

## The Bigger Picture

HRM is working to create more opportunities for mobility that encourage physical activity and healthy lifestyles for people of all ages and with a variety of physical abilities (All Ages and Abilities – ‘AAA’). Installing active transportation infrastructure (e.g. sidewalks, bikeways, multi-use pathway, crosswalks, etc.) has the potential to significantly increase non-auto modes of transportation (i.e. reduce trips made by vehicle). HRM’s Active Transportation Priorities Plan (2014) aims to double all trips made on foot and by bicycle by 2026. In order to achieve this goal, HRM must provide a connected network that provides direct and convenient access to important destinations. HRM’s Integrated Mobility Plan (IMP) identifies the need to establish a core bikeway network in the regional centre of Dartmouth, which includes implementing a local street bikeway to connect Dartmouth Common to the Shubenacadie Canal Greenway system. A Complete Street lens will be used to incorporate all users; making it easy, convenient and safe for residents to choose walking or cycling.



## The Project

WSP (engineering consultants) are currently working with HRM to develop a plan to close the gaps in the sidewalk network, improve walkability and provide bicycle infrastructure that connects Dartmouth’s communities and key destinations. The project involves the following elements:

- 1. Installing a AAA cycling route on Dahlia Street.**  
Purpose: Create a link in the ‘AAA’ cycling network, Great Trail and the Blue Route while promoting cycling trips around the Municipality. The cycling route to be safe, comfortable and convenient.
- 2. Evaluating the feasibility of installing a sidewalk on Oak Street and/or Crichton Avenue.**  
Purpose: Close the gaps in the sidewalk network where there is anticipated high demand for pedestrian facilities.
- 3. Improving the intersection of Crichton Avenue with both Oak and Dahlia Streets.**  
Purpose: Establish a safe crossing into Sullivan’s Pond Park for people walking, rolling and cycling while reducing the crossing distance, improving sightlines and speed management.
- 4. Evaluating the need for a crosswalk on Victoria Road.**  
Purpose: Review the potential to provide a formal and safe active transportation crossing into the Dartmouth Common from Dahlia Street.
- 5. Connecting proposed facility to the existing Shubenacadie Canal Greenway.**  
Purpose: Close the gap in active transportation infrastructure to complete a connected/cohesive network and review the capacity and comfort of a connection through Sullivan’s Pond Park to the Shubie Canal Greenway.

### Project Next Steps

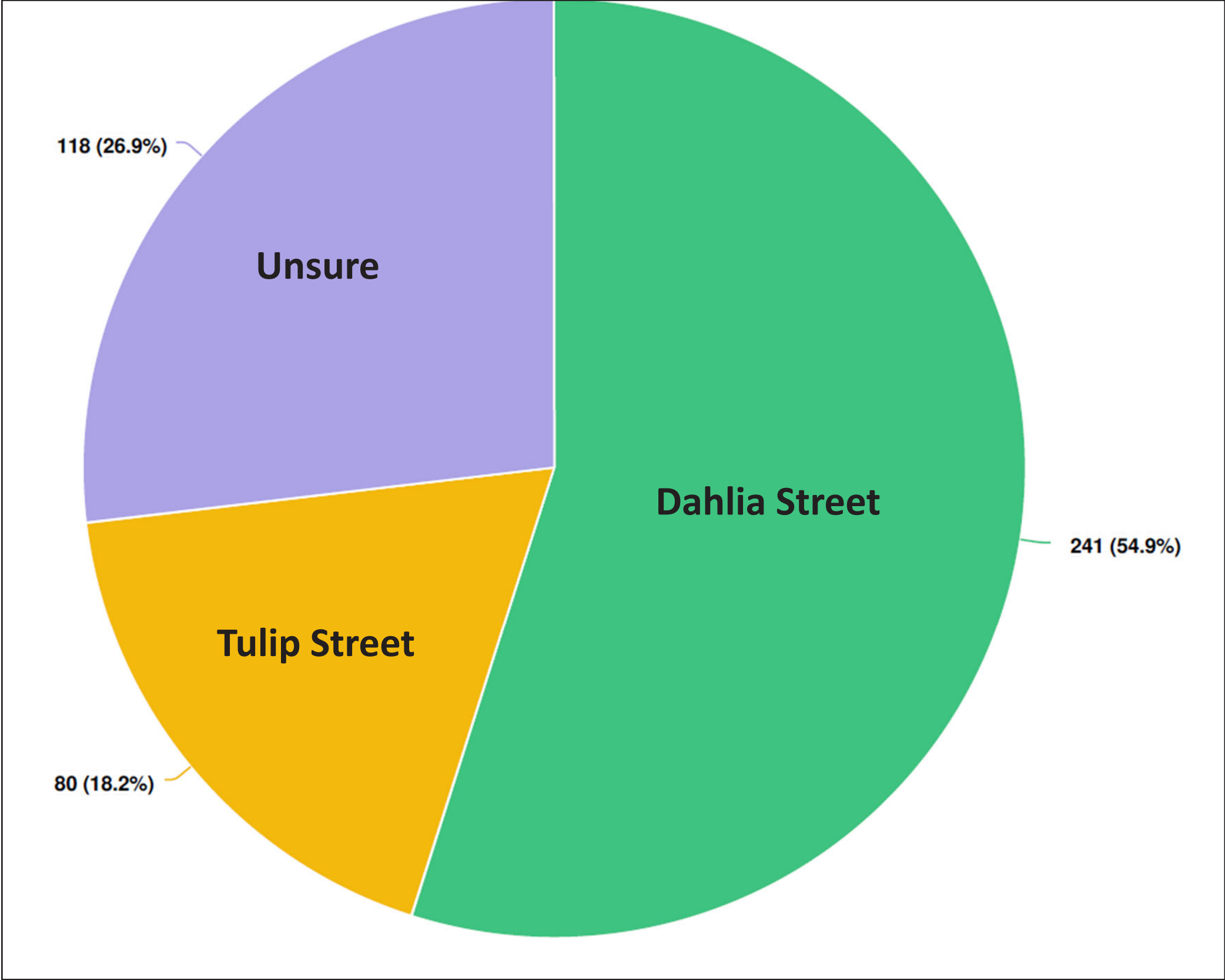
1. Gather feedback on Concept Designs from the Public - Online Surveys & Engagement
2. Selection of the preferred intersection concepts along Dahlia Street
3. Design Report with 30% Design Drawings to present to Council for Approval in early 2021
4. Construction targeted for Summer/Fall 2021



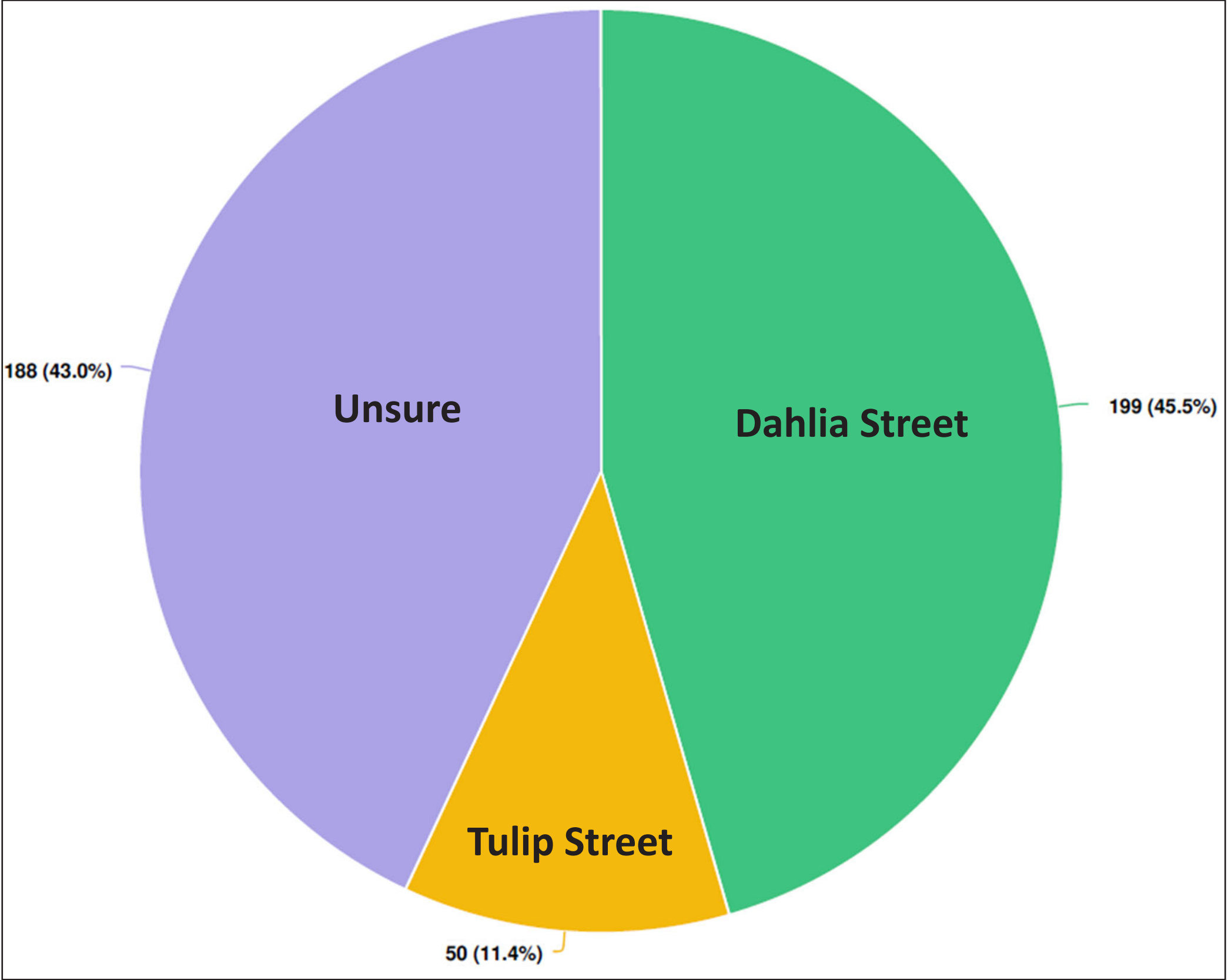
## Public Engagement Round 1 Summary

An online survey was posted on the project’s Shape Your City platform from August 4-17th, 2020, which included a variety of questions about the project. There were 442 surveys completed. Public feedback in combination with internal HRM evaluation lead the project team to recommend **Dahlia Street** as the preferred AAA cycling corridor. See below for a snapshot of results from two questions from the survey.

### Along which corridor do you feel most comfortable walking/rolling?



### Along which corridor do you feel most comfortable cycling?



## Local Street Bikeways (LSBs) in HRM

A key objective of LSBs is to create a continuous and comfortable route for cyclists of all ages and abilities (AAA) to share the lane with vehicles on a slow and low volume roadway. To provide the level of comfort that is needed for a LSB, traffic calming and diversion measures can be put in place as well as special intersection treatments to facilitate more safe crossings by people cycling.

HRM Council has adopted an **Administrative Order (2016-002OP)** which provides guidance on when and where traffic calming and/or diversion measures may be needed to optimize bicycle comfort along these corridors:



Vehicle Volume Thresholds:	Vehicle Speed Thresholds:
• < 1,000 vpd – <b>shall not</b> require consideration of diversion of traffic	• < 30 km/hr – <b>shall not</b> require consideration of traffic calming
• 1,000 to 3,000 vpd – <b>may</b> require consideration of diversion of traffic	• 30 to 45 km/hr – <b>may</b> require consideration of traffic calming
• > 3,000 vpd – <b>shall</b> require consideration of diversion of traffic	• > 45 km/hr – <b>shall</b> require consideration of traffic calming

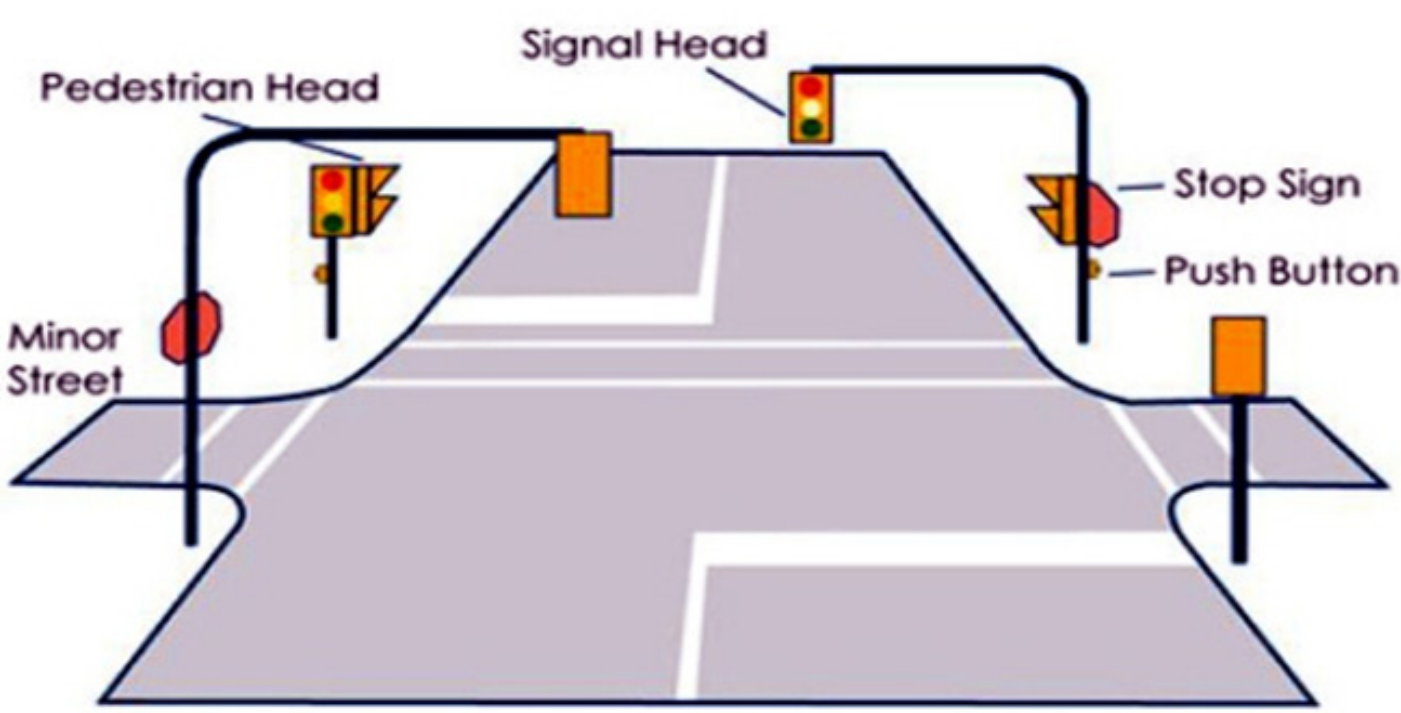
**Dahlia Street:** 142 vpd (shall not require diversion of traffic) & 39 km/hr (may require traffic calming)

## Use of Rectangular Rapid Flashing Beacons & Traffic Half-Signals by People Cycling

The Province is currently working on modifying existing regulations for the purpose of allowing someone on a bicycle to use activated flashing crosswalk lights (Rectangular Rapid Flashing Beacons or RRFB) to stop traffic and allow people to ride across on their bicycle. The alternative is installing a traffic half-signal to provide a gap in traffic for cyclists to cross the intersection while vehicles wait at a red signal. RRFBs allow for minimal delay for people crossing and vehicles must yield on the major street. Traffic half-signals may introduce some delay, however vehicles must stop at the red signal.



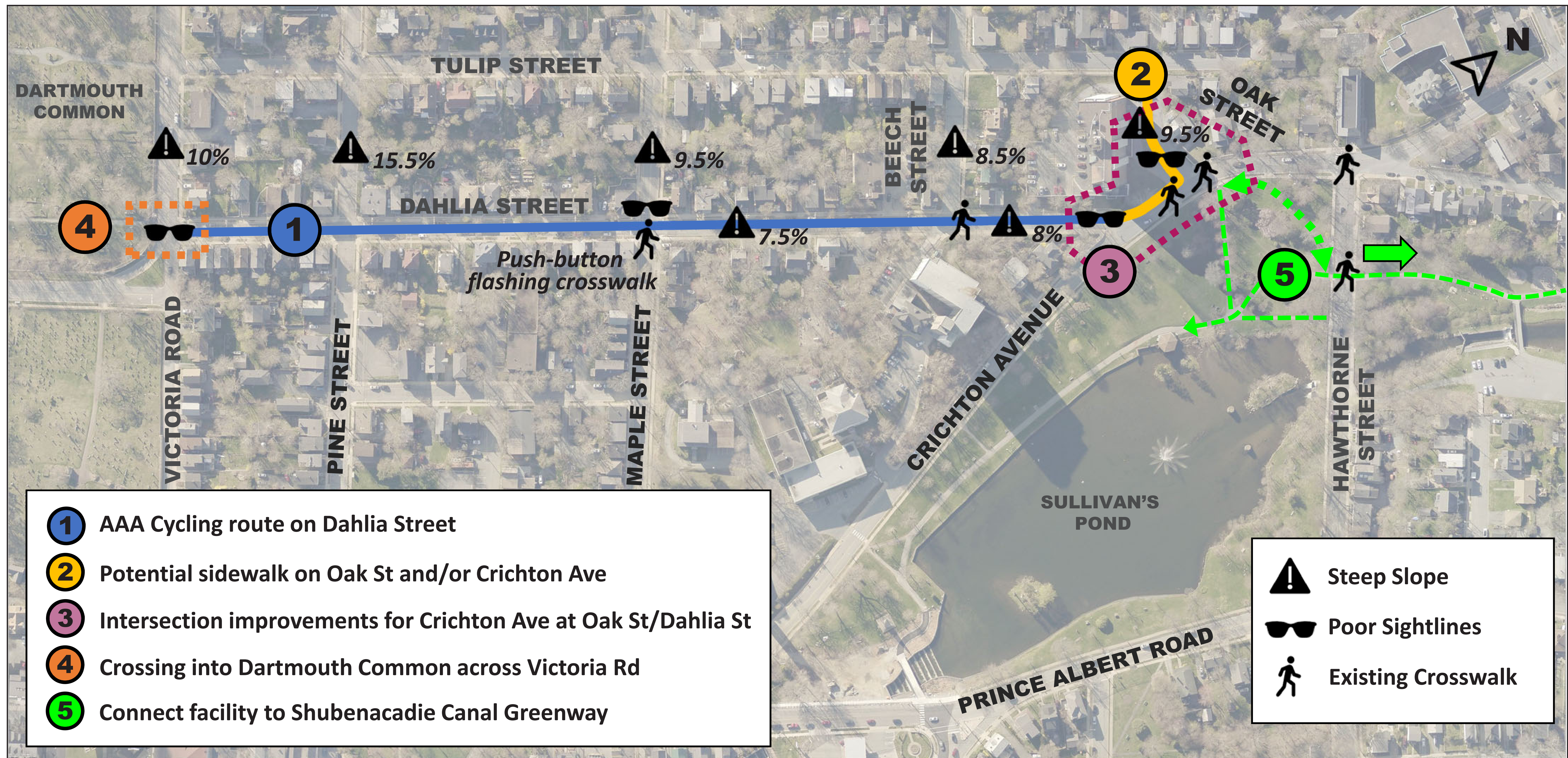
Rectangular Rapid Flashing Beacon



Traffic Half-Signal



# DAHLIA-OAK-CRICHTON ACTIVE TRANSPORTATION CONNECTIONS





# DAHLIA-OAK-CRICHTON ACTIVE TRANSPORTATION CONNECTIONS

## Concept Designs: Dahlia Street at Victoria Road

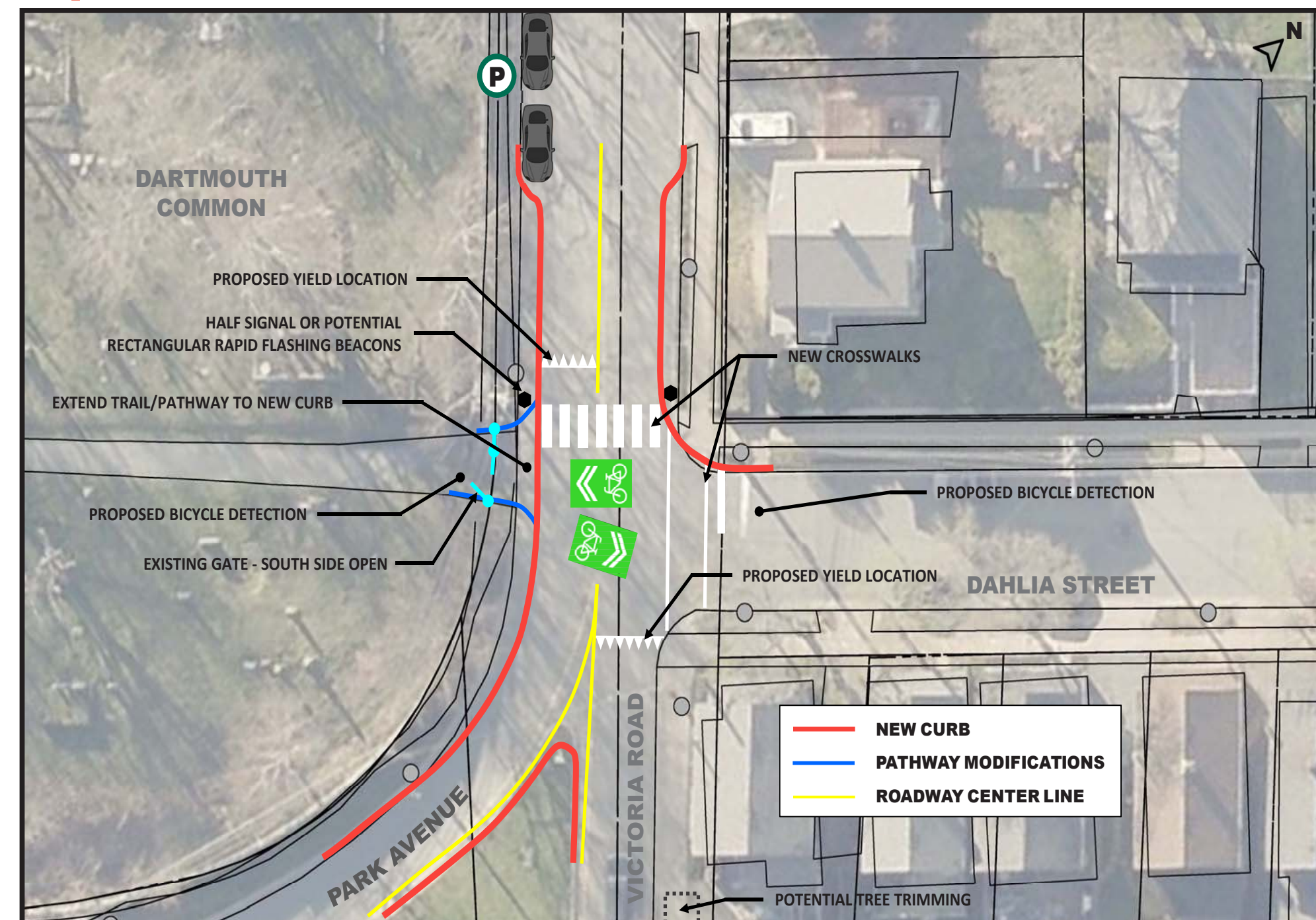
The intersection of Dahlia Street at Victoria Road is challenging to cross as a person walking/rolling or cycling as there is a large volume of vehicles on Victoria Road (approx 5,000 vpd) and no marked pedestrian/cyclist crossing. To provide an opportunity for people walking/rolling and cycling across Victoria Road to access the Dartmouth Common, three concept options have been prepared for your input and they are shown below with more detail.

We want to know which option will help feel more comfortable crossing Victoria Road at Dahlia Street to access the Dartmouth Common multi-use pathway.

### General Information for the 3 concept options:

A marked crossing is proposed on Victoria Road with either a Half-Signal or Regular Rapid Flashing Beacons (RRFB). Bicycle detection is proposed on Dahlia Street and the Dartmouth Common pathway for people walking/rolling and cycling to trigger a gap (or signal) to cross Victoria Road. Potential tree trimming on Victoria Rd to improve sightlines.

#### Option V-1



- Crossing distance shortened and sightlines improved. People cycling cross in a separated facility.



- Crossing distance shortened and improves sightlines. People walking/rolling cross in a separated facility.

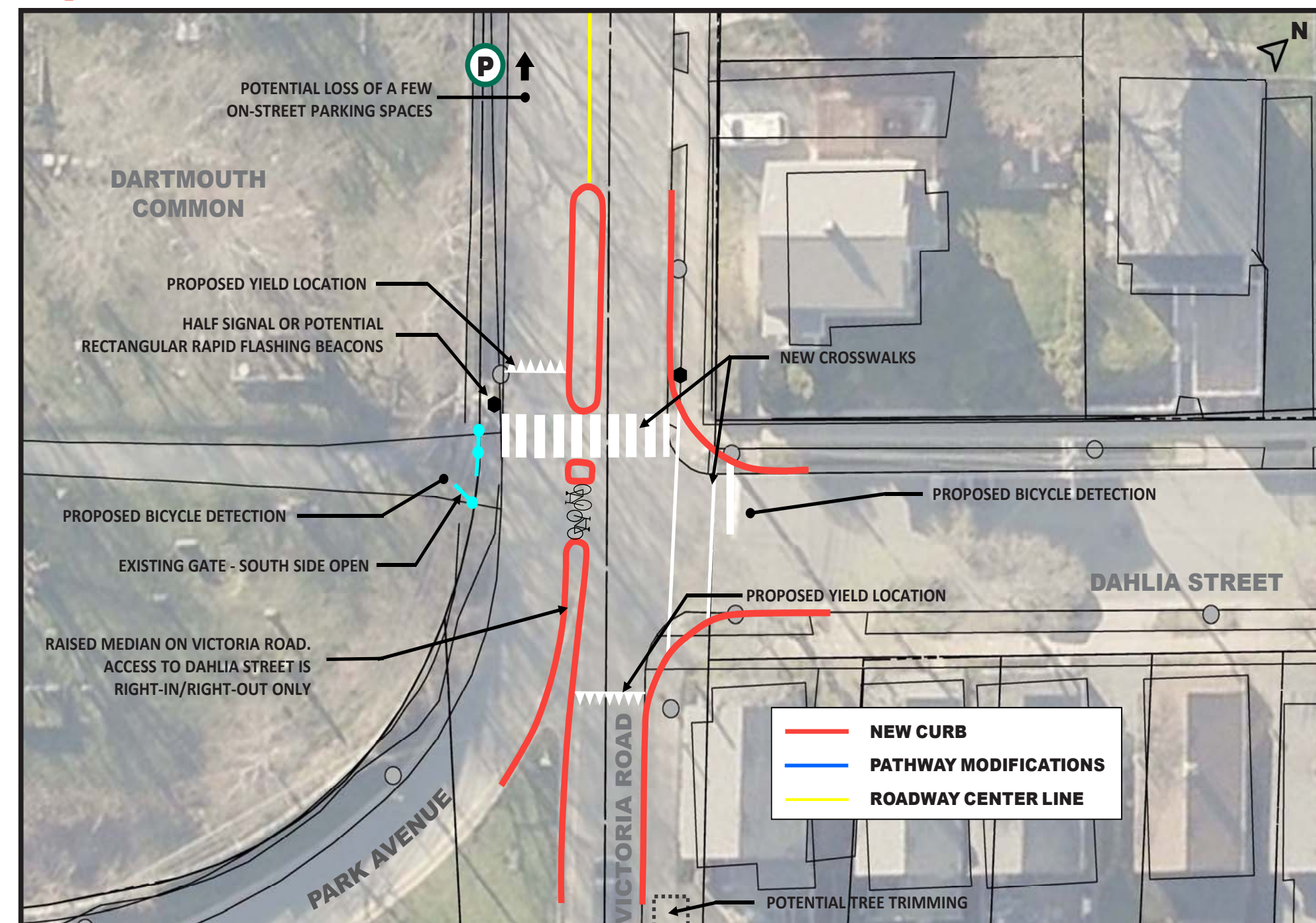


- No impact to vehicles.



- No impact to parking.

#### Option V-2



- Median refuge area provided. People cycling cross in two stages in a separated facility.



- Median refuge area provided. People walking/rolling cross in a separated facility in two stages.

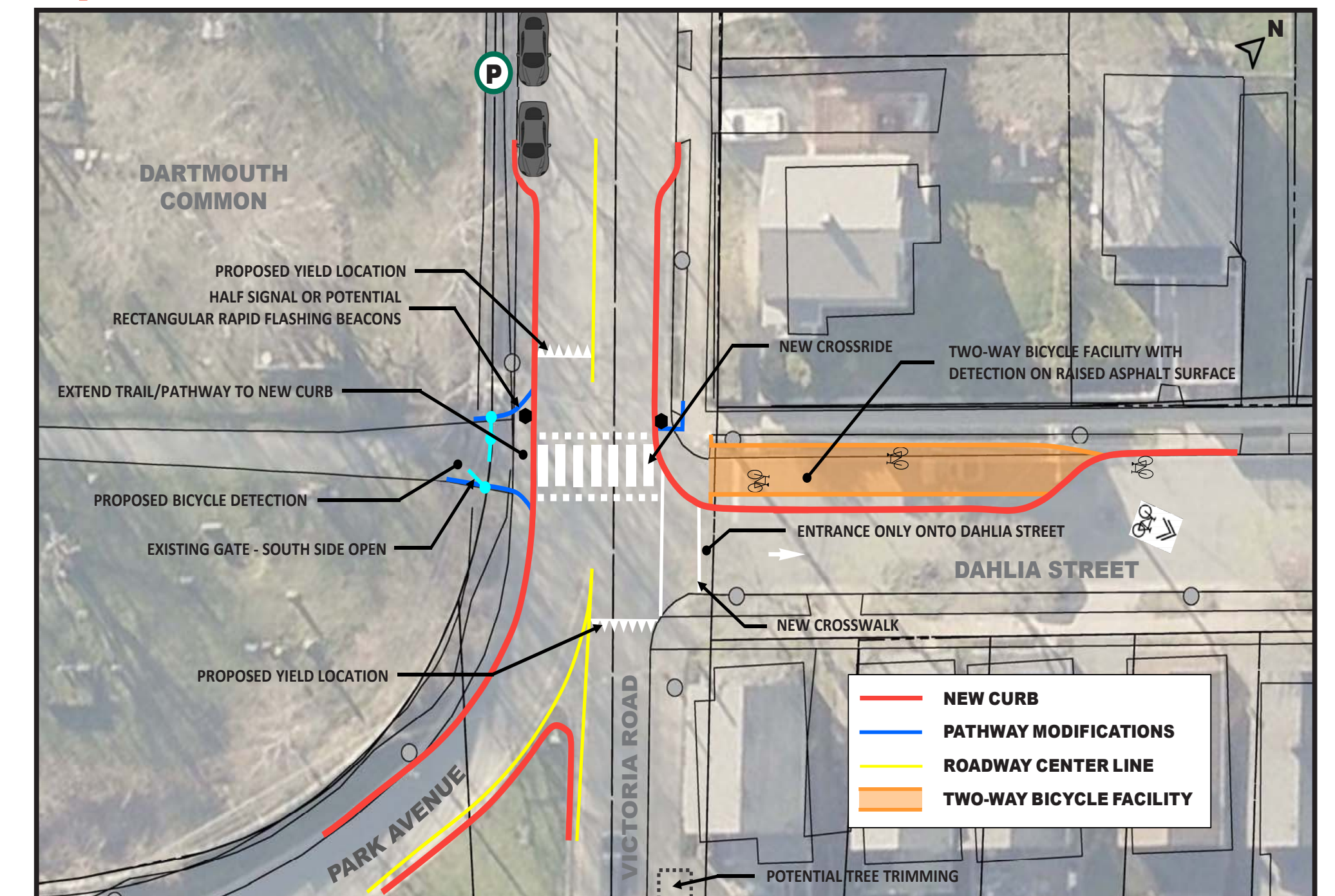


- Right-in/right-out only from Dahlia St (no left turns to/from Victoria Rd).



- Potential loss of a few on-street parking on the west side of Victoria Rd.

#### Option V-3



- Shortens crossing distance, aligns with DC and improves sightlines. Shared facility with people walking/rolling.



- Crossride space shared between people walking/rolling and cycling.



- Entrance only onto Dahlia St. First 20-25m of Dahlia St becomes one-way and remaining street is two-way for access to homes from both sides.



- Loss of parking on Dahlia St near the intersection of Victoria Rd, approximately 4-5 spaces.



# DAHLIA-OAK-CRICHTON ACTIVE TRANSPORTATION CONNECTIONS

## Concept Designs: Dahlia Street at Pine Street

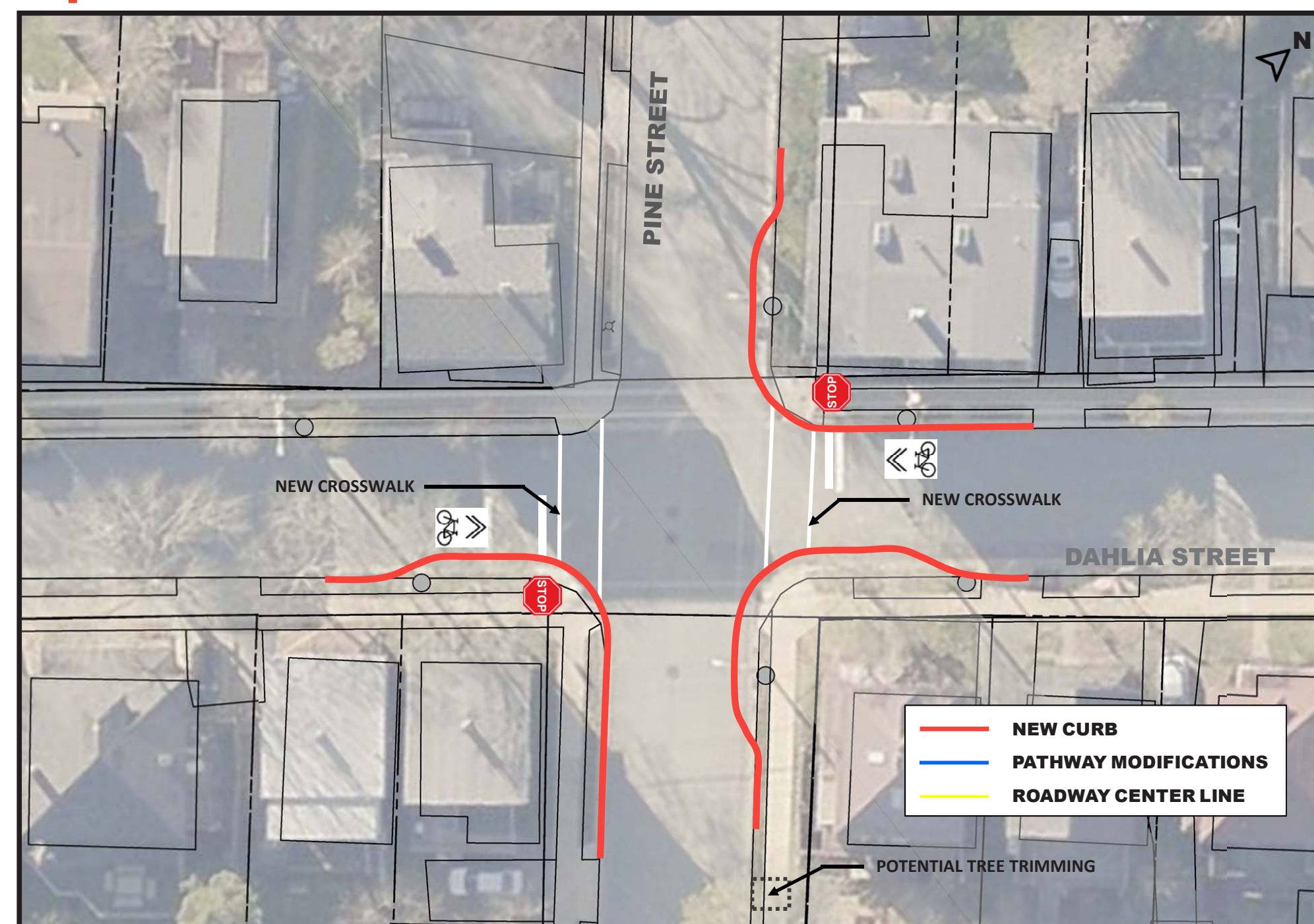
Today, the intersection of Dahlia Street and Pine Street has vehicle users stopping on the Dahlia Street approach and free-flow on Pine Street. Two concept options have been prepared for your input and they are shown below with more detail.

### General Information for the 2 concept options:

Curb extensions are proposed to improve sightlines and shorten the crossing distance for people walking/rolling and cycling. Since parking is not permitted near an intersection, there is no anticipated loss of on-street parking. Potential tree trimming on Pine Street to improve sightlines.

We want to know if you would like to keep the STOP signs as they are, or would you rather have Pine Street STOP controlled and allow free-flow on Dahlia Street?

### Option P-1



- Curb extensions narrow the travel lanes, improve sightlines and promote single file approach at intersection of Pine at Dahlia.



- Marked crosswalk provided on both sides of Pine Street with improved visibility and reduced crossing distance.

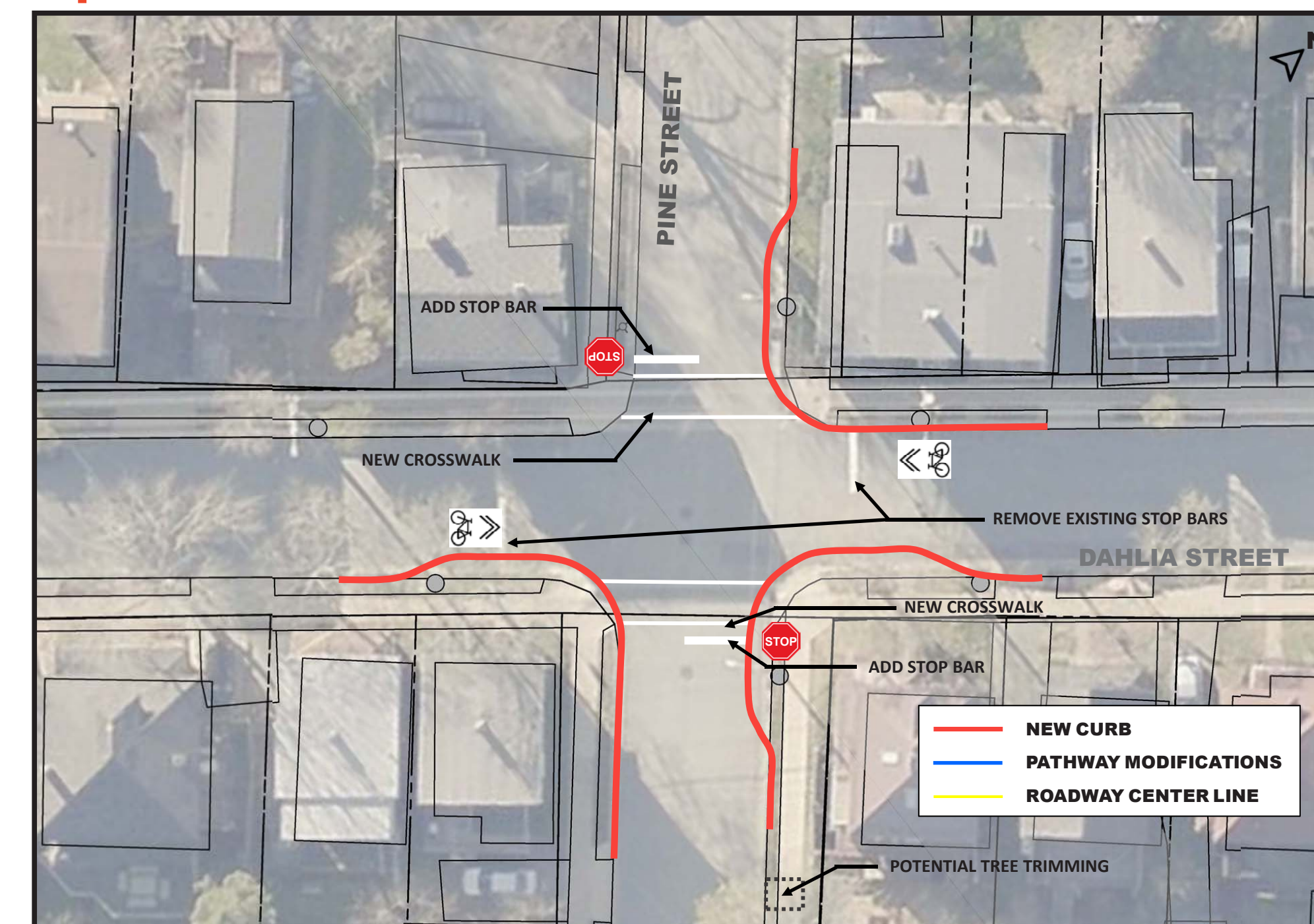


- No impact to vehicles.



- No impact to parking.

### Option P-2



- Curb extensions narrow the travel lanes, improve sightlines and promote single file approach at intersection. People cycling along Dahlia can maintain their momentum and don't need to stop.



- Marked crosswalk provided on either side of Dahlia Street with vehicles stopped on Pine Street. Crosswalks have improved visibility and reduced crossing distance.



- Vehicles on Pine Street are required to stop for vehicles on Dahlia Street.



- No impact to parking.



# DAHLIA-OAK-CRICHTON ACTIVE TRANSPORTATION CONNECTIONS

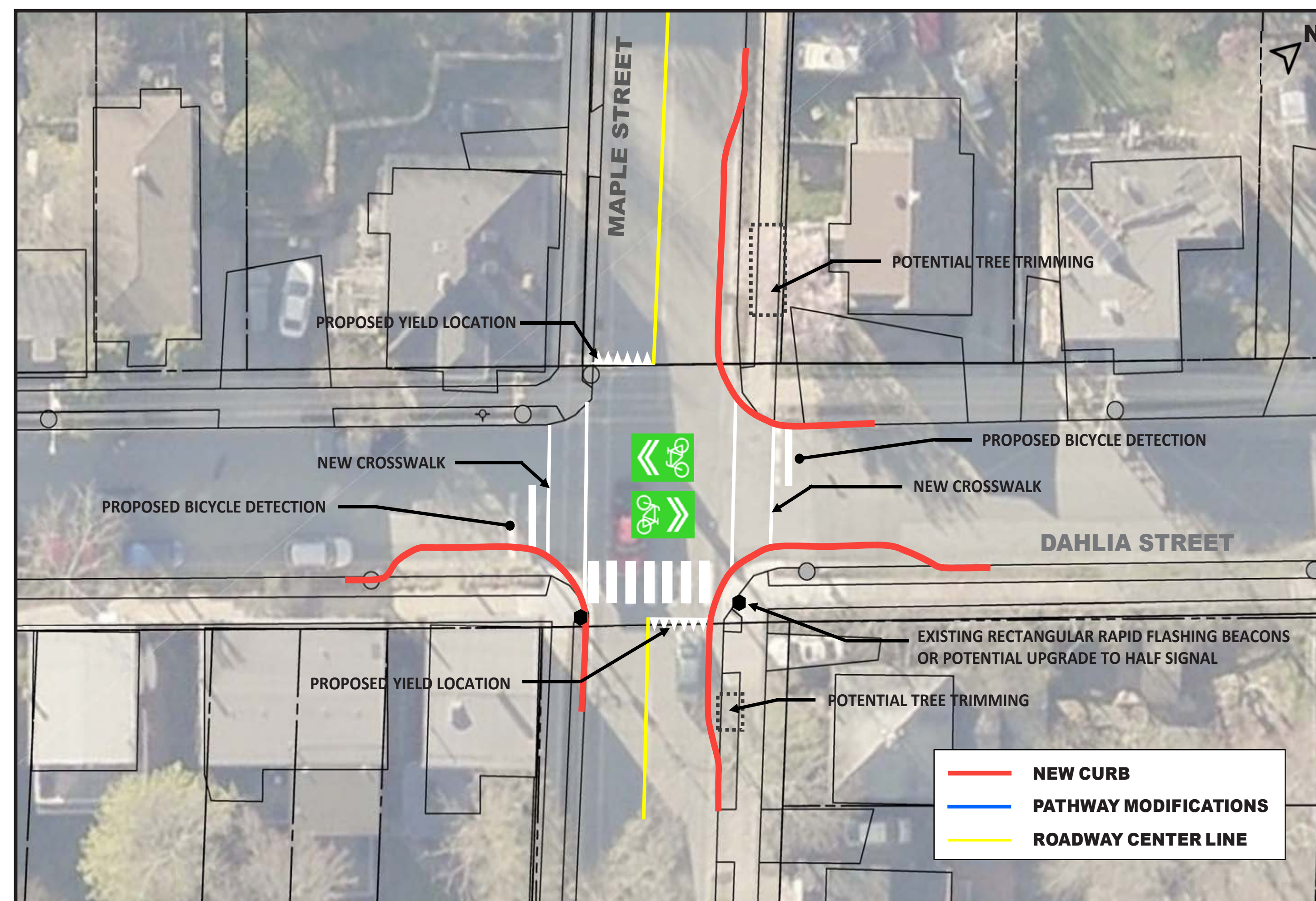
## Concept Designs: Dahlia Street at Maple Street

The existing intersection of Dahlia Street at Maple Street has a flashing beacon pedestrian crossing on the south side. To accommodate cyclists at the intersection and to assist with the crossing of Maple Street, the proposed option has been prepared for your input which illustrates the proposed benefits. We want to know if this presented option will help you feel more comfortable crossing Maple Street from Dahlia Street.

### General Information for the concept option:

Curb extensions are proposed to improve sightlines and shorten the crossing distance for people walking/rolling and cycling. At the existing marked crosswalk on Maple Street, it is proposed to keep the existing Regular Rapid Flashing Beacons (RRFB) or upgrade to a Half Signal. If deemed necessary, bicycle detection is proposed on the Dahlia Street approaches, meaning that people walking/rolling and cycling can trigger the Half-Signal or RRFB to cross Maple Street. Marked crosswalks are proposed on both sides of Maple Street.

### Option M-1



- Shortens crossing distance and improves sightlines. People cycling cross in a separated facility and share the road with vehicles. Curb extensions facilitate a single file approach at intersection.



- Marked crossings on Dahlia Street. Shortens crossing distance and improves sightlines. People walking/rolling cross in a separated facility.



- No impact to vehicles. Yield locations provided for guidance to help keep the intersection clear for cyclists to cross.



- Curb extensions will not be longer than 10-12 m, so that there is no anticipated impact to parking.



- Potential tree trimming is required on Maple Street to improve sightlines.



# DAHLIA-OAK-CRICHTON ACTIVE TRANSPORTATION CONNECTIONS

## Concept Designs: Dahlia Street/ Oak Street at Crichton Avenue

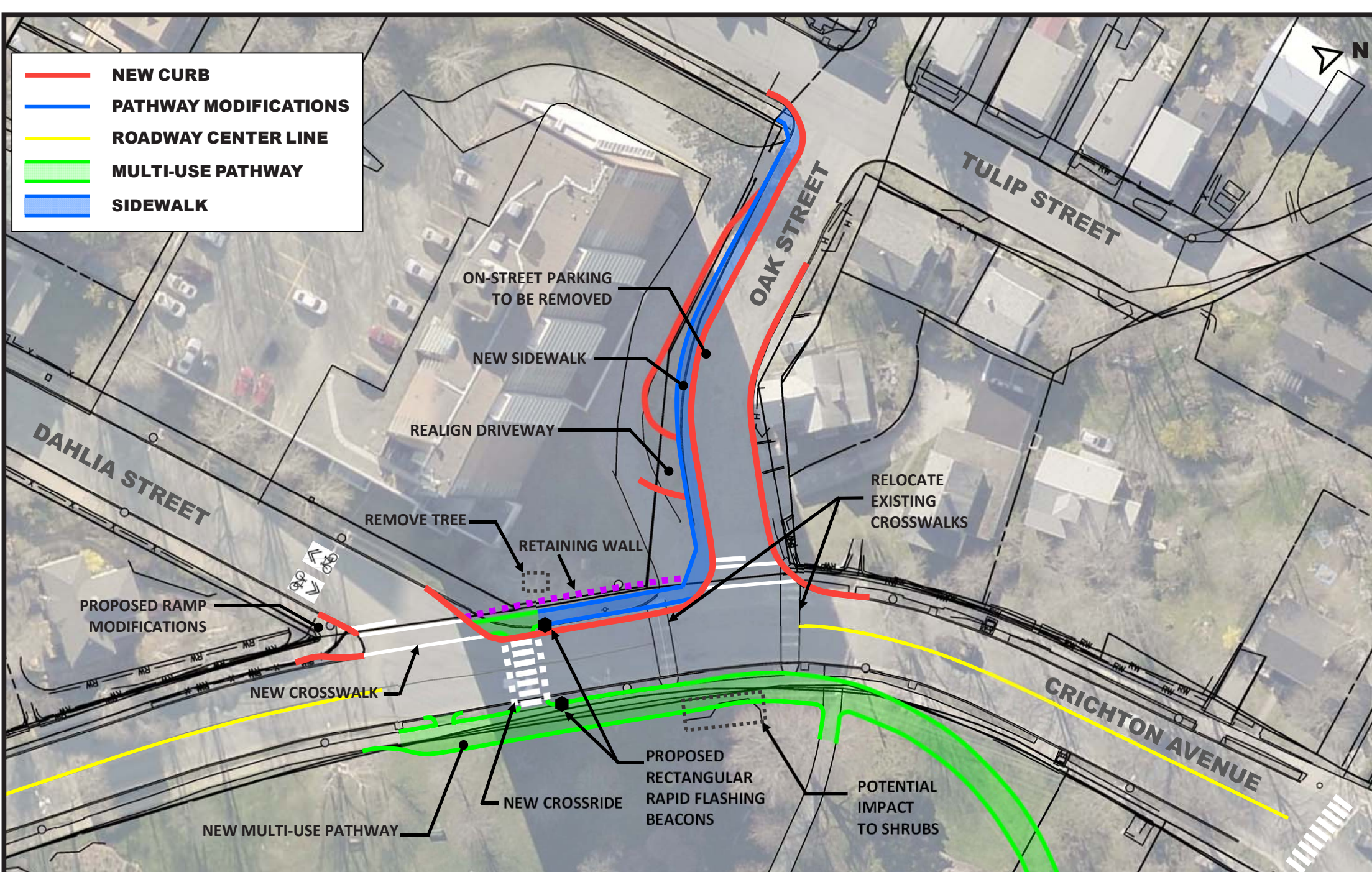
At the intersection of Dahlia Street/Oak Street at Crichton Avenue, there are many challenges for a person walking/rolling or cycling. There are no existing facilities to assist cyclists in crossing Crichton Avenue to access Sullivan's Pond Park, there is no sidewalk on Oak Street or on Crichton Avenue between Dahlia and Oak and there are two crosswalks at Oak Street which may be confusing to vehicles and crosswalk users. Three concept options have been prepared for your input and they are shown below.

We want to know which option will help you feel safer crossing Crichton Avenue Road at Dahlia Street to access Sullivan's Pond Park and the Shubenacadie Canal Greenway.

### General Information for the 3 concept options:

The existing crosswalks on Crichton Ave are combined and relocated towards Dahlia St as a crossride with proposed Regular Rapid Flashing Beacons (RRFB). A new crosswalk is proposed on Dahlia Street with modifications to the existing ramp for access and improved accessibility. The One Oak Street apartment building driveway is realigned and sidewalk is proposed on the south side of Oak St and on west side of Crichton Ave to close the existing sidewalk gap. The crossing distance on Crichton Ave is shortened with improved sightlines. People walking/rolling and cycling across Crichton Ave use the crossride. A multi-use pathway is proposed on the east side of Crichton Ave that extends through Sullivan's Pond Park, see next board.

### Option C-1



- People cycling share the road with vehicles on Dahlia St. Option to use cross-ride or access multi-use pathway across the street.



- New sidewalk on Oak St with a connection to Dahlia St. Improved accessibility, closing the gap in the sidewalk and enhanced crossing.



- No impact to vehicles.

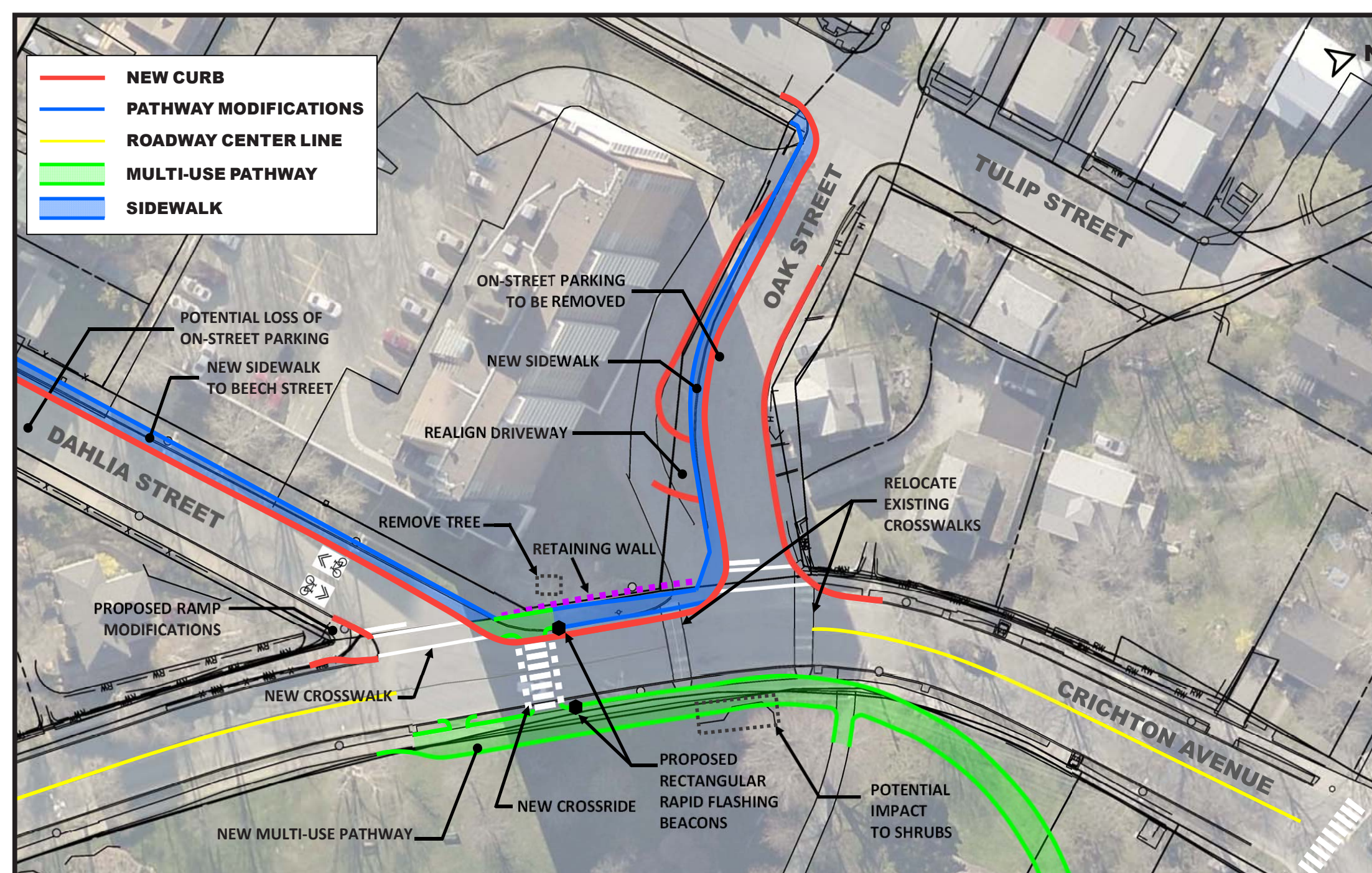


- Loss of on-street parking on Oak St.



- Tree removal required and potential impact to shrubs.

### Option C-2



- People cycling share the road with vehicles on Dahlia St. Option to use cross-ride or access multi-use pathway across the street.



- New sidewalk on Oak St with a connection to Dahlia St. Improved accessibility, closing the gap in the sidewalk and enhanced crossing. New sidewalk on Dahlia St to Beech St.



- No impact to vehicles.

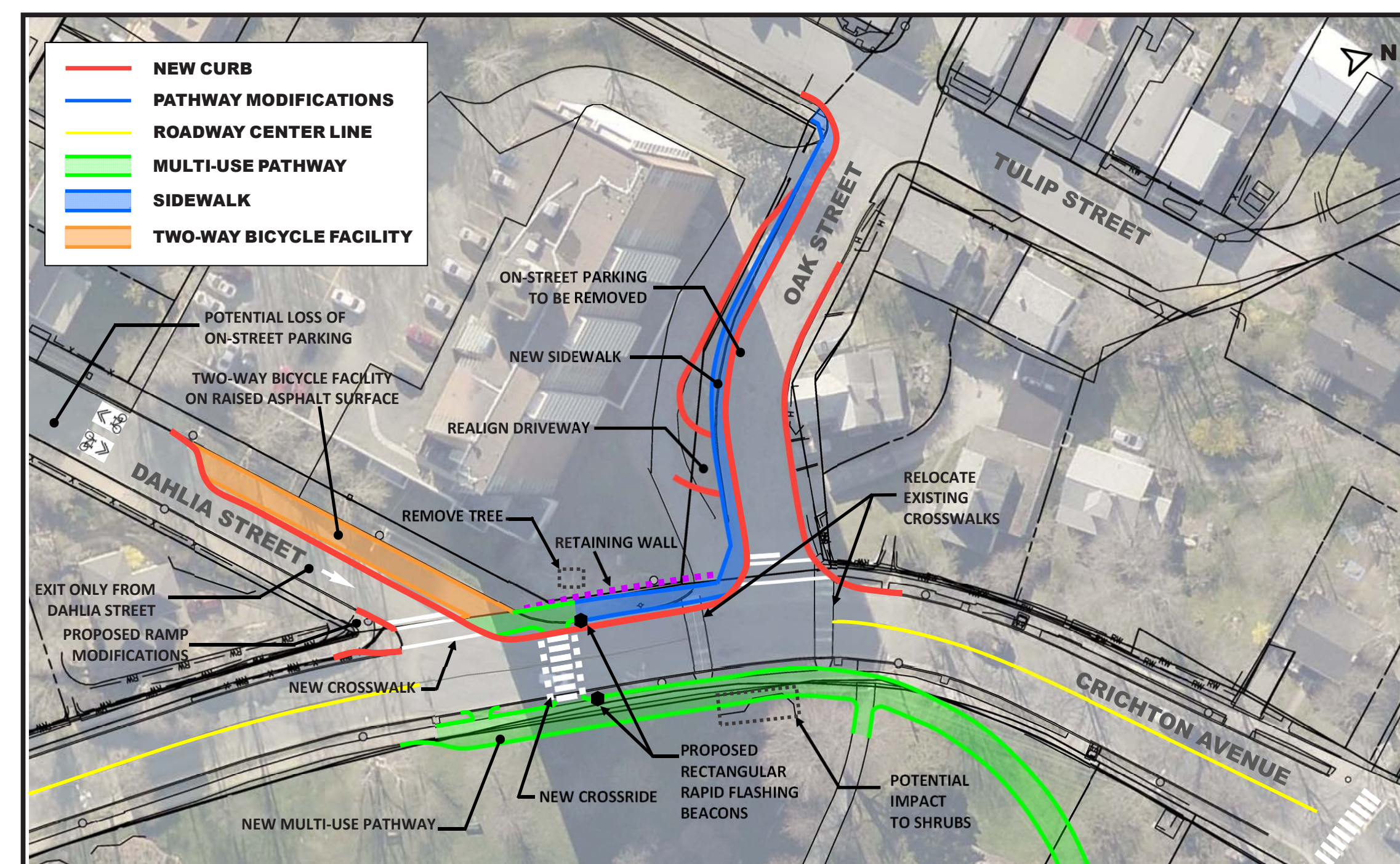


- Loss of on-street parking on Oak St and potential loss on on-street parking on one-side of Dahlia St between Crichton Ave and Beech St..



- Tree removal required and potential impact to shrubs.

### Option C-3



- Separated two-way bicycle facility provided on the one-way portion of Dahlia St to align cyclists with a shared crossride with a potential RRFB.



- New sidewalk on Oak St with a connection to Dahlia St. Improved accessibility, closing the gap in the sidewalk and enhanced crossing.



- Exit only onto Crichton Ave. First 20-25m of Dahlia St becomes one-way and remaining street is two-way for access to homes and underground parking from both sides.



- Loss of on-street parking on Oak St. and potential loss of on-street parking on Dahlia St. within 25m of Crichton Ave intersection.



- Tree removal required and potential impact to shrubs.



# DAHLIA-OAK-CRICHTON ACTIVE TRANSPORTATION CONNECTIONS

## Concept Designs: Sullivan's Pond Park Connection

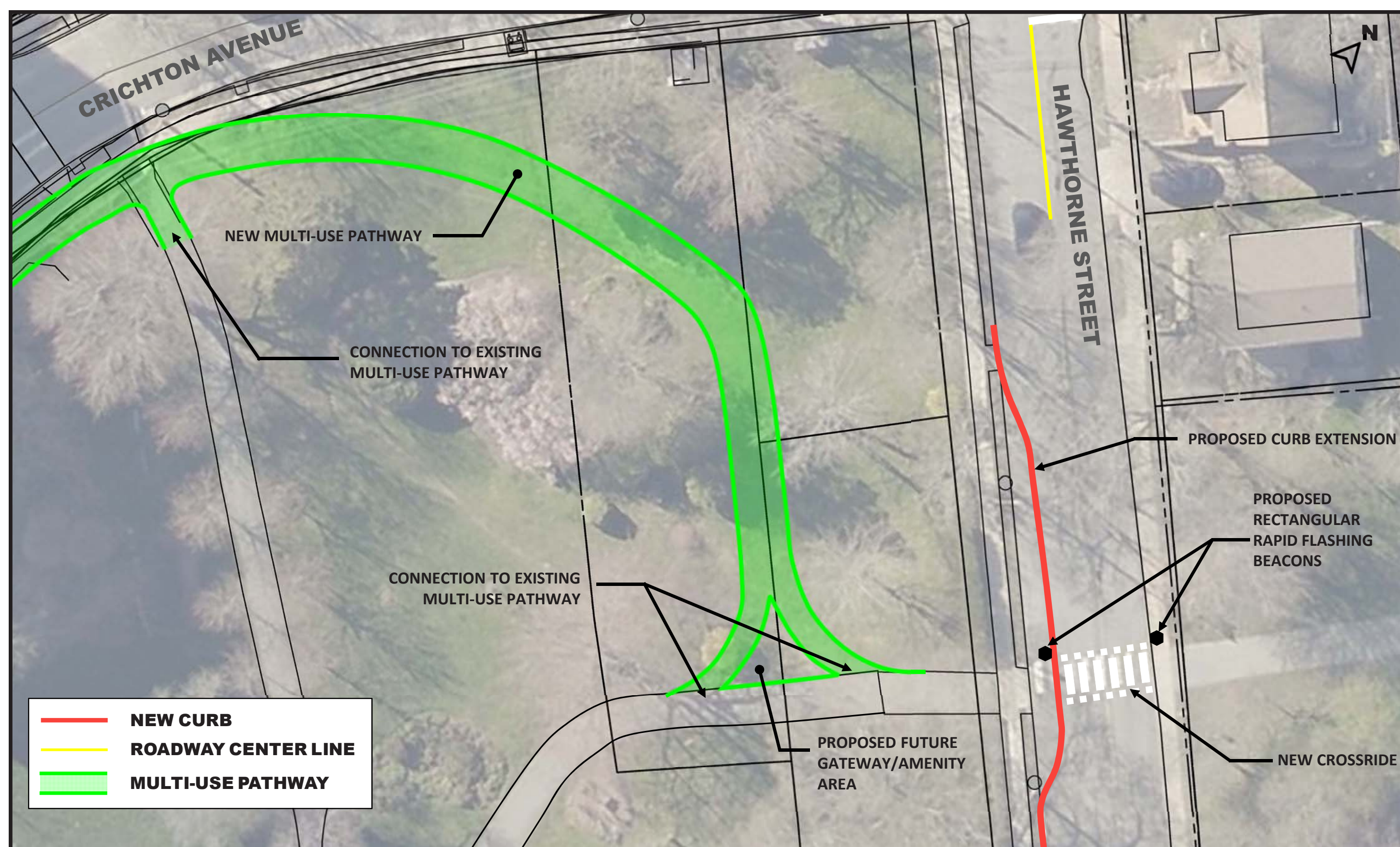
To provide a connection from the Dahlia Street 'AAA' bikeway to the Shubenacadie Canal Greenway, we have prepared a concept illustrating the proposed multi-use pathway to connect Crichton Avenue with Hawthorne Street. The concept option has been prepared for your input and the associated benefits listed below.

We want to know if this presented option will help you feel more comfortable connecting from Dahlia Street to the Shubenacadie Canal Greenway in a AAA walking/rolling/cycling facility.

### General Information for the concept option:

A new multi-use pathway is proposed through Sullivan's Pond Park to connect Crichton Avenue to Hawthorne Street with a more direct route. The proposed route utilizes the existing topography with minimal grades changes along the multi-use pathway. The proposed multi-use pathway provides a more direct connection to those who want to travel from Dahlia St to the Shubenacadie Canal Greenway. Access will be provided to the existing multi-use pathway network within Sullivan's Pond Park from the proposed multi-use pathway. A crossride is proposed on Hawthorne Street with a curb extension to improve sightlines and shorten the crossing distance for people walking/rolling and cycling. An RRFB may be potentially incorporated in the crossing.

### Option S-1



- People cycling have a shorter distance to cross Hawthorne St and can cross without dismounting. New multi-use pathway uses the topography and desire line to minimize grade change and maximize convenience.



- People walking/rolling cross Hawthorne Street in a crossride with a potential RRFB crossing. The crossing distance is shortened with the addition of the curb extension.



- No impact to vehicles.



- No impact to on-street parking.



- To accommodate the proposed multi-use pathway, some shrubs and plantings may be removed/relocated. All efforts will be made to minimize impact on trees. HRM staff are working with landscape architects in Parks and Recreation to formalize what the multi-use pathway will look like. The proposed multi-use pathway will improve the park by leaving the internal pathway system for primarily recreational users.