Region of Waterloo

Public Consultation Centre #2 Summary

University Avenue between Albert Street and Weber Street, Class Environmental Assessment, Schedule ‘C’ and Preliminary Design

IBI

Prepared for Region of Waterloo
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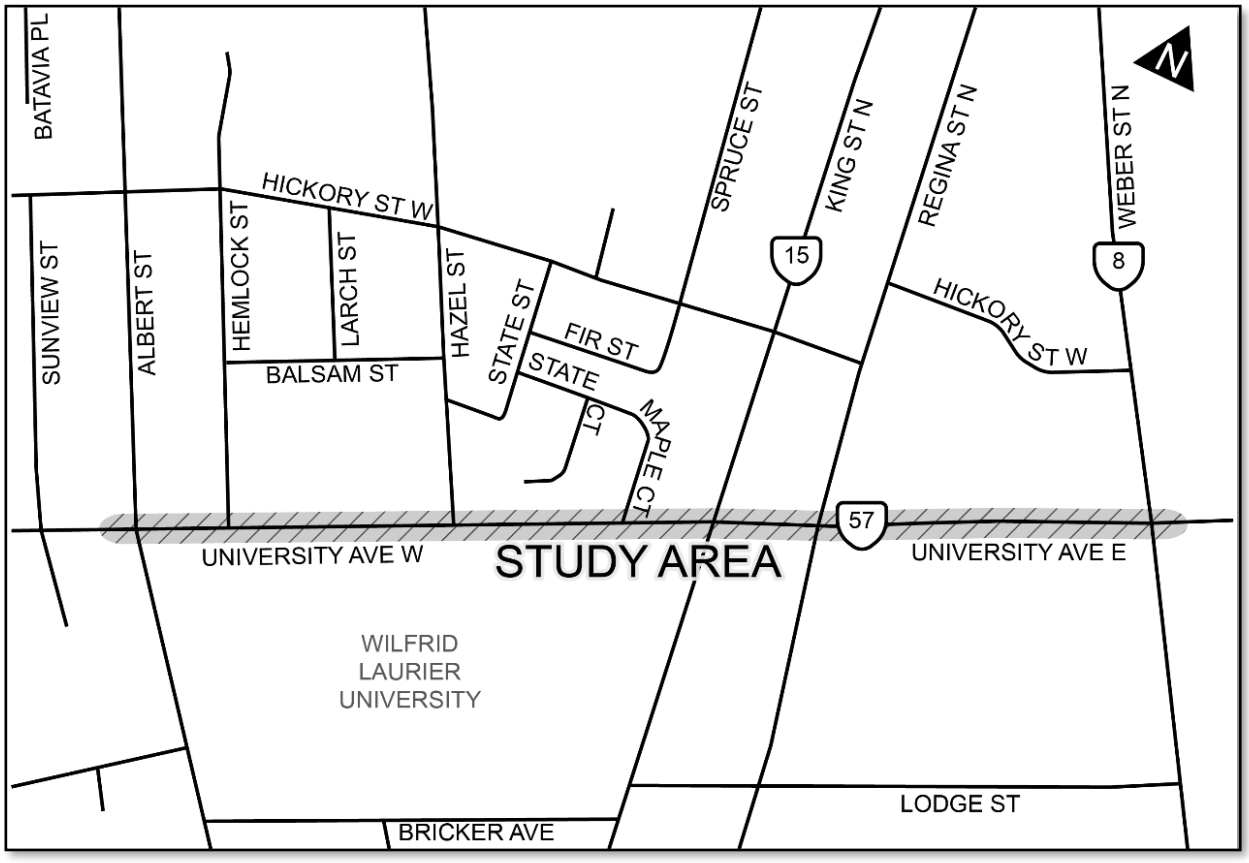
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1 Introduction

The Region of Waterloo, and their consultant IBI Group, are undertaking a Municipal Class Environmental Assessment (Class EA) Schedule 'C' Study, including preliminary design, for improvements of a 1.1 km stretch of University Avenue (Regional Road 57) from Albert Street to Weber Street in the City of Waterloo (**Exhibit 1-1**). University Avenue is a Regional Road, owned and maintained by the Region of Waterloo.

Exhibit 1-1. Study Area



Improvements along University Avenue are being considered to improve roadway and underground infrastructure (watermain, storm sewer and sanitary sewer), active transportation facilities and traffic operations along the corridor.

The 2018 Regional Transportation Master Plan identified this section of roadway for rehabilitation to address deteriorated pavement structure and provide active transportation and intersection improvements. Also, the City of Waterloo's watermain and sanitary sewer systems require replacement. The Transportation Master Plan identified this section of University Avenue from King Street to Weber Street for cycling infrastructure installation to complete the cycling network connectivity in this area.

2 PCC Purpose and Objectives

The objectives of PCC #2 were to present:

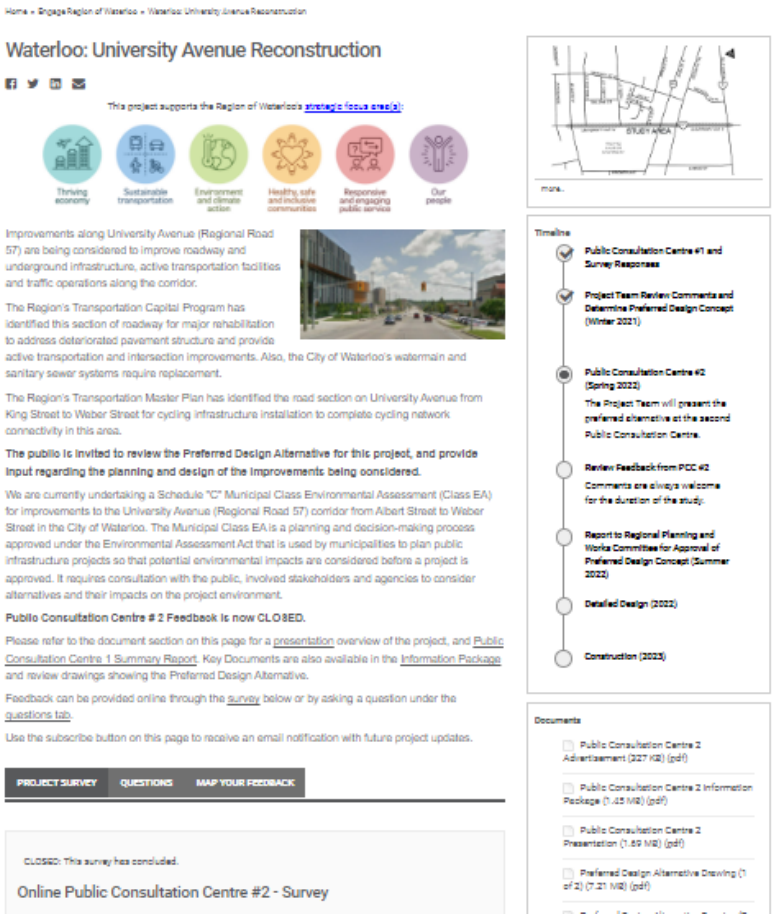
- The Project Team Preferred Design Alternative being considered; and
- Receive feedback from the public and stakeholders.

3 Notifications

The Notice of PCC #2 was published in The Waterloo Record on February 14 and 21, 2022 and in the Waterloo Chronicle on February 14, 2022. Notices were also mailed to over 50 residents within and bordering the study area, and mailed to identified agency, stakeholder groups, and Indigenous community representatives on March 11, 2022. All notices are in **Appendix A**.

All notices were posted on the Study's EngageWR webpage (www.engagewr.ca/University-Ave). A snapshot of the webpage is in **Exhibit 3-1**.

Exhibit 3-1. EngageWR Study Webpage



The PCC #2 notice invited all interested parties to participate in the study and provided information on the:

- Study background;
- Study Process (subject to the requirements of the Municipal Class EA Schedule C process);
- Community Involvement:
  - The Region's website and the Study's EngageWR webpage;
  - How to actively participate in the study through the virtual PCC and/or by requesting to be added to the project mailing list;
  - Comment period for virtual PCC #2;
- Contact information for the Region and consultant project leads;
- Accessibility requests; and,
- Respondent privacy as subject to the *Freedom of Information and Protection of Privacy Act*.

A copy of the Notice for PCC #2 is included in **Appendix A.**

4 Public Consultation Centre #2 Details

Due to the impacts of the COVID-19 public meeting restrictions, PCC #2 was held online between March 8, 2022 and April 8, 2022, and hosted on the Region's EngageWR website (https://www.engagewr.ca/University-Ave). The PCC presentation was provided as accessible Adobe Acrobat files (PDFs), where interested parties could read through the nineteen presentation boards, including the PCC# 2 Information Package, and a preliminary plan of the preferred design alternative.

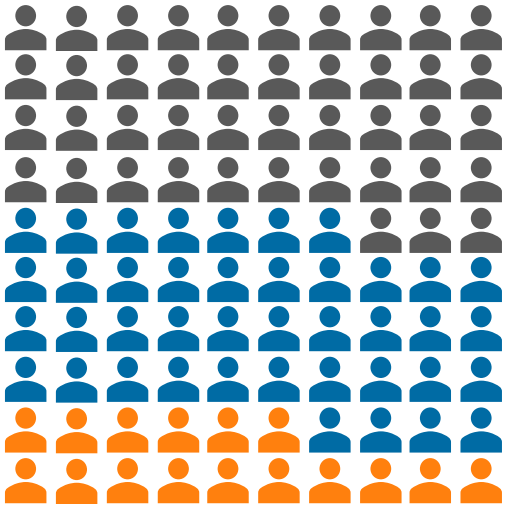
Participants were encouraged to engage with the Study Team through a variety of means:

- PCC# 2 Public Survey;
- Question and Answer (Q&A) page;
- Comment forms/emails; and
- By phone.

The Region's and Consultant Team's Project Managers' contact information were provided for direct questions, requests to be added to the mailing list, or to request further information about the study.

During the period of PCC #2, the Study's EngageWR webpage was visited 92 times. The survey and breakdown of participation is presented in **Appendix B** and summarized in **Exhibit 4.1.**

Exhibit 4-1: Summary of EngageWR Study Webpage Engagement During PCC #2



92 Aware Visitors

Viewed at least one page
(Includes Informed and Engaged Visitors)

53 Informed Visitors

Viewed documents, images or multiple pages
(Includes Engaged Visitors)

18 Engaged Visitors

Participated in the online survey, submitted mapped feedback and/or asked a question

18 Participated in the PCC #2 Survey	25 Viewed the PCC #2 Presentation	27 Downloaded a document
1 Submitted Questions to the Q&A	92 Visited Project Webpage	37 Visited Multiple Project Webpages

5 Information Presented

The information Package summarized project objectives and results from PCC #1, and provided answers to frequently asked questions. The Presentation boards (in Adobe Acrobat format) was used to present information about the study. The boards provided an overview of the study, including the Problem/Opportunity, study area limits, the Class EA process being followed (Municipal Class EA, Schedule C), summary of public feedback from PCC#1, alternative design evaluation process and

Project Team Recommended Design Alternative. The Drawings provided an aerial (or plan) view of the Preferred Design alternative along the entire study area on University Avenue. A summary of the boards presented is provided in **Exhibit 5-1**, with copies of the boards included in **Appendix C**.

Exhibit 5-1: Summary of PCC #2 Display Boards

#	Board Title	Description of Board
1	Title Board	Name of study, type of EA, date and duration.
2	Purpose of Public Consultation Centre	Provide stakeholders with an opportunity to participate; and present and receive input on recommended alternative, needs and opportunities, environment and future opportunities
3	Study Area	Map of Study Area
4	Purpose of the Study	Purpose of study and considerations for evaluating potential improvements
5	Municipal Class EA Process	Flow chart of the Municipal Class EA process, including the current state of the project, study timeline, and steps to be completed for this study
6	Problem Statement	Problem to be addressed through the Class EA process
7	Public Feedback	Summary of the EngageWR website and survey statistics from PCC #1
8	Public Feedback	Summary of EngageWR Study Webpage Engagement During PCC#1
9	Public Feedback	Summary of PCC#1 respondent profile
10	Public Feedback	Summary of community priorities from PCC #1
11	Studies Undertaken	Description of the 3 categories of study that were undertaken
12	The Region Considered four (4) Alternatives	Summary of the 4 four alternative solutions considered and evaluated to address the needs and opportunities
13	Alternative Designs Evaluation Process Criteria	Summary of the 5 criteria taken into account during the evaluation of each design alternative
14	Evaluation Process	Table of criteria (Natural Environment, Social Environment) including sub-criteria considered during evaluation process.
15	Evaluation Process (Continued)	Table of criteria (Traffic Capacity, Operations and Safety, Costs, Public Support) including sub-criteria considered during evaluation process
16	Alternative Designs Evaluation Summary	Final evaluation of each alternative based on evaluation process
17	Project Team Recommended Design Alternative	Alternative 3a - Reconstruct University Avenue, with physical barriers (curbs) between the outside lane of traffic and raised bike lanes, and widening sidewalks to 2.1 m (where possible)

#	Board Title	Description of Board
18	Next Steps	Summary of next steps to be completed as part of the Study, including review of comments and suggestions, confirm preferred planning alternative, develop and evaluate design solutions, present the preferred alternative at PCC #2, prepare Environmental Study Report; issue Notice of Completion and 30-day public review, complete final design, go to tender, and proceed to construction
19	Contact Information	Study team contact information and link to the University Avenue Project EngageWR webpage

6 Comments from the Public

Input from the public was collected through an online survey, the EngageWR website, and direct emails to the Project Team members. The comments received through the online survey subsequent responses received by email are tallied and summarized in **Appendix D**.

6.1 PCC #2 Survey and Submitted Comments

This survey was conducted online through the EngageWR Study webpage to collect information on what respondents like, and what challenges they see with the Project Team recommended Design Alternative.

A total of 18 PCC #2 online surveys were completed between March 8, 2022 and April 8, 2022. The list of survey questions and Project Team responses are included in **Appendix D**.

6.1.1 PCC #2 Survey

This survey was conducted online through the EngageWR Study webpage to collect information on what the respondents like, and what challenges they see with the Project Team Recommended Design Alternative. The following are the questions asked in the survey:

1. What do you like about the Recommended Design Alternative for University Avenue Improvement Project?
2. What challenges or considerations do you see with the Recommended Design Alternative?

7 Key Findings

People who participated in PCC #2 by submitting surveys and/or comments generally had positive feedback about the preferred design alternative presented. Based on the submitted surveys and comments, the community's comments about the preferred design alternative are in **Appendix D**.

Question:	# of Respondents That Had Positive Feedback About the Preferred Design Alternative	# of Respondents With No Comment	# of Respondents That Had Negative Feedback About The Preferred Design Alternative
What do you like about the Recommended Design Alternative for University Avenue Improvement Project?	15	1	1
What challenges or considerations do you see with the Recommended Design Alternative?	15	1	1

Appendix A: Public Consultation Centre #2 Notice

Region of Waterloo

Public Consultation Centre #2
Schedule 'C' Class Environmental Assessment for

University Avenue (Regional Road 57) Improvements
Albert Street to Weber Street
City of Waterloo

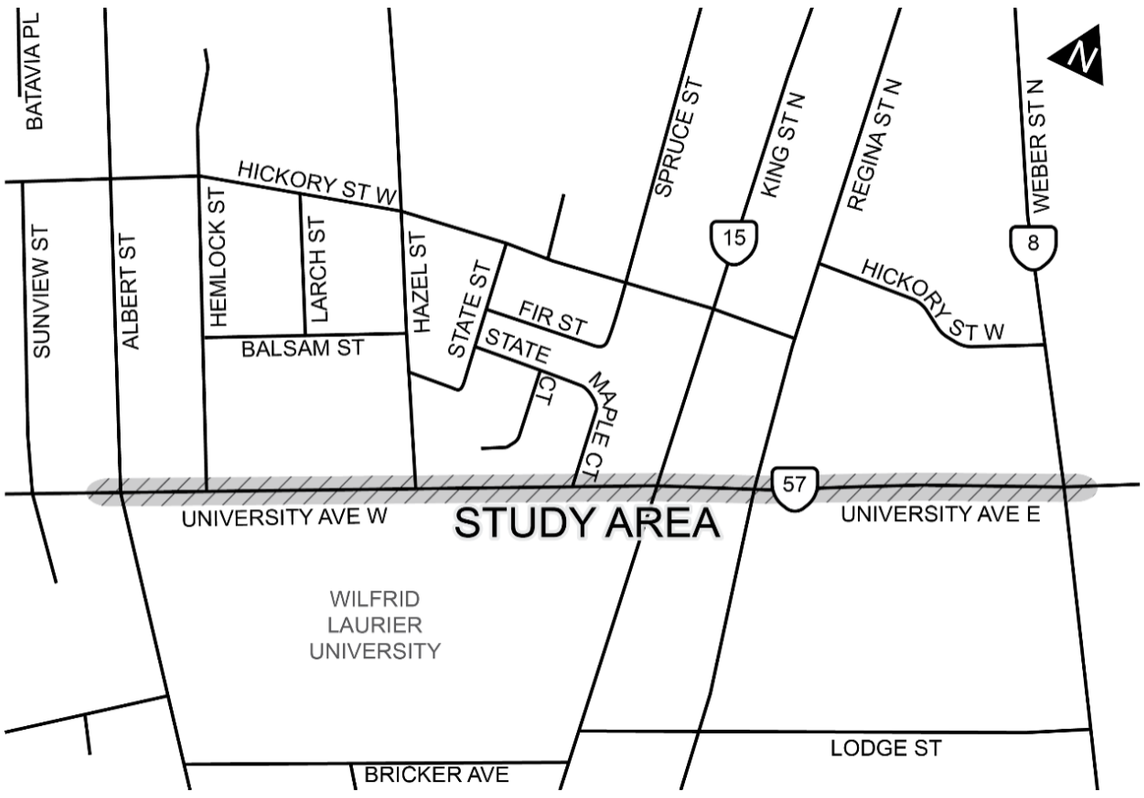
You are invited to our second Public Consultation Centre to provide your input into the planning of the University Avenue Improvements.

The video presentation for the Public Consultation Centre will be available online on the Engage Waterloo Region project page between **March 8, 2022 and April 8, 2022** at: www.engagewr.ca/University-Ave.

Background

The Regional Municipality of Waterloo is undertaking a Schedule "C" Municipal Class Environmental Assessment (Class EA) for improvements to the University Avenue (Regional Road 57) corridor from Albert Street to Weber Street in the City of Waterloo. Improvements along University Avenue (Regional Road 57) are being considered to improve roadway and underground infrastructure, active transportation facilities and traffic operations along the corridor.

The Active Transportation Master Plan (ATMP) has identified this section of road for the installation of an on-road bike lane.



The Process

The study is being conducted in accordance with the requirements of a Municipal Class Environmental Assessment, which is an approved process under the Ontario Environmental Assessment Act (last amended in 2020).

This Public Consultation Centre is designed to provide interested members of the public, local businesses, community, and agencies the opportunity to receive an update on the project work completed to date and discuss project issues.

Community Involvement

The Region of Waterloo encourages members of the public, stakeholder groups, and agencies to actively participate in this study by attending public consultation opportunities and/or contacting staff directly with comments or questions. If you wish to be added to the project mailing list, or would like further information on the project and any future project meetings, please visit our website at www.regionofwaterloo.ca or contact:

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All comments and information received from individuals, stakeholder groups, and agencies regarding this project are being collected to assist the Region of Waterloo in making a decision. Under the “Municipal Act”, personal information such as name, address, telephone number, and property information that may be included in a submission becomes part of the public record. Questions regarding the collection of this information should be referred to Andrew Doman.

Appendix B: EngageWR PCC #2 Engagement Survey and Responses

Summary Report

08 March 2022 - 08 April 2022

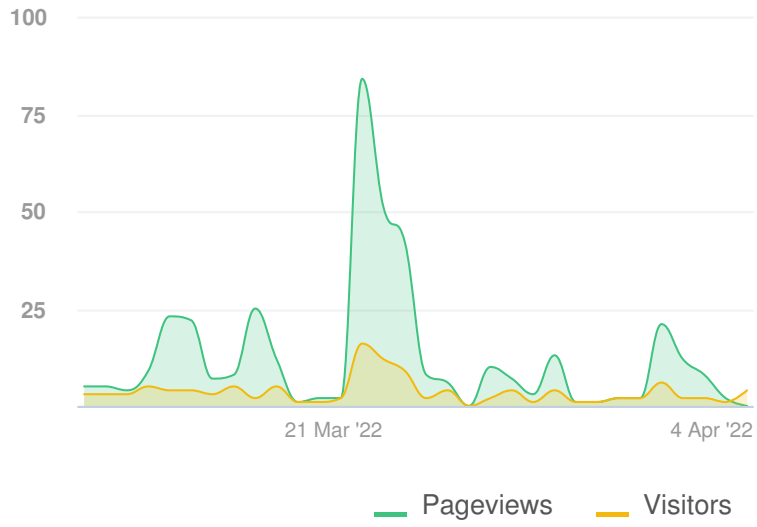
EngageWR

PROJECTS SELECTED: 1

Waterloo: University Avenue Reconstruction

FULL LIST AT THE END OF THE REPORT

Visitors Summary



Highlights

TOTAL VISITS	MAX VISITORS PER DAY	NEW REGISTRATIONS
148	16	6

ENGAGED VISITORS	INFORMED VISITORS	AWARE VISITORS
18	53	92

PARTICIPANT SUMMARY

ENGAGED
INFORMED
AWARE

18 ENGAGED PARTICIPANTS

	Registered	Unverified	Anonymous
Contributed on Forums	0	0	0
Participated in Surveys	18	0	0
Contributed to Newsfeeds	0	0	0
Participated in Quick Polls	0	0	0
Posted on Guestbooks	0	0	0
Contributed to Stories	0	0	0
Asked Questions	1	0	0
Placed Pins on Places	0	0	0
Contributed to Ideas	0	0	0

** A single engaged participant can perform multiple actions*

(%)

Waterloo: University Avenue..	18 (19.6%)

** Calculated as a percentage of total visits to the Project*

ENGAGED
INFORMED
AWARE

53 INFORMED PARTICIPANTS

	Participants
Viewed a video	1
Viewed a photo	4
Downloaded a document	27
Visited the Key Dates page	0
Visited an FAQ list Page	0
Visited Instagram Page	0
Visited Multiple Project Pages	37
Contributed to a tool (engaged)	18

** A single informed participant can perform multiple actions*

(%)

Waterloo: University Avenue..	53 (57.6%)

** Calculated as a percentage of total visits to the Project*

ENGAGED
INFORMED
AWARE

92 AWARE PARTICIPANTS

	Participants
Visited at least one Page	92

** Aware user could have also performed an Informed or Engaged Action*

Waterloo: University Avenue..	92

** Total list of unique visitors to the project*

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ENGAGEMENT TOOLS SUMMARY

0	2	0	0	0	0	1	1
FORUM TOPICS	SURVEYS	NEWS FEEDS	QUICK POLLS	GUESTBOOKS	STORIES	Q&A'S	PLACES

SURVEYS SUMMARY

2	Surveys
18	Contributors
18	Submissions

TOP 3 SURVEYS BASED ON CONTRIBUTORS

18	0
Contributors to	Contributors to
Online Public Consultation Centre #2 - Survey	Project Survey

PLACES SUMMARY

1	Places
0	Contributors
0	Pins

TOP 3 PLACES BASED ON CONTRIBUTORS

0
Contributors to
University Avenue Study Area Map

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INFORMATION WIDGET SUMMARY

10	5	6	0	0
DOCUMENTS	PHOTOS	VIDEOS	FAQS	KEY DATES

DOCUMENTS

10	Documents
27	Visitors
84	Downloads

TOP 3 DOCUMENTS BASED ON DOWNLOADS

18	25	9
Downloads	Downloads	Downloads
Public Consultation Centre 2 Information Package	Public Consultation Centre 2 Presentation	Preferred Design Alternative Drawing (1 of 2)

PHOTOS

5	Photos
4	Visitors
13	Views

TOP 3 PHOTOS BASED ON VIEWS

4	3	2
Views	Views	Views
University Ave Key Plan	Preferred Design Alternative 3a: Separated Bike Lane with Physical Barrier	Alternative 3: Separated Bike Lane with Flexible Bollards

VIDEOS

6	Videos
1	Visitors
1	Views

TOP 3 VIDEOS BASED ON VIEWS

1	0	0
Views	Views	Views
Part 3	Part 5	Part 4

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TRAFFIC SOURCES OVERVIEW

REFERRER URL	Visits
t.co	17
www.google.com	15
www.google.ca	4
duckduckgo.com	1
l.facebook.com	1
statics.teams.cdn.office.net	1

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SELECTED PROJECTS - FULL LIST

PROJECT TITLE	AWARE	INFORMED	ENGAGED
Waterloo: University Avenue Reconstruction	92	53	18

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Appendix C: Public Consultation Centre Exhibits

University Avenue Improvements

Albert Street to Weber Street

City of Waterloo

Public Consultation Centre #2
Information Package

What: The Regional Municipality of Waterloo is looking to improve the University Avenue (Regional Road 57) corridor. This work will include a Schedule “C” Municipal Class Environmental Assessment (Class EA).

Where: University Avenue from Albert Street to Weber Street in the City of Waterloo.

Why: To improve roadway and underground infrastructure, active transportation facilities and traffic operation along the corridor.

When: 2023 Construction (Region Transportation Capital Program).

Who: Andrew Doman, P. Eng., Project Manager
Region of Waterloo 519-575-4757 Ext. 3183
ADoman@regionofwaterloo.ca

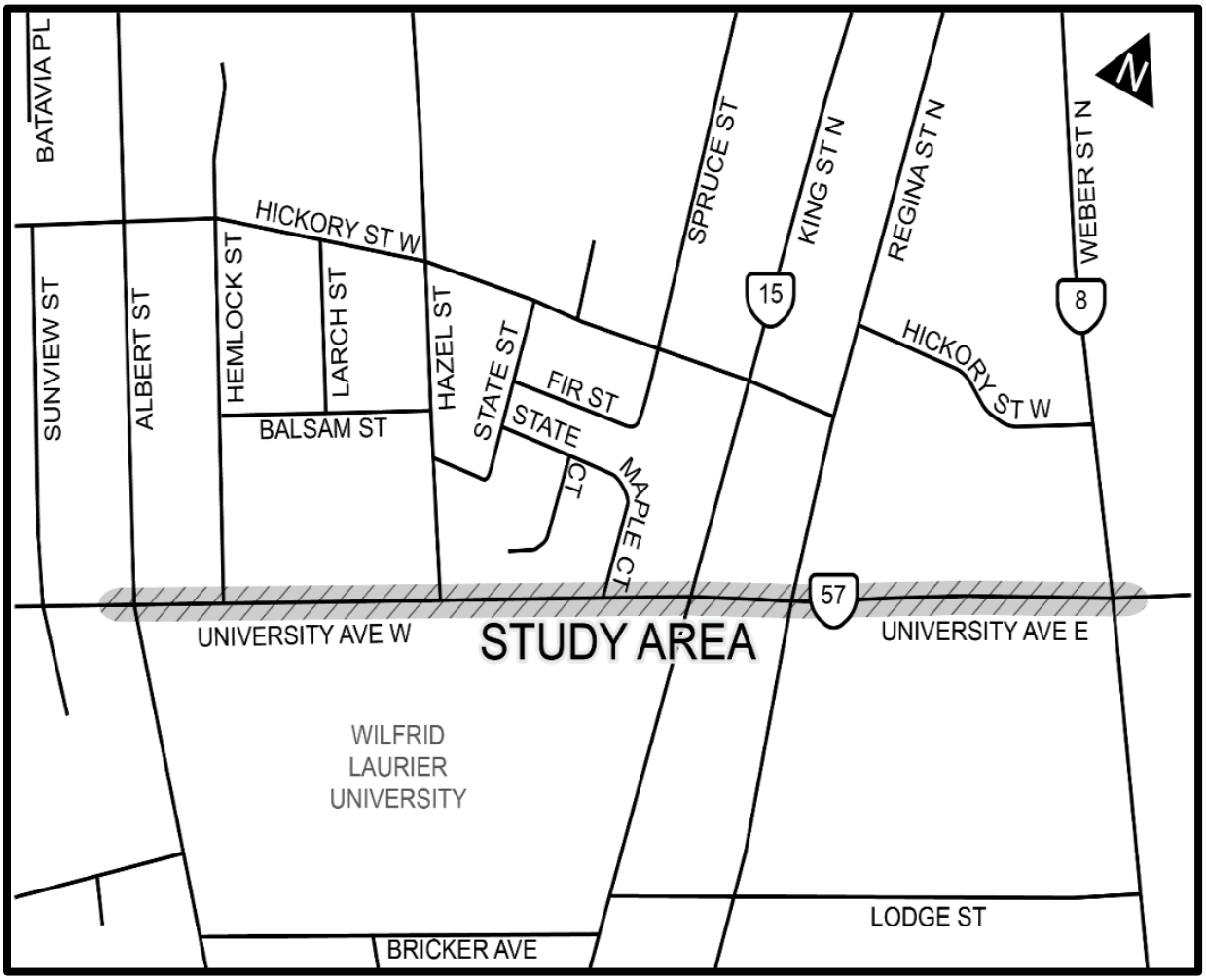
Public Consultation Centre #2
Held virtually online at www.engagewr.ca

1. What is the purpose of this second Public Consultation Centre (PCC)?

At this PCC, the project team will present a preferred alternative to meet the improvements needs of University Avenue. We will share the findings of the Environmental Assessment (EA) in terms of the improvement needs, what other solutions were considered, how we evaluated all alternative solutions to reach a preferred solution, and ask the public for their comments on the preferred solution.

Region and project consultant staff are available to answer any questions the public may have.

To complement this Class EA process, the Region of Waterloo will use its EngageWR online survey platform to help reach as many of the public as possible to get input on this project. Your comments will be considered by the project team in conjunction with all other relevant information in recommending a preferred alternative for this project.



2. What is a Class Environmental Assessment?

The Municipal Class EA is a planning and decision-making process approved under the Environmental Assessment Act that is used by municipalities to plan public infrastructure projects so that potential environmental impacts are considered before a project is approved. It requires consultation with the public, involved stakeholders and agencies to consider alternatives and their impacts on the project environment.

This project is being planned in accordance with the requirements of the Municipal Class Environmental Assessment (Class EA) Schedule "C" which applies to larger, more complex projects with the potential for significant environmental impacts (natural, social, cultural and economic) and requires multiple opportunities for public input.

For additional details regarding the Municipal Class EA process, please refer to Appendix "B".

3. Who is directing this project?

The planning and design for this project is being directed by staff from the Region of Waterloo and City of Waterloo, along with the City of Waterloo Mayor and Region of Waterloo (Waterloo) Councillor Dave Jaworsky and City of Waterloo (Ward 6) Councillor Jeff Henry. The consulting engineering firm IBI Group has been retained by the Region of Waterloo to provide planning and preliminary design services during the study phase of this project, as well as detailed design, contract administration, and inspection services through the construction phase.

4. Why is the Region considering this project?

The Region's Transportation Capital Program has identified this section of roadway for major rehabilitation to address deteriorated pavement structure and provide active transportation and intersection improvements. Also, the City of Waterloo's watermain and sanitary sewer systems require replacement.

The Region's Transportation Master Plan has identified the road section on University Avenue from King Street to Weber Street for cycling infrastructure installation to complete cycling network connectivity in this area.

5. What work has been completed on this project to date?

The project was initiated in 2019 with the first Public Consultation Centre (PCC#1) held online between August 1, 2020 and October 2, 2020, to provide information on

the purpose of the Class EA study and need for improvements on University Avenue. Comments received at PCC#1 generally supported the need for traffic, pedestrian and cyclist improvements along the corridor. Comments received from PCC#1 have been incorporated into the needs and opportunities of the project for the development of alternatives and evaluation of impacts.

In accordance with the Class EA, environmental studies were completed for the study area in order to identify areas of concern related to potential for impacts along the corridor. Environmental studies completed include: Traffic and Transportation; Natural Environment; Heritage and Cultural Environment; and Archeological.

No significant environmental constraints or potential for impact was identified from these studies.

6. What work has been completed on this project to date since the first public consultation?

Alternatives for improvements on University Avenue have been developed by the project team and are presented in section 7 below. The project team reviewed and responded to public comments from the first public consultation and continued consultation with stakeholders such as Wilfrid Laurier University, City of Waterloo, Grand River Transit and the public. The team also evaluated the identified alternatives.

7. What alternatives have been developed for improvements on University Avenue?

The alternate solutions for improvements considered by the Project Team are listed below and cross-sections are provided in Appendix A. Please note all alternatives maintain four lanes of vehicle traffic as these were deemed required as part of the Transportation Study.

1. **Do Nothing** – this alternative would include reconstruction of the road in its current cross-section configurations.

2. **On-road Buffered Bike Lanes** – this alternative maintains on-road bike lanes between Albert Street and King Street and adds bike lanes from King Street to Weber Street on both sides of the roadway. These bike lanes would be separated by a painted buffer space.

3. **Separated Bike Lanes with Enhanced Sidewalk** – this alternative would provide an enhanced 2.1m wide sidewalk, where possible, and separated bike lane facilities on both sides of the roadway separated with flexible bollards.

3a. Separated Bike Lanes with Enhanced Sidewalk – this alternative would provide an enhanced 2.1m wide sidewalk, where possible, and separated bike lane facilities on both sides of the roadway setting the bike lane off the roadway platform.

8. What other improvements have been completed in the project area and how do they impact this project?

As part of the Region's Transportation Capital Program, other road improvements in the project area that have recently been completed are as follows:

- Infrastructure and Streetscape Improvements on King Street from Central Street to University Avenue
- Region's Separated Cycling Pilot Project was implemented in 2019 along King Street crossing University Avenue, University Avenue between King Street and the Laurel Trail and on Albert Street crossing University Avenue.

9. How have the improvement alternatives been evaluated?

The improvement alternatives have been assessed against a set of evaluation criteria by the Project Team to determine which alternative is "Preferred" and is considered to best address the needs and opportunities for improvement on University Avenue. The evaluation criteria included the following:

1) **Technical**
   How well does the alternative manage traffic performance and network connectivity, transit access and pedestrian/cyclist needs?

2) **Natural Environment**
   What impact does the alternative have on the natural environment features such as trees and wetlands, wildlife, aquatic habitat, air quality and surface drainage?

3) **Socio-Cultural Environment**
   What impact does the alternative have on adjacent communities and properties (access, property acquisition), landscapes, archaeological or heritage resources and traffic noise?

4) **Costs**
   How do the alternatives compare for anticipated capital, operating and property acquisition costs?

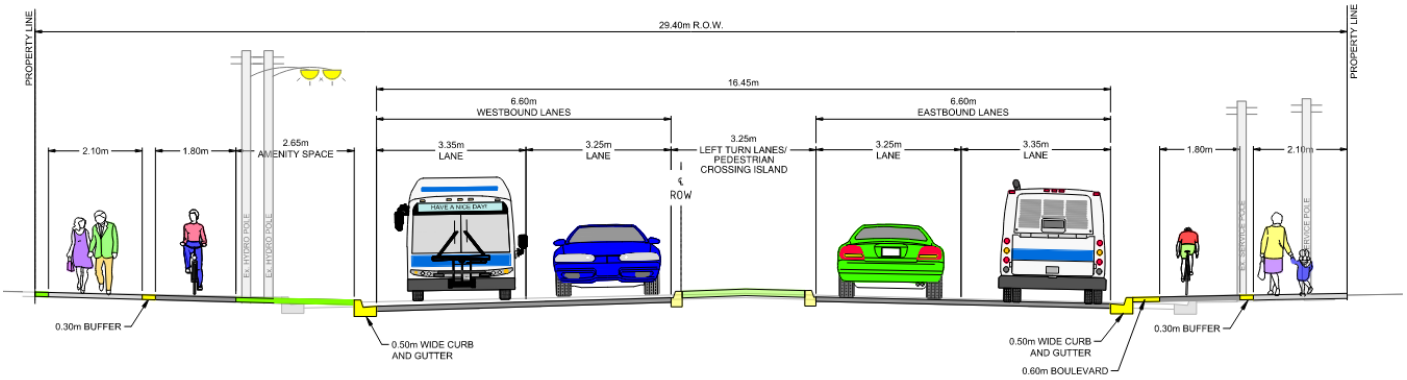
Following PCC #1, the Project Team reviewed public input, as well as the various identified constraints, in order to finalize the evaluation of the alternatives.

10. Has the project team identified a preferred alternative?

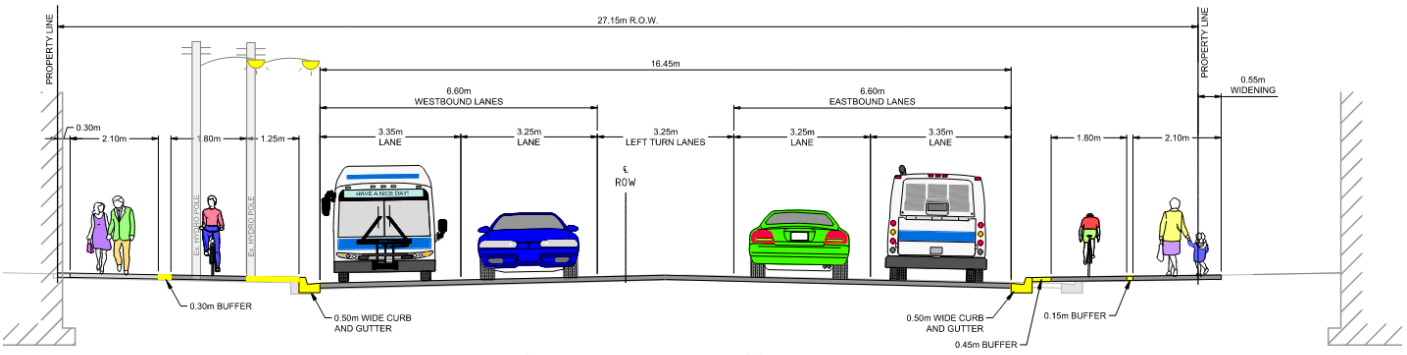
In consideration of the varying section and needs of University Avenue throughout the project limits, the Project Team has identified Alternative 3a as the Preferred Alternative.

Alternative 3a – Separated bike lane with a physical barrier.
This preferred alternative includes the addition of separated bike lane off of the road level, wider 2.1m sidewalks along the corridor where possible, and two lanes of traffic in each direction with left turn lanes.

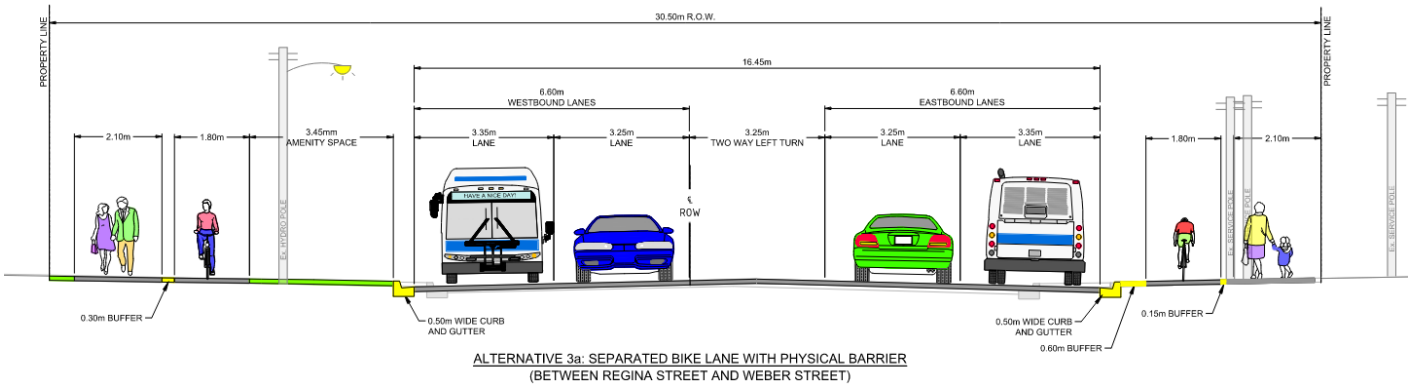
The preferred alternative for each segment is shown in the following figures:



ALTERNATIVE 3a: SEPARATED BIKE LANE WITH PHYSICAL BARRIER
(BETWEEN ALBERT STREET AND KING STREET)



ALTERNATIVE 3a: SEPARATED BIKE LANE WITH PHYSICAL BARRIER
(BETWEEN KING STREET AND REGINA STREET)



ALTERNATIVE 3a: SEPARATED BIKE LANE WITH PHYSICAL BARRIER
(BETWEEN REGINA STREET AND WEBER STREET)

Subject to additional comments received as a result of this second Public Consultation Centre, and additional agency comments, **Alternative 3a** is considered "Preferred" compared to all the other alternatives based on its overall impacts on the traffic, natural environment, socio-cultural environment and costs.

The following is a summary of the evaluation that resulted in the project team identifying **Alternative 3a, Separated Bike Lane with Physical Barrier,** as preferred at this point in the project:

1) **Technical**

Alternative 3a maintains the four lane road with turning lanes, and includes enhanced 2.1m wide sidewalks and a separated cycle track that will provide separated facilities for pedestrians and cyclists away from the road, encouraging greater use and providing greater safety for users. Separation from the road also keeps the road pavement widths to a minimum which may encourage lower operating speeds along the corridor.

2) **Natural Environment**

Natural Environment studies completed for this EA reviewed existing vegetation, trees, wetlands, wildlife, aquatic habitat and surface drainage in and adjacent to the study area. A single-candidate significant wildlife habitat was identified within the study area: Special Concern and Rare Wildlife Species (habitat for species of conservation concern). The preferred alternative does not directly impact any of the trees having potential suitable roost habitat features for species at risk bats, which comprise the candidate SWH. Information gathered through background review and field investigations, combined with technical input from reviewing agencies, was used to inform the evaluation of alternatives from a natural environment perspective, as well as determining mitigation strategies to avoid or minimize impacts to natural heritage.

3) Socio-Cultural Environment

A Stage 1 Archaeological Assessment (Background Research and Property Inspection) was completed in July 2019. The Stage 1 Background Research indicated that two (2) previously registered sites are within the Study Area, but do not retain archaeological potential. The remainder of the Study Area does not retain archaeological potential due to prior deep and extensive land disturbance.

A Cultural Heritage Resource Assessment for Built Heritage Resources and Cultural Heritage Landscapes was completed for the study area. This study revealed a study area with a rural land use history, which has experienced significant commercial, institutional, residential, and road development. It was determined that three (3) cultural heritage resources are located within the study area. Based on these findings, construction activities and staging will be suitably planned and undertaken to avoid impact to the cultural heritage resources. No direct impacts to identified cultural heritage resources are anticipated.

4) Costs

Alternative 1 represents the least amount of work on University Avenue and respectively the least cost, however the do nothing alternative would require a reconstruction of University Ave due to failing pavement conditions and need to replace underground infrastructure at a cost of $1.9 million.

Alternative 2 with addition of on-road cycling facilities is estimated at approximately $4.2 million.

Alternative 3 with addition of separated bike lanes and enhanced wider sidewalks is estimated at approximately $4.3 million. Alternative 3A with addition of separated bike facilities and wider 2.1m wide sidewalks is at approximately $4.2 million.

Additional costs for the utility relocations are required for all alternatives and are estimated to be in the range of $180,000 to $220,000.

11. What happens when property is required for the approved alternative?

While it is the intent of the design process to minimize as much as possible the need to obtain property for the University Avenue Improvements, the Preferred Alternative being considered will require widening the road allowances in areas to accommodate the cycle track and wide 2.1m sidewalks, and limited temporary work on adjacent property to match grades and restore landscaping during the construction period. In areas where property is required, the property owner will be contacted directly by the Region of Waterloo's Land Purchasing Officer during the future detail design process. Compensation will be provided at fair market rates based on recent similar area sales. Please refer to Appendix "C" for further information on the property acquisition process.

12. How will existing trees be affected?

A tree assessment was completed in the summer of 2019 to inventory the various trees within the study area. Any potentially impacted trees will be reviewed as to their significance and health and a determination made if disturbance should and/or could be avoided. A streetscape design will be completed for planting of any new trees and any trees removed will be considered for replacement with nursery stock of a Region-approved native species on a two for one basis.

13. What are the next steps in the project?

The project team will use the comments received from Public Consultation Centre #2, along with other input received from the public and approval agencies as well as technical data, to identify a recommended alternative for improvements on University Avenue.

Subject to comments received, we propose to present the Recommended Alternative to the Region of Waterloo's Planning and Works Committee for approval in Summer 2022. If the Recommended Alternative design is approved, the study process and findings will be documented in an Environmental Study Report (ESR) which will then be advertised, notification sent to interested parties and available for public review and comment for 30 days. This is a requirement of the Municipal Class Environmental Assessment Act (Part II Order requests). Any Part II Order requests unresolved after the 30 day review period will be sent to the Ministry of Environment for further consideration and ruling.

Further consultation and preliminary design for utility relocations are currently underway and will be incorporated into the assessment of alternatives being considered.

Pending project approval by Regional Council, detailed design and property acquisition would be completed throughout 2022 with utility relocations in 2022/2023 and construction commencing in 2023.

14. How will I receive further notification regarding this project?

All property owners within the study area and members of the public registering at this Public Consultation Centre, or the first Public Consultation Centre, will receive any forthcoming additional information and be notified of any future meetings including Regional Council or Committee meetings. Advertisements will also be placed in local newspapers advising the public of the meetings and availability of the final Environmental Study Report for the University Avenue Improvements Class EA study.

15. How can I provide my comments at this stage?

We encourage you, stakeholder groups, and agencies to actively participate in this study by attending public consultation opportunities and/or contacting staff directly with comments or questions. If you wish to be added to the project mailing list, or would like further information on the project and any future project meetings, please visit our website at www.engagewr.ca/University-Ave or contact one of the following:

Andrew Doman, P. Eng.
Senior Engineer
Region of Waterloo
150 Frederick Street
Kitchener, ON N2G 4J3
519-575-4400 x3183
ADoman@regionofwaterloo.ca

Kelly Cobbe, P. Eng.
Consultant Project Manager
IBI Group
410 Albert Street, Suite 101
Waterloo, ON N2L 3V3
519-585-2255
kcobbe@IBIGroup.com

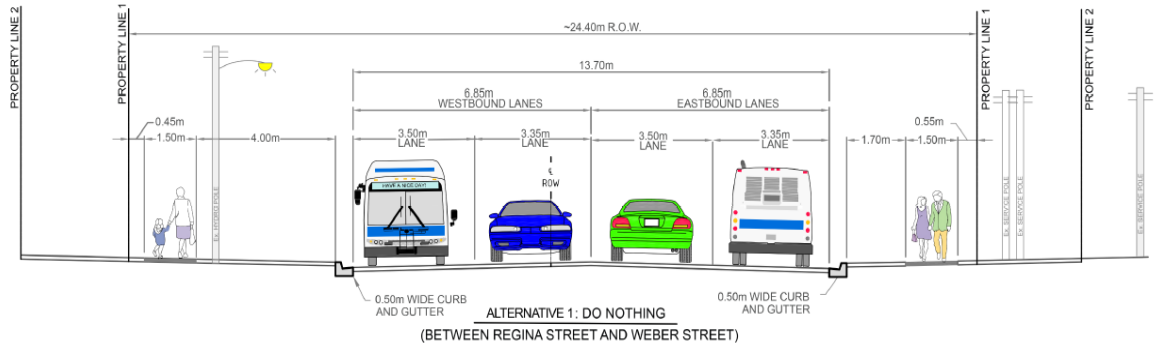
16. How can I view project information following the PCC?

All of the PCC display materials and other relevant project information, notifications of upcoming meetings and contact information are available for viewing at the Region of Waterloo municipal office as identified above. Alternatively, you may visit the Region's website at www.engagewr.ca/University-Ave .

Appendix A

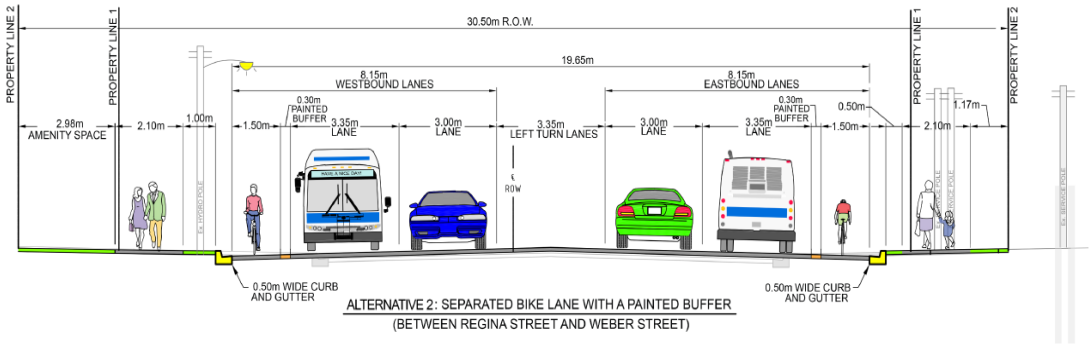
Alternative Solutions Considered

Alternative 1: Do Nothing



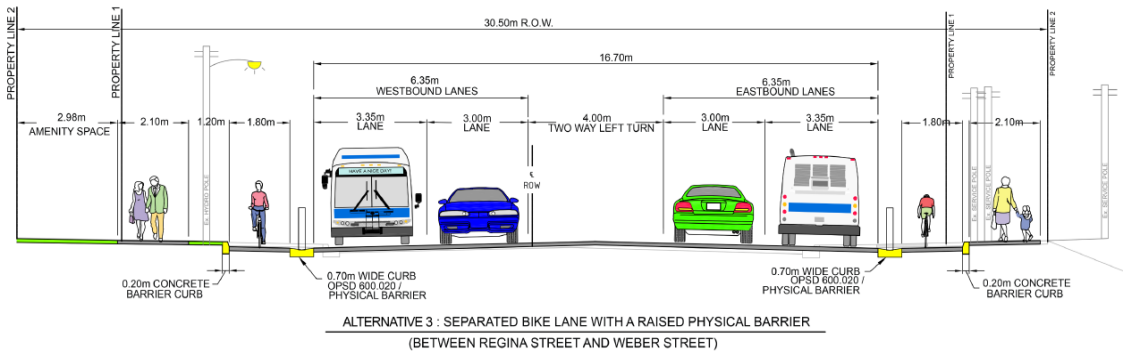
- Reconstructing the road in its current cross-section configurations

Alternative 2: Separated Bike Lane with a Painted Buffer



- Maintain on-road bike lanes between Albert Street and King Street North, add on-road bike lanes between King Street North and Weber Street North.
- Provide a 0.3m painted buffer between outside vehicular travel lane and the bike lane.

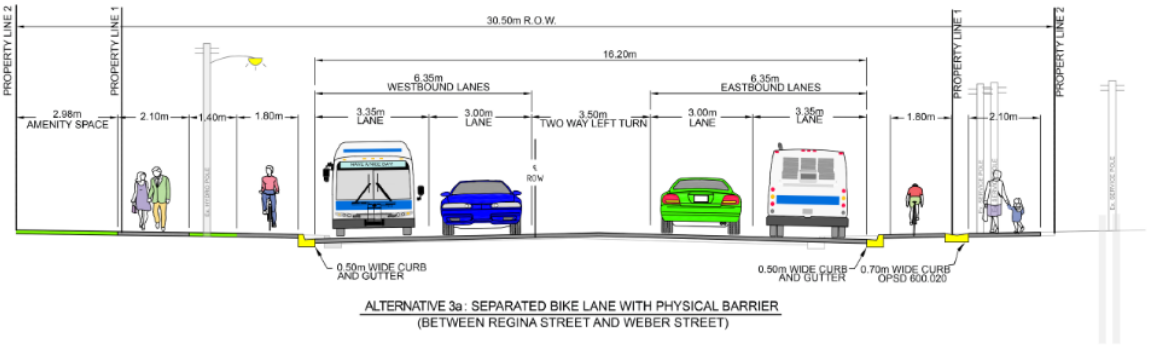
Alternative 3: Separated Bike Lane with a Raised Physical Barrier



ALTERNATIVE 3 : SEPARATED BIKE LANE WITH A RAISED PHYSICAL BARRIER
(BETWEEN REGINA STREET AND WEBER STREET)

- Modified travel lane widths to provide flexible bollards between the outside vehicular travel lane and the bike lane.
- Enhanced 2.1m wide sidewalk where possible.

Alternative 3a: Separated Bike Lane with a Physical Barrier



ALTERNATIVE 3a : SEPARATED BIKE LANE WITH PHYSICAL BARRIER
(BETWEEN REGINA STREET AND WEBER STREET)

- Provide a separated bike lane behind standard curb and gutter, further away from the vehicular travel lanes.
- Enhanced 2.1m wide sidewalk where possible.

Appendix B

Municipal Class Environmental Assessment Process
Ontario Environmental Assessment Act

The purpose of the Ontario Environmental Assessment Act (EA Act) is to provide for "the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management of the environment in Ontario". Environment is applied broadly and includes the natural, social, cultural, built and economic components.

The key principles of successful environmental assessment planning include:

- Consultation with stakeholders and affected members of the public;
- Consideration of a reasonable range of alternatives;
- Assessment of the environmental impacts for each alternative;
- Systematic evaluation of alternatives; and
- Clear documentation of the process followed.

The Municipal Class EA is a planning process approved under the Environmental Assessment Act that is used by municipalities to plan infrastructure enhancement projects while satisfying the requirements of the Environmental Assessment Act. Under the Class EA process, projects are planned in one of three ways depending on their scope, complexity, and potential for adverse environmental impacts.

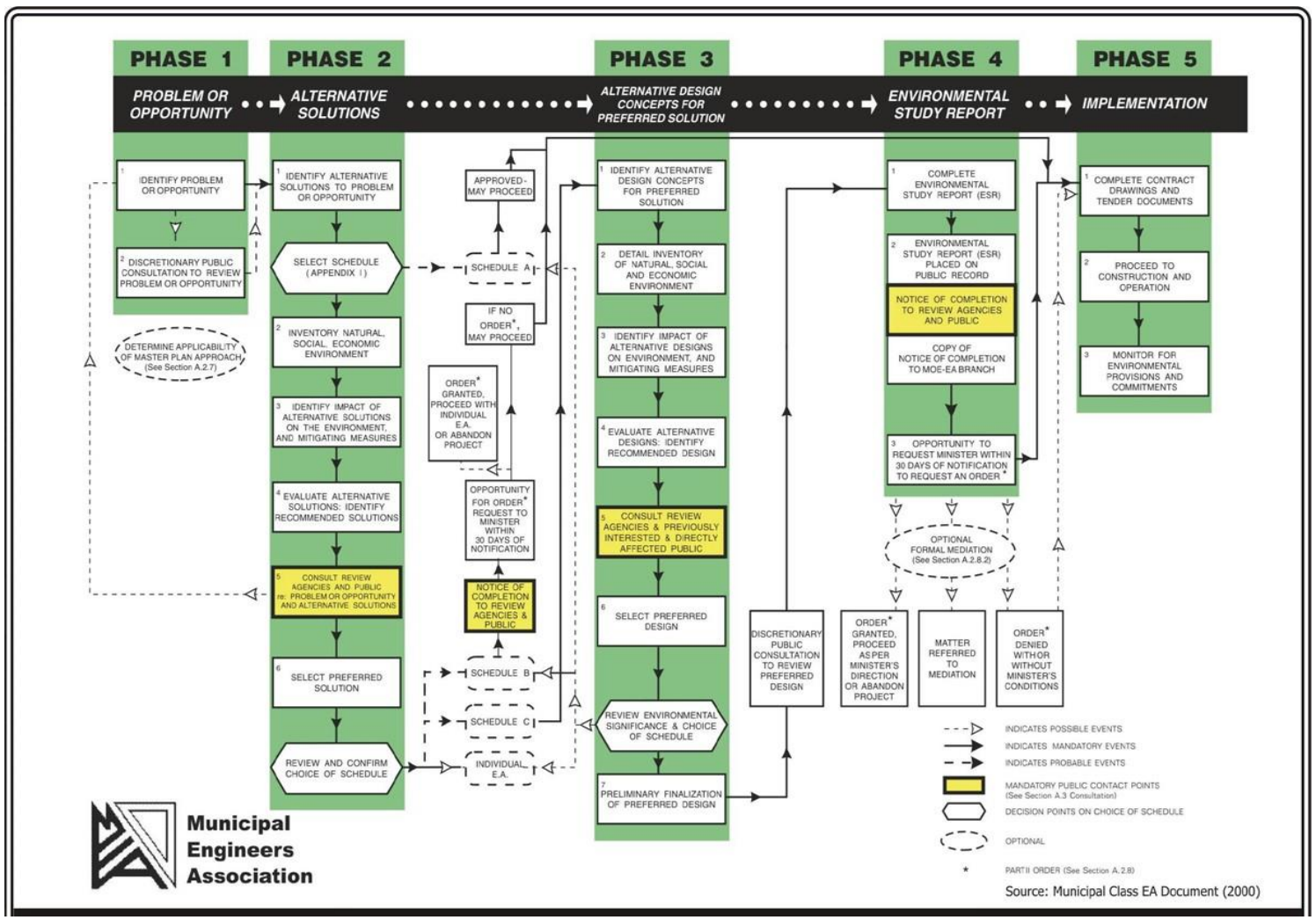
Schedule "A"	Includes routine maintenance, operation and emergency activities. The Municipality can proceed with this work without further approval or public consultation.
Schedule "B"	Includes projects with the potential for some adverse environmental effects. These projects are subject to a screening process that includes consultation with directly affected public and agencies.
Schedule "C"	Includes larger, more complex projects with the potential for significant environmental effects.

These projects are subject to all phases of the Class EA and require a minimum of 3 points of public contact.

Public Involvement

Members of the public that have a stake in the project are encouraged to provide comment throughout the Class EA process. For Schedule "C" projects there are a minimum of three (3) opportunities for public contact. These typically include two Public Consultation Centres and the Notice of Study Completion.

Class EA Process for Schedule "C" Projects



Change in Project Status – Appeal Provision

It is recommended that all stakeholders (including the proponent, public and review agencies) work together to determine the preferred means of addressing a problem or opportunity. If you have any concerns, you should discuss them with the proponent and try to resolve them. In the event that there are major issues which cannot be resolved, you may request the Minister of the Environment by order to require a proponent to comply with Part II of the EA Act before proceeding with a proposed undertaking which has been subject to Class EA requirements. This is called a "Part II Order". The Minister will make one of the following decisions:

1. Deny the request (with or without conditions);
2. Refer the matter to mediation; or
3. Require the proponent to comply with Part II of the EA Act, ordering a full Environmental Assessment.

All stakeholders are urged to try to resolve issues since it is preferable for them to be resolved by the municipality in which a project is located, rather than at the provincial level.

To request a Part II Order, a person must send a written request to:
The Ministry/Minister of Environment and Climate Change
77 Wellesley St. West, 11th Floor
Toronto, ON M7A 2T5

The request must address the following with respect to the identified concerns:

- Environmental impacts and specific concerns;
- Adequacy of the planning and public consultation process; and,
- Involvement of the person in the planning process and details of discussion held between the person and the proponent.

Appendix C

Property Acquisition Process Information Sheet

The following information is provided as a general overview of the property acquisition process and is not legal advice. Further, the steps, timing and processes can vary depending on the individual circumstances of each case.

Once the Recommended Design Concept has been approved, the property acquisition process and the efforts of Regional Real Estate staff will focus on acquiring the required lands to implement the approved design. Regional staff cannot make fundamental amendments or changes to the approved design concept.

Property Impact Plans

After the project has been approved and as it approaches final design, the project planners will generate drawings and sketches indicating what lands and interests need to be acquired from each affected property to undertake the project. These drawing are referred to as Property Impact Plans (PIP).

Initial Owner Contact by Regional Real Estate Staff

Once the PIPs are available, Regional Real Estate staff will contact the affected property owners by telephone and mail to introduce themselves and set-up initial meetings to discuss the project and proposed acquisitions.

Initial Meetings

The initial meeting is attended by the project engineer and the assigned real estate staff person to brief the owner on the project, what part of their lands are to be acquired or will be affected, what work will be undertaken, when, with what equipment, etc. and to answer any questions. The primary purpose of the meeting is to listen to the owner and identify issues, concerns, effects of the proposed acquisition on remaining lands and businesses that can be feasibly mitigated and/or compensated, and how the remaining property may be restored. These discussions may require additional meetings. The goal of staff is to work with the owner to reach mutually agreeable solutions.

Goal – Fair and Equitable Settlement for All Parties

The goal is always to reach a fair and equitable agreement for both the property owner and the Region. Such an agreement will provide compensation for the fair market value of the lands and address the project impacts (such as repairing or replacing landscaping, fencing, paving) so that the property owner will receive the value of the lands acquired and the restoration of their remaining property to the condition it was prior to the Project.

The initial meetings will form the basis of an initial offer of settlement or agreement of purchase and sale for the required lands or interests.

Steps Toward Offer of Settlement or Agreement of Purchase and Sale

The general steps towards such an offer are as follows;

1) the Region will obtain an independent appraisal of the fair market value of the lands and interests to be acquired, and an appraisal of any effect on the value of the rest of the property resulting from the acquisition of the required lands and interests;

2) compensation will be estimated and/or works to minimize other effects will be defined and agreed to by the property owner and the Region;

3) reasonable costs of the owner will be included in any compensation settlement;

4) an offer with a purchase price and any other compensation or works in lieu of compensation will be submitted to the property owner for consideration; and

5) an Agreement will be finalized with any additional discussion, valuations, etc. as may be required.

Depending on the amount of compensation, most agreements will require the approval of Council. The approval is undertaken in Closed Session which is not open to the public to ensure a level of confidentiality.

Expropriation

Due to the time constraints of these projects, it is the practice of the Region to commence the expropriation process in parallel with the negotiation process to insure that lands and interests are acquired in time for commencement of the Project. Typically, over 90% of all required lands and interests are acquired through the

negotiation process. Even after lands and interests have been acquired through expropriation an agreement on compensation can be reached through negotiation, this is usually referred to as a 'settlement agreement'.

Put simply, an expropriation is the transfer of lands or an easement to a governmental authority for reasonable compensation, including payment of fair market value for the transferred lands, without the consent of the property owner being required. In the case of expropriations by municipalities such as the Region of Waterloo, the process set out in the Ontario *Expropriations Act* must be followed to ensure that the rights of the property owners provided under that *Act* are protected.

Comment Sheet
Regional Municipality of Waterloo
University Avenue Improvements
City of Waterloo
Public Consultation Centre #2, March 8 – April 8, 2022

Please complete and email or fax your comments by April 4, 2022 to either contact below. Alternatively you can complete the survey online at: www.engagewr.ca/University-Ave

Andrew Doman, P. Eng.
Senior Engineer
Region of Waterloo
150 Frederick Street, 6th Floor
Kitchener, ON N2G 4J3
Telephone: 519-575-4757 Ext. 3183
Fax: 519-575-4430
Email: ADoman@regionofwaterloo.ca

Kelly Cobbe, P. Eng.
Consultant Project Manager
IBI Group
410 Albert Street, Suite 101
Waterloo, ON, N2L 3V3
Telephone: 519-585-2255
Email: kcobbe@ibigroup.com

1. Do you think there are any other problems, needs or opportunities that should be considered for this project?

2. What opportunities/challenges do you see with the Preferred Alternative (**Alternative 3a – Separated Bike Lane with Physical Barrier**)?

3. Are there any other general comments you have on this project?

_____

_____

_____

_____

_____

_____

Do you wish to be placed on the mailing list for this project? Yes ☐ No ☐

Name: _____

Address: _____

Postal Code: _____

Phone & email: _____

Thank you for your interest and time.

Collection Notice

All comments and information received from individuals, stakeholder groups and agencies regarding these projects and meetings are being collected to assist the Region of Waterloo in making a decision. Under the "Municipal Act", personal information (such as name, address, telephone number, and property location) that may be included in a submission becomes part of the public record. Questions regarding the collection should be forwarded to the staff member noted above.

University Avenue (RR 57) Improvements

PCC #2

Region of Waterloo

March 2022

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Purpose of the Public Consultation Centre



To provide stakeholders with an opportunity to participate in the planning and decision-making process



To present and receive input on the needs and opportunities, the project environment, alternative solutions and future opportunities

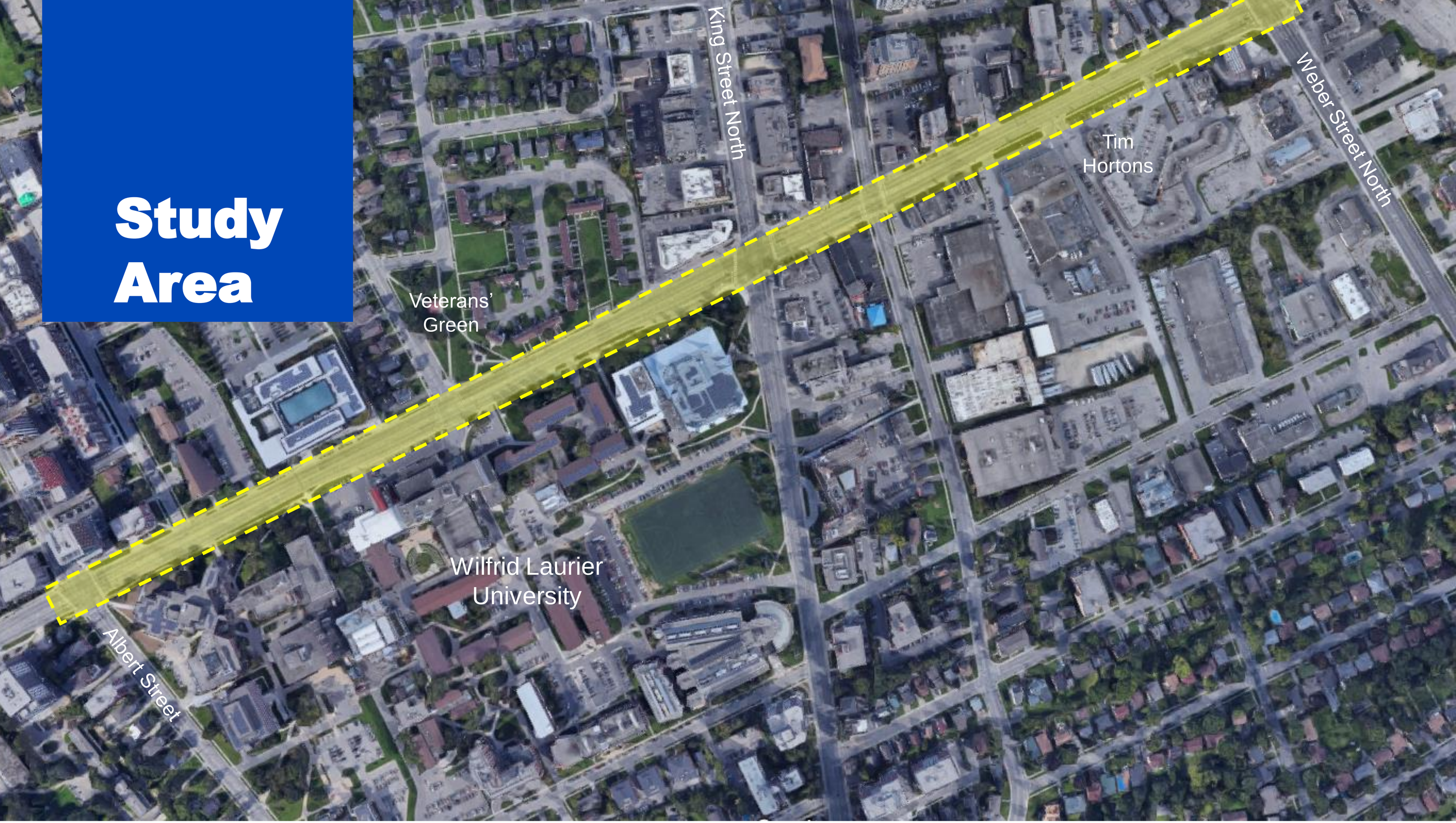


For participants to ask questions and provide comments, concerns or additional information

Region of Waterloo

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Study Area



Region of Waterloo

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Purpose of the Study

Investigate the need for capacity, safety and operational improvements to **University Avenue** between **Albert Street** and **Weber Street North** in the City of Waterloo.

Municipal Class EA Study Process

Enables the planning and implementation of municipal infrastructure projects

August 2019 — **Fall 2020** — **Winter 2022** — **July 2022**

PHASE 1: Problem or Opportunity

- Problem identification
- Project Initiation
- Public notices (newspaper & mail-outs)
- Letter to agencies

PHASE 2: Alternative Solutions

- Inventory natural, cultural and economic environment
- PCC #1: Public input on problem and opportunity and possible concept solutions
- Identification of alternative solutions
- Identification of opportunities and constraints
- Identification of evaluation criteria
- Select preferred alternative solutions

PHASE 3: Alternative Design Concepts

- Evaluation of alternative design concepts
- Evaluate natural, cultural and economic environment impacts
- **PIC#2: Public input on preliminary preferred design concept**
- Select preferred design concept

Current Stage

PHASE 4: Documentation and Study Completion

- Prepare Environmental Study Report
- Notice of Study Completion
- 30-day review period

PHASE 5: Implementation

- Construction, budget permitting, is scheduled for 2023 (construction may be phased).

Region of Waterloo

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Problem Statement

> To improve the roadway and underground infrastructure, active transportation facilities and traffic operations to the **University Avenue (Regional Road 57) corridor**.

Region of Waterloo

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Public Feedback

Public Consultation Centre #1

Hosted virtually on the Regions EngageWR Website between August 12 and October 2, 2020

Participants were encouraged to:

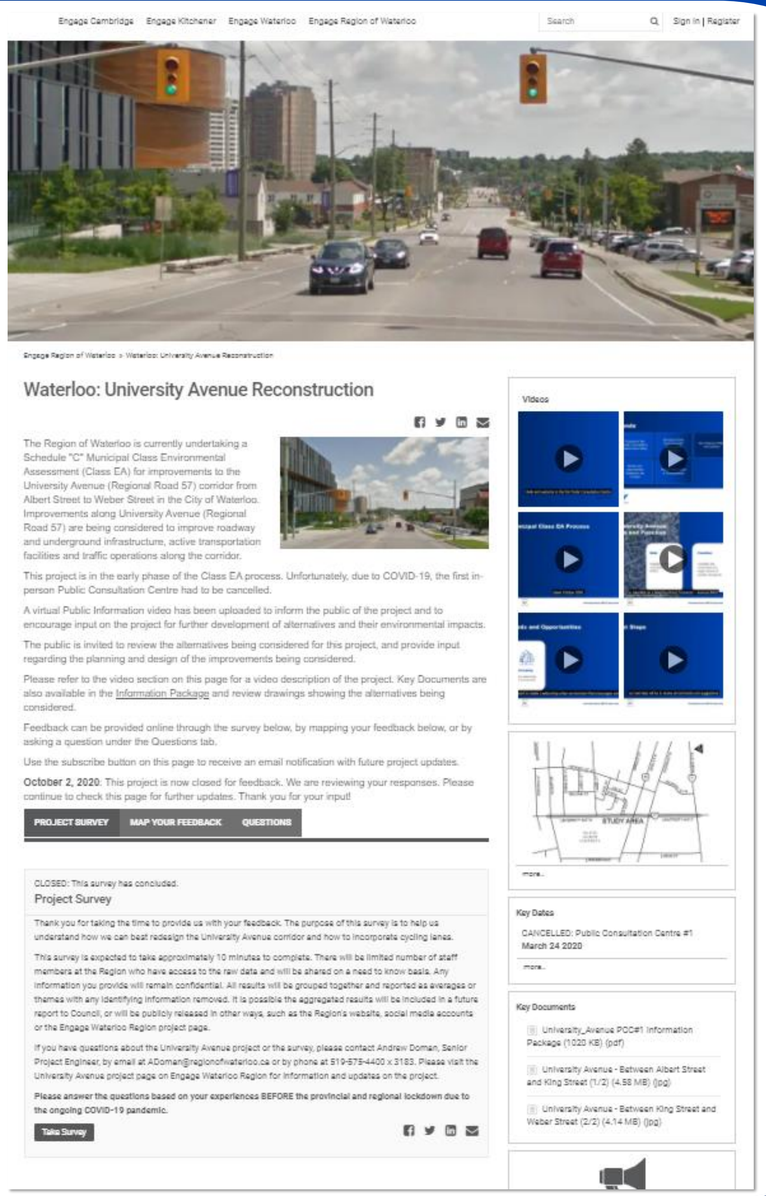
- Complete PCC#1 Public Survey
- Submit questions via the Question and Answer (Q&A) page
- Submit comment forms/emails
- Call the Study Team by phone

324 Site Visits

- The Study webpage on EnageWR was visited times during PCC#1

85 Surveys and Comments received

- Through EnageWR website and by email

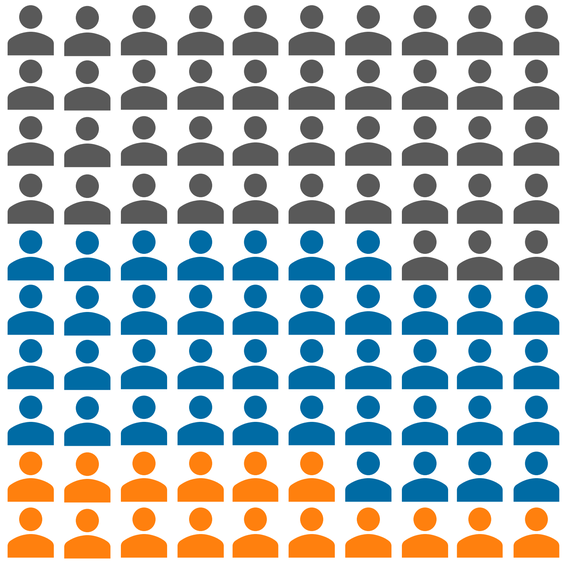


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Public Feedback

Public Consultation Centre #1



324 Informed Visitors

Viewed documents, images or multiple pages (Includes Engaged Visitors)

90 Engaged Visitors

Participated in the online survey, submitted mapped feedback and/or asked a question

85 Participated in the PCC #1 Survey	54 Viewed the PCC #1 Presentation	14 Visited the Key Dates page
2 Submitted Questions to the Q&A	28 Viewed the Detailed Study Area Map	207 Visited Multiple Project Webpages
9 Placed Pins on the Map	133 Downloaded a document	568 Visited Project Webpage

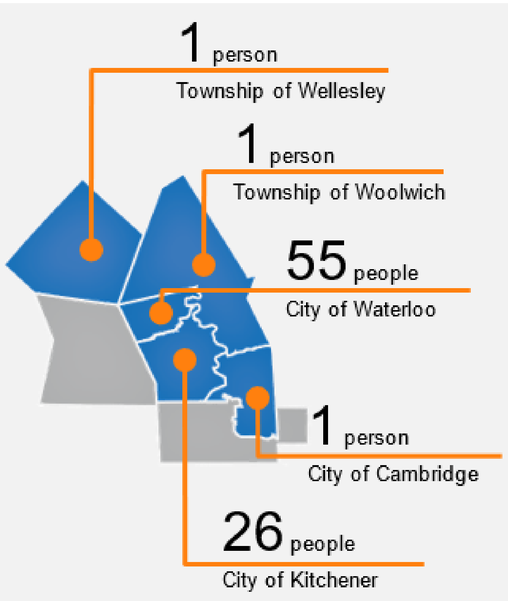
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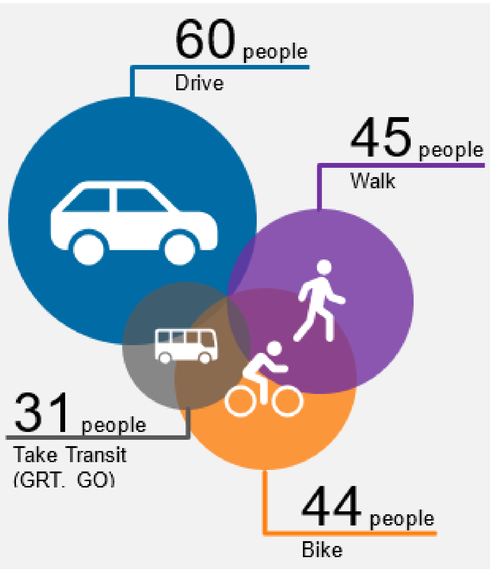
Public Feedback

Public Consultation Centre #1 – Respondent Profile

Where do you live?

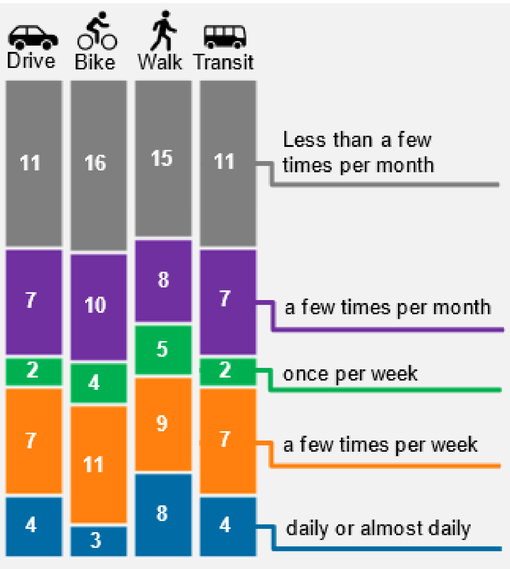


How do you most often travel?



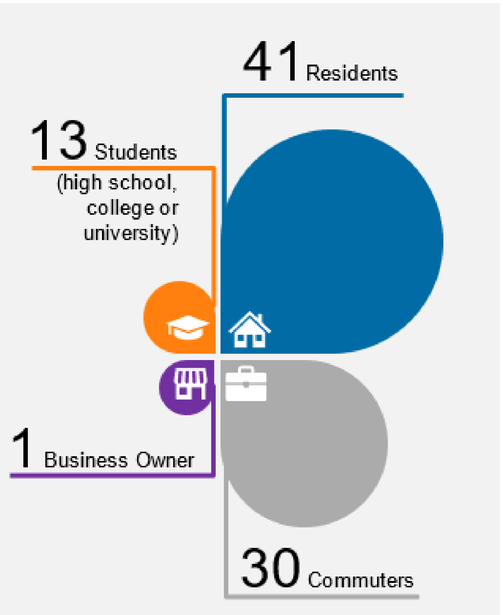
(Some respondents use more than one mode of travel)

How often do you travel along University Avenue?



number of respondents

Which of the following best describes how you live or interact with the University Avenue area?



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Public Feedback

Public Consultation Centre #1 – Community Priorities



Longer crossing times for pedestrians



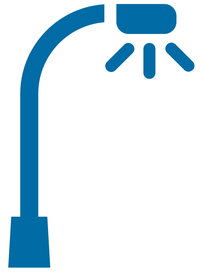
Longer turning lanes for vehicles



Longer advanced turning signals for vehicles



Improvements to visibility at intersections



Improvements to lighting on sidewalks



Traffic Calming Measures

Region of Waterloo

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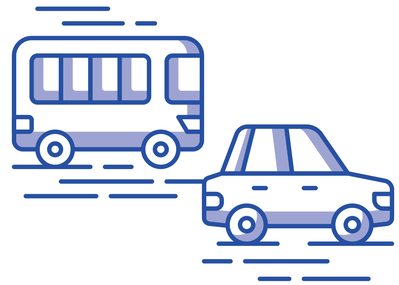
Studies Undertaken



Environmental Impact Study



Stage 1 Archeological Assessment and Cultural heritage Resource Assessment



Traffic Impact Study

Region of Waterloo

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The Region Considered four (4) Alternatives

1

Do Nothing (Maintain Existing Conditions)

2

Separated Bike Lane with Painted Buffer

3

Separated Bike Lane with Flexible Bollards

3a

Separated Bike Lane with a Physical Barrier (Preferred Solution)

Alternative Designs Evaluation Process Criteria

Traffic Operations and User Comfort on University Avenue

Natural Environment

Socio-Culture Environment

Economic Environment

Regulatory Environment

Region of Waterloo

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Evaluation Process

Criteria	Sub-Criteria	Least Preferred	Most Preferred
Natural Environment	Aquatic Species & Habitat	Significant impact to aquatic species or habitat	No impact to aquatic species or habitat
	Terrestrial Species & Habitat	Significant impact to terrestrial species or habitat	No impact to terrestrial species or habitat
	Floodplain	Significant expansion or construction into floodplain area	Improvements to floodplain storage
	Wetlands	Significant loss of, or impact to wetlands	No loss of, or impact to, wetlands
	Trees & Landscaping	Significant loss of existing trees and landscaping	Improvements to trees and landscaping
	Wildlife	Significant impact to Species at Risk	Improvements to conditions for Species at Risk
	Property Contamination	Exposure of contaminated materials	Avoidance of contaminated materials
	Drainage	Detrimental Impact on storm water management and drainage	Maintenance or improvements to existing storm water management and drainage
Social Environment	Cultural Heritage & Archaeology	Significant loss or impact to cultural heritage or archaeological sites	No impact to cultural heritage or archaeological sites
	Culture & Recreation	Significant loss or impact to cultural or recreational facilities	No impact to cultural or recreational facilities
	Businesses	Reduced access to businesses	Improved access to businesses
	Construction	Lengthy construction duration with traffic delays and/or reduced access	Limited construction duration, traffic delays and/or access restrictions
	Streetscaping	Reduced opportunity to provide space for improvements to streetscaping elements (e.g. plantings, decorative paving materials, decorative streetlights)	Enhanced opportunity to provide space for improvements to streetscaping elements (e.g. plantings, decorative paving materials, decorative streetlights)
	Air Quality & Noise	Increased air and noise emissions	Reduced air and noise emissions
	Private Property	Greater impacts on property and need for land acquisition	Lesser impacts on property and need for land acquisition

Region of Waterloo

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Evaluation Process (Continued)

Criteria	Sub-Criteria	Least Preferred	Most Preferred
Traffic Capacity, Operations and Safety	Traffic Level-of-Service	Increased congestion	Reduced congestion
	Safety	No improvement to safety for all users	Improved safety for all users
	Access Management	Diminished access to driveways and side roads	Improved access to driveways and side roads
	Transit	Diminished transit service, reduced access to transit stops, and potential conflicts with other road users	Enhanced transit service and access to transit stops, and reduced potential conflicts with other road users
	Cycling	Diminished opportunity for improvement to existing facilities	Enhanced opportunity for improved cycling facilities and pedestrian space
	Pedestrians	Reduced potential space and separation of pedestrian facilities from other vehicular uses	Increased potential pedestrian space
	Emergency Services	Increase to emergency response time	Minimize emergency response time
Costs	Utility Relocations / Conflicts	Greater need for utility relocations	Lesser need for utility relocations
	Initial Capital Costs	Higher construction cost	Lower construction cost
	Life-Cycle Costs	Higher maintenance and operation cost	Lower maintenance and operating cost
Public Support	Public Preference	Lesser public support	Greater public support

Region of Waterloo

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Alternative Designs Evaluation Summary

Traffic Capacity, Operations and Safety: How might the alternative serve the expected vehicular, transit, pedestrian and cycling traffic in terms of travel delay, safety and emergency access?

Design Alternative 1 Do Nothing – Retain Roadway Cross-Section in its Current Configuration	Design Alternative 2 On Road Buffered Bike Lane	Design Alternative 3 Separated Bike Lane with Enhanced Sidewalk	Design Alternative 3a Separated Bike Lane with Physical barrier
• Does not satisfy the Region's Transportation Master Plan with respect to vehicular, pedestrian, or cycling facilities. • Does not provide adequate capacity for vehicular traffic. • Does not improve conditions for Emergency Services, Heavy Trucks, and Transit Vehicles. • Does not provide improved conditions for cyclists or pedestrians.	• Addresses the Region's Transportation Master Plan with respect to vehicular, pedestrian, and cycling facilities. • Addition of on road buffered bike lanes will keep cyclists and motorists separated. • Reconstruction of roadway to address pavement condition, and safety of cyclists by providing on-road cycle lanes. • Roadside is shared with cyclists and transit stops introducing a potential conflict between cyclist and transit vehicles. • On Road cycling added between King Street and Weber Street. Potential for conflicts between cyclist and vehicles. • Enhanced 2.1 metre wide sidewalk to be constructed on north side and south side of University Avenue right-of-way where possible. • Emergency response times will remain the same, as no changes to the current configuration will be made. • No change in current operation and maintenance services.	• Addresses the Region's Transportation Master Plan with respect to vehicular, pedestrian, and cycling facilities. • Separated bike lanes will allow cyclists to remain off road, decrease visibility issues between vehicular traffic and cyclists at intersections. • Addition of centre turning lane allows for easier turning into adjacent properties and will allow for more efficient traffic operations. Additional signal timing optimization will further improve intersection operations. • Separated cycling facility is provided where the cycling facility is separated from vehicular traffic by flexible bollards. Reducing potential conflicts between cyclists and vehicles but increasing potential conflict between cyclist and transit vehicles with a shared roadside. • Enhanced 2.1 metre wide sidewalk to be constructed on north side and south side of University Avenue right-of-way where possible. • Emergency response times will improve due to additional two way left turn lane and related reductions in conflict, delays and congestion. • Additional snow clearing methods will need to be used for the separated bike lane and will require several passes of snow clearing equipment.	• Addresses the Region's Transportation Master Plan with respect to vehicular, pedestrian, and cycling facilities. • Physical grade separation of bike lanes maintains safety of cyclist, and good visibility for vehicular traffic. Vehicular traffic is not affected • Addition of centre turning lane allows for easier turning into adjacent properties and will allow for more efficient traffic operations. Additional signal timing optimization will further improve intersection operations. • Addresses Transit concerns regarding on road conflicts at stop locations reducing potential conflicts between cyclist and transit users . • Separated cycling facility is provided, where the cycling facility is separated from vehicular traffic by full height concrete curb and gutter. This further reduces potential conflicts between cyclists and vehicles. • Enhanced 2.1 metre wide sidewalk to be constructed on north side and south side of University Avenue right-of-way where possible. • Emergency response times will improve due to additional two way left turn lane and related reductions in conflict, delays and congestion. • No change in current operation and maintenance services. Opportunities for efficient methods of snow clearing for both sidewalk and bike lane.
POOR	FAIR	GOOD	VERY GOOD

Region of Waterloo

IBI

Alternative Designs Evaluation Summary

Natural Environment: How might the alternative affect existing trees, vegetation and wildlife?

Design Alternative 1 Do Nothing – Retain Roadway Cross-Section in its Current Configuration	Design Alternative 2 On Road Buffered Bike Lane	Design Alternative 3 Separated Bike Lane with Enhanced Sidewalk	Design Alternative 3a Separated Bike Lane with Physical barrier
• There are no existing watercourses, culvert crossings or bridges requiring widening or replacement within the study area. Impact on fisheries is not anticipated. • No impacts to significant woodland areas or vegetation communities. Vegetation removal is limited to cultural woodland or cultural thicket communities and landscape trees. • Weber Street at University Ave is within the GRCA floodplain limit, a fill alteration permit will be required during construction. • Hydrogeological impacts are similar for all alternatives and can be mitigated. • No significant existing landscape trees on existing road allowance. • Trees that need to be removed can be replaced during construction, with enhanced plantings. • SAR would not be affected with this alternative • There are no known environmentally impacted lands affected this alternative. No contaminated properties have been identified in the City's past studies.	• There are no existing watercourses, culvert crossings or bridges requiring widening or replacement within the study area. Impact on fisheries is not anticipated. • No impacts to significant woodland areas or vegetation communities. • Weber Street at University Ave is within the GRCA floodplain limit, a fill alteration permit will be required during construction. • Hydrogeological impacts are similar for all alternatives and can be mitigated. • No significant existing landscape trees on existing road allowance. Trees that need to be removed can be replaced during construction, with enhanced plantings. • This alternative does not directly impact any of the trees having potential suitable roost habitat features for SAR bats, trees identified in the study are outside of the public right-of-way. • There are no known environmentally impacted lands affected this alternative. No contaminated properties have been identified in the City's past studies. • Opportunities to be evaluated for improved stormwater management, like implementation of oil/grit separators or other Low Impact Development (LID) measures.	• There are no existing watercourses, culvert crossings or bridges requiring widening or replacement within the study area. Impact on fisheries is not anticipated. • No impacts to significant woodland areas or vegetation communities. • Weber Street at University Ave is within the GRCA floodplain limit, a fill alteration permit will be required during construction. • Hydrogeological impacts are similar for all alternatives and can be mitigated. • No significant existing landscape trees on existing road allowance. Trees that need to be removed can be replaced during construction, with enhanced plantings. • This alternative does not directly impact any of the trees having potential suitable roost habitat features for SAR bats, trees identified in the study are outside of the public right-of-way. • There are no known environmentally impacted lands affected this alternative. No contaminated properties have been identified in the City's past studies. • Opportunities to be evaluated for improved stormwater management, like implementation of oil/grit separators or other Low Impact Development (LID) measures.	• There are no existing watercourses, culvert crossings or bridges requiring widening or replacement within the study area. Impact on fisheries is not anticipated. • No impacts to significant woodland areas or vegetation communities. • Weber Street at University Ave is within the GRCA floodplain limit, a fill alteration permit will be required during construction. • Hydrogeological impacts are similar for all alternatives and can be mitigated. • No significant existing landscape trees on existing road allowance. Trees that need to be removed can be replaced during construction, with enhanced plantings. • This alternative does not directly impact any of the trees having potential suitable roost habitat features for SAR bats, trees identified in the study are outside of the public right-of-way. • There are no known environmentally impacted lands affected this alternative. No contaminated properties have been identified in the City's past studies. • Opportunities to be evaluated for improved stormwater management, like implementation of oil/grit separators or other Low Impact Development (LID) measures.
VERY GOOD	GOOD	GOOD	GOOD

Region of Waterloo

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Alternative Designs Evaluation Summary

Social Environment: How might the alternative affect the residential and commercial properties abutting the road (driveways, access, property impacts, noise, air quality, streetscaping / beautification potential and archaeological / heritage resources)?

Design Alternative 1 Do Nothing – Retain Roadway Cross-Section in its Current Configuration	Design Alternative 2 On Road Buffered Bike Lane	Design Alternative 3 Separated Bike Lane with Enhanced Sidewalk	Design Alternative 3a Separated Bike Lane with Physical barrier
• No anticipated archaeological or cultural heritage impacts • No change to business visibility, no access improvements • No new opportunities for streetscaping adjacent to designated road allowance including plantings, decorative paving materials, decorative streetlights, etc. • No change to air quality and noise.	• No anticipated archaeological or cultural heritage impacts • Relieves traffic congestion facilitating better access to businesses and adjacent neighbourhoods. • Less traffic congestion leads to better relative air quality. • Business visibility and access improvements with additional Active Transportation. • Limited opportunities for streetscaping adjacent to designated road allowance • Some additional property is required to accommodate sidewalk encroachments at intersections along the corridor. • Noise levels may increase due to projected traffic volumes.	• No anticipated archaeological or cultural heritage impacts • Relieves traffic congestion facilitating better access to businesses and adjacent neighbourhoods. • Less traffic congestion leads to better relative air quality. • Business visibility and access improvements with additional Active Transportation and enhanced sidewalks • Limited opportunities for streetscaping adjacent to designated road allowance including plantings, decorative paving materials, decorative streetlights, etc. • Some property acquisition is required to accommodate wider sidewalks along the corridor and encroachments at intersections • Noise levels may increase due to projected traffic volumes.	• No anticipated archaeological or cultural heritage impacts • Relieves traffic congestion facilitating better access to businesses and adjacent neighbourhoods. • Less traffic congestion leads to better relative air quality. • Business visibility and access improvements with additional Active Transportation and enhanced sidewalks • Greatest opportunities for Streetscaping adjacent to designated road allowance including plantings, decorative paving materials, decorative streetlights, etc. • Some property acquisition is required to accommodate wider sidewalks along the corridor and encroachments at intersections • Noise levels may increase due to projected traffic volumes.
GOOD	GOOD	VERY GOOD	VERY GOOD

Region of Waterloo

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Alternative Designs Evaluation Summary

Costs: What is the total cost of the alternative, including the cost for road construction, utility and street-lighting relocations, property acquisitions, traffic signal and intersection improvements, and landscaping?

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• Increased costs for movement of goods and services as congestion increases. • No change to maintenance costs for road, pedestrian/ cycling facilities, or landscaping. • Increased traffic over fewer travel lanes increases frequency of required maintenance. • Increased traffic volume increases congestion and may lead to increased accident frequency due to gap reduction.	• Cross-section unit cost is $4,240/m. • Reduced costs for movement of goods and services as congestion decreases. • No change in maintenance costs for road, pedestrian/ cycling facilities, and landscaping.	• Cross-section unit cost is $4,320/m. • Reduced costs for movement of goods and services as congestion decreases. • Increased maintenance costs for road, pedestrian/ cycling facilities, and landscaping.	• Cross-section unit cost is $4,100/m. • Reduced costs for movement of goods and services as congestion decreases. • Increased maintenance costs for road, pedestrian/ cycling facilities, and landscaping.
POOR	GOOD	FAIR	VERY GOOD

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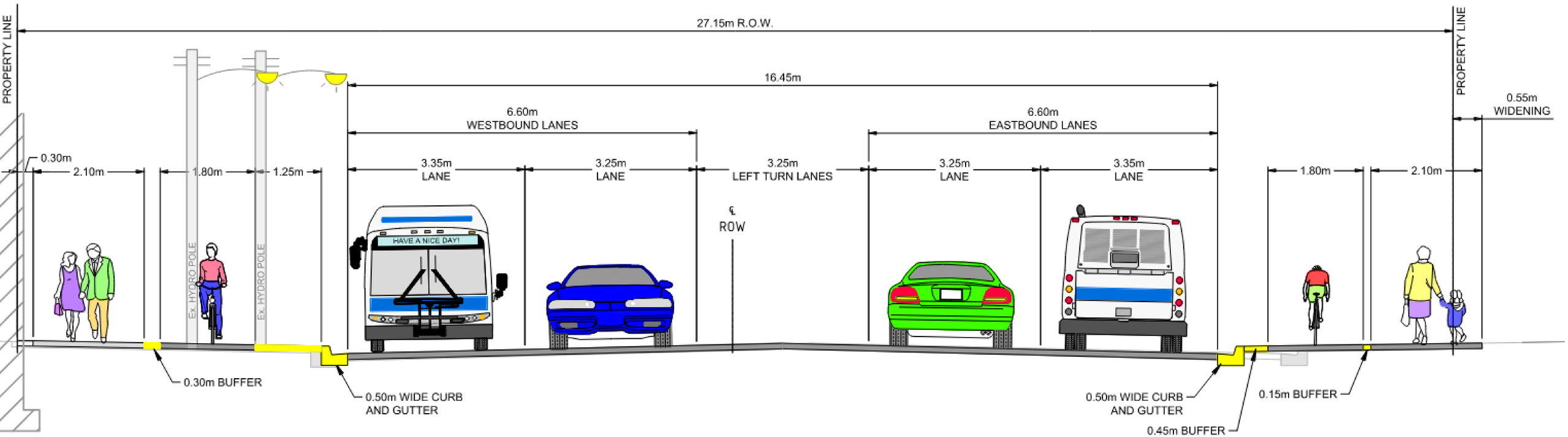
Alternative Designs Evaluation Summary

For more information on how each alternative was evaluated visit the documents section at www.engagewr.ca/University-Ave

Design Alternative 1 Do Nothing – Retain Roadway Cross-Section in its Current Configuration	Design Alternative 2 On Road Buffered Bike Lane	Design Alternative 3 Separated Bike Lane with Enhanced Sidewalk	Design Alternative 3a Separated Bike Lane with Physical barrier
Does not address safety and design deficiencies identified in the problem/opportunity statement for this study.	This alternative fails to adequately address operational and safety deficiencies. It does not address the parameters laid out in the active transportation master plan.	This alternative does not address all pedestrian and cyclist conflicts that exist with this alternative.	This alternative balances transportation needs and enhances safety of pedestrians and cyclists while enhancing urban design / streetscaping along the corridor.
FAIR	GOOD	GOOD	VERY GOOD
4	3	2	1
✗	✗	✗	✓
Not carried forward	Not carried forward	Not carried forward	Carried forward as the preferred design alternative

Project Team Recommended Design Alternative

Alternative 3a: Separated Bike Lane with a Physical Barrier



Next Steps

Public Review of Preliminary Preferred Design at Public Consultation Centre #2

Prepare Environmental Study Report including Preferred Design, identification of impacts and mitigation measures

(Spring 2022)

Issue Notice of Study Completion and hold 30-day public review of the Environmental Study Report

(Summer 2022)

Proceed to Detailed Design and Construction Phases subject to council approval

(2022/2023/2024)

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Visit the University Avenue Reconstruction Project website at
https://www.engagewr.ca/University-Ave

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Alternative Designs Evaluation Summary

Traffic Capacity, Operations and Safety: How might the alternative serve the expected vehicular, transit, pedestrian and cycling traffic in terms of travel delay, safety and emergency access?

Design Alternative 1 Do Nothing – Retain Roadway Cross-Section in its Current Configuration	Design Alternative 2 On Road Buffered Bike Lane	Design Alternative 3 Separated Bike Lane with Enhanced Sidewalk	Design Alternative 3a Separated Bike Lane with Physical barrier
• Does not satisfy the Region's Transportation Master Plan with respect to vehicular, pedestrian, or cycling facilities. • Does not provide adequate capacity for vehicular traffic. • Does not improve conditions for Emergency Services, Heavy Trucks, and Transit Vehicles. • Does not provide improved conditions for cyclists or pedestrians.	• Addresses the Region's Transportation Master Plan with respect to vehicular, pedestrian, and cycling facilities. • Addition of on road buffered bike lanes will keep cyclists and motorists separated. • Reconstruction of roadway to address pavement condition, and safety of cyclists by providing on-road cycle lanes. • Roadside is shared with cyclists and transit stops introducing a potential conflict between cyclist and transit vehicles. • On Road cycling added between King Street and Weber Street. Potential for conflicts between cyclist and vehicles. • Enhanced 2.1 metre wide sidewalk to be constructed on north side and south side of University Avenue right-of-way where possible. • Emergency response times will remain the same, as no changes to the current configuration will be made. • No change in current operation and maintenance services.	• Addresses the Region's Transportation Master Plan with respect to vehicular, pedestrian, and cycling facilities. • Separated bike lanes will allow cyclists to remain off road, decrease visibility issues between vehicular traffic and cyclists at intersections. • Addition of centre turning lane allows for easier turning into adjacent properties and will allow for more efficient traffic operations. Additional signal timing optimization will further improve intersection operations. • Separated cycling facility is provided where the cycling facility is separated from vehicular traffic by flexible bollards. Reducing potential conflicts between cyclists and vehicles but increasing potential conflict between cyclist and transit vehicles with a shared roadside. • Enhanced 2.1 metre wide sidewalk to be constructed on north side and south side of University Avenue right-of-way where possible. • Emergency response times will improve due to additional two way left turn lane and related reductions in conflict, delays and congestion. • Additional snow clearing methods will need to be used for the separated bike lane and will require several passes of snow clearing equipment.	• Addresses the Region's Transportation Master Plan with respect to vehicular, pedestrian, and cycling facilities. • Physical grade separation of bike lanes maintains safety of cyclist, and good visibility for vehicular traffic. Vehicular traffic is not affected • Addition of centre turning lane allows for easier turning into adjacent properties and will allow for more efficient traffic operations. Additional signal timing optimization will further improve intersection operations. • Addresses Transit concerns regarding on road conflicts at stop locations reducing potential conflicts between cyclist and transit users . • Separated cycling facility is provided, where the cycling facility is separated from vehicular traffic by full height concrete curb and gutter. This further reduces potential conflicts between cyclists and vehicles. • Enhanced 2.1 metre wide sidewalk to be constructed on north side and south side of University Avenue right-of-way where possible. • Emergency response times will improve due to additional two way left turn lane and related reductions in conflict, delays and congestion. • No change in current operation and maintenance services. Opportunities for efficient methods of snow clearing for both sidewalk and bike lane.
POOR	FAIR	GOOD	VERY GOOD

Region of Waterloo

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Alternative Designs Evaluation Summary

Natural Environment: How might the alternative affect existing trees, vegetation and wildlife?

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VERY GOOD	GOOD	GOOD	GOOD

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Alternative Designs Evaluation Summary

Social Environment: How might the alternative affect the residential and commercial properties abutting the road (driveways, access, property impacts, noise, air quality, streetscaping / beautification potential and archaeological / heritage resources)?

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GOOD	GOOD	VERY GOOD	VERY GOOD

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Alternative Designs Evaluation Summary

Costs: What is the total cost of the alternative, including the cost for road construction, utility and street-lighting relocations, property acquisitions, traffic signal and intersection improvements, and landscaping?

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POOR	GOOD	FAIR	VERY GOOD

Region of Waterloo

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Alternative Designs Evaluation Summary

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Does not address safety and design deficiencies identified in the problem/opportunity statement for this study.	This alternative fails to adequately address operational and safety deficiencies. It does not address the parameters laid out in the active transportation master plan.	This alternative does not address all pedestrian and cyclist conflicts that exist with this alternative.	This alternative balances transportation needs and enhances safety of pedestrians and cyclists while enhancing urban design / streetscaping along the corridor.
FAIR	GOOD	GOOD	VERY GOOD
4	3	2	1
✗	✗	✗	✓
Not carried forward	Not carried forward	Not carried forward	Carried forward as the preferred design alternative

Appendix D: Summary of Public Comments and Project Team Comment Responses

Appendix D – Public Comments and Project Team Responses

No.	Comment (Grouped by Submission)	Response
1.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* Separated bike line with a physical barrier - safety for pedestrians and cyclists	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA.
2.	*Q. What challenges or considerations do you see with the Recommended Design Alternative?* First, pedestrian space should be made a priority (2.1m wide sidewalk or greater everywhere) as the corridor is extremely pedestrian heavy (not to mention the climate and safety implications). Second, intersections should have separate (and early) signal phases for pedestrians and cyclists as that makes intersections far safer for pedestrians (as seen in Montréal). Taking further from that example, right hand turns on red lights should be stopped on most major crossings to further increase pedestrian safety. Finally, protected intersections should be used to reduce car speeds, increase pedestrian and cyclist visibility and safety, and reduce crossing distances.	The Recommended Design Alternative includes increasing sidewalks to 2.1m wide along the corridor wherever possible, this is based on Transportation Association of Canada's (TAC) guidelines. The intersections and crossings will be further evaluated during the detailed design phase of the project balancing all user needs.
3.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* It has some more space for bicycles I suppose *Q. What challenges or considerations do you see with the Recommended Design Alternative?* Street still gigantic, not that forward thinking. If this is a future BRT/LRT corridor and has quite literally the busiest pedestrian crossing in the whole region, how is this meek redesign the best we can do?	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. This corridor is identified for potential LRT routing in the time horizon past 2041. This current University Avenue project stretch that overlaps this proposed LRT route (King Street to Albert Street) will require future road reconstructions prior to this. If a future proposed LRT is selected for this corridor then the future reconstructions will review and address this. We do however see a mutually beneficial outcome from the preferred alternative in this regard. The proposed placement of the concrete sidewalk and asphalt bike lane as far away from the centreline of the road as possible results in additional active transportation comfort and provides as much boulevard and road platform width as possible for the potential cross sectional changes needed due to LRT accommodation.
4.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* Dedicated spaces for cyclists and pedestrians. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* A higher curb so that cyclists feel more protected and reduce spray from vehicles during winter and rain. Additionally, I think that a wider sidewalk be good addition as the current sidewalk can be very busy	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Recommended Design Alternative is to increase sidewalk width to 2.1m where possible along the entire corridor. The Project Team will evaluate the type of curb used to separate cyclists from the roadway during detailed design phase of the project.

No.	Comment (Grouped by Submission)	Response
5.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* Separated and protected bike lanes Wider sidewalks Longer pedestrian signals Longer left turning lanes *Q. What challenges or considerations do you see with the Recommended Design Alternative?* Still not enough protection for cyclists and pedestrians. Taller physically raised barriers between motor vehicles and cyclists would make it feel safer and reduce noise. This would also reduce the amount of splashing of water/snow/slush/ice at the pedestrians and cyclists when passing by. I would like to see even wider sidewalks so that it is more accessible can fit 2 wheelchair users side by side, this would also benefit the busy sidewalks of the student population often walking in groups and passing others. Also, there seems to be an enormous lack of public trashcans along sidewalks and spaces compared to places like the greater Toronto area especially considering the high-density of foot traffic and it is obvious from the amount of trash along walkways that it is desperately necessary. Also, more shelters for pedestrians for rain or snow precipitation and protected indoor bicycle storage lockers/spaces to prevent rain/snow/salt rust. We should also test out a pedestrian's first advanced head start crossing even before an advanced left-turn. Maybe add raised crosswalks at intersections, lane narrowing, smaller building setback distances, no roadside parking, and planting large trees closer to the motor vehicles to prevent cars from speeding down relatively straight-a-way university avenue. Bury utilities for more sidewalk/cycle space. Actually, enforce shovelling and salting the sidewalks and cycle paths at the same frequency and urgency during winter storms like how it is always seemingly instantly done for the roads. Also, replace the white reflective material for crosswalks with an alternative that does not become extremely slippery when wet or covered in snow. In summary, please try to take some inspiration from world-class bicycle and pedestrian infrastructure such as in the Netherlands (pathways do not necessarily need to be along a 90-degree motor vehicle alignment and can be more direct between destinations for faster travel times)	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Recommended Design Alternative includes increasing sidewalks to 2.1m wide along the corridor wherever possible, this is based on Transportation Association of Canada's (TAC) guidelines. The Project Team will evaluate the type of curb used to separate cyclists from the roadway during detailed design phase of the project. The intersections, crossings and uses for the amenity space will be further evaluated during the detailed design phase of the project balancing all user needs. Utilities have been consulted during the study for needs along the corridor and will continue to be asked for input throughout the detailed design phase of the project. Grand River Transit (GRT) will be asked to provide input into the detailed design with respect to transit measures for University Avenue corridor. GRT has already provided a needs assessment along the corridor, the intent is to provide for standard bus shelters at all stop locations within the project limits. Efficiency in transit service delivery is a priority for GRT and the Region to promote transit use, satisfy the Regional Transportation Master Plan objectives, and minimize conflicts with transit vehicles which are key considerations in the review of transit provisions on all Region of Waterloo road improvement projects.
6.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* I'm so, so excited to see bike lanes that are grade-separated from traffic. As a driver, it can be frustrating to have to share the road with cyclists, as there's sometimes uncertainty with how to overtake them. Separating cyclists from drivers will make this road feel so much safer and less stressful as a driver. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* The stretch of road from King to Phillip can be frustrating to drive on, as other drivers are constantly weaving around buses. This, in combination with the high pedestrian volumes, makes the road feel unsafe to drive on. I wish that we could just give buses their own lane so that drivers wouldn't need to worry about needing to navigate around them.	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. Grand River Transit (GRT) will be asked to provide input into the detailed design with respect to transit measures for University Avenue corridor. GRT has provided a needs assessment for this project, the intent is to provide for standard bus shelters at all stop locations within the project limits. Efficiency in transit service delivery is a priority for GRT and the Region to promote transit use, satisfy the Regional Transportation Master Plan objectives, and minimize conflicts with transit vehicles which are key considerations in the review of transit provisions on all Region of Waterloo road improvement projects.

No.	Comment (Grouped by Submission)	Response
7.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* I like the improved pedestrian space and protected cycle lanes. I trust that the curb between cycle lanes and vehicles is a full vertical curb, NOT a roll curb. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* I think a small grade separation between cycling and pedestrian space will be needed to minimize conflict. King St Uptown has shown that just different colours are not sufficient. Please also ensure that all intersections have crossrides and leading intervals are provided for both pedestrians and bicycles. Consider best practices for protecting the intersection as well. See NACTO	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Project Team will evaluate the type of curb used to separate cyclists from the roadway during detailed design phase of the project. The intersections and crossings will be evaluated individually and as a whole during the detailed design phase of the project.
8.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* An actual curb to protect people on bikes from motor vehicles. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* The designs still have wide turning radii at intersections. I don't see anything in the drawings that would improve safety at intersections (maybe I'm missing something).	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Project Team will evaluate each intersection and crossing balancing all user needs during the detailed design phase of the project.
9.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* Protected bike lanes are a huge improvement, especially with the bus stop bypasses. Narrower lanes on University should calm traffic. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* The Weber/University intersection is a monstrosity, corners are even wider in the new design. The only reason it sees fewer ped injuries than King/University is because it has fewer peds. The 2.1-meter sidewalks are still to narrow in many places, there is a massive mount of ped traffic near the university, 3 meters is easily justified just by looking at the trodden dirt paths beside the sidewalks. King and University is excessively large. King only has 1 lane per direction yet for some reason the intersection is five lanes wide, that's a waste. Please ensure that the bike lane shift for bus stop bypasses (bravo again) are very gradual so that they are safer for cyclists and provide good visibility for transit riders (if they are sharp cyclists will be focused on navigating the turns).	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Project Team will evaluate each intersection and crossing balancing all user needs during the detailed design phase of the project. Bike lane shift approach around bus stops will be further evaluated during the detailed design phase of the project.
10.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* More bike & pedestrian friendly	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA.
11.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* Bike lanes!!! *Q. What challenges or considerations do you see with the Recommended Design Alternative?* One of the issues is passenger vehicles interacting with buses. I think it would be better to limit cars to one lane each direction and dedicate more space to public transportation. University Ave has the population density to be a lively destination with all sorts of interesting amenities (live music, restaurants, but 5 lanes of traffic ruins that potential. The sidewalk in some places will be very crowded at times. There's also not a whole lot of room for snow to be cleared. I think the sidewalks and bike lanes should be cleared first and, if necessary, cleared onto the rightmost car lane.	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. GRT has provided a needs assessment for this project, the intent is to provide for standard bus shelters at all stop locations within the project limits. GRT will continue to be consulted during the detailed design phase of the project. Efficiency in transit service delivery is a priority for GRT and the Region to promote transit use, satisfy the Regional Transportation Master Plan objectives, and minimize conflicts with transit vehicles which are key considerations in the review of transit provisions on all Region of Waterloo road improvement projects.

No.	Comment (Grouped by Submission)	Response
12.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* The separation and protection of bike lanes is a great improvement on the current street. The current University Ave is not at all safe to cycle on (I've tried once and regretted it immediately) and quite unsafe for pedestrians due to the road width. The distance between intersections makes it very tempting to "jay walk". The pedestrian islands proposed will great help with crossing what is unfortunately a very busy road. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* In "University Avenue Improvements Class EA Information Package – PCC#2 March 2022" page 6, the second illustration indicates light posts might be in the bike lane. If this is the case it would be a significant hazard, especially next to such a busy roadway. I wasn't clear from the document how intersections would be set up for cyclists. If this isn't the case, there should be protected corners for cyclists (eg a Dutch style intersection). The amount of busses on University means there probably should be a separation between public transit and private cars. I think this could improve congestion and massive improve transit reliability for the huge number of university students and workers taking transit. This reserved lane would also be helpful for getting emergency vehicles through which I've seen be an issue, particularly in the winter.	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Project Team will evaluate each intersection and crossing balancing all user needs during the detailed design phase of the project. Grand River Transit has been consulted early in the study and has provided a needs assessment along the corridor, GRT will continue to be consulted during the detailed design phase of the project. Efficiency in transit service delivery is a priority for GRT and the Region to promote transit use, satisfy the Regional Transportation Master Plan objectives, and minimize conflicts with transit vehicles which are key considerations in the review of transit provisions on all Region of Waterloo road improvement projects.
13.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* I really like the focus on cycling infrastructure; I think this is important to build into our city as early as possible, as the more we develop the more difficult it will be to redevelop and implement later. Similarly, the larger pedestrian walk is great, and very useful in the student area. The time is now to build a liveable city, and it starts with University Avenue. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* I dislike the widening of the street to include the left-turning lane/traffic islands. The street is currently two-lanes each way, and I think we can find a better use for that 3.35m. I'm writing this from Vancouver as I visit it for the first time, and I'm stunned by the trees that line many of the streets downtown that make this a far more livable city than Toronto. If this city can fit these trees on the street-edges in their downtown core, why can't a city our size do that (and more!). We should be trying to grow into the most livable city we can be, not emulating the approaches of Toronto just due to proximity. While you can theoretically remove a lane in the future, the reasonable political and financial reality is that once we add a lane, it's never going to go away. I urge you to consider reallocating this space to the street edges and line it with trees (if this costs too much more, approach the universities or the student-run endowments; I'm sure they'd love to sponsor such a progressive project). Alternatively, reallocate that 3.35 lane to the outside of the sidewalk and put in seating areas surrounded by planters or hedges. Make the space a liveable destination rather than a bearable but utilitarian space--and make the space nicer for patrons of restaurants and other commercial spaces as well as social spaces. University Avenue can be a testbed for a made-in-Waterloo approach to liveable cities that can spread across the City and Region, and that requires an upfront investment of both cash and confidence.	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. Based on current traffic volumes and observations of left turn queuing negatively impacting traffic operations and safety, left turn storage is warranted in this corridor. The turn lanes are also associated with positive safety benefits in terms of collisions involving left-turning vehicles. The Project Team will continue to evaluate traffic operations in the detailed design phase of this project.

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14.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* I really like the inclusion of bicycle lanes which are physically separated from vehicle traffic, this will make cycling along University Ave much safer and more attractive. The widening of sidewalks will make walking more comfortable, especially to the shops and bus stops along University Avenue. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* "The use of channelized right turn lanes at Weber will increase the number of conflict points between vehicles and vulnerable road users (pedestrians and cyclists). Will the use of off-road bicycle lanes be accompanied by dedicated bicycle signals at signalized intersections? Or will pedestrians be expected to consider pedestrian signals? The detail drawings appear to not include dedicated bicycle crossing going north/south at the University and Weber intersection? Considering these are two major roadways, it would likely be beneficial to have bicycle facilities for all directions. The detail drawings appear to not include a dedicated bicycle crossing for the south approach of the University & Regina intersection? Are cyclists expected to use the pedestrian crosswalk at this location? With the addition of an extra vehicle lane, the midblock pedestrian crossing near 64 University Avenue West will have a pedestrian refuge island. Will the crossing remain as a one-stage crossing?"	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Project Team will evaluate each intersection and crossing balancing all user needs during the detailed design phase of the project. The University Avenue Improvement project is generally limited to just past the curb returns. Any future works planned along Weber Street will be coordinated with and integrated with this project for connectivity and transitions. The intent is to maintain the mid-block pedestrian crossing near 64 University Avenue as a one-stage crossing
15.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* Ok here we go again with building bike lanes that no will use on a major artery. As a cyclist, I will ride on a trail such as the iron horse trail or secondary streets. How many times does the region and the councillors have to hear this. The election cannot come soon enough! *Q. What challenges or considerations do you see with the Recommended Design Alternative?* No one will use the bike lanes.	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA.
16.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* I like that it increases safety bike users and for pedestrians. I like that the sidewalks are going to be wider. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* I think that more care should be made to conflict points within the study area. Especially between intersections. I think it would be great if the study area would consider a median down the centre of the road and then have signalled round-a-bouts along the corridor. This would remove conflict points from left turns all along the corridor and thus increase throughput and safety as drivers will never need to rush to beat on coming traffic.	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. University Avenue is a constrained corridor, land costs to accommodate a roundabout makes it unattainable.
17.	*Q. What do you like about the Recommended Design Alternative for University Avenue Improvement Project* Love the separate active transportation route that is also protected. *Q. What challenges or considerations do you see with the Recommended Design Alternative?* Lack of landscaping opportunities, such as street trees, however, the cross-section is tight as shown, and trees likely will have challenges surviving along this busy stretch of road.	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. The Project Team will be evaluating street scaping opportunities along the corridor during the detailed design phase of the project.

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18.	*General Comment* How will transit infrastructure, in particular bus stop locations and/or amenities, be affected by this project?	Bus stops will be improved along the corridor, the stop locations will generally remain the same, we have consulted GRT during the EA phase and have considered their requests for improvement along the corridor. We will continue to consult GRT during design phase to ensure the design meets the needs of transit users and operators.
19.	*General Comment* 1. Maintaining 3.35/3.25 width lanes was presented as a feature of the design. We're narrower lanes considered or technically possible? (Thinking about maximizing potential sidewalk width, given volumes will still fill 2.1m easily at many times of day) 2. Further to the above, to what extent, if any, did the potential routing of LRT Phase 3 along part of this corridor factor into decisions around lane width/number of travel lanes (eg preserving sufficient space for converting middle lanes to centre running trains) 3. How did the team decide on maintaining slip lanes for right turns at Weber? These are challenging to navigate, can present AT collision safety concerns at usual design speeds, and are potentially space constrained (Conestoga college volumes) as well as extra winter maintenance (adjacent property owner doesn't maintain).	1. The lane widths follow the Region's Transportation Corridor Guideline for this classification of roadway. We have considered lane widths lower than the standard 3.65m curb lane. The 3.35m curb lane is the narrowest curb lane width we can consider that accommodates larger vehicles such as buses that will make frequent stops along the corridor as well as for snow maintenance operations. We understand the high pedestrian volumes along this corridor, especially students accessing the university and local shops. While the south side of the roadway is very constrained on space due to property restrictions, there are additional amenity spaces provided on the north side of the street. Through detailed design, a review of how to best use the amenity space will be conducted to allow for an enhanced pedestrian realm. The available boulevard on the north side is limited by the existing pole line. The available boulevard on the south side of the roadway is only limited by property taking (and some existing uses like parking lot). We can provide an even more enhanced sidewalk width of 2.4m, however it would be only at select segments where it is possible to do so. 2. This corridor is identified for potential LRT routing in the time horizon past 2041. This current University Avenue project stretch that overlaps this proposed LRT route (King Street to Albert Street) will require future road reconstructions prior to this. If a future proposed LRT is selected for this corridor then the future reconstructions will review and address this. We do however see a mutually beneficial outcome from the preferred alternative in this regard. The proposed placement of the concrete sidewalk and asphalt bike lane as far away from the centreline of the road as possible results in additional active transportation comfort and provides as much boulevard and road platform width as possible for the potential cross sectional changes needed due to LRT accommodation. 3. The channelized right-turn lanes on the north side of the University/Weber intersection have been maintained in response to high right turn volumes southbound to westbound and westbound to northbound. The traffic analysis compared the status quo conditions (RT slip lane) to a modified intersection (removed RT slip lane) with an added pedestrian leading signal interval. From a traffic operations perspective, removing the right turn slip lanes results in a notable decrease in the LOS and an increase in queue lengths in all directions. We have never had a systemic collision issue involving pedestrians or cyclists in right turn channel lanes. We've revised our standard right turn channel design to mitigate free flowing traffic to further enhance pedestrian and cyclist safety. The channel is known as a smart channel design. Additionally, standardizing channels to a smart channel design was supported by GRAAC several years ago as a mechanism to help persons with visual impairments negotiate.

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20.	*General Comment* Looking for some clarity on the construction on the DQ/Fresco's corner. From the drawings will the property be affected or just on the Petro Canada side & if so to what extent. We have a Video street sign very close to the sidewalk within a meter & already a lack of parking that am concerned about. Also are there plans of extending this cyclist path further towards the highway in the future?	The recommended concept alternative does identify impacts on the DQ/Fresco corner. Our aim during detailed design will be to minimize encroachment and impact onto this property. When we have done so, we will want to meet with the owner of this parcel to discuss the details. There aren't any current plans to upgrade the existing on road cycling lanes on University Ave between Weber and Lincoln Road. There are plans in progress to construct a new cycling lane on University Ave between Lincoln Rd and Bridge St (crossing the highway).
21.	*General Comment* 1. We don't have a great deal of special needs. We are always conscious of the potential to increase response times; however the lanes are adequate for our vehicles. 2. If we had a preference, the physical barrier would not be in place on alternative 3a. If the bike lane remains without the barrier, vehicles can move to the side more easily to allow our responding units to pass. No general comments other than the ones provided above.	The Project Team acknowledges these comments, and they will be documented in the final study reporting (i.e. Environmental Study Report) for this Schedule C Class EA. Two lanes of traffic in each direction will be maintained and allow for emergency vehicle passage.