Appendix 2

Connecting 2nd Avenue / 3rd Avenue: Walking, Cycling, and Driving Improvements

City of Saskatoon

4/16/2024

Authorization

Prepared By:

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Acknowledgements

The completion of this review would not be possible without the contribution of the following organizations and individuals:

- City Park residents and businesses
- Central Industrial businesses
- Saskatoon Fire Department
- Saskatoon Light and Power
- Saskatoon Transit
- City of Saskatoon Communications and Public Engagement
- City of Saskatoon Parking Services
- City of Saskatoon Planning and Development
- City of Saskatoon Roadways, Fleet and Support Services
- City of Saskatoon Urban Forestry
- City of Saskatoon Transportation
- Councillor Darren Hill

Executive Summary

The purpose of this project was to prepare a functional design for 2nd Avenue / 3rd Avenue between King Street and 33rd Street to improve safety for people walking, cycling, and driving.

An engineering review of design options was completed. The draft Traffic Plan was circulated to civic departments and presented to the community to gather feedback.

The Traffic Plan was finalized based on the feedback received. The recommended option is Option 2A: Widen to the West – Separated Sidewalk.

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1. Introduction

In the 1980s, the City of Saskatoon acquired properties along the 900 block of 3rd Avenue North, a site on the corner of Duchess Street and 3rd Avenue, and a site on the corner of Duke Street and 3rd Avenue. The intent was to widen 3rd Avenue North, but the project was postponed because of the Circle Drive project.

The purpose of this project was to prepare a functional design for 2nd Avenue / 3rd Avenue between King Street and 33rd Street to improve safety for people walking, cycling, and driving.

The scope is outlined below:

- Gather background information,
- Conduct an engineering review of design options,
- Conduct engagement,
- Finalize design option, and
- Present report to the Standing Policy Committee on Transportation (SPCT) and City Council.

This report presents the study findings and recommendations.

2. Background Information

2.1. City Park Local Area Plan

The City Park Local Area Planning Committee (City Park LAPC) created a vision, identified issues, developed goals, and outlined strategies intended to improve the future of City Park.

The conceptual design at the time considered the following elements:

- widen to four lanes with a median,
- left-turn bays,
- promote on-site parking,
- add bicycle lanes,
- create wider sidewalks, and
- traffic calming measures installed at other intersections to increase pedestrian safety.

The City Park Local Area Plan (April 2010) recommended:

> "That the Infrastructure Services Department, Transportation Branch, in addition to the required public notice policy, present the proposed design for the 3rd Avenue road widening to the City Park Community Association and City Park Local Area Planning Committee. And, that the Community Services Department, Land Branch, meets with the City Park Local Area Planning Committee in regard to the development of this property."

Given the Local Area Plan was adopted in 2007, the City Park LAPC is considered to be disbanded. The City Park Community Association is still active and was the local organization included in engagement activities for the project.

2.2. Community Gardens

The Saskatoon Food Bank had a year-to-year agreement with the City of Saskatoon to use the site along the 900 block of 3rd Avenue North as a temporary garden since 2011 (Exhibit 2-1). The Saskatoon Food Bank will be relocating their garden to their new facility located on Avenue P at the end of 2024 and will no longer be using these lands.

Once this project has established its land requirements, Saskatoon Land will work towards the sale of any remnant lands.

Exhibit 2-1: Community Gardens

2.3. Central Industrial Area Traffic Review

The Central Industrial Area Traffic Review was completed in 2021. This review assessed the entire area and included community participation.

The Central Industrial Area Traffic Review recommended improvements along 2nd Avenue / 3rd Avenue are outlined in Table 2-1.

Table 2-1: Central Industrial Area Traffic Review Recommendations

Location	Recommended Improvement	Justification
3rd Avenue & Duke Street	Active Pedestrian Corridor (north side)*	Improve pedestrian safety
2nd Avenue & King Street	Pedestrian Activated Signal (north side)*	Improve pedestrian safety
2nd Avenue & Princess Street	Remove existing crosswalk	No longer warranted with upgrades to the adjacent crossings

*Note: The recommendations may require modification at the time of detailed design due to the complexity of the locations

The Central Industrial Neighbourhood Traffic Review Follow-Up report presented to the Standing Policy Committee on Transportation on February 7, 2022 stated that the pedestrian crossing recommendations for 2nd Avenue / 3rd Avenue outlined in the Central Industrial Area

will not be implemented, and instead designs will be finalized through the engagement and detailed design process for the widening project.

3. Existing Conditions

The study area is shown in Exhibit 3-1 below.

Exhibit 3-1: Study Area

3.1. Street Design

2nd Avenue / 3rd Avenue between King Street and 33rd Street is classified as a major arterial roadway.

2nd Avenue / 3rd Avenue has two travel lanes in each direction (Exhibit 3-2). Each travel lane is approximately 2.9 m wide. The posted speed limit for the street is 50 kilometres per hour (kph).

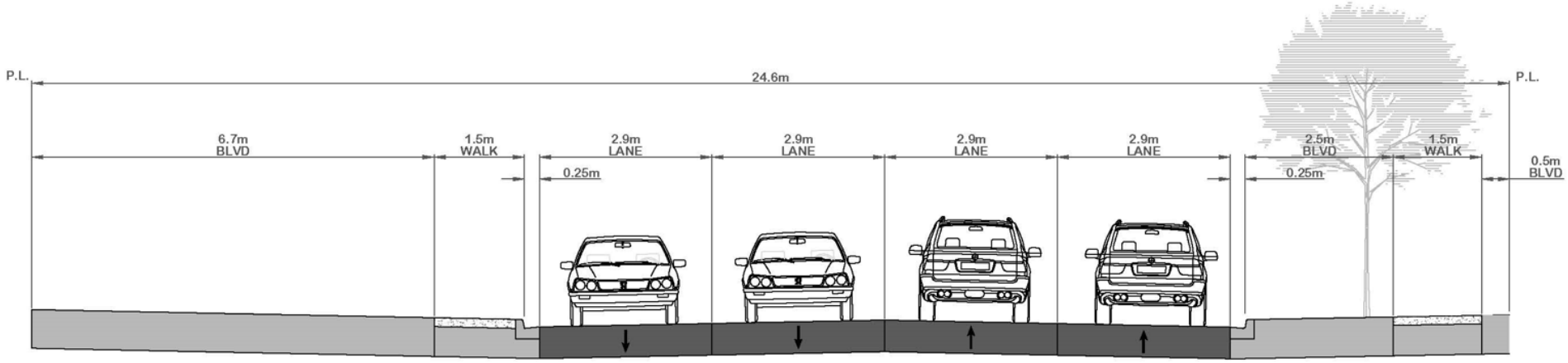

Exhibit 3-2: Existing Cross-Section of 3rd Avenue between Duchess Street and Duke Street (Facing North)

There are 1.5 m wide sidewalks on both sides of the street and zebra pedestrian crosswalks at King Street, Princess Street, and Duke Street.

Typical design elements for major arterial streets include:

- Travel lane widths between 3.2 m and 3.6 m,
- Sidewalk width of 2.5 m or greater, both sides,
- Shared-use pathway, minimum 3.0 m, offset from street 1.5 m,
- Amenity strip, minimum 1.5 m wide, wider if trees are desired, and
- Boulevard, minimum 1.0 m.

3.2. Traffic Data

Arterial streets are intended to carry large volumes of all types of traffic. In 2017, the average daily traffic (ADT) on 2nd Avenue was 17,700 vehicles per day between Queen Street and 3rd Avenue East. In 2021, the ADT on 3rd Avenue was 21,200 vehicles per day between Duke Street and 33rd Street.

3.3. Issues and Challenges

Due to the amount of traffic and the width of the street, it can be difficult for pedestrians to find gaps in traffic to cross safely.

The skewed intersection geometry at the intersection of 2nd Avenue and 3rd Avenue creates sightline issues. Skewed intersections may increase crossing distances and speed of turning vehicles.

In addition, the lanes are narrow around the curve at 2nd Avenue / 3rd Avenue. Vehicles may require more horizontal space to navigate curved roadways.

4. Analysis

4.1. Collision History

The most recent five-year collision data (2018-2022) was reviewed. A summary is below. More information is available in Appendix A.

- 83 total collisions (67 collisions at intersections and 16 collisions along road segments).
- 18 of the 83 collisions resulted in injuries.
- Out of the 83 collisions, three pedestrians were involved (i.e. two at Duchess Street, and one between Duke Street and Duchess Street). Two of these three pedestrians suffered minor injuries. Collisions that involve vulnerable road users (i.e. pedestrians and cyclists) have a high risk of severe consequences.
- Rear end collisions are the most dominant collision configuration, comprising 27 of the 83 total collisions (33%).
- Out of the 16 collisions along road segments, there were five sideswipe collisions and one head-on collision. Head-on collisions have a higher risk of resulting in an injury / fatal collision.
- Failing to yield the right-of-way and inattentiveness were recorded as the major contributing factor in 26 of the 83 total collisions.

Traffic and collision data is shown in Exhibit 4-1.

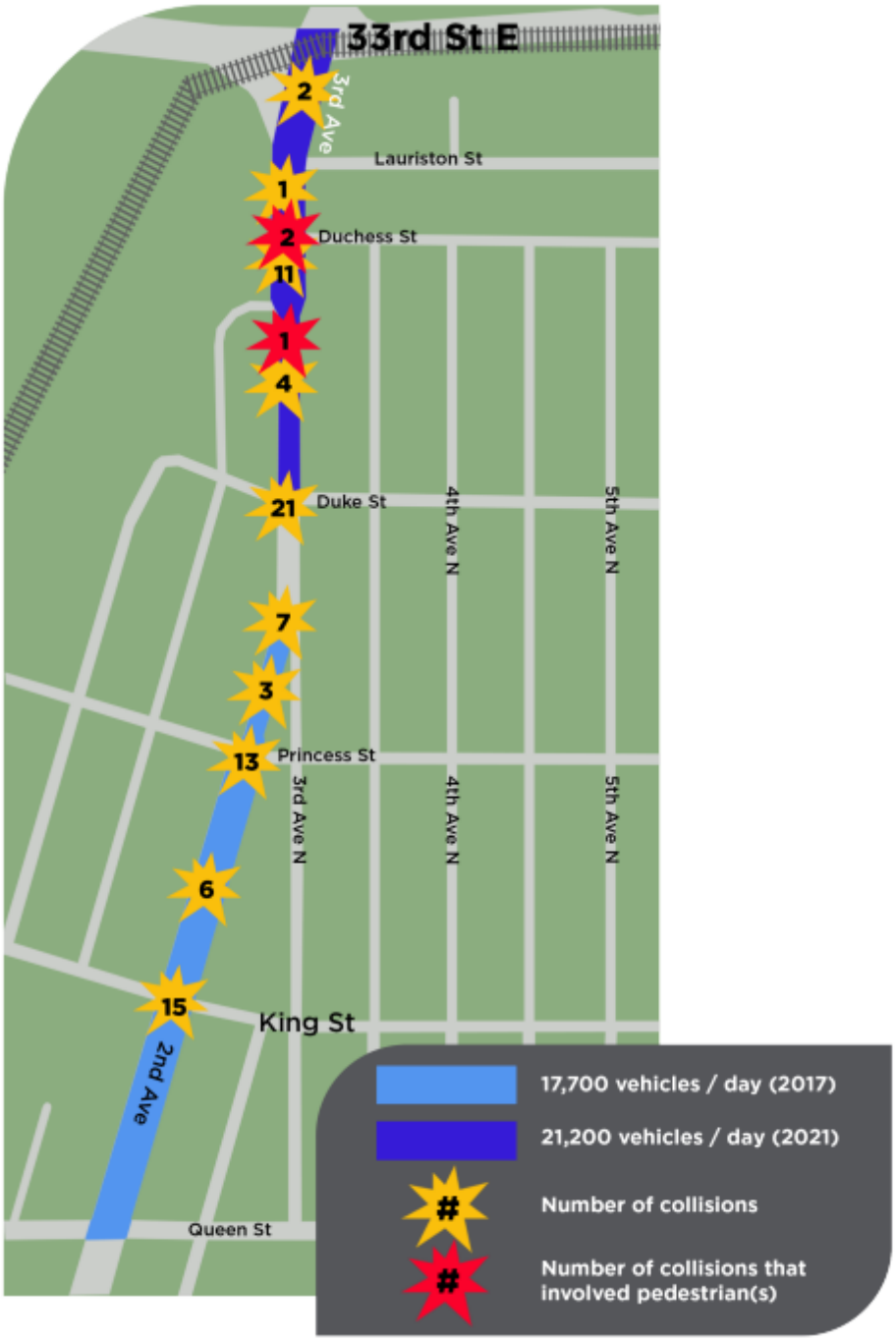

Exhibit 4-1: Traffic and Collision Data

Benefits of road widening include reduced sideswipe collisions and reduced head-on collisions. The potential casualty reduction ranges between 25% and 40%[1].

Incidents have reduced after the installation of pedestrian actuated signals in the City of Vancouver. Vancouver implemented two locations in the last five years, noting a 96% reduction of incidents involving pedestrians in a collision and a 20% reduction of incidents involving pedestrians with a fatality or injury in a collision[2].

Removal of skewed intersections help to address vehicle alignment, long exposure in the intersection, and potential driver confusion. The crash reduction factor varies by the degree of the skew at the intersection.[3]

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[1] Lane Widening, Road Safety Toolkit, 2022, https://toolkit.irap.org/safer-road-treatments/lane-widening/#
[2] How we are improving transportation safety, City of Vancouver, 2024, https://vancouver.ca/streets-transportation/improving-transportation-safety.aspx
[3] 4. Countermeasures, U.S. Department of Transportation Federal Highway Administration, https://highways.dot.gov/safety/local-rural/intersection-safety-manual-local-rural-road-owners/4-countermeasures

4.2. Traffic Signal Assessments

Assessments were conducted in 2020 as part of the Central Industrial Neighbourhood Traffic Review to determine the need for traffic signals in adherence to the Traffic Signal and Pedestrian Signal Head Warrant Handbook. A warrant system assigns points for a variety of conditions including:

- number of traffic lanes;
- posted speed limit of the street;
- distance to the nearest traffic signal; and
- number of pedestrians and vehicles at the location.

Pedestrian and traffic data was collected during the five peak hours of: 8:00 a.m. to 9:00 a.m., 11:30 a.m. to 1:30 p.m., and 4:00 p.m. to 6:00 p.m.

A summary of the traffic signal assessments is provided in Table 4-1.

Table 4-1: Traffic Signal Assessments

Location	Traffic Signal Warrant Points	Results
3rd Avenue & Duke Street	20	Not warranted
2nd Avenue & King Street	27	Not warranted

4.3. Pedestrian Assessments

Pedestrian assessments were conducted to determine the need for pedestrian crossing devices in adherence to the City of Saskatoon Council Policy C07-018 Traffic Control at Pedestrian Crossings.

Pedestrian crossing devices include:

- standard crosswalk,
- zebra crosswalk,
- rectangular rapid flashing beacon (ground mounted flashing lights),
- actuated pedestrian corridor (overhead flashing yellow lights), and
- pedestrian actuated signals.

The City follows national guidance for locating pedestrian devices and selecting the type of pedestrian device using a treatment matrix which considers traffic volume, posted speed limit, and number of lanes for pedestrian crossing.

Based on a review of the elements listed above and a review of collision data, Pedestrian Actuated Signals are recommended at the intersections with King Street and Duke Street

(see Table 4-2). The existing crosswalk at Princess Street is recommended to be removed as it is no longer warranted with upgrades to the adjacent crossings.

Table 4-2: Pedestrian Crossing Recommendations

Location	Recommended Improvement
3rd Avenue & Duke Street	Pedestrian Activated Signal (north side)*
2nd Avenue & King Street	Pedestrian Activated Signal (north side)*
2nd Avenue & Princess Street	Remove existing crosswalk

*Note: The recommendations may require modification at the time of detailed design due to the complexity of the locations

5. Options

Based on the assessments and design criteria for arterial streets, draft plans were prepared for three options:

- **Option 1 – Do Nothing:** No improvements proposed.
- **Option 2A – Widen to the West – Separated Sidewalk:** Widen to the west by relocating the west curb farther west and includes a 2.5 m sidewalk that is separated from the traffic lane by a 0.5 m wide boulevard.
- **Option 2B – Widen to the West – Combined Sidewalk:** Widen to the west by relocating the west curb farther west and includes a 1.8 m sidewalk that is not separated from the traffic lane.
- **Option 3 – Widen to the East:** Widen to the east by relocating the east curb farther east.

Table 5-1 shows a comparison of the options and how they align with the current design standards.

Table 5-1: Options and Design Standards

<table>
<tr><th rowspan="2">Option</th><th colspan="3">Travel Lanes</th><th colspan="3">Active Transportation Facilities</th></tr>
<tr><th>Lane Width</th><th>Design Criteria</th><th>Meets Design Criteria?</th><th>Width</th><th>Design Criteria</th><th>Meets Design Criteria?</th></tr>
<tr><td>1 – Do Nothing</td><td>2.9 m</td><td rowspan="4">3.6 m</td><td>No</td><td>1.5 m</td><td rowspan="4">2.5 m sidewalk for arterial streets

3 m shared-use pathway</td><td>No</td></tr>
<tr><td>2A – Widen to the West – Separated Sidewalk</td><td>3.6 m</td><td>Yes</td><td>2.5 m sidewalk on West side and 3m shared-use pathway on East side</td><td>Yes, for the portion of the street where there is new curb (~200 m in length). Tying into existing 1.5 m sidewalk for the remainder.</td></tr>
<tr><td>2B – Widen to the West – Combined Sidewalk</td><td>3.6 m</td><td>Yes</td><td>1.8 m sidewalk on West side and 3 m shared-use pathway on East side</td><td>No, sidewalk width of 1.8 m is narrower than 2.5 m.</td></tr>
<tr><td>3 – Widen to the East</td><td>3.6 m</td><td>Yes</td><td>1.5 m sidewalk on West side and 3 m shared-use pathway on East side</td><td>No, existing sidewalk will remain 1.5 m wide.</td></tr>
</table>

The following criteria was used to evaluate each of the options:

- Improves pedestrian safety,
- Improves cyclist safety,
- Improves traffic safety,
- Impact on utilities,
- Environmental impacts,
- Property acquisition,
- Parking impacts, and
- Estimated capital cost.

Table 5-2 shows the evaluation of the options.

Table 5-2: Evaluation of Options

Option	Improves Pedestrian Safety	Improves Cyclist Safety	Improves Traffic Safety	Impact on Utilities	Environmental Impacts	Property Acquisition	Parking Impacts	Estimated Cost	Summary
1: Do Nothing	No	No	No	None	None	None	None	$0	Not recommended – Does not meet project purpose
2A: Widen to the West – Separated Sidewalk	Yes – 2.5 m sidewalk separated from traffic lane with a 0.5 m boulevard (~200 meter long), shared-use pathway on east side, 2 pedestrian devices, and 10 pedestrian curb ramps proposed	Yes – provides pathway connection to shared-use pathway on 33rd Street and Warman Road, north of 33rd Street	Yes – Lane widths meet design standards for arterial street classification and match existing lane widths to the north and south of the study area Cul-de-sac eliminates skewed intersection	4 light poles and 2 distribution poles impacted Additional lighting to be provided on east side between Duke Street and Duchess Street	5 boulevard trees removed. There may be opportunities for future plantings.	None	6 parking spaces removed along east side of 3rd Avenue North 1 parking space created along cul-de-sac	$1.09 million	Recommended – Less environmental impacts, no additional property acquisition required, and provides a 2.5 m sidewalk on the west side
2B: Widen to the West – Combined Sidewalk	Yes – 1.8 m sidewalk with no separation from traffic lane, shared-use pathway on east side, 2 pedestrian devices, and 10 pedestrian curb ramps proposed	Yes – provides pathway connection to shared-use pathway on 33rd Street and Warman Road, north of 33rd Street	Yes – Lane widths meet design standards for arterial street classification and match existing lane widths to the north and south of the study area Cul-de-sac eliminates skewed intersection	3 light poles and 2 distribution poles impacted Additional lighting to be provided on east side between Duke Street and Duchess Street	5 boulevard trees removed. There may be opportunities for future plantings.	None	6 parking spaces removed along east side of 3rd Avenue North 1 parking space created along cul-de-sac	$1.06 million	Not recommended – 1.8 m sidewalk does not meet current design standards
3: Widen to the East	Yes – Shared-use pathway, 2 pedestrian devices, and 10 pedestrian curb ramps proposed	Yes – provides pathway connection to shared-use pathway on 33rd Street and on Warman Road, north of 33rd Street	Yes – Lane widths meet design standards for arterial street classification and match existing lane widths to the North and south of the study area Cul-de-sac eliminates skewed intersection	No utility posts impacted Additional lighting to be provided on east side between Duke Street and Duchess Street	13 boulevard trees removed. There may be opportunities for future plantings.	Yes – property acquisition required for two lots	6 parking spaces removed along east side of 3rd Avenue North 1 parking space created along cul-de-sac	$975,000	Not recommended – More environmental impacts, and property acquisition required

6. Engagement Summary

6.1. Civic Stakeholders

The draft Traffic Plan was circulated to civic departments, which included Saskatoon Fire Department, Saskatoon Light and Power, Saskatoon Transit, Communications and Public Engagement, Parking Services, Planning and Development, Roadways, Fleet and Support Services, and Urban Forestry.

A summary of the comments received from internal stakeholders is provided below.

- Discussion about the 900 block of 3rd Avenue (where the current Saskatoon Food Bank Community Gardens is located) and the future of this space once the road widening is complete.
- Minimize the number of mature street trees that will need to be removed as much as possible.
- Consider providing new plantings and soft landscaping.
- Discussion about a centre median that could be utilized for snow storage and impacts of providing a centre median.
- Providing separation between the sidewalk and street would support snow storage, landscaping, etc. and increase comfort and safety of pedestrians.
- Addition of street lighting on the east side to meet lighting standards.

6.2. Community

The draft Traffic Plan was presented to and discussed with the community. Table 6-1 shows a summary of the engagement activities.

Flyers were mailed to City Park Community Association, local residents, and business owners in City Park and Central Industrial area within the 2nd Avenue / 3rd Avenue project limits. The flyer described the various engagement activities and how to participate in them. The engagement activities were also posted on the City's social media accounts. A mini-billboard was also placed on the street to reach residents who travel the corridor.

Table 6-1: Summary of Engagement Activities

Engagement Activities	Purpose	Meeting Materials
Virtual Meeting December 6, 2023 Online Teams Meeting 9 attendees	To present the options, discuss the preliminary preferred option, and gather feedback.	Meeting presentation and minutes are included in Appendix B.
Open House December 6, 2023 In-person meeting 9 attendees		*What We Learned* report is included in Appendix C.
Online Survey December 2023 43 responses		*What We Learned* report is included in Appendix C.

A summary of additional concerns received after the engagement events is provided in Appendix D.

7. Recommendations

The recommended option is Option 2A – Widen to the West – Separated Sidewalk as there are less environmental impacts, no additional property acquisition required, and provides a 2.5 m sidewalk on the west side. Based on engagement feedback, there was general support for this option.

The improvements are shown in Exhibit 7-1 and include:

- Widening traffic lanes to 3.6 m,
- Widening the west side sidewalk to 2.5 m wide that is separated from the traffic lane by a boulevard,
- Widening the east sidewalk to a 3.0 m shared-use pathway,
- Constructing a cul-de-sac to close 3rd Avenue at 2nd Avenue,
- Installation of pedestrian accessible curb ramps, and
- Installation of pedestrian actuated signals at King Street and Duke Street.

The functional plan is included in Appendix E.

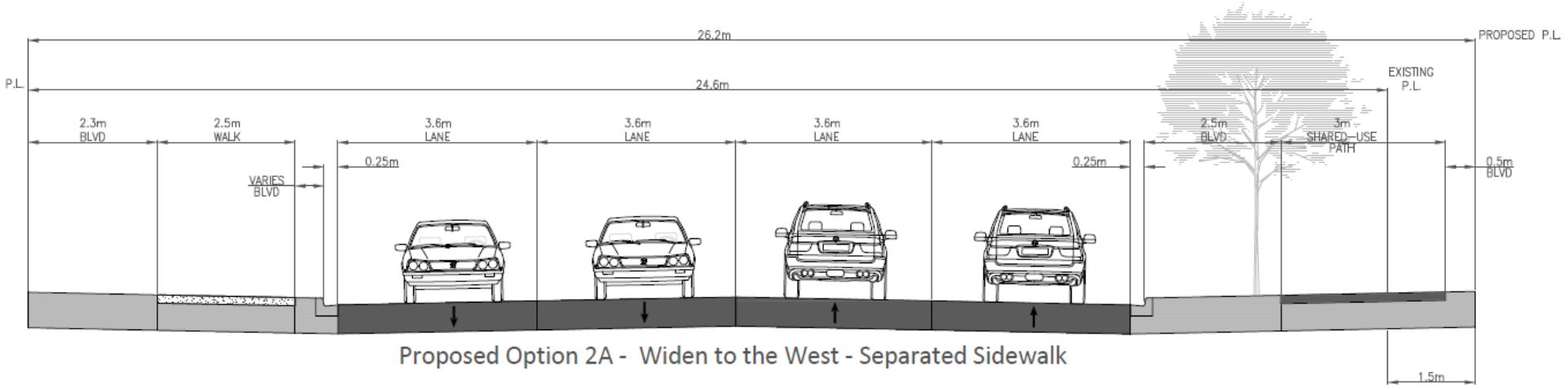


Exhibit 7-1: Proposed Cross-Section of 3rd Avenue between Duchess Street and Duke Street (Facing North)

7.1. Cost Estimate

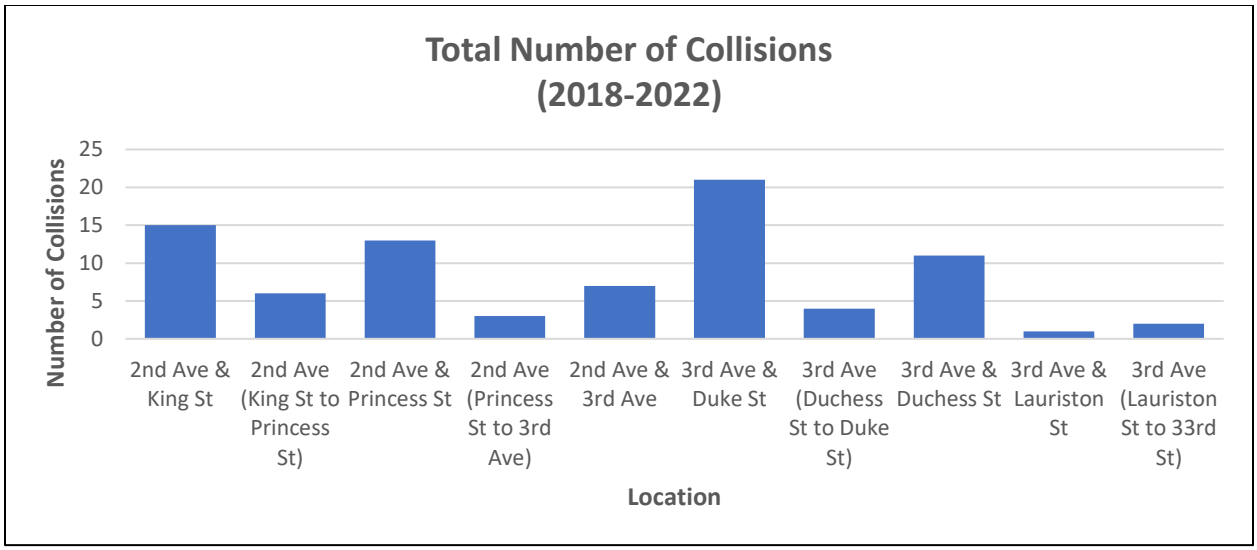
The estimated capital costs of the recommended option is $1.09 million (Table 7-1).

Table 7-1: Cost Estimate

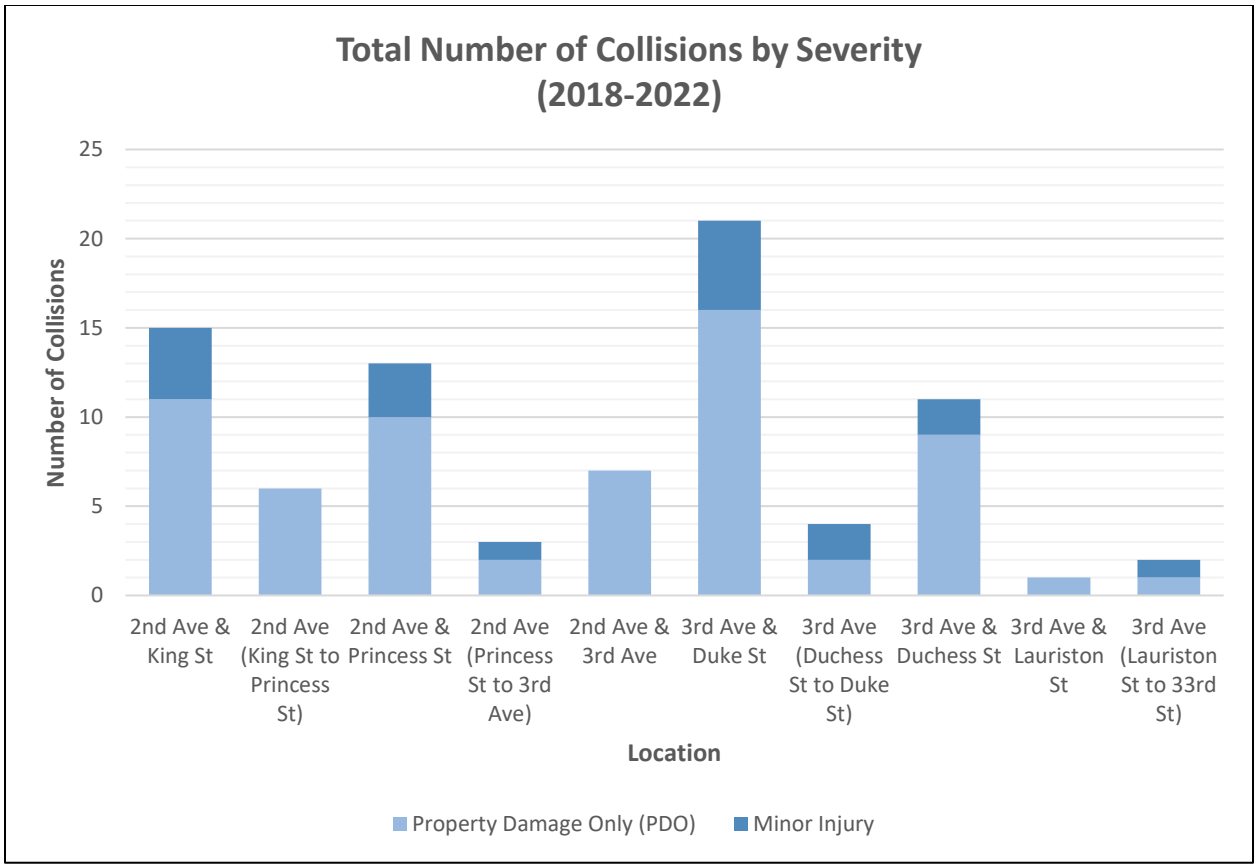
Recommended Improvement	Estimated Cost
Road Work	$310,000
Concrete Work	$220,000
Pedestrian Ramps	$5,000
Power Pole Relocation	$80,000
Streetlight Relocation	$20,000
New Streetlights	$25,000
Tree Removal	$75,000
Pedestrian Devices	$300,000
Landscaping	$55,000
Total	**$1,090,000**

Appendix A

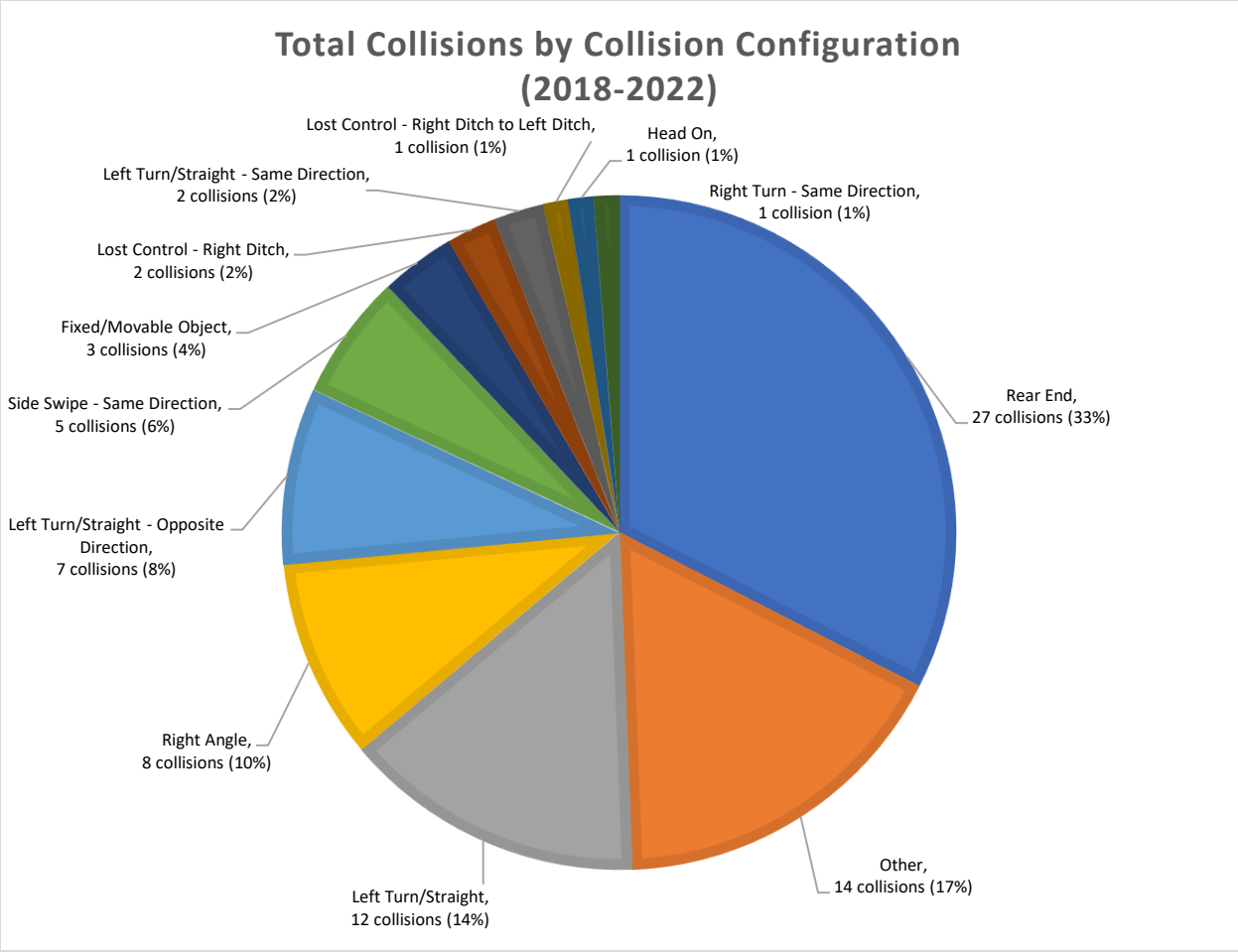
Collision Data



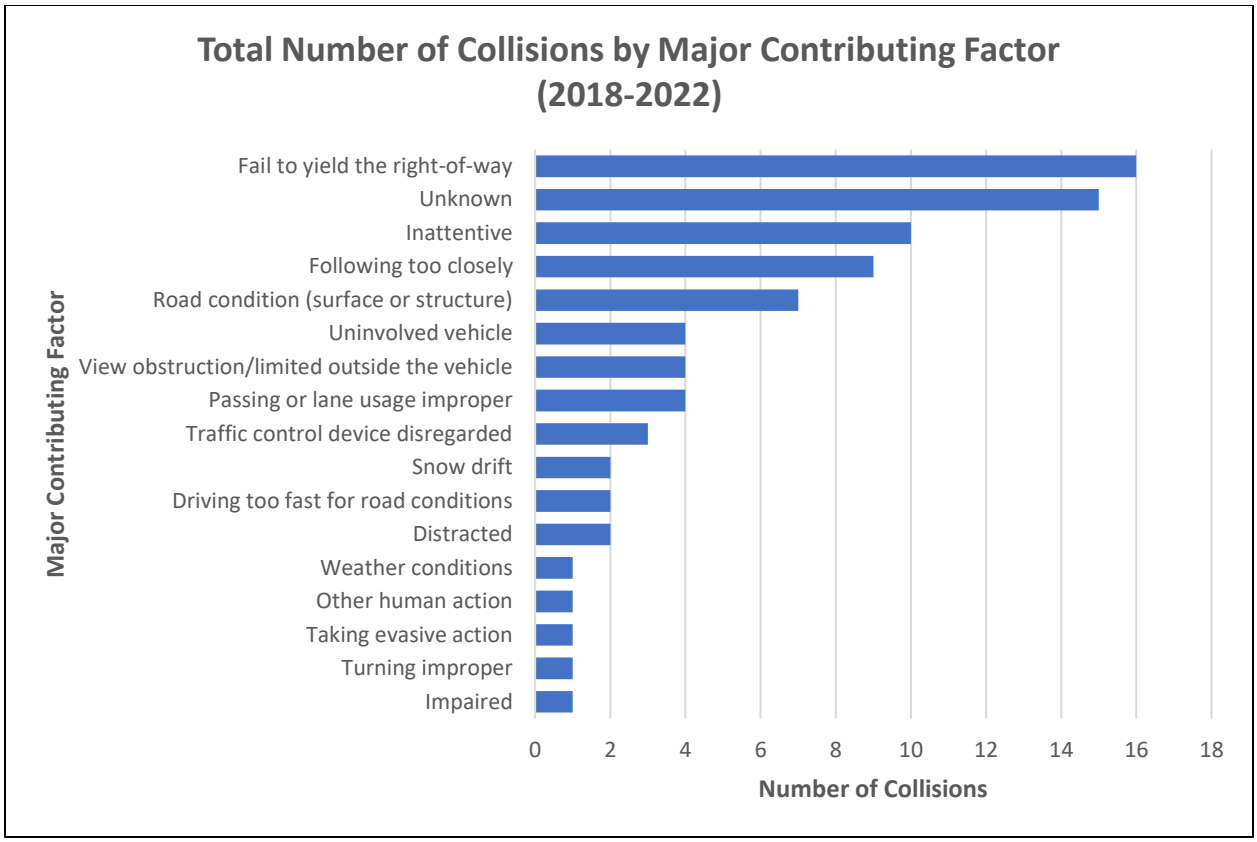
Location	Number of Collisions
2nd Ave & King St	15
2nd Ave (King St to Princess St)	6
2nd Ave & Princess St	13
2nd Ave (Princess St to 3rd Ave)	3
2nd Ave & 3rd Ave	7
3rd Ave & Duke St	21
3rd Ave (Duchess St to Duke St)	4
3rd Ave & Duchess St	11
3rd Ave & Lauriston St	1
3rd Ave (Lauriston St to 33rd St)	2
Total	**83**



Location	Property Damage Only (PDO)	Minor Injury	Total
2nd Ave & King St	11	4	15
2nd Ave (King St to Princess St)	6	0	6
2nd Ave & Princess St	10	3	13
2nd Ave (Princess St to 3rd Ave)	2	1	3
2nd Ave & 3rd Ave	7	0	7
3rd Ave & Duke St	16	5	21
3rd Ave (Duchess St to Duke St)	2	2	4
3rd Ave & Duchess St	9	2	11
3rd Ave & Lauriston St	1	0	1
3rd Ave (Lauriston St to 33rd St)	1	1	2
Total	**65**	**18**	**83**



Collision Configuration	Number of Collisions	Percent of Collisions (%)
Rear End	27	33
Other	14	17
Left Turn/Straight	12	14
Right Angle	8	10
Left Turn/Straight - Opposite Direction	7	8
Side Swipe - Same Direction	5	6
Fixed/Movable Object	3	4
Lost Control - Right Ditch	2	2
Left Turn/Straight - Same Direction	2	2
Lost Control - Right Ditch to Left Ditch	1	1
Head On	1	1
Right Turn - Same Direction	1	1



Major Contributing Factor	Number of Collisions
Fail to yield the right-of-way	16
Unknown	15
Inattentive	10
Following too closely	9
Road condition (surface or structure)	7
Uninvolved vehicle	4
View obstruction/limited outside the vehicle	4
Passing or lane usage improper	4
Traffic control device disregarded	3
Snow drift	2
Driving too fast for road conditions	2
Distracted	2
Weather conditions	1
Other human action	1
Taking evasive action	1
Turning improper	1
Impaired	1
Total	**83**

Appendix B

Virtual Meeting Presentation and Minutes

Connecting 2nd Avenue / 3rd Avenue: Walking, Cycling, and Driving Improvements
Meeting Minutes

Date: Wednesday, December 6, 2023

Time: 3:00 – 4:00 pm

Location: Microsoft Teams Online Meeting

Attendees:

Name	Position
Mariniel Flores-Vongkhamchanh	Connecting 2nd Avenue / 3rd Avenue Project Manager City of Saskatoon Acting Senior Transportation Engineer
Scott McCaig	City of Saskatoon Real Estate Manager
Isaac Dankwah	City of Saskatoon Engagement Consultant
Kenton Lysak	City of Saskatoon Communications Consultant
Nathalie Baudais	City of Saskatoon Transportation Engineering Manager
Katie Sapieha	City of Saskatoon Acting Senior Transportation Engineer
Pat Mckay	City of Saskatoon Communications Consultant
Brad Murray	City of Saskatoon Land Development Project Manager
Frank Long	City of Saskatoon Director of Saskatoon Land

Items:

Welcome and Introductions

Presentation from the Transportation Division

(Presented by Mariniel Flores-Vongkhamchanh – Acting Senior Transportation Engineer)

See Video – Online meeting video recording – December 6, 2023

See Draft Traffic Plan (Engagement Boards and Roll Plans)

Comments

1. **Question:** Can the sidewalk and asphalt pathway be modified to save all the trees?

Response: The design standard for a shared-use pathway is 3.0 metres wide. The removal of the trees is proposed to meet this design standard.

Some of the trees also require modification to place the poles for the Pedestrian Actuated Signals. Some trees are located too close to the corner. To make the pedestrian curb ramp and push buttons accessible to all users, some of the trees would need to be removed.

2. **Question:** Can you not simply leave an opening for the trees?

   Response: A certain amount of space is required to be accessible for people with mobility devices who are not able bodied. They may not be able to navigate around openings or gaps in the sidewalk or pathway.

3. **Question:** Are there any metrics for the growth rate of traffic on 2nd / 3rd Avenue over 10 years or more? Is four lanes of traffic sufficient for the growth rate?

   Response: A growth rate was not applied. We don't anticipate widening to six lanes with future development. Most of this area is established so we don't anticipate a need for more than four traffic lanes through this section.

4. **Question:** If the sidewalk is widened on the west side of 3rd Avenue, would the remnant lands at the potato patch go out for sale and development?

   Response: Once the 2nd / 3rd Avenue project has established its land requirements, the remnant lands would be brought out for sale and development.

5. **Question:** Can you not use tree grates or paving stones?

   Response: We don't have those details yet. That can be considered in detailed design. We work with our Urban Forestry team to see if there are any ways that we can mitigate the impact to trees with paving stones or tree grates around roots. It often depends on the species of the tree and the root system for the tree.

6. **Question:** If the sidewalk is widened to the west side, is there any impact to the businesses along 2nd / 3rd Avenue?

   Response: There are no impacts to the property lines on the west side. Widening by moving the west curb would reduce the existing 6.7 meter boulevard.

   There might be some adjustments to the driveways to ensure slopes tie in properly to the new street.

The rest of the work is all within the public right-of-way.

7. **Question:** Is there going to be any work done to the storm drainage with any of these plans? Will the roadway asphalt be updated with the project?

   Response: Discussions with internal work groups about those details would be part of the next phase of the project.

8. **Question:** At the Princess Street intersection, could the triangle be landscaped with trees to encourage proper sight lines?

   Response: We have had preliminary discussions with Urban Forestry. There are potential locations for future tree plantings on both the new triangular island created north of the cul-de-sac and the existing triangular island just north of Princess Street. There also may be planting opportunities in the existing boulevard.

9. **Question:** Was a pedestrian crosswalk considered on the south side of Princess Street as this is an access into City Park?

   Response: Traffic counts were completed at all three intersections as part of the Central Industrial Area Traffic Review and Princess Street had the lowest pedestrian volume. The existing crosswalk at Princess Street is recommended to be removed as it is no longer warranted with upgrades to the adjacent crossings at King Street and at Duke Street.

   We do have a question in the online survey. If you disagree with the King Street and Duke Street intersections, please let us know through your survey response. We want to make sure we get the two devices at the most appropriate places for the neighbourhood and the employment area.

10. **Question:** Some sidewalks are not continuous on Princess.

    Response: We have a Sidewalk Infill program that addresses gaps in the sidewalk network. Those locations can be reviewed to see where they are on the priority list.

11. **Comment:** Looks great. Much needed upgrades

Next Steps

- Gather feedback – December 29, 2023.
- Determine revisions and finalize recommendations – Winter 2023/2024.
- Present report to Standing Policy Committee on Transportation – Spring 2024.

- Begin implementing recommendations (pending approval and additional funding)

Adjournment

City of Saskatoon

Connecting 2nd Avenue / 3rd Avenue: Walking, Cycling, and Driving Improvements

December 6, 2023

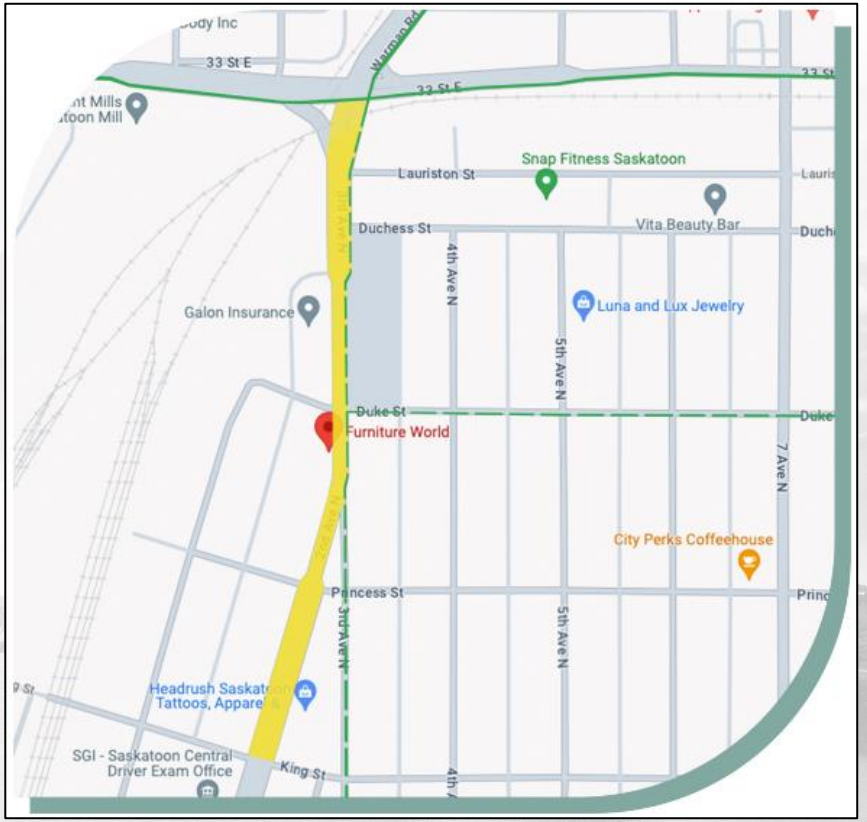
Agenda

1. Welcome & Introductions
2. Presentation of Traffic Plan
3. Remnant Lands
4. Informal Question & Answer

City of Saskatoon

Project Purpose

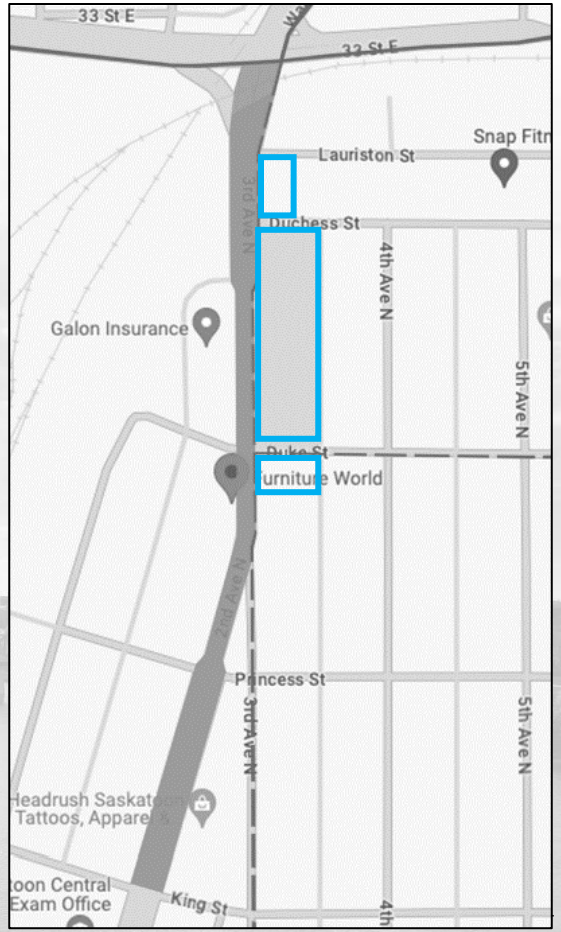
- To design 2nd Avenue / 3rd Avenue between King Street and 33rd Street to improve safety for people walking, cycling, and driving



City of Saskatoon

Background

- In the 1980s, the City of Saskatoon acquired properties along the 900 block of 3rd Avenue North, a site on the corner of Duchess Street and 3rd Avenue, and a site on the corner of Duke Street and 3rd Avenue
- Examined upgrading to a four-lane divided roadway plus left turn lanes with on-street parking and bike lanes
- The intent was to widen 3rd Avenue North. The project was postponed because of the Circle Drive South project.



Background

The City Park Local Area Plan (April 2010) recommended:

> *That the Infrastructure Services Department, Transportation Branch, in addition to the required public notice policy, present the proposed design for the 3rd Avenue road widening to the City Park Community Association and City Park Local Area Planning Committee. And, that the Community Services Department, Land Branch, meets with the City Park Local Area Planning Committee in regard to the development on this property.*

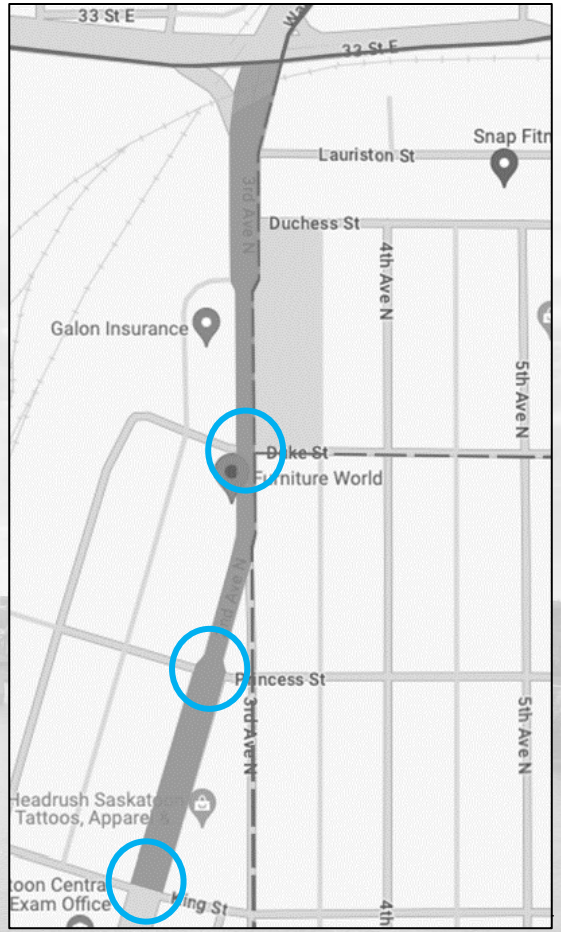
City of Saskatoon

Background

The Central Industrial Area Traffic Review (February 2022) recommended:

Location	Recommended Improvement	Justification
3rd Avenue & Duke Street	Pedestrian Activated Signal (north side)*	Improve pedestrian safety
2nd Avenue & King Street	Pedestrian Activated Signal (north side)*	Improve pedestrian safety
2nd Avenue & Princess Street	Remove existing crosswalk	No longer warranted with upgrades to the adjacent crossings

*These recommendations may require modification at the time of detailed design due to the complexity of these locations



Scope

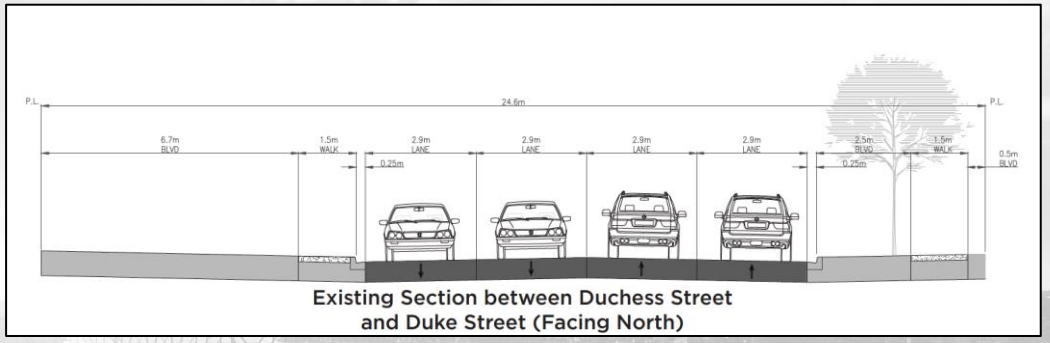
- Gather background information
- Conduct engineering review of design options
- Conduct engagement
- Finalize design option
- Present report to Standing Policy Committee on Transportation (SPCT) and City Council
- Request funding
- Proceed with implementation

City of Saskatoon

Existing Conditions

Road Characteristics

- Major arterial, uncontrolled access
- 4 travel lanes
- 50 km/h posted speed limit
- Sidewalk on both sides (asphalt overlay)
- Zebra pedestrian crosswalks at King Street, Princess Street, and Duke Street



Existing Section between Duchess Street and Duke Street (Facing North)

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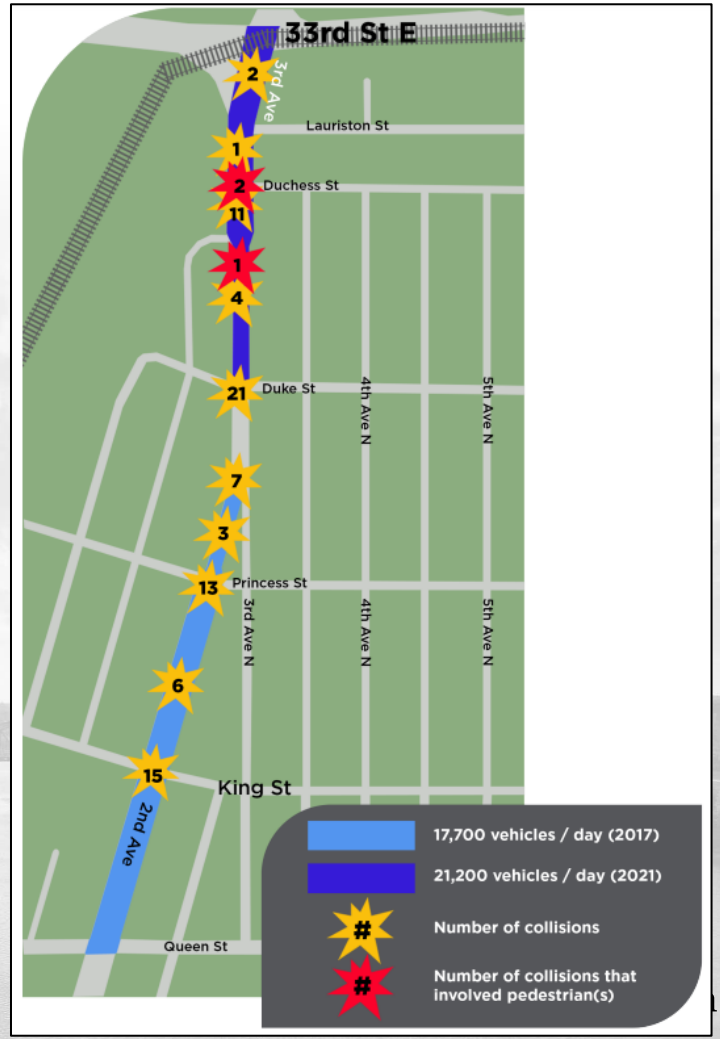
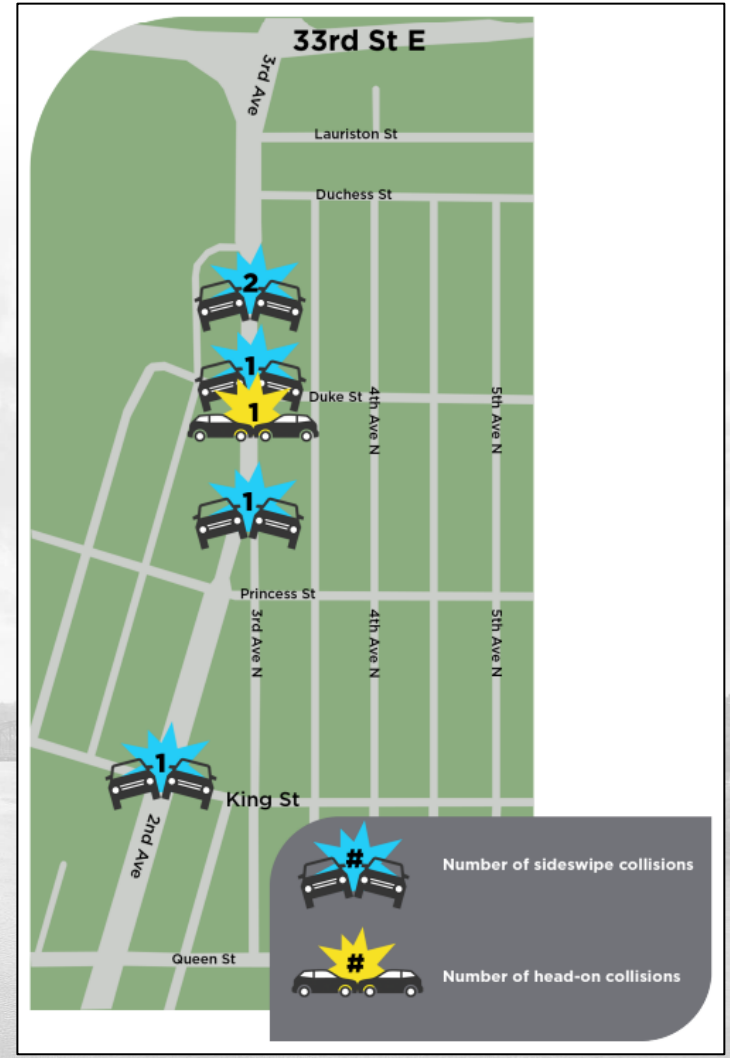
Existing Conditions

- Traffic Data
- Collision Data (2018-2022)
  - 83 total collisions
    - 67 collisions at intersections
    - 16 collisions along road segments
    - 18 injury collisions
      (3 pedestrian collisions,
      2 pedestrians with minor injuries)



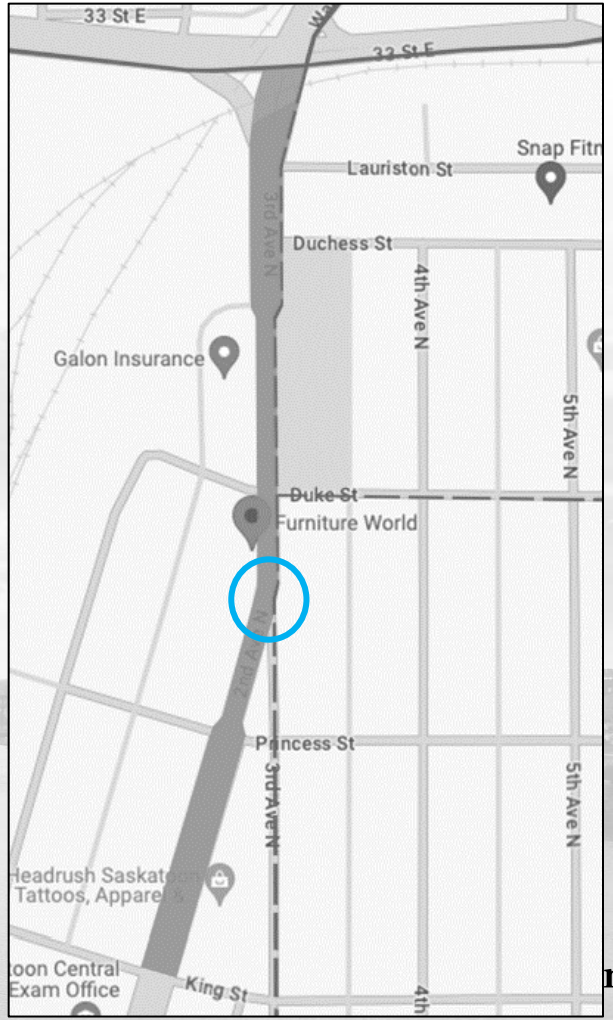
Issues / Challenges

- Five sideswipe collisions
- One head-on collision



Issues / Challenges

- Due to the amount of traffic and the four traffic lanes, it may be difficult for pedestrians to find gaps in traffic to cross
- The skewed intersection geometry at the intersection of 2nd Avenue and 3rd Avenue creates sightline issues



Pedestrian Crossings

- Reviewed according to the Transportation Association of Canada's Pedestrian Crossing Control Guide
- Includes decision matrix for locating pedestrian devices based on the following:
  - Traffic signal warrants
  - Pedestrian and traffic volumes
  - Distance to the nearest traffic control device
  - Pedestrian desire line
  - Network connectivity

Options

- Option #1: Do Nothing
- Option #2A: Widen to the West – Separated Sidewalk
- Option #2B: Widen to the West – Combined Sidewalk
- Option #3: Widen to the East

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Options

Widening Design Elements

- Wider traffic lanes
- Wider sidewalk widths
- 3m shared-use pathway
- No median
- Pedestrian curb ramps
- Pedestrian devices

Options

Design Standards

Option	Traffic Lanes			Active Transportation Facilities		
	Lane Width	Design Criteria	Meets Design Criteria?	Width	Design Criteria	Meets Design Criteria?
#1 Do Nothing	2.9m	3.6m	No	1.5m	2.5m sidewalk for arterial streets	No
#2A Widen to the West - Separated Sidewalk	3.6m		Yes	2.5m sidewalk on West side and 3m shared-use pathway on East side	3m shared-use pathway	Yes, for the portion of the street where there is new curb. Tying into existing sidewalk for the remainder.
#2B Widen to the West - Combined Sidewalk	3.6m		Yes	1.8m sidewalk on West side and 3m shared-use pathway on East side		No
#3 Widen to the East	3.6m		Yes	1.5m sidewalk on West side and 3m shared-use pathway on East side		No

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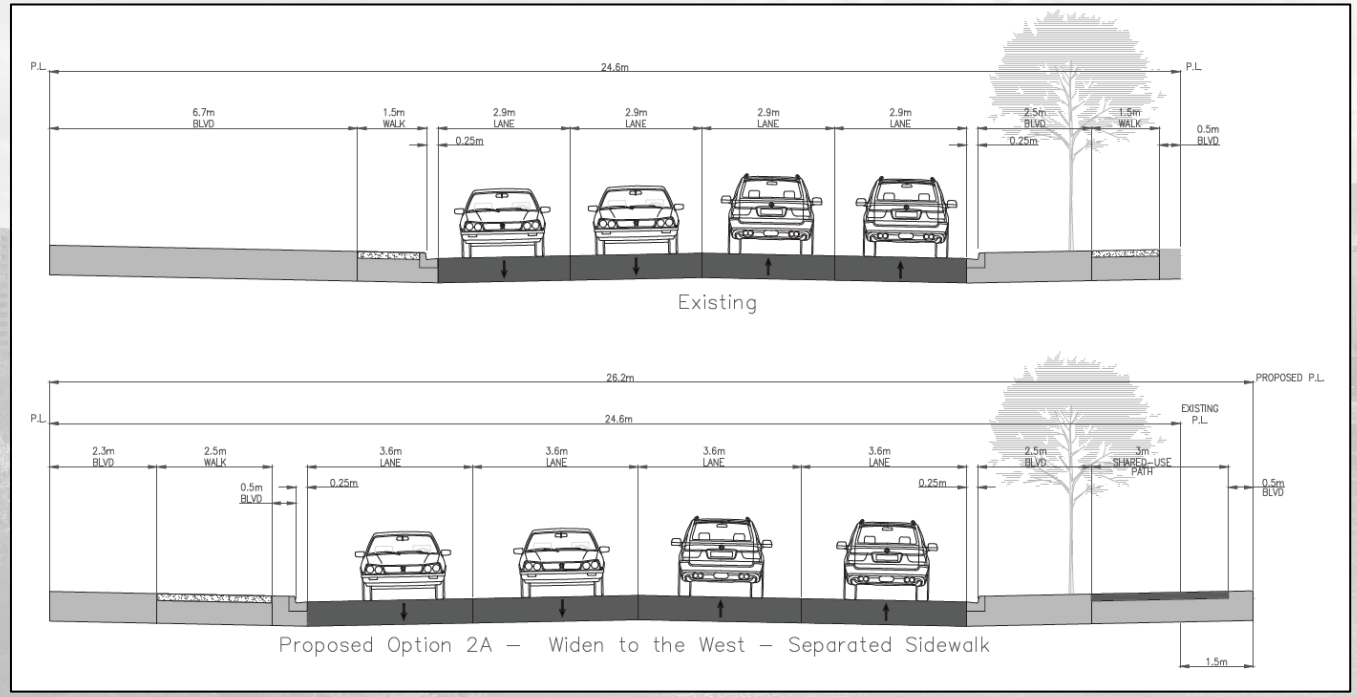
Options

Option #2A: Widen to the West – Separated Sidewalk



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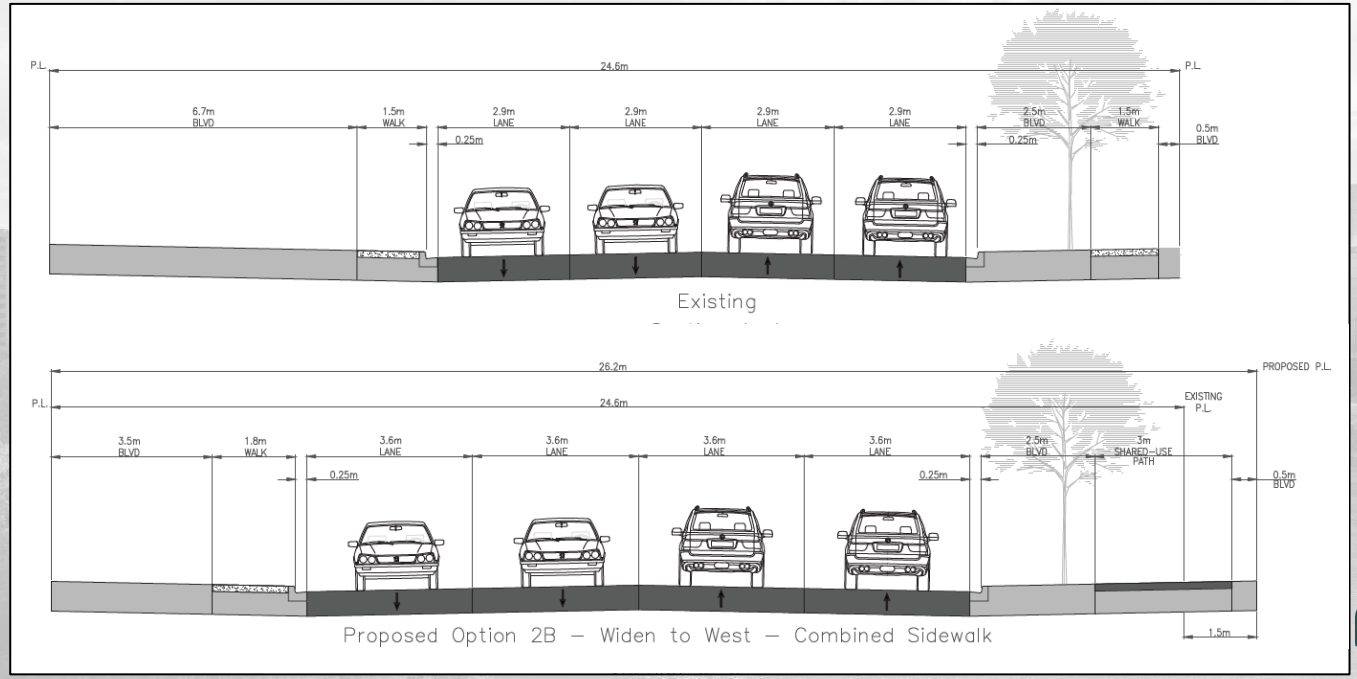
Options

Option #2B: Widen to the West – Combined Sidewalk



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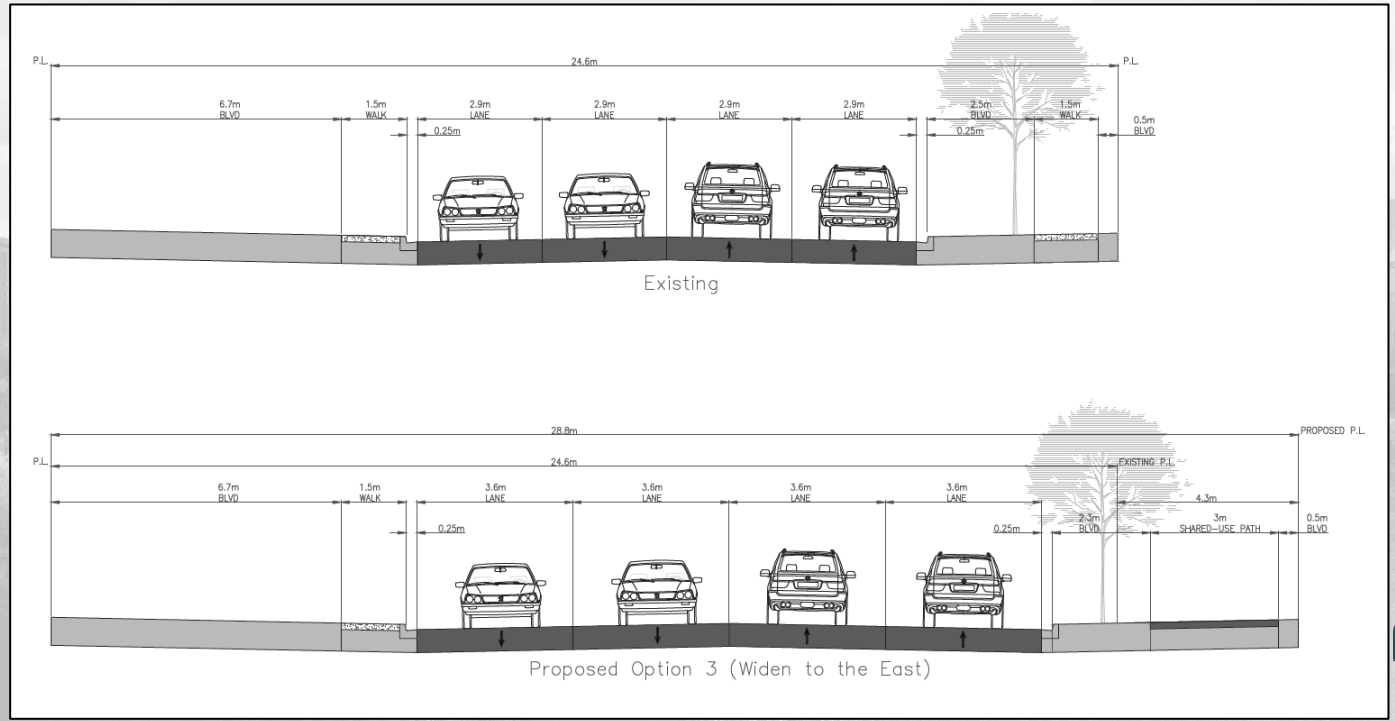
Options

Option #3: Widen to the East



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Evaluation Criteria

- Improves Pedestrian Safety
- Improves Cyclist Safety
- Improves Traffic Safety
- Impact on Utilities
- Environmental Impacts
- Property Acquisition
- Parking Impacts
- Estimated Cost

City of Saskatoon

Alternatives Evaluation

Option	Improves Pedestrian Safety	Improves Cyclist Safety	Improves Traffic Safety	Impact on Utilities	Environmental Impacts	Property Acquisition	Parking Impacts	Estimated Cost	Summary
#1 Do Nothing	No	No	No	None	None	None	None	$0	Not recommended - does not meet project purpose
#2A Widen to the West - Separated Sidewalk	Yes - 2.5m sidewalk separated from traffic lane with a 0.5m boulevard, shared-use pathway on East side, 2 pedestrian devices, and 10 pedestrian curb ramps	Yes - provides pathway connection to shared-use pathway on 33rd Street and on Warman Road, North of 33rd Street	Yes - Lane widths meet design standards for arterial street classification and match existing lane widths to the North and South of study area Cul-de-sac eliminates skewed interseaction	4 light poles and 2 distribution poles impacted Additional lighting to be provided on East side between Duke Street and Duchess Street	5 boulevard trees removed. There may be opportunities for future plantings	None	6 parking spaces removed along East side of 3rd Ave North 1 parking space created along cul-de-sac	$1.06 million	Not recommended - larger impact on utilities
#2B Widen to the West - Combined Sidewalk	Yes - 1.8m sidewalk with no separation from traffic lane, shared-use pathway on East side, 2 pedestrian devices, and 10 pedestrian curb ramps	Yes - provides pathway connection to shared-use pathway on 33rd Street and on Warman Road, North of 33rd Street	Yes - Lane widths meet design standards for arterial street classification and match existing lane widths to the North and South of study area Cul-de-sac eliminates skewed interseaction	3 light poles and 2 distribution poles impacted Additional lighting to be provided on East side between Duke Street and Duchess Street	5 boulevard trees removed There may be opportunities for future plantings	None	6 parking spaces removed along East side of 3rd Ave North 1 parking space created along cul-de-sac	$1.03 million	Recommended - less environmental impacts, no additional property acquisition required, while still meeting most of the project goals
#3 Widen to the East	Yes - Shared-use pathway, 2 pedestrian devices, and 10 pedestrian curb ramps proposed	Yes - provides pathway connection to shared-use pathway on 33rd Street and on Warman Road, North of 33rd Street	Yes - Lane widths meet design standards for arterial street classification and match existing lane widths to the North and South of study area Cul-de-sac eliminates skewed interseaction	No utility posts impacted Additional lighting to be provided on East side between Duke Street and Duchess Street	13 boulevard trees removed There may be opportunities for future plantings	Yes - property acquisition required for two lots	6 parking spaces removed along East side of 3rd Ave North 1 parking space created along cul-de-sac	$950,000	Not recommended - more environmental impacts, and property acquisition required

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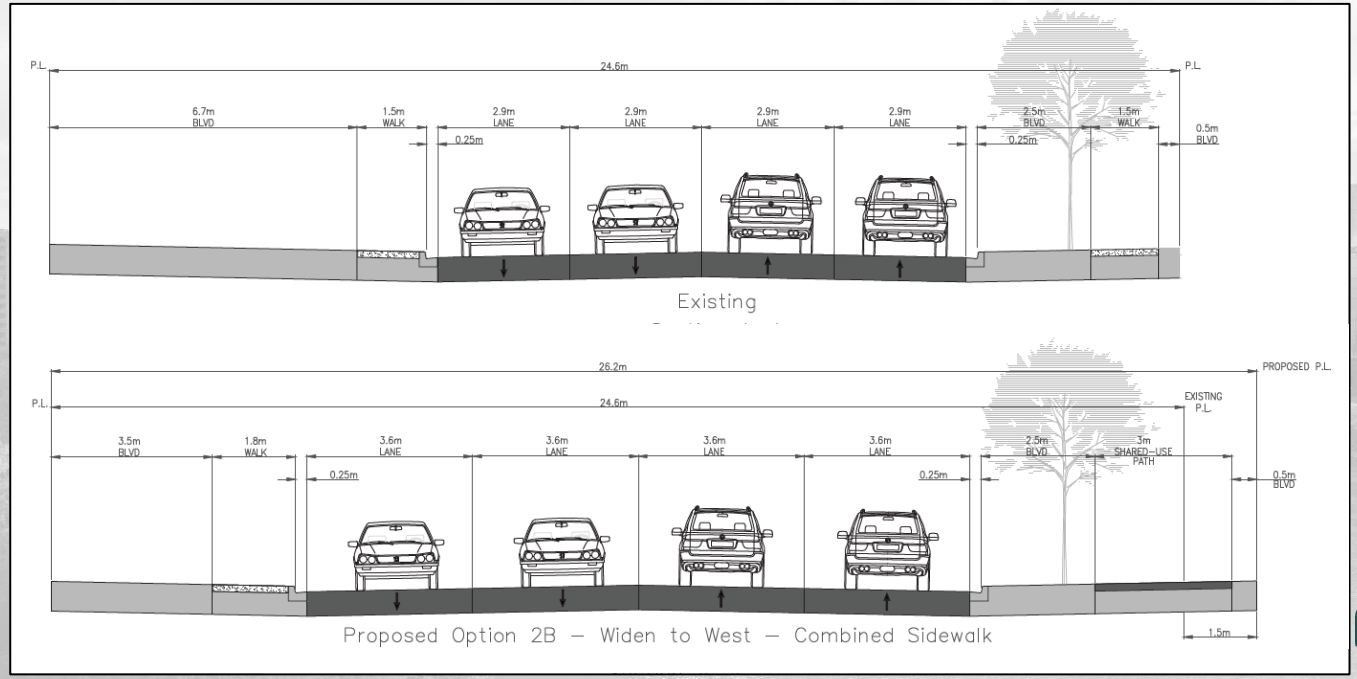
Proposed Option

Option #2B: Widen to the West – Combined Sidewalk



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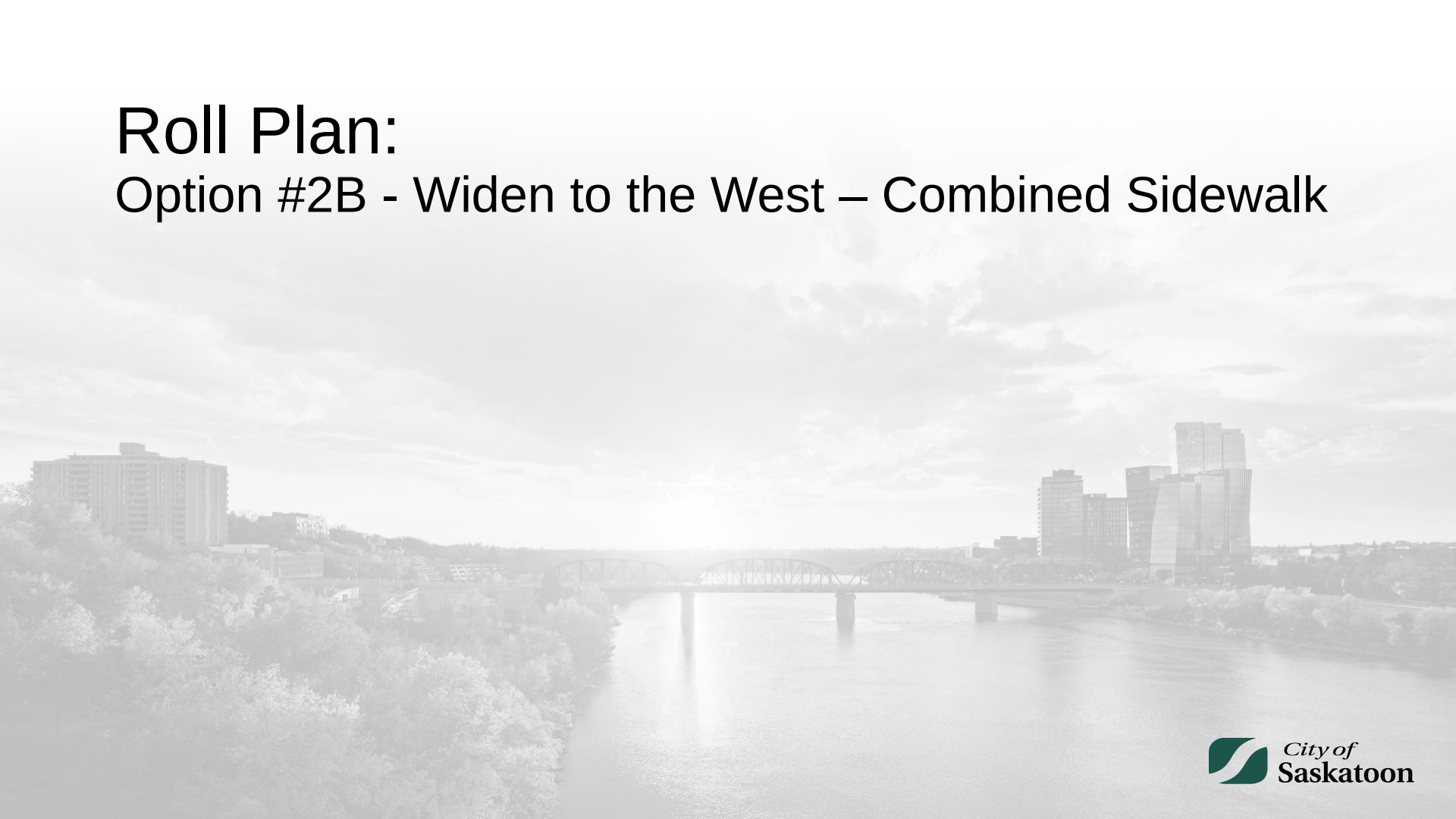
Remnant Lands

Roll Plan:

Option #2B - Widen to the West – Combined Sidewalk



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Next Steps

- Gather feedback – December 29
- Finalize recommendations – Winter 2023/2024
- Prepare Standing Policy Committee on Transportation report – Spring 2024
- Begin implementing recommendations (pending approval and additional funding)

City of Saskatoon

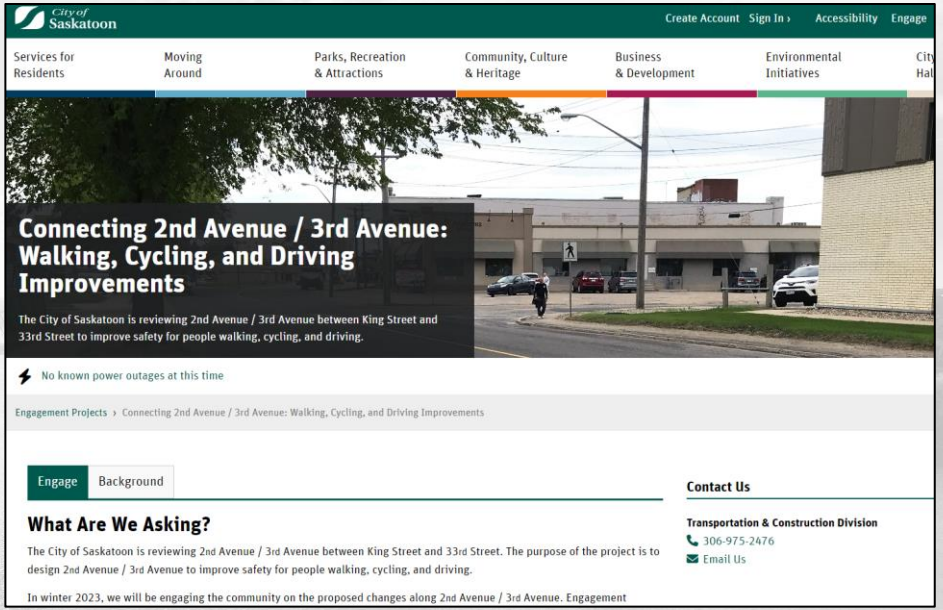
Have Your Say

- Complete the online survey, post comments and subscribe for updates at saskatoon.ca/engage/connecting-2nd-ave-3rd-ave

  Or scan the QR code

- Phone us at 306-975-2476
- Email us at ntr@saskatoon.ca
- Send us a letter

  Attn: Transportation & Construction
  Connecting 2nd Avenue / 3rd Avenue
  222 3rd Avenue North
  Saskatoon, SK S7K 0J5



Submit comments by December 29.

Thank You!

City of Saskatoon

Appendix C

What We Learned Report

City of Saskatoon
Communications & Public Engagement

ENGAGE

Connecting 2nd Avenue / 3rd Avenue: Walking, Cycling, and Driving Improvements

What We Learned - Engagement Summary

April 15, 2024

Engagement Summary

In the 1980s, the City of Saskatoon acquired properties along the 900 block of 3rd Avenue North, a site on the corner of Duchess Street and 3rd Avenue North, and a site on the corner of Duke Street and 3rd Avenue. The intent was to widen 3rd Avenue North. The project was postponed because of the Circle Drive project.

The City of Saskatoon reviewed 2nd Avenue / 3rd Avenue between King Street and 33rd Street. The purpose of the project is to design 2nd Avenue / 3rd Avenue to improve safety for people walking, cycling, and driving.

In December 2023, engagement on the proposed changes along 2nd Avenue / 3rd Avenue took place with community members and business owners.

Summary of engagement activities

The goal of this engagement was to **inform and consult with** the community and businesses on the proposed changes along 2nd Avenue / 3rd Avenue. Two engagement activities were held on the same day, first was a virtual Teams Live Event and the second was an in-person event. These were followed with an online survey.

Table 1: Summary of Engagement Strategy

Engagement Event		Engagement Purpose	Participants	Engagement Goal
1	Virtual Meeting	Communicate and gather feedback	Business Owners City Park Residents Public	Share the proposed changes along 2nd Avenue / 3rd Avenue and gather feedback.
2	In-Person Meeting	Communicate and gather feedback	City Park Residents Business Owners Public	Share the proposed changes along 2nd Avenue / 3rd Avenue and gather feedback.
3	Online survey	Gather Feedback	General Public	Gather feedback on the proposed changes along 2nd Avenue / 3rd Avenue.

Flyers were mailed to the City Park Community Association, local residents and business owners in City Park and the Central Industrial area within the 2nd Avenue / 3rd Avenue study limits. The flyer described the various engagement activities and how to participate in them. The engagement activities were also posted on the City's social media accounts. A billboard was also placed on the street.

Event 1 – Virtual Meeting

A Teams Live Event was held on December 6th, 2023, and 9 people attended the meeting. The project team presented the proposed changes to the attendees. The attendees were provided with the option of typing in their questions in the chat box in the live event.

What We Learned

Attendees raised concerns about the trees that will be removed by the proposed changes. Some of the attendees asked if the sidewalk and asphalt pathway could be modified to save the trees. Questions were asked if the pedestrian crosswalk on the south side of Princess Street was considered in the proposed changes as it is an access into City Park and if the triangular island at the Princess Street intersection could be landscaped with trees to encourage proper sight lines. It was also noted that some sidewalks are not continuous on Princess Street.

Questions were also raised on whether work will be done on storm drainages in any of the proposed changes and if the roadway asphalt will be updated with the project. There were questions about the impact of the changes to businesses along the 2nd Avenue / 3rd Avenue corridor and the impact on the remnant lands currently used by the Saskatoon Food Bank. Other attendees suggested that the Food Bank site could be used as landscape and not commercial purposes because of the vehicular traffic. There was a question about the traffic growth rate on 2nd Avenue / 3rd Avenue over 10 years or more and whether four lanes would be enough for the anticipated growth rate. There was also a comment that the project was a much-needed upgrade.

Event 2 – In-Person Meeting

The in-person event was held at École St. Paul Elementary on December 6th, 2023, and 9 people attended the meeting. The project team started with a presentation of the proposed changes, followed by a question and answer session. The project team members were available to answer questions with boards set up in the meeting space.

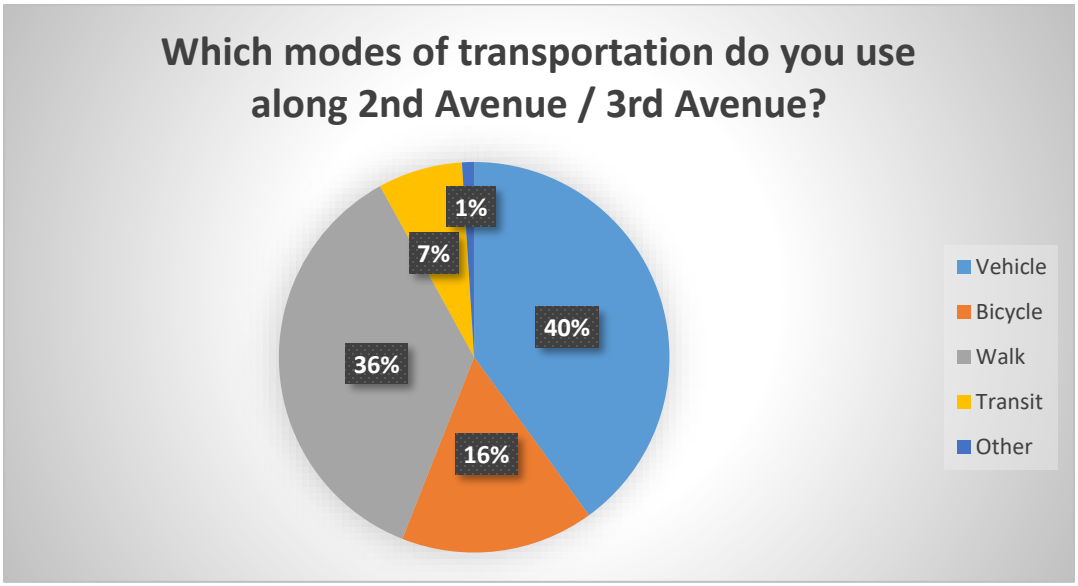
What We Learned

Most of the attendees were residents of City Park. One major concern that was raised was why the project team was proposing to remove the pedestrian crosswalk from Princess Street. Some of the attendees noted that a pedestrian device should be recommended at the Princess Street pedestrian crossing because the study area is too long to have only two pedestrian crossing locations. The unsafe conditions when crossing 2nd Avenue / 3rd Avenue was a common theme heard among several respondents that wanted pedestrian crossing devices to facilitate crossing the street. Some attendees preferred a different option to the project team's proposed option.

Event 3 – Online Survey

The online survey was made live on December 6th, 2023 and remained open until December 29th, 2023. The survey was developed to gather feedback on the proposed option to Widen to the West with a Combined Sidewalk and the proposed locations for the Pedestrian Actuated Signals. Respondents were asked to review the draft plan on the Engage Page before completing the survey. The survey had 3 sections with 19 questions. 43 respondents completed the survey.

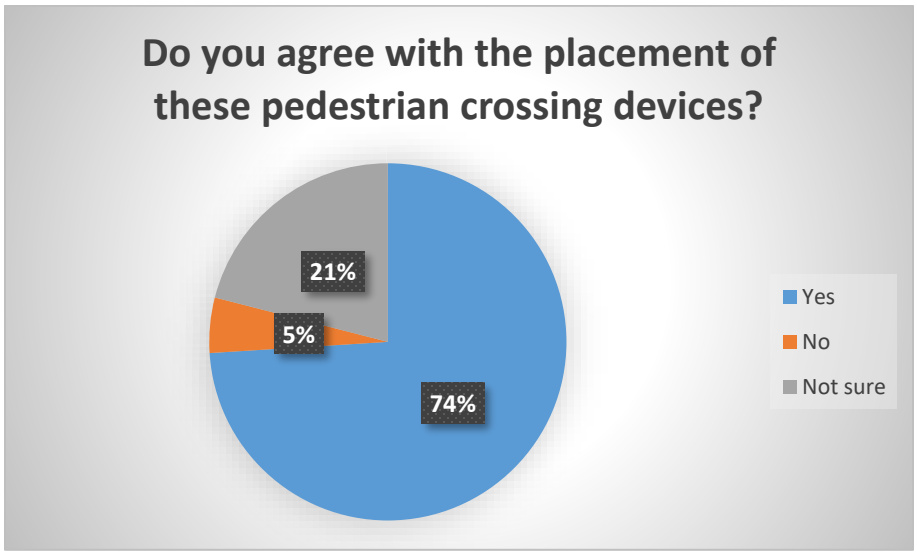
The majority of the respondents use 2nd Avenue / 3rd Avenue daily. 17 respondents (40%) travel on the road using vehicles, 16 (36%) travel the road by walking, and 7 respondents (16%) use cycling as their means of transportation.



What We Learned

Proposed Locations for Pedestrian Actuated Signals

32 respondents (74%) supported the proposed Pedestrian Actuated Signals (crossing devices) on King Street and Duke Street and the removal of the crosswalk at Princess Street. Nine respondents (21%) were not sure and two respondents (5%) did not agree with the proposed changes.



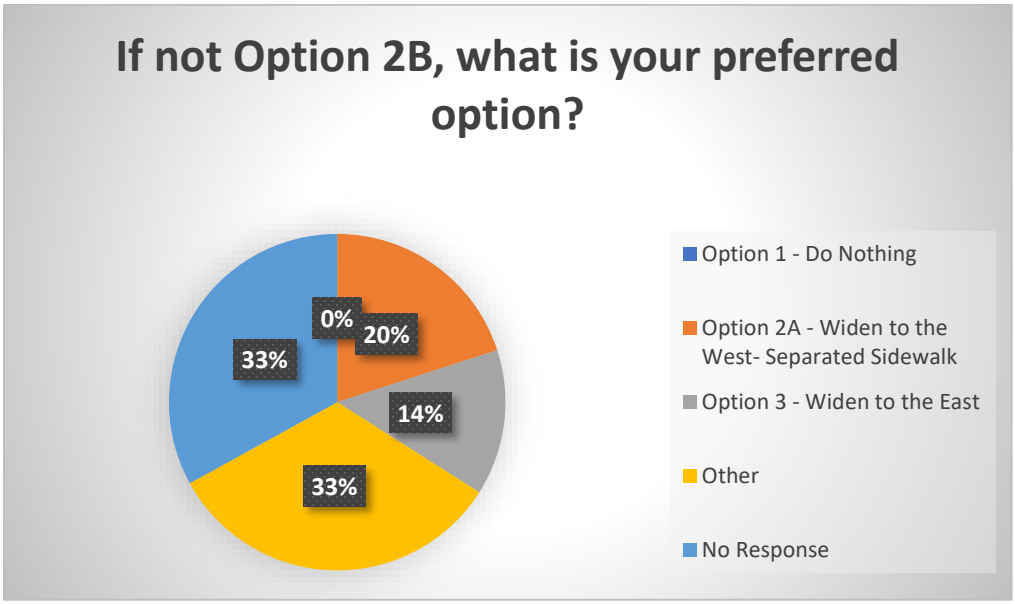
Respondents who did not agree with the placement of pedestrian devices (11) were asked a follow up question to identify their proposed locations for the pedestrian crossing devices. Six of these respondents (55%) suggested a pedestrian crossing on Princess Street. They mentioned that in a high traffic flowing area, more pedestrian crossings are needed.

Some respondents also wondered what will happen to the current pedestrian pavement markings at the Princess Street. Respondents expressed how unsafe it is for them when they are crossing the street using the current pedestrian crossing device and suggested the new crossing devices be improved to make them feel safe when crossing.

Proposed Widening Option

28 respondents (65%) agreed with the proposed option to Widen to the West with a Combined Sidewalk. Some respondents shared that they liked the proposed option because it saves more trees and they advocated for the planting of more trees to replace the lost ones. Others were happy about the closure of 3rd Avenue north of Princess Street. Many respondents noted that the proposed option was a much-needed upgrade.

8 respondents (19%) were not in agreement with the proposed options; the rest (7 or 16%) were not sure. Some respondents advocated for more involvement of the City Park Community Association. Of the respondents that did not support the proposed option or were unsure, three (20%) supported the option to Widen to the West with a Separated Sidewalk, two (14%) supported the option to Widen to the East, five (33%) preferred a different option to the ones provided, and five (33%) did not provide an answer.

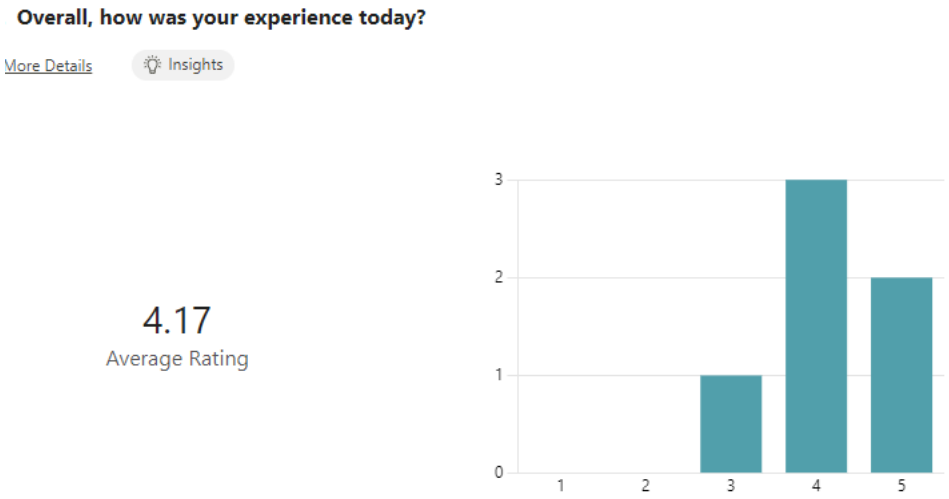


The respondents that preferred different options suggested that the lanes be widened to a four-lane divided roadway with no driveway access, and no left turns at Lauriston Street and at Duchess Street. A protected left turn at Duke Street, Princess Street and King Street, left turn prohibition from Duke Street onto 3rd Avenue, new trees along the back of sidewalk on both sides, and closure of 3rd Avenue to traffic north were also suggested. Some indicated they would like a median added to separate the driving lanes and a speed limit of 40 km/h between 25th Street and 33rd Street noting that road widening will lead to an even higher average traffic speed.

Feedback about the Online Survey

The majority of the survey respondents did not attend the virtual or in-person engagement events. Of the respondents who attended an engagement event, most attended the in-person public meeting. The overall experience for respondents on the online survey was good.

What We Learned - Engagement Summary



Limitations

Some participants may have limited access to internet or technology that presented challenges in accessing the online survey and virtual meeting.

Next Steps

Engagement results will be shared with the project team in the Transportation Department to determine next steps. The summary of this evaluation will also be provided to City Council in Spring 2024.

Appendix D

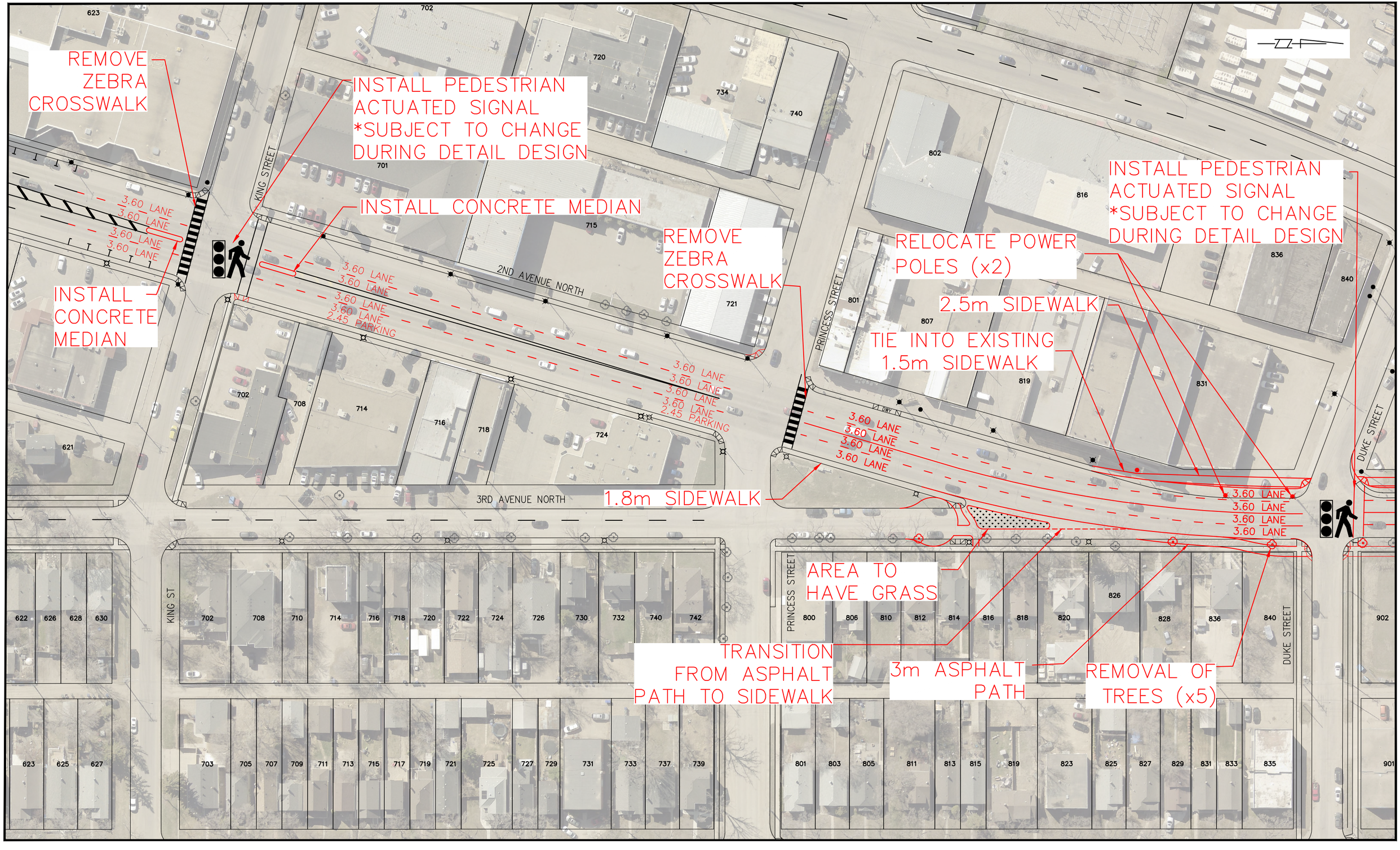
Additional Concerns Received
After Presentation of Draft Plan

Location	Comments	Decision
2nd Avenue and Princess Street	What will happen to the current pedestrian pavement markings? It is currently unsafe to cross the street. A new crossing device is suggested.	Pedestrian counts were completed at King Street, Princess Street, and Duke Street as part of the Central Industrial Area Traffic Review. Based on the pedestrian counts, Princess Street had the lowest pedestrian volume. Pedestrian Actuated Signals are recommended at King Street and Duke Street because there are more pedestrian crossings at King Street and Duke Street. The existing crosswalk pavement markings at Princess Street are recommended to be removed as it is no longer warranted with upgrades to the adjacent crossings.
2nd Avenue and 3rd Avenue	This should be closed to traffic north.	A cul-de-sac is shown in the proposed design which will close 3rd Avenue at 2nd Avenue.
General	Lanes should be widened to a four-lane divided roadway with no driveway access.	A four-lane divided roadway was reviewed and was not presented as one of the design options. A four-lane divided roadway would result in larger impact on utilities, more environmental impacts, property acquisition, parking impacts, and higher cost.
	There should be left turn prohibitions at Lauriston Street, Duchess Street, and from Duke Street onto 3rd Avenue.	The collision data did not indicate that left turns are an issue at Lauriston Street and at Duchess Street. Left turn prohibitions are not recommended. The recommended option will include removal of the tree on the southeast corner, which will improve sightlines for westbound left turning vehicles.

Location	Comments	Decision
	There should be protected left turn signals at Duke Street, Princess Street and King Street.	Traffic signal assessments at Duke Street and at King Street were conducted in 2020. A warrant system assigns points for a variety of conditions including number of traffic lanes, posted speed limit of the street, distance to the nearest traffic signal, and number of pedestrians and vehicles at the location. The assessments indicated that traffic signals are not warranted at Duke Street or King Street.
	There should be new trees along the back of sidewalk on both sides of the street.	Appropriate locations for new tree plantings will be considered during the next phases of the project.
	A speed limit of 40 km/h between 25th Street and 33rd Street was suggested. Road widening will lead to an even higher average traffic speed.	The collision data did not indicate that speeding was a major contributing factor in any of the collisions. A lane width of 3.6 m meets the design standard for arterial streets and ties into the existing 3.6 m wide traffic lanes south of King Street and north of 33rd Street.

Appendix E

Functional Plan of Recommended Option



OPTION 2A - Widen to the West - Separated Sidewalk (SOUTH)

2.5m SIDEWALK

RELOCATE LIGHT POLE X4

DRIVEWAY RESHAPING

3.60 LANE
3.60 LANE
3.60 LANE
3.60 LANE

3m ASPHALT PATH

3m ASPHALT PATH

STREET LIGHTING WILL BE PROVIDED ON THIS BLOCK FACE

PINCH PATH TO 2m AROUND RAIL SIGNAL POST

3RD AVENUE N

DUCHESS STREET

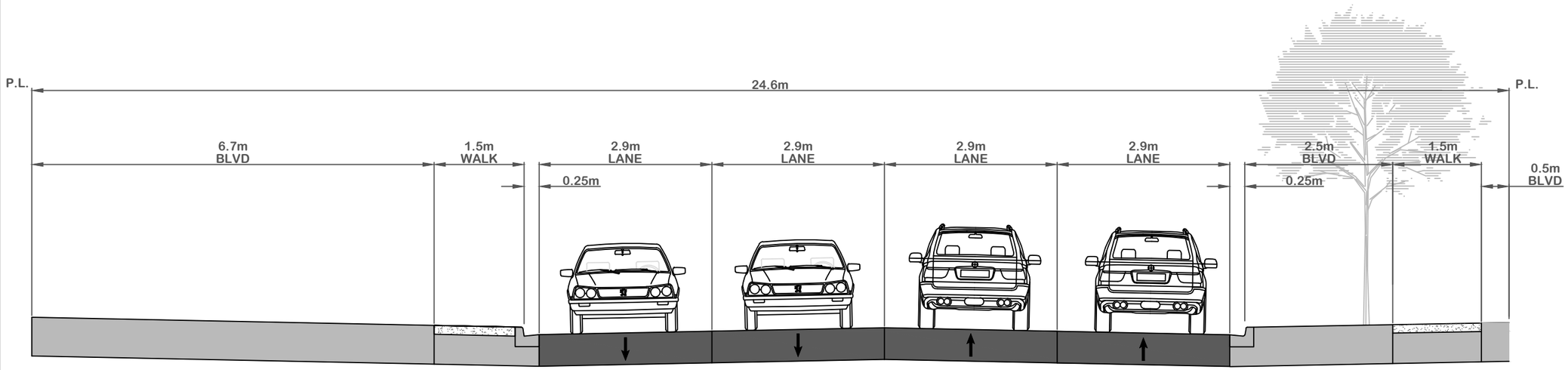
LAURISTON STREET

33RD STREET

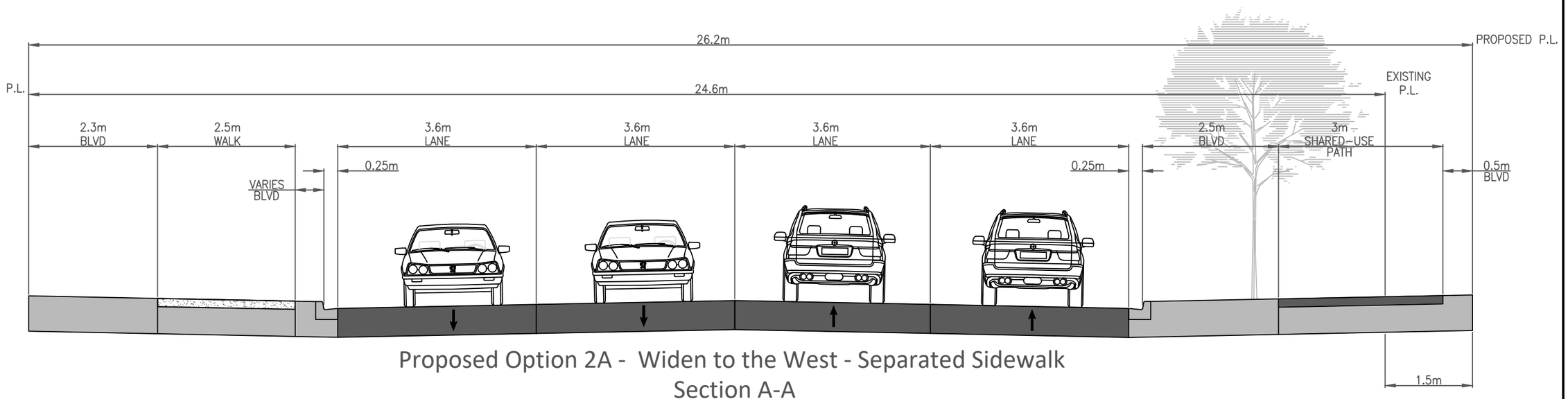
LEGEND

SIDEWALK REMOVAL AREA

OPTION 2A - Widen to the West with Separated Sidewalk (NORTH)



Existing
Section A-A



Proposed Option 2A - Widen to the West - Separated Sidewalk
Section A-A