



## **North Central Mobility and BRT Studies**

2020

2021



#### Inform

- Keep Calgarians up-to-date on Green Line planning initiatives through online events and electronic updates
- Host an online open house for projects impacting downtown in late-October
- Ensure previous public input informs our technical planning this fall



Nov 23 – Dec 13, 2020 **Explore** 

- Present ideas and considerations that will inform functional planning
- Gather input from Calgarians through online engagement



Jan 28 – Feb 10, 2021 Evaluate

- Share what we've heard and how it informed proposed concepts
- Gather input to help us evaluate proposed concepts
- Host virtual engagement through online workshops and The City's Engage Portal



#### March 2021 Realize

- Share what we've heard and how it informed functional planning
- Develop and share final recommendations with Calgarians





## Planning the Green Line Engagement

Phase 1: EXPLORE November 23 - December 13, 2020

#### WHO WE REACHED



#### **AWARE 40,000+**

The number of people who were made aware of the project and opportunity to get involved. Tools used to build awareness included: Social media, bold signs and informational displays, mailed postcards/ brochures, and email updates.



#### **INVOLVED 8,000+**

**The number of people who actively or passively got involved in some way.** This includes people who visited the website, attended an event, subscribed for email updates etc.



#### **ENGAGED 350+**

The number of people who provided input online or at an event.

#### **Calgary**



## Planning the Green Line Engagement

Phase 1: EXPLORE

#### WHAT WE HEARD



The top themes that emerged throughout the public engagement process for the four functional planning initiatives were:

- **1. BRT Enhancements.** There was a keen interest in an improved Bus Rapid Transit service and station amenities.
- **2. Mobility Network Concerns.** There were various concerns shared about the mobility network including:
  - **a.** Identification of daily travel routes for all transportation modes and improvements needed
  - **b.** Potential changes to the roadway, including potential loss of vehicular travel lanes
  - c. Impacts of cut-through traffic on the residential streets
  - d. Desire for more east-west connections for all transportation modes
- **3. Streetscape Amenities.** There was a strong desire for streetscape amenities and improvements that contribute to a more vibrant Centre Street and Crescent Heights community.
- **4. Vision for Bow River Bridge.** There were a mix of visions shared for the new Bow River LRT Bridge, from distinctive to low-key, and desire for a multi-modal bridge that incorporates convenient access, viewpoints and that is designed in an environmentally sensitive way.



#### **North Central Mobility & BRT Studies**

#### PHASE 2: EVALUATE

Starting on **January 28**, there will be a number of engagement opportunities as part of the North Central Mobility Study and North Central BRT Study.

#### Online engagement

Open from January 28 to February 10

#### Virtual open houses

February 4 from 5 to 8 p.m.

February 9 from 12 to 1:15 p.m.

Drop-in style event via. Microsoft Teams

Visit engage.calgary.ca/greenline



January 2021

## **North Central BRT Study**





#### **North Central BRT Study**

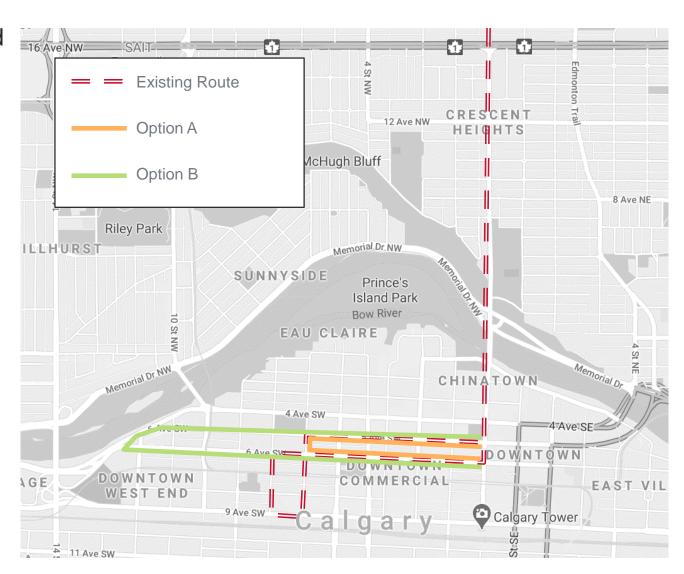
## Overview and objectives

- The North Central BRT Study is looking for opportunities to improve BRT operations through North Central Calgary and as the busses loop through downtown.
- Green Line will impact BRT operations south of 16 Avenue N.
- Potential improvements are being examined along the current BRT route between downtown and the North Point Park and Ride lot in the short, medium and long term.
- Recommendations for potential improvements to the corridor at specific intersections and enhanced station amenities as well as considerations for improvements to active mode connections that provide better connections to the BRT.



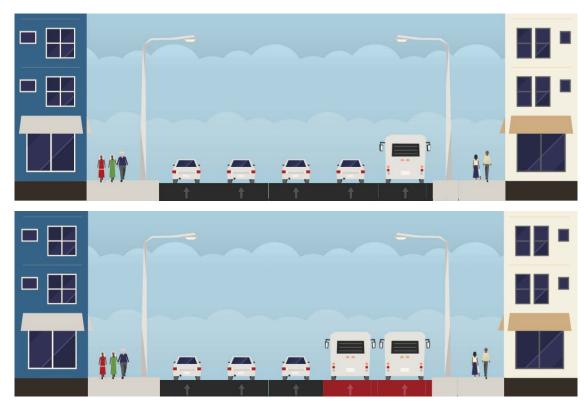
#### **BRT Improvements - Downtown Route**

- Option A provides a shorter and more efficient route downtown
- Option B provides better coverage of downtown and the opportunity to construct operator's washrooms
  - Requires crossing LRT at 9
     Street SW





#### **BRT Improvements - Downtown Bus Only Lanes**



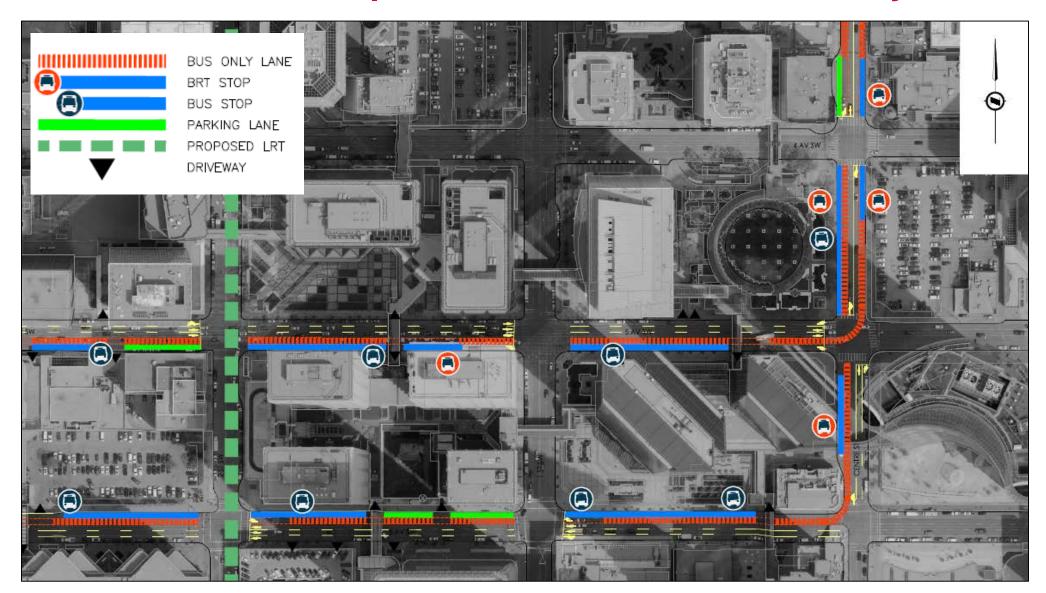
#### **Peak Hour Lanes**

- Reviewing potential for dedicated bus lanes on 5 and 6 Avenue SW
- 3 lanes would be maintained during peak periods
- Off-peak parking could be provided in outside through lanes

Images created with Streetmix



## **BRT Improvements - Downtown Bus Only Lanes**



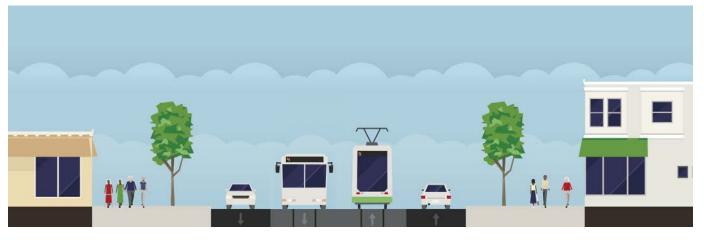


#### **BRT Improvements – Bow River to**

16 Avenue N

- Options currently under consideration
  - BRT operating within LRT Right of Way
  - BRT operating within curb lanes







Images created with Streetmix



#### North Central BRT Improvements Study

#### Potential operational cross-sections









#### BRT Improvements – 16 Avenue N to 21 Avenue N



- Dedicated right turn lanes provided at 16 Ave N intersection to maintain bus operations considering increased pedestrian volumes at this intersection
- Potential to provide all-day parking between 18 Avenue N and 21 Avenue N on the east side of Centre Street N
- North of 21 Avenue N the roadway narrows if the bus lanes are only provided during peak periods, then on-street parking can be provided off-peak





## BRT Improvements – 21 Avenue N to McKnight Blvd N





- North of 21 Avenue N the roadway narrows - if the bus lanes are only provided during peak periods, then on-street parking can be provided off-peak
- Tie-in to existing bus-only lanes approaching McKnight Blvd N at 43 Avenue NW

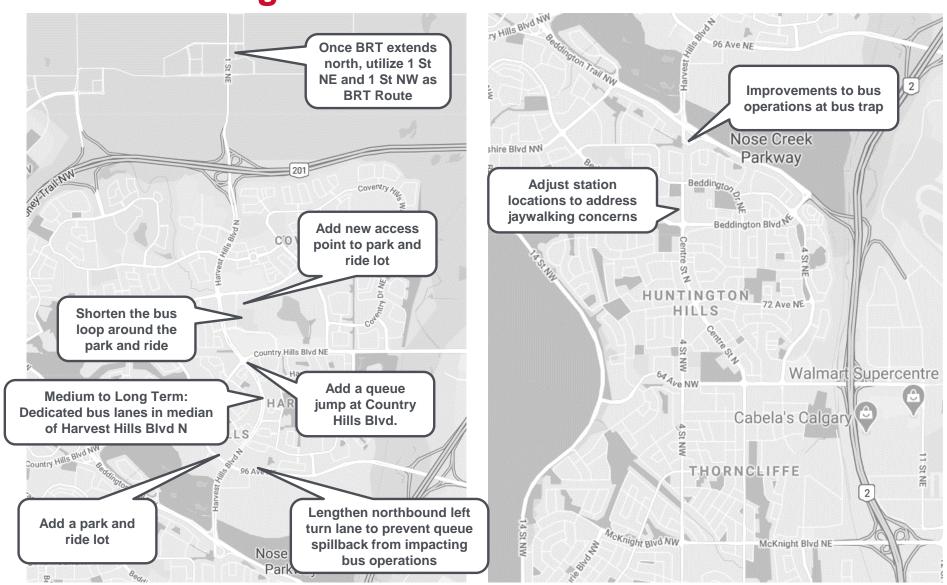


BUS ONLY LANE BRT STOP BUS STOP PARKING LANE DRIVEWAY

#### Calgary ( )



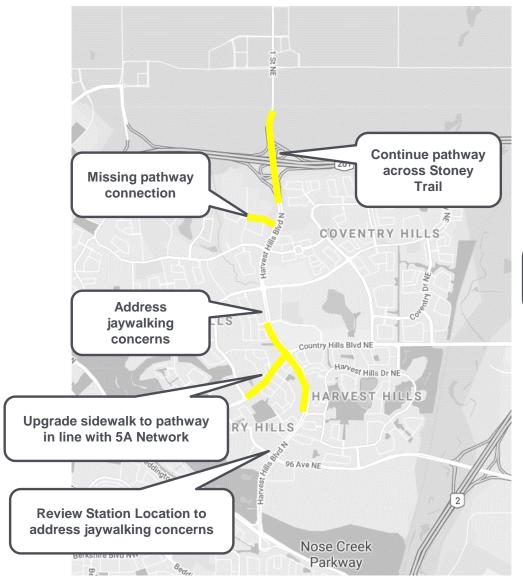
## **BRT Improvements Under Consideration** McKnight Blvd N to 160 Avenue N

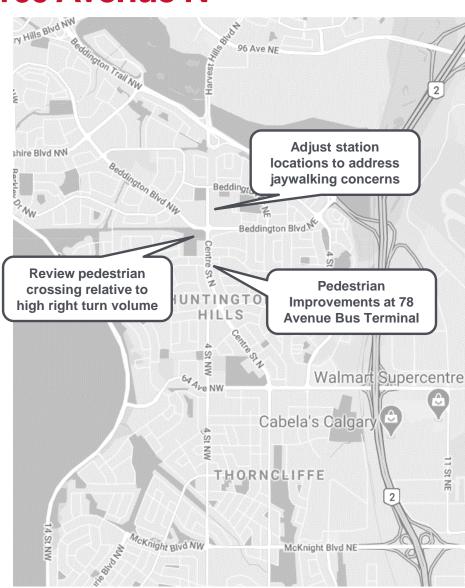






## **Multimodal Improvements Under Consideration** McKnight Blvd N to 160 Avenue N







January 2021

# North Central Mobility Study Neighbourhood Review





## **Objectives**

- Review the potential impacts to all modes within the neighbourhoods adjacent to the Centre Street corridor with the addition of Green Line
- Gather input from community members on current state of traffic calming, active modes of transportation, and safety in the community
- Two key goals in undertaking traffic calming are Safety and Liveability



#### **Active Transportation Network review**



- Green Line Mobility Study 5A Bikeway Network Legend
- Existing Bikeways
- Neighbourhood GreenwayShared Lane
- Off Street Path
   Does not meet 5A network principles
- 5A Network -
- Recommended Facilities
  --- Recommended
- On-Street Bikeway
  --- Recommended
  Off-street Pathway

- Access to the station and through the neighbourhood needs to be comfortable and safe for all modes including cyclists and pedestrians
- Gaps in existing network noted on 40/41 Avenue N, 32 Avenue N, 4 Street NW
- Important crossings for people walking to be prioritized



## We are building off what you have told us

- Thousands of Calgarians have shared their thoughts about neighbourhood traffic, such as:
  - Concerns about McKnight Blvd, Edmonton Trail, and Centre Street being congested
  - Concerns about speed of vehicles on major roadways
  - Need for safe crossings of Centre Street
  - Desire for traffic calming

"Think about the neighborhood access and traffic calming perspective...her kids play on the street and she's completely okay with it now, but with Green Line, things will change."

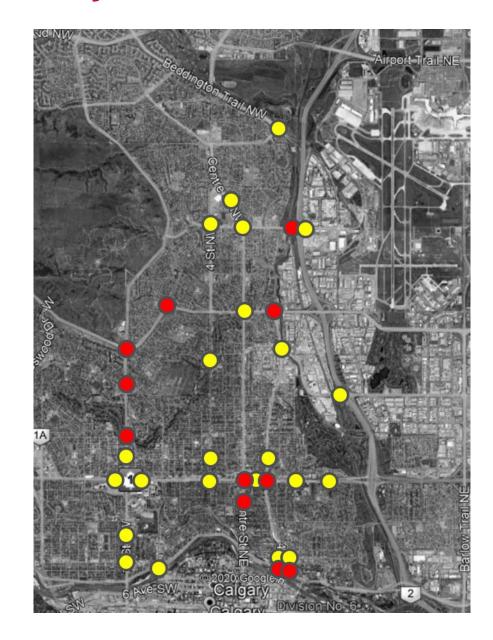
"We need more, better, and safer intercommunity cycling networks. I can't get out of our neighbourhood easily on my bike hauling my young son in his trailer. It's too dangerous to cross the major roads: 14th St NW, Centre St, Ed. Trail., 16th Ave. etc."



#### **Future Focus Areas**

Based on the analysis that was completed, we will focus our efforts on the following areas for when Green Line is operational:

- 4 Street NW
- Centre Street N
- Edmonton Trail NE
- 20 Avenue N
- 32/30 Avenue N
- 40/41 Avenue N
- McKnight Boulevard





January 2021

# **North Central Mobility Study**





## What's changing?

- The Green Line LRT will operate within the median of Centre Street N, reducing the road from two lanes in each direction (three during peak periods), to a single lane in each direction south of 16 Avenue N
- The North BRT is examining the potential of providing bus only lanes along Centre Street N between 16 Avenue N and McKnight Boulevard N thus reducing Centre Street N from 2 lanes in each direction for all vehicles to 1 lane in each direction



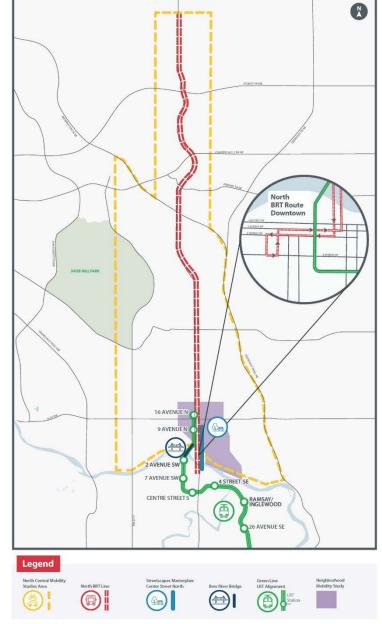
#### What do we want to understand?

- How will vehicular travel patterns change? What impacts will this have on all modes of travel?
- What improvements need to be made for vehicular traffic? Active modes?



#### What's our approach?

- Information from the City's Regional Transportation Model (RTM) and location-based data have been used in estimating future travel patterns with Green Line and with and without BRT lanes north of 16 Avenue N.
- Congestion and delay issues for travel are identified and mitigation measures are developed.
- The current travel conditions for all modes have been assessed within the immediate vicinity of Centre Street N.
- The future traffic volumes are being used to identify potential challenge areas as a result of the change in traffic patterns or where existing issues are made worse.

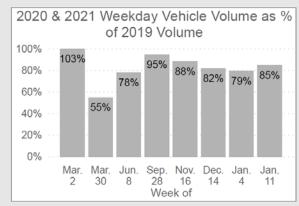




#### Impacts of COVID-19

- Over the past year there have been significant reductions in traffic volumes and transit ridership.
- Transit ridership saw a significant drop due to the Pandemic.
   An increase happened during fall 2020 once schools started and a decrease happened again late December and early January.
- Traffic volumes have rebounded more quickly but have varied based on the roadway.
- It is anticipated that there will be changes in the way we work and travel post-pandemic, however for purposes of the Mobility Study we have conducted our assessment based on a return to pre-pandemic traffic volumes by opening day of Green Line.

#### McKnight Blvd. West of 36 St. NE

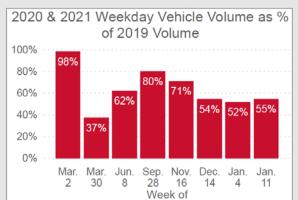


Vehicle Volume Volume Jan. 11-15, 2021

85%

of 2019 Weekday Volume

#### Louise Bridge



Downtown Vehicle Volume Jan. 11-15, 2021

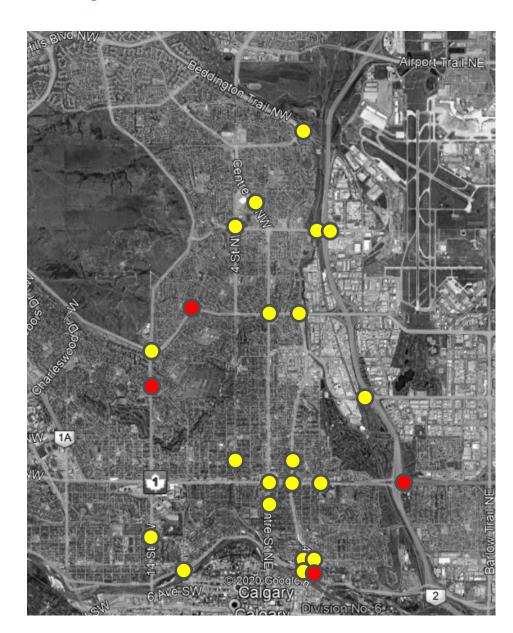
**55%** 

of 2019 Weekday Volume



#### Existing conditions analysis: Hot Spots

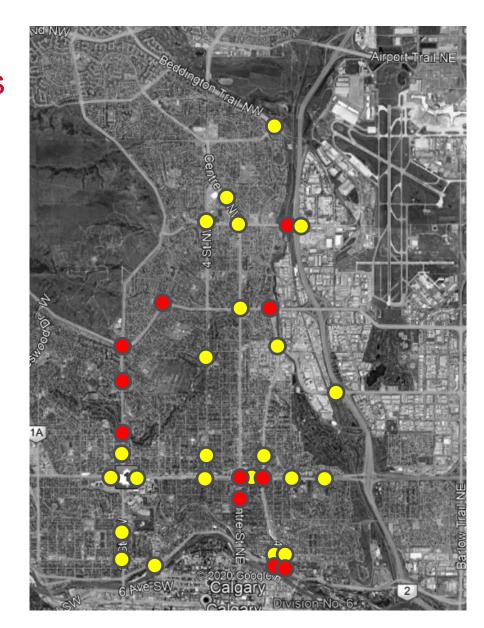
- Analysis is based on volumes available pre-COVID
- Intersections with at least one movement with congestion and delay issues
- Intersections with numerous movements with congestion and delay issues





#### Future conditions analysis: Hot Spots

- Significant decrease in traffic on Centre Street N (Upper Deck)
- Significant increase in traffic on Edmonton Trail N
- Modest gain in traffic on Deerfoot Trail (Deerfoot Trail is already operating close to capacity)
- Significant increase in traffic on 14 Street N
- Modest increase in traffic on 10 Street N
- Intersections with at least one movement with congestion and delay issues
- Intersections with numerous movements with congestion and delay issues





## Future conditions – potential mprovements

- Edmonton Trail NE
  - Added/lengthened turn lanes at McKnight Boulevard NE and 16 Avenue NE
  - Signal timing adjustments throughout the corridor
  - Additional signalized intersections south of 16 Avenue NE to improve neighbourhood access and pedestrian safety
- 14 Street NW
  - More in-depth review of the corridor will be conducted to determine if turn lanes can be lengthened/added to improve operations at key intersections
  - Signal timing adjustments throughout the corridor
- 16 Avenue N
  - Signal timing adjustments throughout the corridor
  - Potential modifications to north/south approaches will be examined



## Help shape your communities



Learn more and share your input: engage.calgary.ca/greenline You can also join the conversation on social media: #GreenLineYYC



# Thank you!

We appreciate your participation and invite you to stay involved at: <a href="mailto:engage.calgary.ca/greenline">engage.calgary.ca/greenline</a>

