater	◕	◕	◕	◔	◑
Socio-Cultural Environment	Aesthetics, Educational Opportunities	●	◕	●	◔	○
Technical Factors	Quality and Quantity Control, Erosion Control, Maintenance, Surface footprint	◕	◑	◑	◕	◕
Financial Factors	Estimated Capital and Maintenance Costs, Life-cycle costs and savings	◑	●	◑	◔	●
Overall Summary		**Most Preferred**	**Most Preferred**	**More Preferred**	**Least Preferred**	**Somewhat Preferred**

Order of Preference:

Most Preferred ● More Preferred ◕ Somewhat Preferred ◑ Less Preferred ◔ Least Preferred ○

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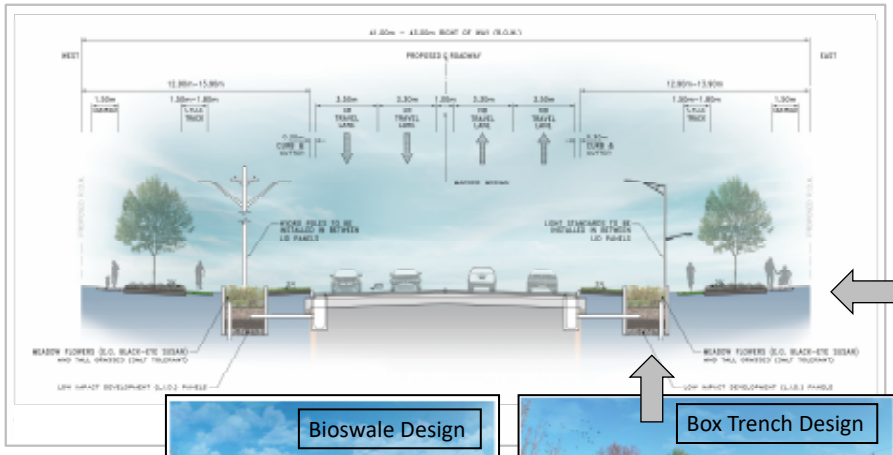
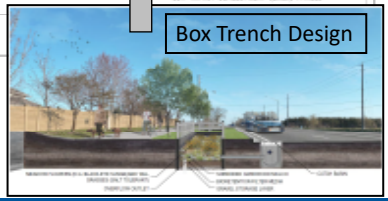
Preferred Design Concept



Bioswale Design



Box Trench Design

Possible Examples for Separated Sidewalk and Cycle Track

Source: Alta. https://altago.com/separated-bike-lanes/

Source: York Region Millway Avenue

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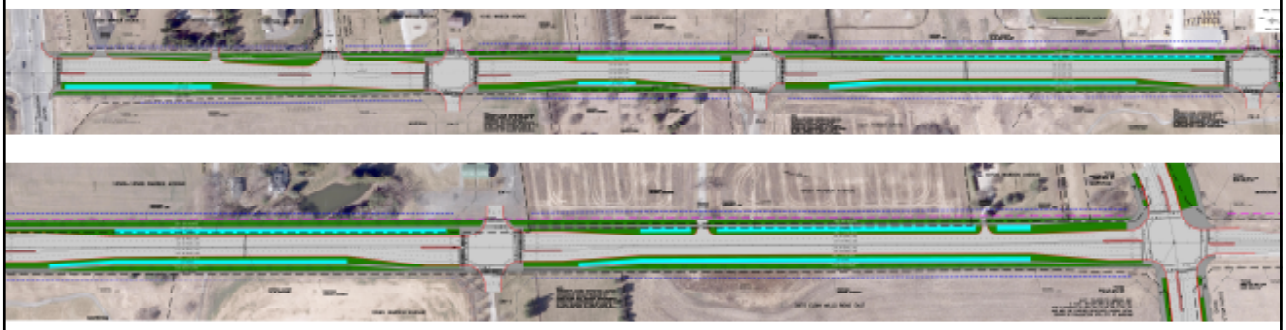
Preferred Design Concept - Warden Avenue - Plan View



LEGEND

- PROPOSED SIDEWALK
- PROPOSED CYCLE TRACK
- PROPOSED BLVD / PLANTING
- PROPOSED LOW IMPACT DEVELOPMENT
- PROPOSED ASPHALT
- PROPOSED BOULEVARD TREE
- PROPOSED CURBLINE
- PROPOSED GRADING EASEMENT
- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE
- FUTURE RIGHT-OF-WAY

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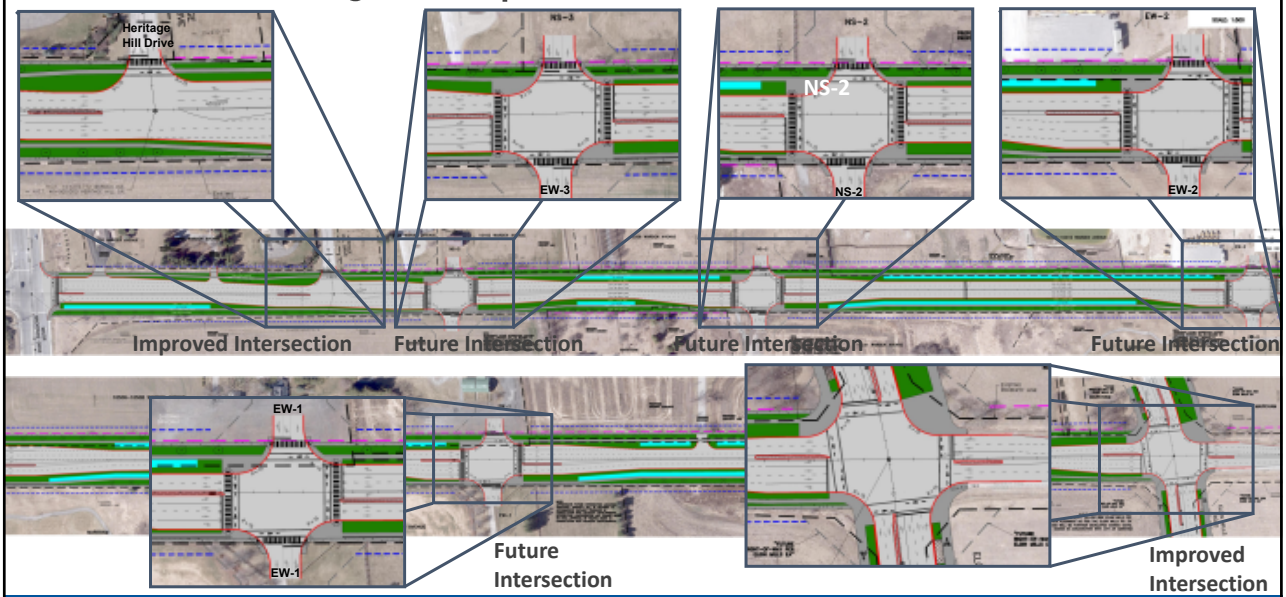
Preferred Design Concept - Warden Avenue - Intersections



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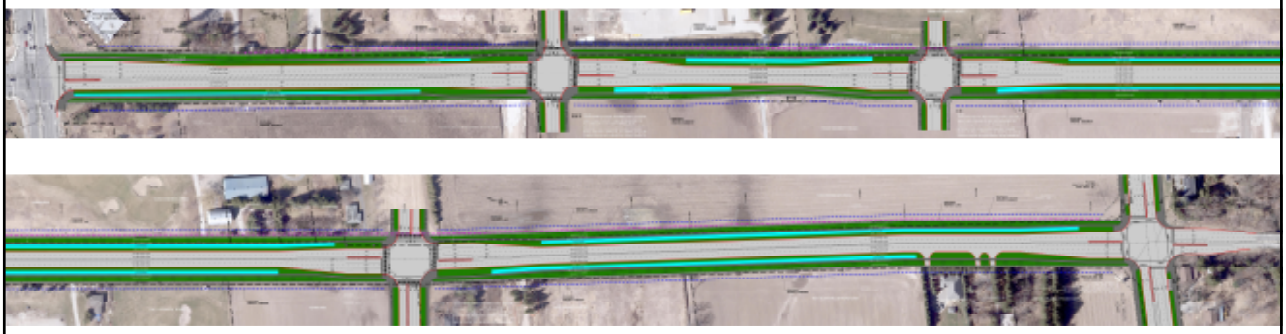
Preferred Design Concept - Kennedy Road - Plan View



LEGEND

- PROPOSED SIDEWALK
- PROPOSED CYCLE TRACK
- PROPOSED BLVD / PLANTING
- PROPOSED LOW IMPACT DEVELOPMENT
- PROPOSED ASPHALT
- PROPOSED BOULEVARD TREE
- PROPOSED CURBLINE
- PROPOSED GRADING EASEMENT
- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE
- FUTURE RIGHT-OF-WAY

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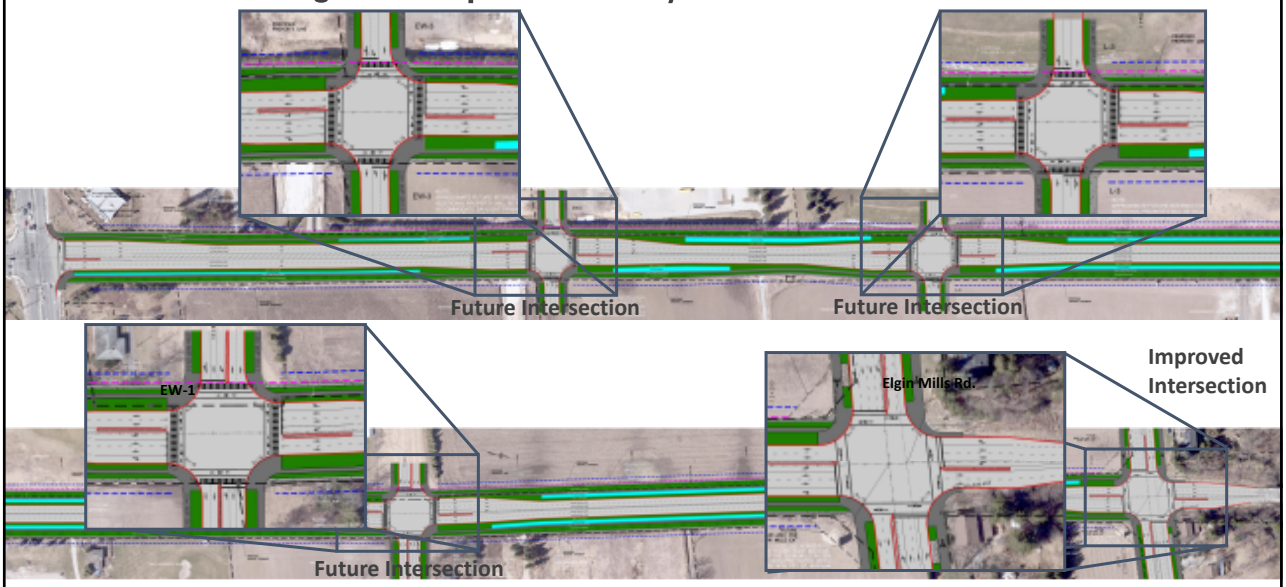
Preferred Design Concept - Kennedy Road - Intersections



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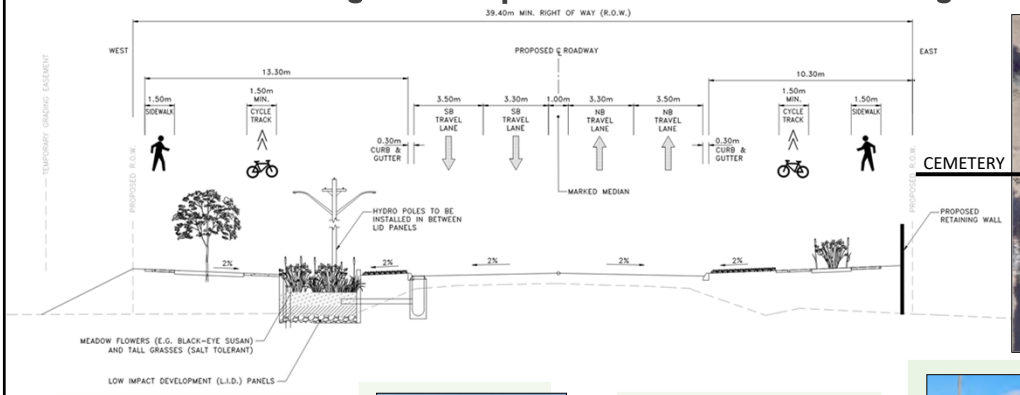
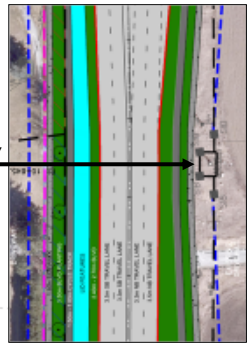
Preferred Design Concept – Constraints and Mitigation





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Project Timeline

Municipal Class Environmental Assessment Process

Next Steps

Phase 3
Alternative Design Concepts for the Preferred Solution

- December 2022 to January 2023: ➢ Review public feedback regarding recommended design concepts
- January 2023: ➢ Confirm the preferred design concept

Phase 4
Environmental Study Report

- January to April 2023: ➢ Complete Environmental Study Report (ESR)
- May 2023: ➢ 30-day public review period with **Notice of Completion**

Phase 5
Implementation

- April to December 2023: ➢ Complete detailed design
- 2027*: ➢ Construction – Warden Avenue
- 2028*: ➢ Construction – Kennedy Road

*The year of construction is based on York Region's 2022 10-year roads and transit capital construction program.

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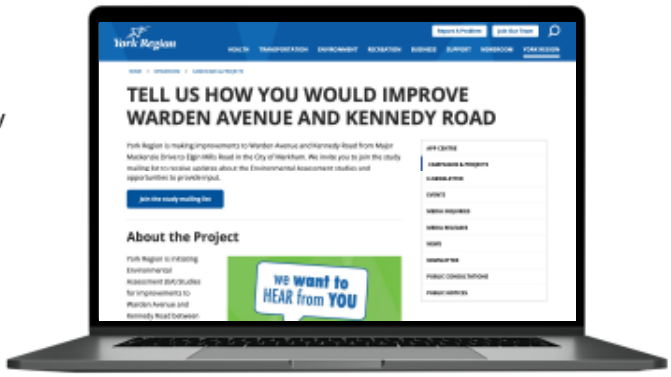
We Value Your Input

We invite you to complete the comment form available at www.york.ca/WardenKennedyStudy
Online open house materials are also posted and will remain available for review and comment until **January 6, 2023**.

A summary of your written comments along with responses will be provided in an Online Open House #2 Summary Report, which will also be posted on the study webpage in spring 2023.



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GREAT | STREETS
Building Roads that Build Community 2022

THANK YOU

For more information please contact:

York Region Transportation, Public Works
Phone: 1-877-464-9675 ext. 75000
TTY: 1-866-512-6228
Email: transportation@york.ca

York Region

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BURNSIDE

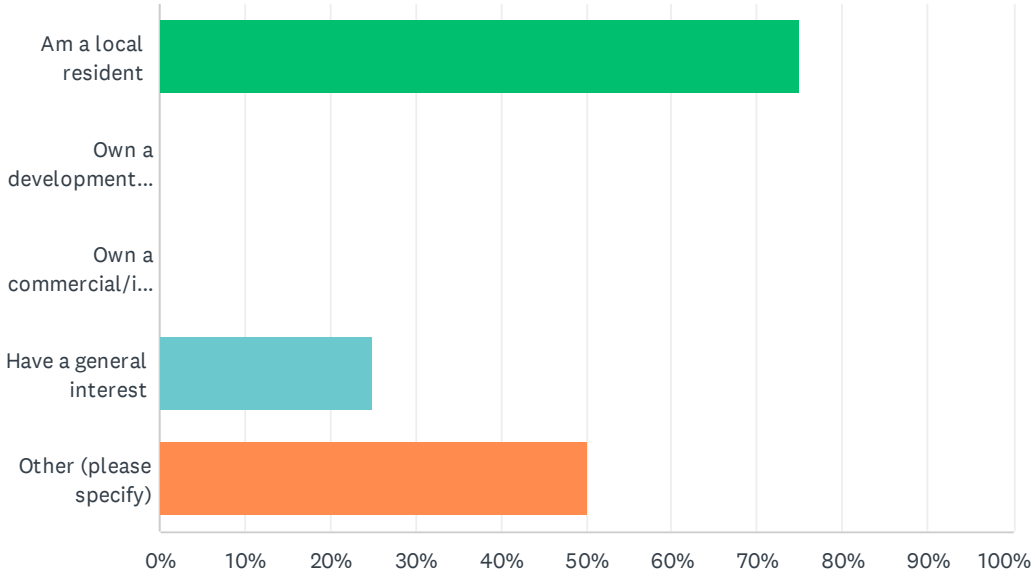
[THE DIFFERENCE IS OUR PEOPLE]

Appendix C

Comments

Q1 I am interested in this study because I (please check all that apply):

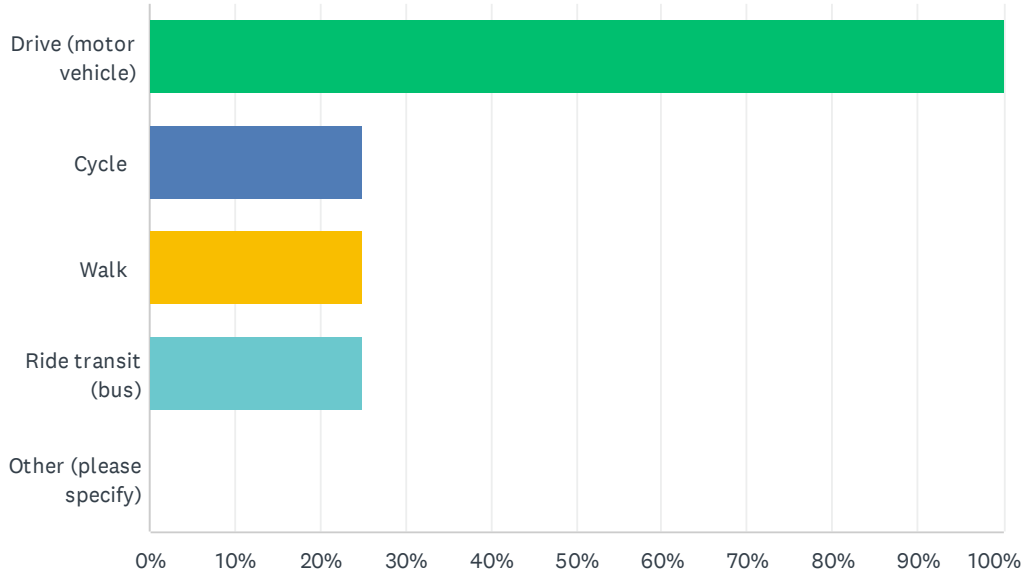
Answered: 4 Skipped: 0



ANSWER CHOICES	RESPONSES	
Am a local resident	75.00%	3
Own a development property	0.00%	0
Own a commercial/industrial property	0.00%	0
Have a general interest	25.00%	1
Other (please specify)	50.00%	2
Total Respondents: 4		

Q2 How do you currently travel in this area? (Please check all that apply):

Answered: 4 Skipped: 0



ANSWER CHOICES	RESPONSES	
Drive (motor vehicle)	100.00%	4
Cycle	25.00%	1
Walk	25.00%	1
Ride transit (bus)	25.00%	1
Other (please specify)	0.00%	0
Total Respondents: 4		

Q3 Please provide any comments on the recommended design concept for Warden Avenue in the study corridor using the text box below:

Answered: 3 Skipped: 1

Q4 Please provide any comments on the recommended design concept for Kennedy Road in the study corridor using the text box below:

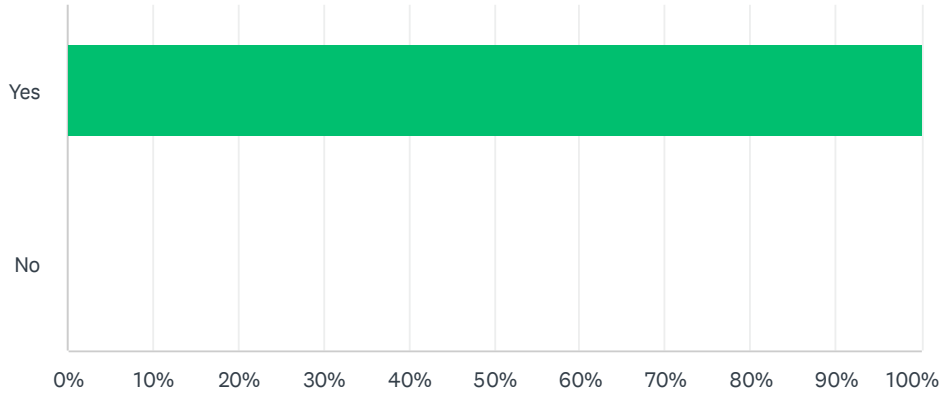
Answered: 2 Skipped: 2

Q5 Please provide any additional comments, questions or suggestions you would like the study team to consider in the text box provided below:

Answered: 3 Skipped: 1

Q6 I/we wish to be added to the contact list to receive notices and updates related to this these studies.

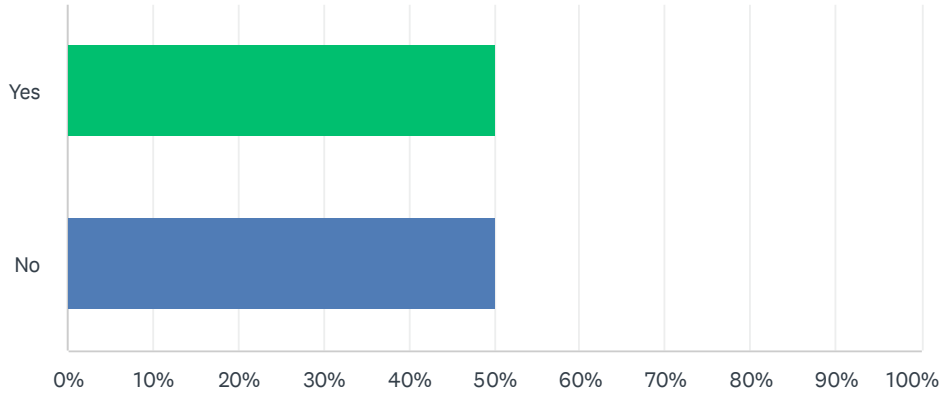
Answered: 4 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	100.00%	4
No	0.00%	0
Total Respondents: 4		

Q7 I/we wish to have personal information (e.g. name, address, phone number) remain confidential.

Answered: 4 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	50.00%	2
No	50.00%	2
Total Respondents: 4		

Q8 Please provide the following information:

Answered: 4 Skipped: 0

ANSWER CHOICES	RESPONSES	
Name	100.00%	4
Company	0.00%	0
Address	100.00%	4
Address 2	0.00%	0
City/Town	100.00%	4
State/Province	100.00%	4
ZIP/Postal Code	100.00%	4
Country	100.00%	4
Email Address	100.00%	4
Phone Number	100.00%	4

Q9 Date

Answered: 4 Skipped: 0

ANSWER CHOICES	RESPONSES	
Please enter a valid date.	100.00%	4

	Please provide any comments on the recommended design concept for Warden Avenue in the study corridor using the text box below:	Please provide any comments on the recommended design concept for Kennedy Road in the study corridor using the text box below:	Please provide any additional comments, questions or suggestions you would like the study team to consider in the text box provided below:	I/we wish to be added to the contact list to receive notices and updates related to this these studies.		I/we wish to have personal information (e.g. name, address, phone number) remain confidential.		Please provide the following information:									Date
	Open-Ended Response	Open-Ended Response	Open-Ended Response	Yes	No	Yes	No	Name	Address	City/Town	State /Prov	ZIP/Postal	Country	Email Address	Phone Number	Please enter a valid date.
1	See response to Item 5	See response to Item 5	First, I applaud the Region's commitment to addressing the various needs of motorized vehicles, transit, pedestrians and bicyclists in the Warden / Kennedy from Major Mackenzie to Elgin Mills EA study. My comments relate to enhancing design of bicycling facilities for the safety of bicyclists and to promote safer active transportation. In the criteria for evaluating alternatives, there is no assessment of bicyclist safety. This appears to be a significant oversight. Respectfully, bicyclist safety should be included as an evaluation criterion in all York Region EA's. The most serious bicycling accidents occur when motorized vehicles are involved. For roadways with relatively high vehicular speed and high vehicular volumes such as Warden Avenue and Kennedy Road, TAC's "Safety Performance of Bicycle Infrastructure in Canada", November 2020 indicates that a separate cycle track or off-road bicycle facility is the preferred approach to reduce collision risk, collision severity and improve perceived safety. This supports the choice of separate off-road bicycle facilities, as proposed. TAC's Geometric Design Guide for Canadian Roads (2017) identifies the following categories of bicyclists: •"Strong and fearless – Bicyclists that will typically ride anywhere regardless of road conditions or weather. •Enthused and confident – Bicyclists who are comfortable riding on all types of bikeways, but usually choose low traffic streets or multi-use paths where available. •Interested but concerned – Bicyclists who typically ride a bicycle on low traffic streets or multi-use paths under favourable weather conditions." Final design of bicycle facilities must address the needs of all bicyclist categories and requirements for power-assisted e-bikes which are becoming more prevalent. Recognizing that design guidelines are less developed for bicyclist and e-bike needs, it is incumbent on roadway designers to go beyond current industry standard guidelines and conduct research to identify and employ best-in-class bicycle facility design. For example, the Toronto Complete Streets Guidelines Street Design for Cycling provides insight into cycling design principles. Matters that need to be addressed during final design include the following: •Geometric design of bicycle facilities: To enhance usability of off-road bicycle facilities for advanced bicyclists and e-bike users, bicycle facilities must be designed to appropriate geometric design criteria. Design criteria should include a minimum 32 km/h design speed (maximum assisted speed allowable in Ontario) to accommodate e-bicycles, along with appropriate design parameters for minimum horizontal curve radius, vertical curves and stopping sight distances. Should appropriate speed-related design criteria not be employed, bicycling facilities may be unusable by advanced bicyclists and e-bike users in preference to more dangerous on-road cycling. •Bicycle facilities should be linear and direct, and follow the roadway as closely as possible. This is important for advanced higher-speed road bicyclists of the 'strong and fearless' type. A good example of this type of bicycling facility is on the east side of Bayview Avenue between Elgin Mills and Stouffville Road. •Intersections can be particularly dangerous to bicyclists. Visibility of bicyclists and motorists should be enhanced in advance of intersections to mitigate the risk of left or right turn collisions with turning motorists. Intersection crossing markings should be provided to improve collision avoidance of drivers at intersections. The Urban Bikeway Design Guide by National Association of City Transportation Officials provides design guidance. •Intersections should be designed to reduce turn conflicts for bicyclists and provide connections to intersecting bicycle facilities. •Potential conflicts between pedestrians and cyclists at intersections should be assessed and minimized to enhance safety. •Provide paved surfaces for bicycling facilities. Since most road bicycles do not have suspension systems, gravel, paving stones and surfaces similar to concrete sidewalks are not suitable for bicyclists traveling at higher speeds. I am hopeful that the final designs will adequately address the needs for all categories of bicyclists and e-bike users. Although beyond the scope of this EA, I encourage York Region to improve bicycling facilities along other Regional roads and provide bicycle lanes or cycle tracks, where absent. The Warden Avenue and Kennedy Road roll plans clearly illustrate glaringly absent bicycle facilities beyond the EA study area.	Yes			No	[redacted]	[redacted]	Markham	ON	L3R3M4	Canada	[redacted]	[redacted]	01/12/2023
2	I am a member of the Stakeholder Advisory Cttee. I raised the question of protected intersections for Active Transportation at the last SAC meeting on Nov 10. Ed Chiu said he would discuss this with York's AT group. However, I would like to document the issue for the record. Per slides 20 and 22 of the Open House #2 package, the preferred intersection treatment at all 5 signalized intersections on each of Warden and Kennedy is a "cross ride". However, the York Region Pedestrian and Cycling Planning and Design Guidelines (pages 110 to 114) discuss a preferred option – use of protected intersections with corner refuge islands. To quote from Pg 110 – "The protected intersection is emerging in North America as a preferred higher order intersection treatment….". Please evaluate this concept at some or all of the signalized intersections.	See comments for Warden Ave above.		Yes			No	[redacted]		Markham	ON	L3R4K2	Canada	[redacted]	[redacted]	12/30/2022
3			The preferred minimum width of a bike lane is 2.0 m to allow for bicyclists to ride side-by-side or pass each other without leaving the bike lane. Cars are wide enough to sit two people next to each other, why should cyclists not be able to ride next to each other? This is important to get more people cycling, including students. Note that the reason I currently only drive in the study area is that there are no AT facilities.	Yes		Yes		[redacted]	[redacted]	Markham	ON	L3R 2J6	Canada	[redacted]	[redacted]	12/05/2022
4	If you look at Warden from Major Mac to 16th Ave.... the roadway and median concepts used there should now be extended and contnued through this design concept portion of Warden Ave. Two reasons - it does present itself very well and is capable of handling current and future traffic loads for some time to come and does allow for use of the centre median (paved/lined) as a turning lane over the entire length - in current design.		I do see two (2)very large vertical storm sewer cribbing abutting Warden (west side) in the design area. Will those not interfere with any width considerations for the roadway/sidewalk/bikepath concepts intended?	Yes		Yes		[redacted]	[redacted]	Unionville	Ont	L3R9R1	Canada	[redacted]	[redacted]	12/01/2022

R.J. Burnside & Associates Limited