PUBLIC ENGAGEMENT
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WELCOME

CENTRE LIGHT RAIL TRANSIT (LRT) STUDY

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WHAT IS THE CENTRE LRT STUDY?

- A two-year study to plan a new route that will add an east/west link in the City's LRT Network Plan
- The route will connect Downtown, the University of Alberta, Strathcona, and Bonnie Doon
- The study has two phases: Route Selection and Concept Plan
- Both the route and concept plan will be presented to City Council for approval:

Preferred Route — **Spring 2018**

Preferred Concept Plan — **Early 2019**

- The concept plan identifies where the stops will be located, and where the tracks and platforms will be positioned

WHERE WE ARE IN THE STUDY

What we know about the preferred route:

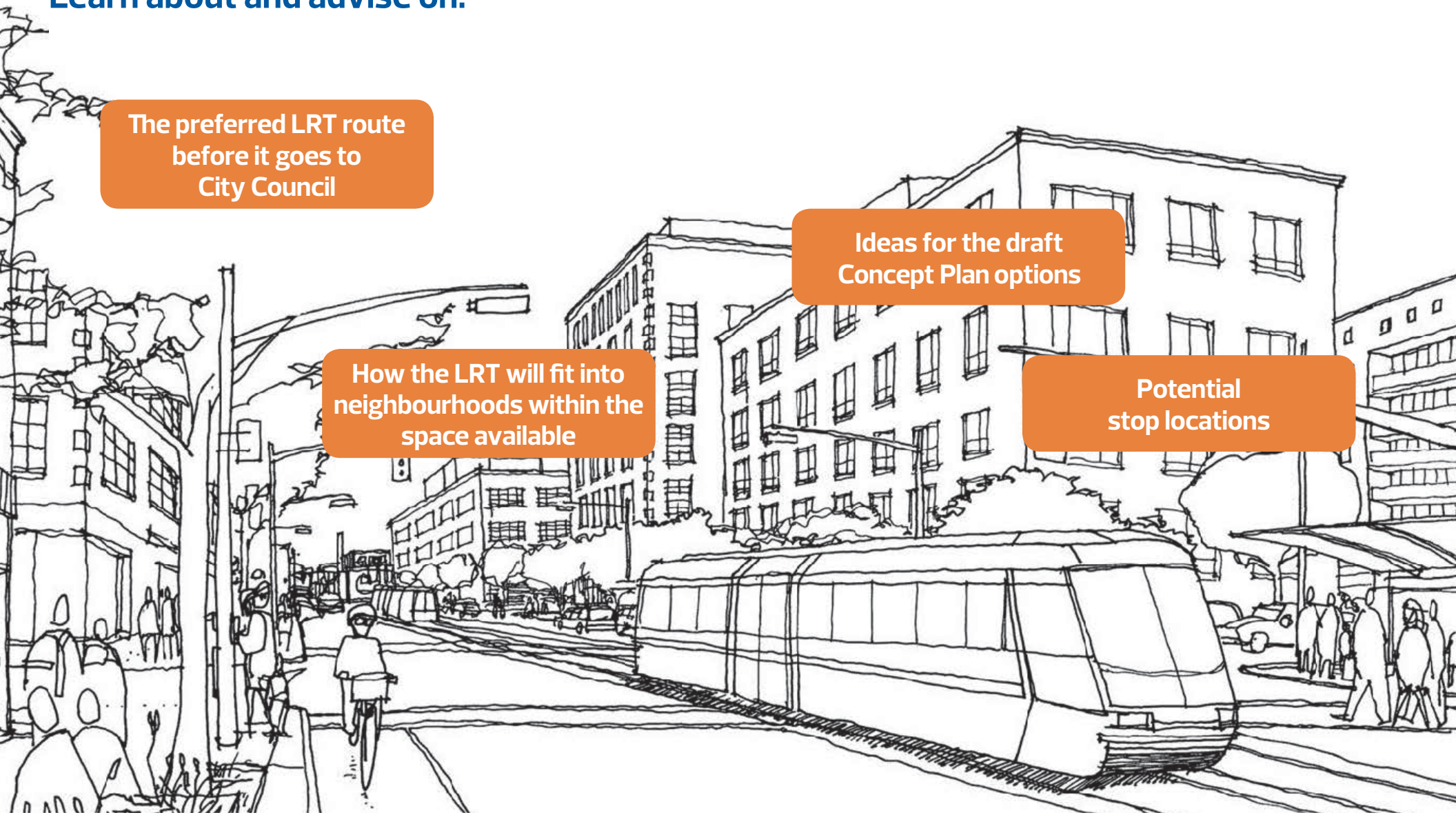
- It will connect with the Valley Line Southeast LRT in Bonnie Doon
- It will connect with the Valley Line West LRT in Downtown
- It will cross the North Saskatchewan River on a new bridge, between the High Level Bridge and the Dudley B. Menzies Bridge
- A low-floor, urban-style LRT system will be used

What we need to determine next:

- Stop locations
- Track alignment – where the tracks fit within the roadway
- Connectivity to transit, pedestrian and bicycle networks
- Community fit: how the LRT will fit into neighbourhoods within the space available
- Modified business and community accesses
- Necessity of grade separations of LRT from traffic, above or below
- Details and exact placement of the new bridge

TONIGHT'S PURPOSE AND OPPORTUNITY

Learn about and advise on:



- The preferred LRT route before it goes to City Council
- Ideas for the draft Concept Plan options
- How the LRT will fit into neighbourhoods within the space available
- Potential stop locations

BACKGROUND: WHY LRT?

As Edmonton grows and neighbourhoods evolve, there will be greater demand for more housing options, and supporting facilities, amenities and services. This presents both challenges and opportunities.

To help ensure future growth is sustainable and contributes to the vibrancy and prosperity of Edmonton, this study focuses on:

- **Transportation and land use integration**
  Ensuring LRT is focused around and aligned to land use.
- **Access and mobility**
  Ensuring access to key destinations and connections to other methods of travel.
- **Sustainability**
  Ensuring LRT enhances and creates sustainable, livable communities.
- **Economic vitality**
  Ensuring LRT provides an economic benefit to the neighbourhoods and their businesses.

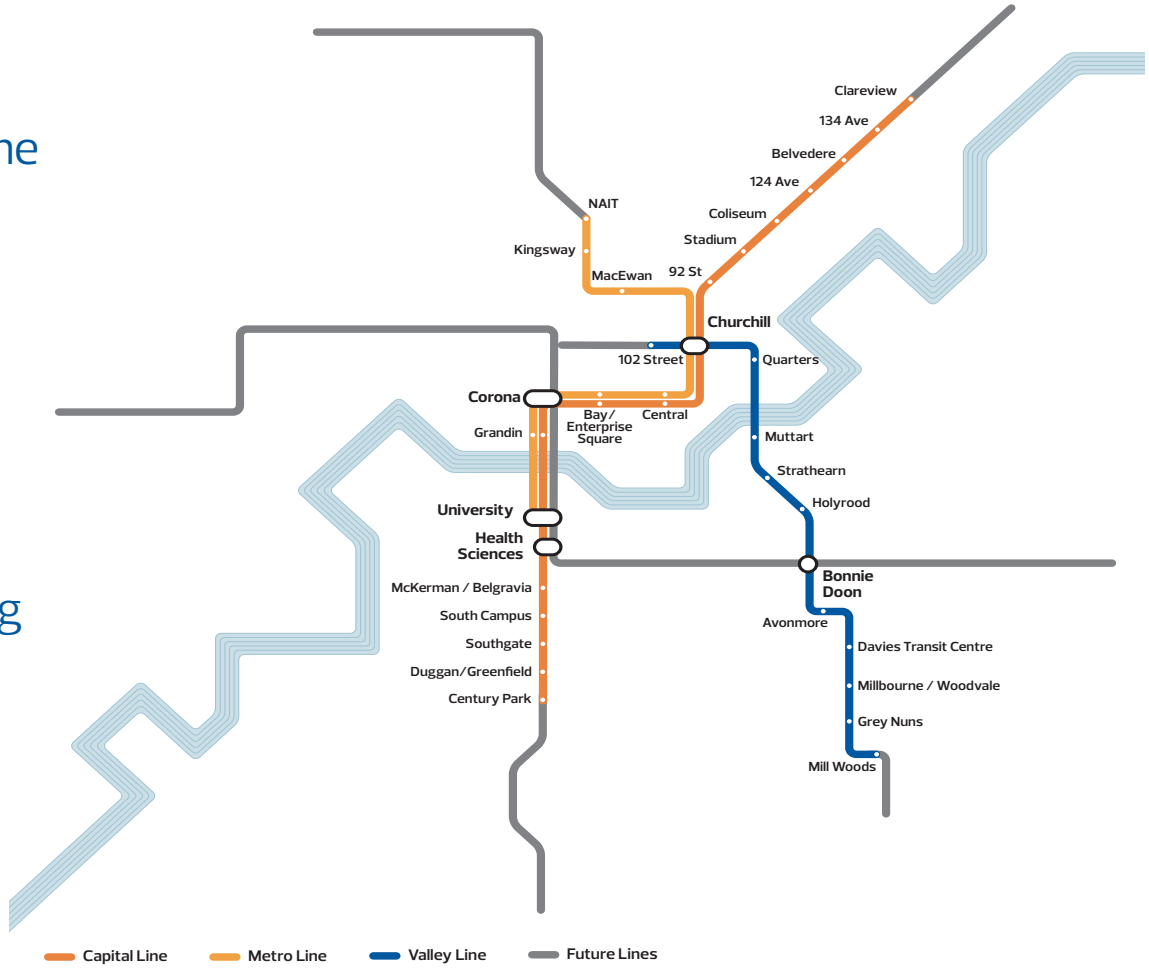
LRT NETWORK PLAN

The 2009 City Council approved plan:

- Defines the future size and scale of Edmonton's LRT System
- Includes the expansion of the Capital Line to the north and south
- Expands the Metro Line to St. Albert city limits
- Includes the Valley Line to the west and southeast
- Provides an east/west route connecting to downtown (Centre LRT Study)

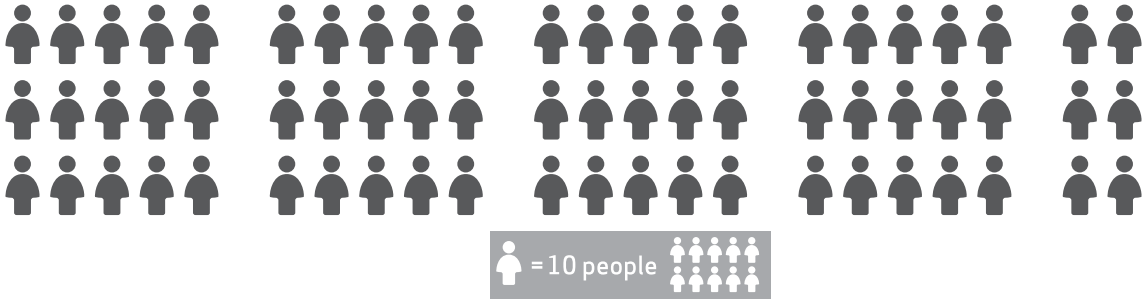
The future LRT network creates the opportunity for seamless or one transfer connections via LRT and/or bus to all quadrants of the city.

LRT Network Plan map



PEOPLE CARRYING CAPACITY

TRANSPORTATION: FROM ROADS TO RAILS



660 people

(based on existing LRT system design guidelines)

=

600 cars

(based on 1.1 person per vehicle occupancy during peak periods)

=

One 4-car train

Approximate LRT train car capacity. Low-floor LRT train cars may be able to carry up to 250–300 people each.

URBAN-STYLE LRT

Urban-style LRT:

- Integrates within existing communities
- Operates in pedestrian-oriented communities
- Is designed to complement existing neighbourhood character
- Uses and fits within existing roadways
- Includes purposeful landscaping, streetscape, and architectural features
- Influences local neighbourhood development
- Supports livability and wellbeing of communities

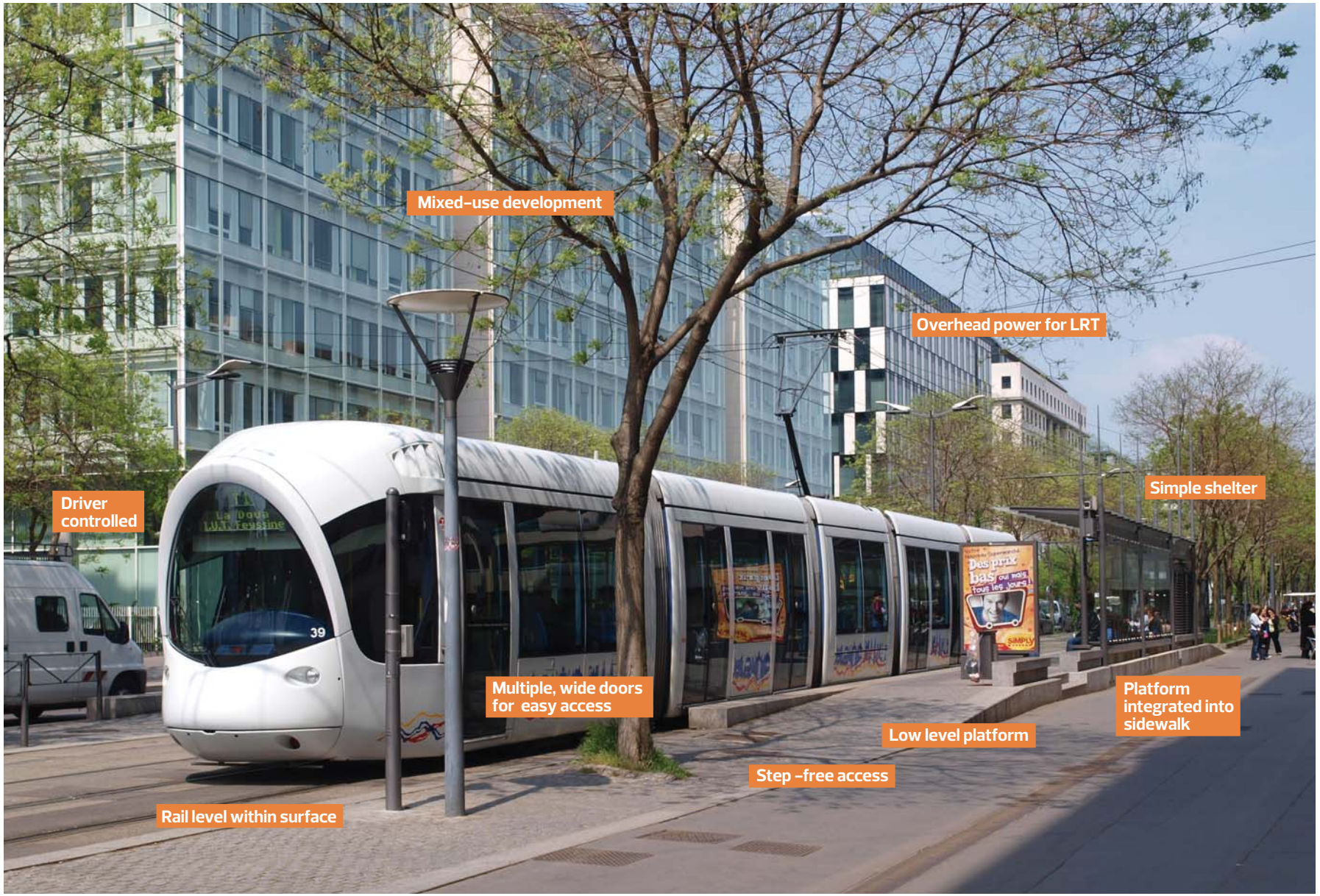
All new LRT development and expansion in Edmonton will be urban-style, whether it is a high-floor or low-floor system.

Pedestrian-oriented

Complement urban form

Streetscape

Typical Low-Floor LRT



LOW-FLOOR VS HIGH-FLOOR LRT

	Low-floor	High-floor
In Edmonton	Future Valley Line	Existing LRT System
Where	Predominantly operates at street-level in dedicated lanes	Operates in dedicated rail corridors
How	Uses traffic signals to operate with traffic	Uses railway crossings to cross intersections
Stops	Stops located at street level, curb height	Stops at large dedicated stations with high platforms
Links	Links directly to transit, pedestrian, and bicycle connections	Links via stairs, escalators and elevators to transit, pedestrian, and bicycle connections
Accessibility	Provides universally accessible and step free access from platform to vehicle	Provides universally accessible and step free access using a ramp from platform to vehicle

Operates in dedicated lanes

LRT and Bus link

Universally accessible

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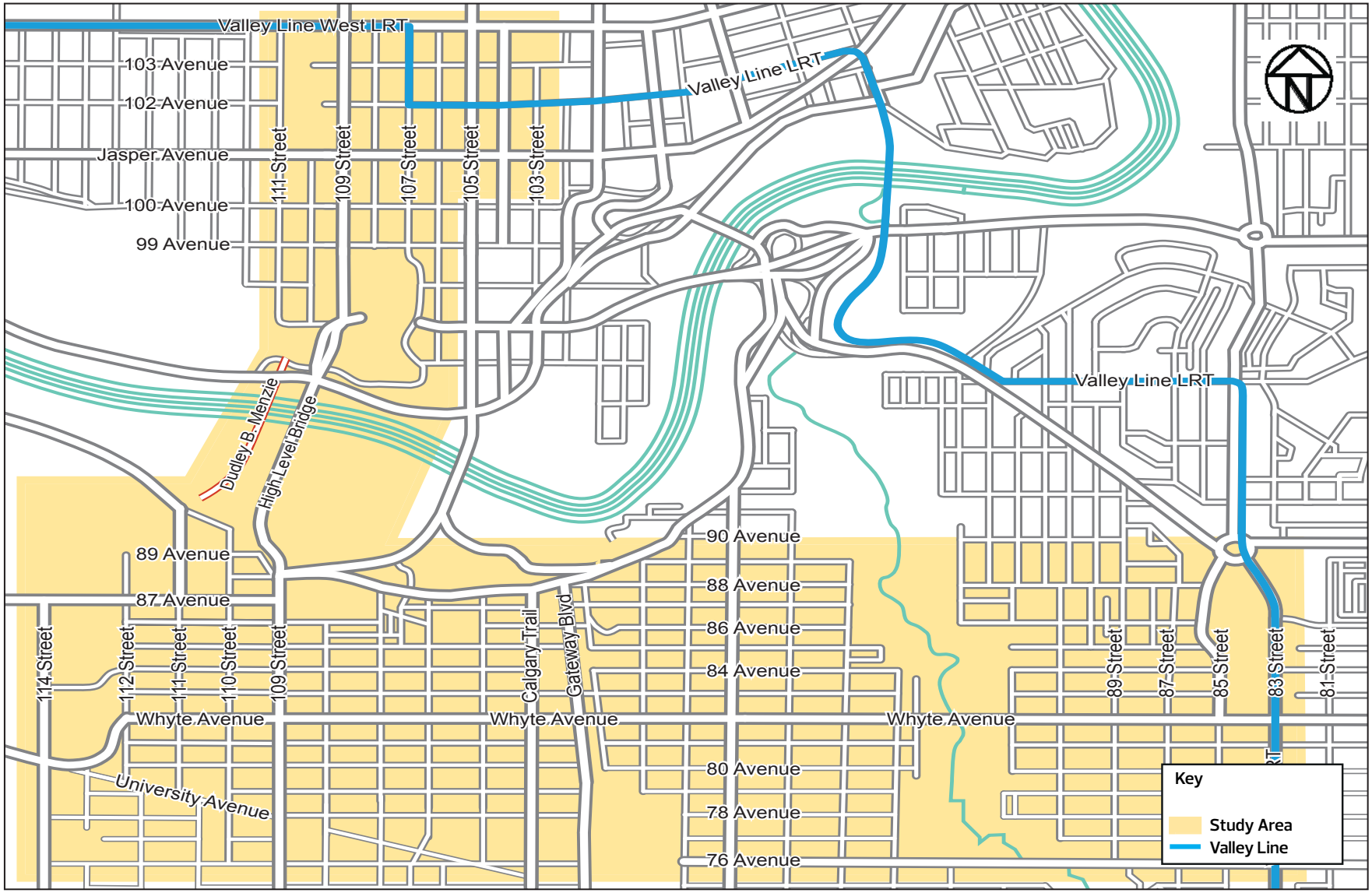
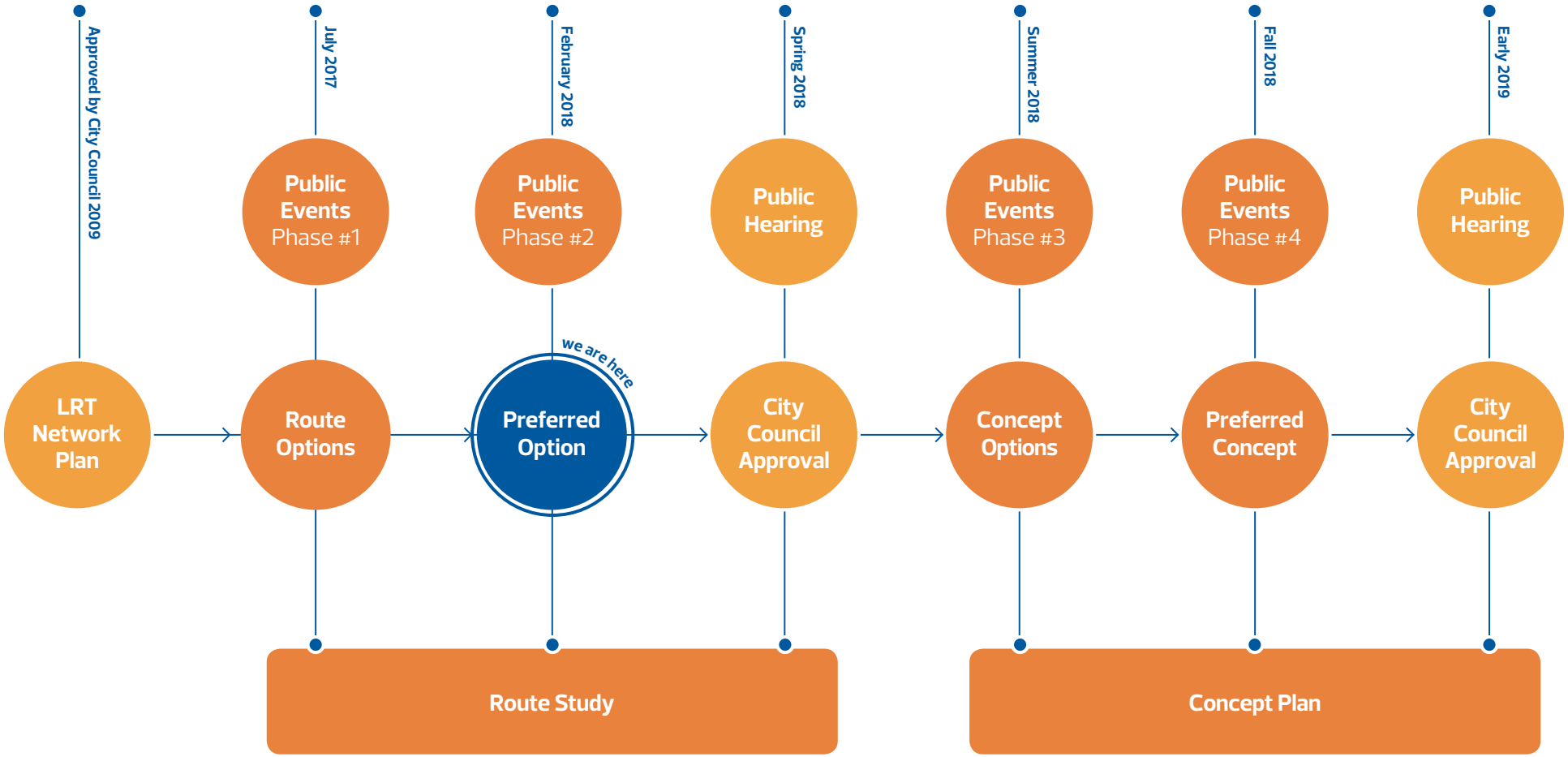
STUDY AREA


Valley Line West LRT
Valley Line LRT
Valley Line LRT
103 Avenue
102 Avenue
Jasper Avenue
100 Avenue
99 Avenue
111 Street
109 Street
107 Street
105 Street
103 Street
Dudley B. Menzie
High Level Bridge
90 Avenue
89 Avenue
88 Avenue
87 Avenue
86 Avenue
84 Avenue
80 Avenue
78 Avenue
76 Avenue
114 Street
112 Street
111 Street
110 Street
109 Street
Calgary Trail
Gateway Blvd
89 Street
87 Street
85 Street
83 Street
81 Street
Whyte Avenue
Whyte Avenue
Whyte Avenue
University Avenue
N
Key
Study Area
Valley Line

WHERE ARE WE IN THE STUDY?



SHARE YOUR VOICE **SHAPE** OUR CITY

What We Heard – Phase 1 – June to October 2017 – Public engagement consultation with Edmontonians, property owners, businesses, organizations and other stakeholders was conducted to gather local knowledge and to better understand local issues, opportunities, concerns and perspectives on the future LRT route.

Engagement activities included: Public events (3 – 445 Attendees), public survey (774 completed), street team outreach (9 pop-up events), business surveys (55 completed), stakeholder meetings (30).

What we heard	City's response
Consider the impacts to drivers/vehicle traffic.	
• We are concerned that LRT will add to vehicle congestion, delays and accessibility. Where will traffic go if the LRT route impacts traffic flow? • Help us understand how LRT can reduce vehicle congestion?	• Impacts to general traffic were considered in determining the preferred route, and will continue to be considered as the concept plans are developed. • A focus of the LRT study is to maximize the people carrying capacity of the route. • An LRT line can carry the equivalent of 8 lanes of traffic, per direction. • The equivalent of removing up to 5,000 cars off the road network in a single peak hour.
Route needs to take us to key destinations.	
• We want the LRT route to take transit users to key destinations including: Whyte Avenue, the University of Alberta, Bonnie Doon, Downtown and The King's University.	• The preferred route will serve Bonnie Doon, Whyte Avenue, the University of Alberta campus and Campus Saint Jean, the Alberta Legislature and connect with downtown. • It will provide seamless connections to existing transit and LRT services. • An LRT route to serve East Edmonton has been deferred to a future study.
Main east/west connection should go on Whyte Avenue.	
• Consider Whyte Avenue as a preferred route for the main east/west connection; 76 Avenue is considered too far from key destinations and too residential for LRT.	• Whyte Avenue has been identified as the preferred east/west LRT route.
Use existing infrastructure when possibile (such as the High Level Bridge).	
• Consider using existing infrastructure (High Level Bridge) to cross the river; give thought to street car preservation.	• The High Level Bridge was the initial preference for a river crossing. After investigation it was determined the bridge, with or without extensive upgrades could not support the additional long term load of LRT trains. Any associated upgrades would also not be possible due to the heritage designation of the bridge. • The study examined alternate bridge locations and recommends a new bridge between the High Level Bridge and Dudley B. Menzies Bridge.
Consider the impacts LRT will have on residents and their property.	
• Consider residential impacts such as neighbourhood disruptions, increased traffic (parking and shortcutting), impeded access, increased noise from LRT operations, expropriation and decreased property values.	• Impacts to property and neighborhoods were considered in determining the preferred route, and will continue to be considered to minimize the impacts on property as concept plans are developed.
Good connections between this LRT route, bus routes, and other LRT lines is important. Consider pedestrian & cyclist connections.	
• Consider connections to other modes of transit such as bus routes and other LRT lines. • Consider how pedestrians (sidewalks, crossings) and cyclists (bike paths, bike lock up areas) will connect to and use LRT.	• The new route will provide transit connections to Bonnie Doon, University, Grandin, and Corona LRT stations, Downtown and adjacent bus routes. • During concept plan development the study will identify stop locations and examine how best to connect these to the pedestrian and bicycle network.

What we heard	City's response
The safety of transit users and of those using the space around the LRT is important.	
• Consider the safety/security of transit users both when accessing and riding the LRT. • Consider the safety of pedestrians (children, elderly) and cyclists using public spaces around/across the LRT infrastructure.	• Safety is of the highest priority; the design of stops will be open and well-lit. Stops will include security cameras and emergency phones to provide a safe environment for passengers. • The LRT will be designed to clearly mark the pedestrian/passenger areas and access points, as well as how, when and where these cross the LRT.
Environmental impacts should be avoided or minimized.	
• Will there be impact to mature trees? Especially in older communities? • Consider impacts to the Mill Creek Ravine, the River Valley and green spaces/parks in general.	• The selection of the preferred LRT route considered possible environmental impacts. During the next phase of the study (Concept Design), we will identify how best to minimize and mitigate any identified impacts. • Trade-offs in some segments of the route, such as Whyte Ave, may result in impacts to trees. At the point of construction, any impacts to trees would follow the City of Edmonton's Corporate Tree Management Policy (C456A), which directs specific tree protection, preservation, and replacement guidelines for construction.
How the LRT will function and service the community is important to think about now.	
• Consider how the LRT will service communities. Consider its efficiency, frequency, reliability, affordability and how to maximize ridership. Speed of service needs to be a faster option than driving.	• The focus of low-floor LRT is to provide reliable, community-focused transit, that forms part of the City's overall LRT Network Plan to enhance travel opportunities.
Parking accommodations are important – both for transit users, residents and area visitors.	
• Consider park and ride and other areas to park near all stops along route; transit users should not be using residential areas to park. • Will area parking be reduced by LRT infrastructure?	• Park and Ride is not being considered as part of the Centre LRT Study. A separate city-wide Park and Ride strategy is being developed by the City. • Potential impacts to parking will be considered in developing the concept plan.
Preserving the character, aesthetics and historical buildings along the chosen route is important.	
• Consider the importance of preserving the character of the neighbourhoods the LRT will be passing through. Will the look, feel and walkability of the area as well as historic buildings, homes and trees be impacted? Whyte Avenue is of particular concern.	• Low-floor, urban-style LRT provides the opportunity to more seamlessly integrate LRT and transit within a community. The impact on neighborhoods and historic resources were considered in determining the preferred route. • In the subsequent concept design, we will continue to consider how to make best use of space to provide for all users.
Consider area businesses in planning.	
• Consider the impacts to small/other businesses both during and after construction.	• The study has and will continue to consult with businesses to address and resolve any issues identified.

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HOW DID WE DECIDE ON A ROUTE?

We considered criteria across the categories below based on established City Guidelines and City Policy

Transportation

Does the route integrate with the existing transport network and increase transportation choice?

Financial

Is the route affordable, cost effective and financially sustainable?

Business, Community and Social

Does the route help create complete and livable communites that support businesses?

Sustainable Urban Integration

Does the route support integrated transportation, urban planning and urban design?

Environment

Does the route limit the impact on the city's natural environment?

Feasible to Build

Is the route geared towards implementation?

The criteria were considered together with what we heard from the public, businesses and stakeholders, and technical analysis.

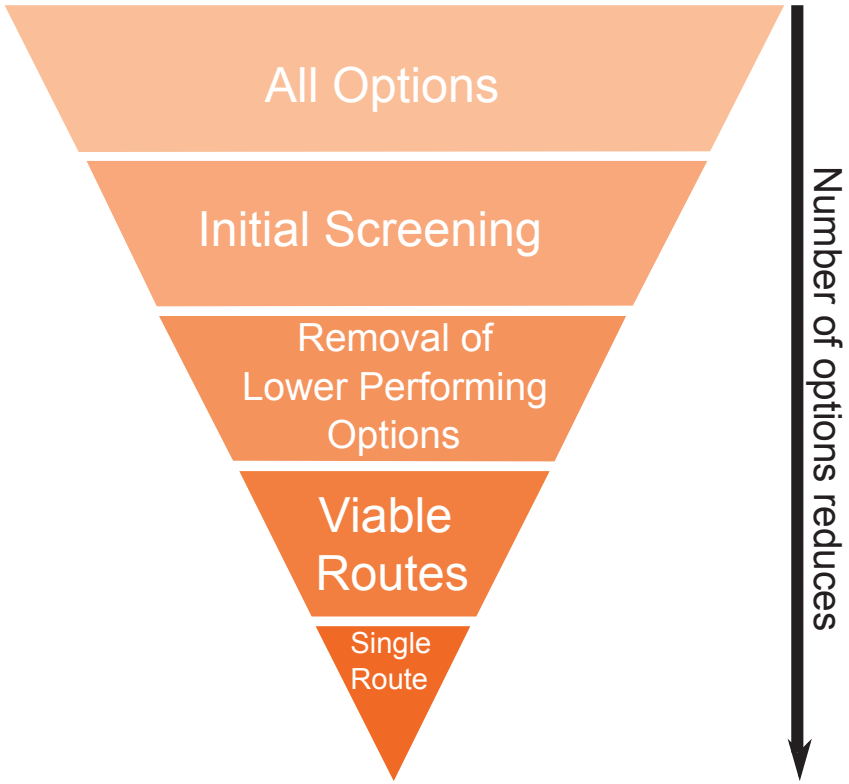
The City will continue to explore options and possible approaches to mitigate any issues raised by the public and stakeholders prior to City Council approval of the route.

MULTIPLE ACCOUNT EVALUATION

To identify the preferred LRT route, a multi-step process was used. This considered all routes in the study area, including those identified by the public and stakeholders.

The phased evaluation included:

- Initial screening
- Removal of lower performing routes
- Viable routes
- Preferred route



INDIGENOUS COMMUNITIES

The City of Edmonton is committed to keeping First Nations and Métis communities, with historic and cultural connections within city boundaries, informed and engaged when projects intersect with Indigenous concerns. Building on the City's previous engagement with Indigenous communities, the City is reaching out to share the status on four current Light Rail Transit (LRT) projects/studies, as well as the Heritage Valley Park and Ride.

Over the past year, the City has engaged Indigenous communities on projects such as:

- **Valley Line LRT Southeast** – Site Visits and Monitoring
- **West Rossdale River Crossing** – Heritage Interpretive Design Site Visits and Workshops
- **Breathe** – Open Space Master Plan and In-community Meetings
- **Ribbon of Green** – River Valley Plan Workshop and In-community Meetings

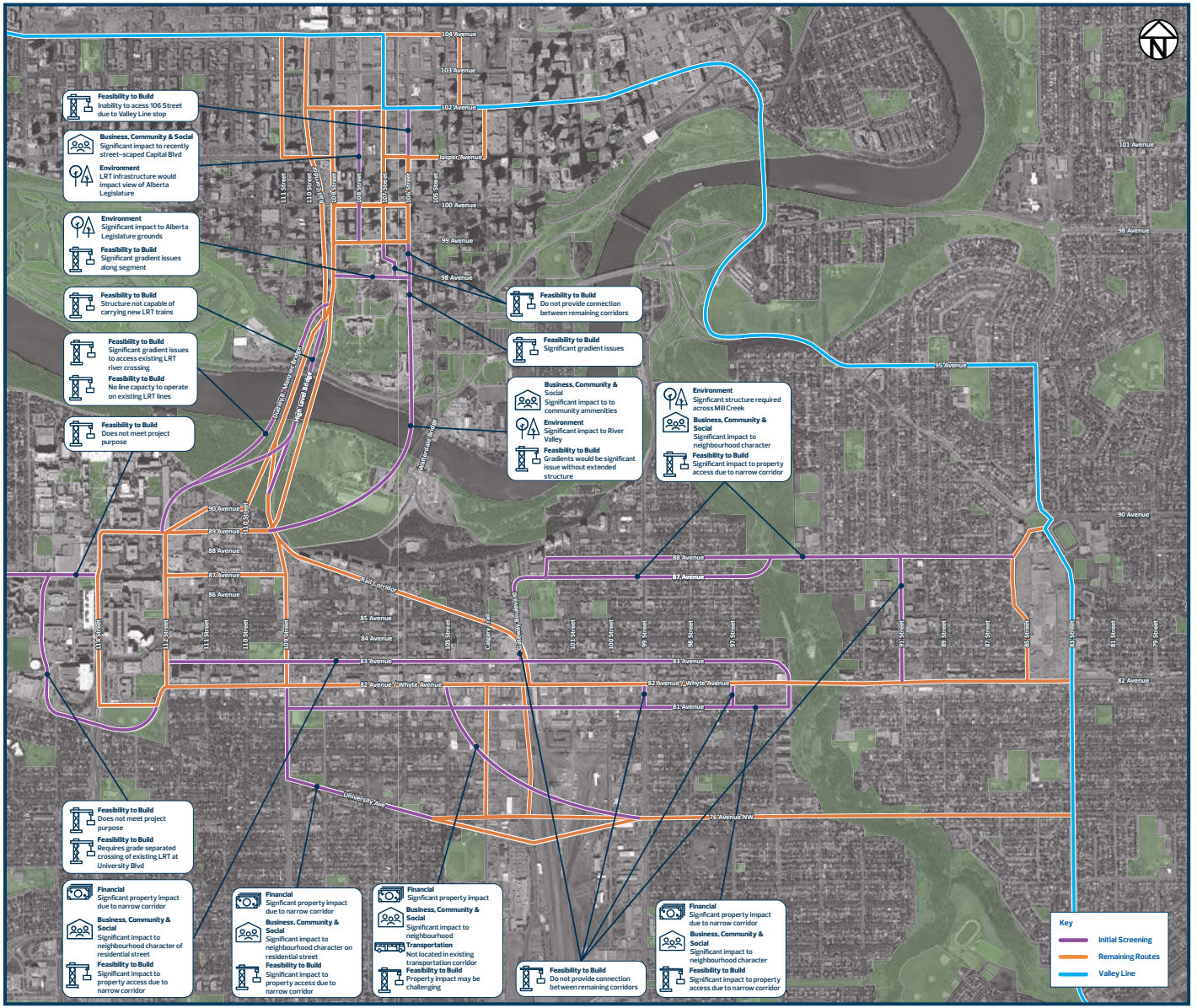
From September to December 2017, the City met with First Nations and Métis communities to seek input on how, together, we may continue to deliver affordable, accessible, and environmentally sustainable public transportation in Edmonton.

INITIAL SCREENING

An initial screening process was conducted to remove routes that could not be used due to significant feasibility issues.

Reasons include:

- Gradient too steep
- Narrow route width
- Constructability issues
- Environmental impacts

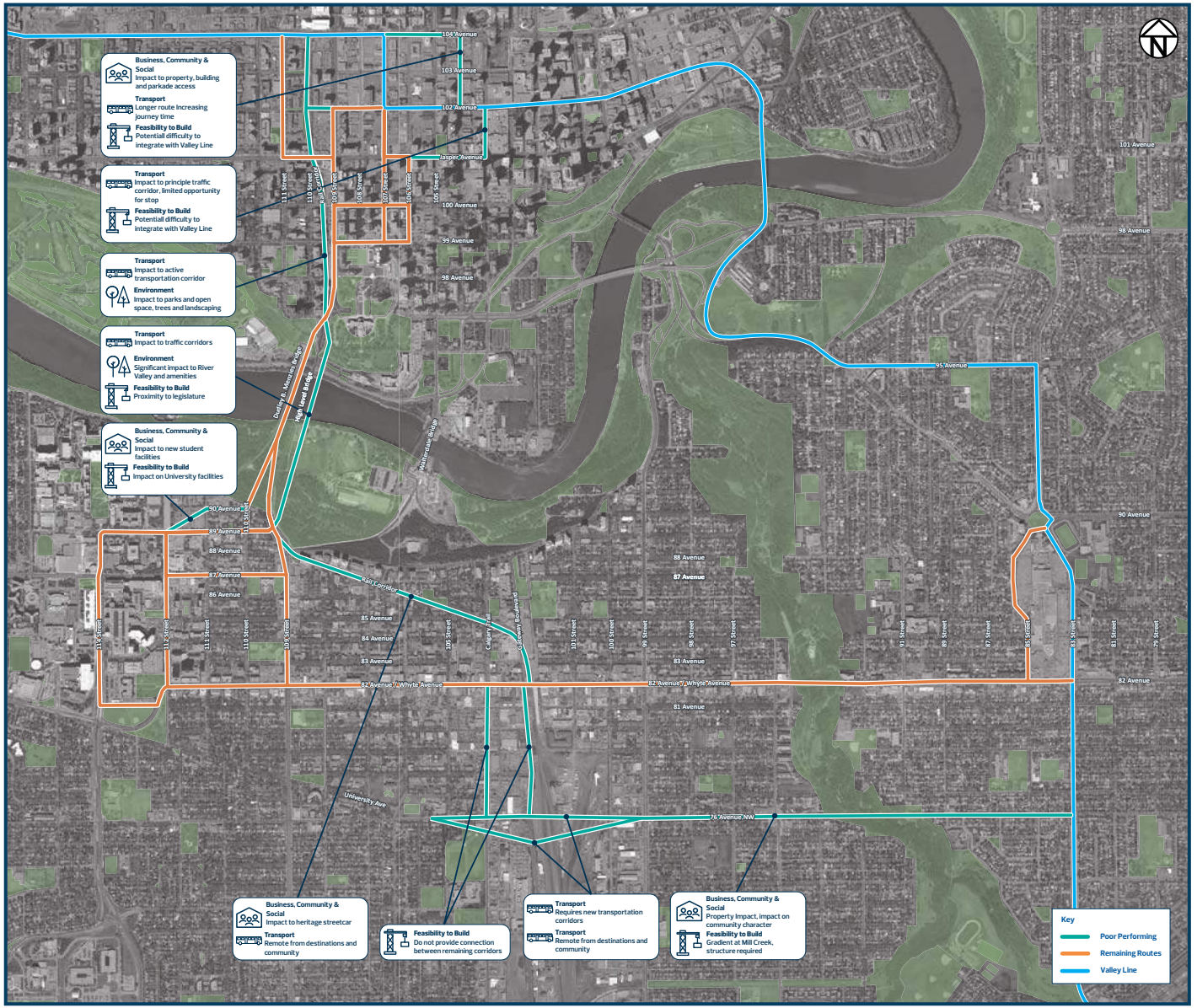


REMOVAL OF LOWER PERFORMING ROUTES

A second screening process identified routes that were lower performing.

Reasons include:

- Extended route length/travel time
- Neighbourhood impacts
- Constructability issues
- Environmental impacts

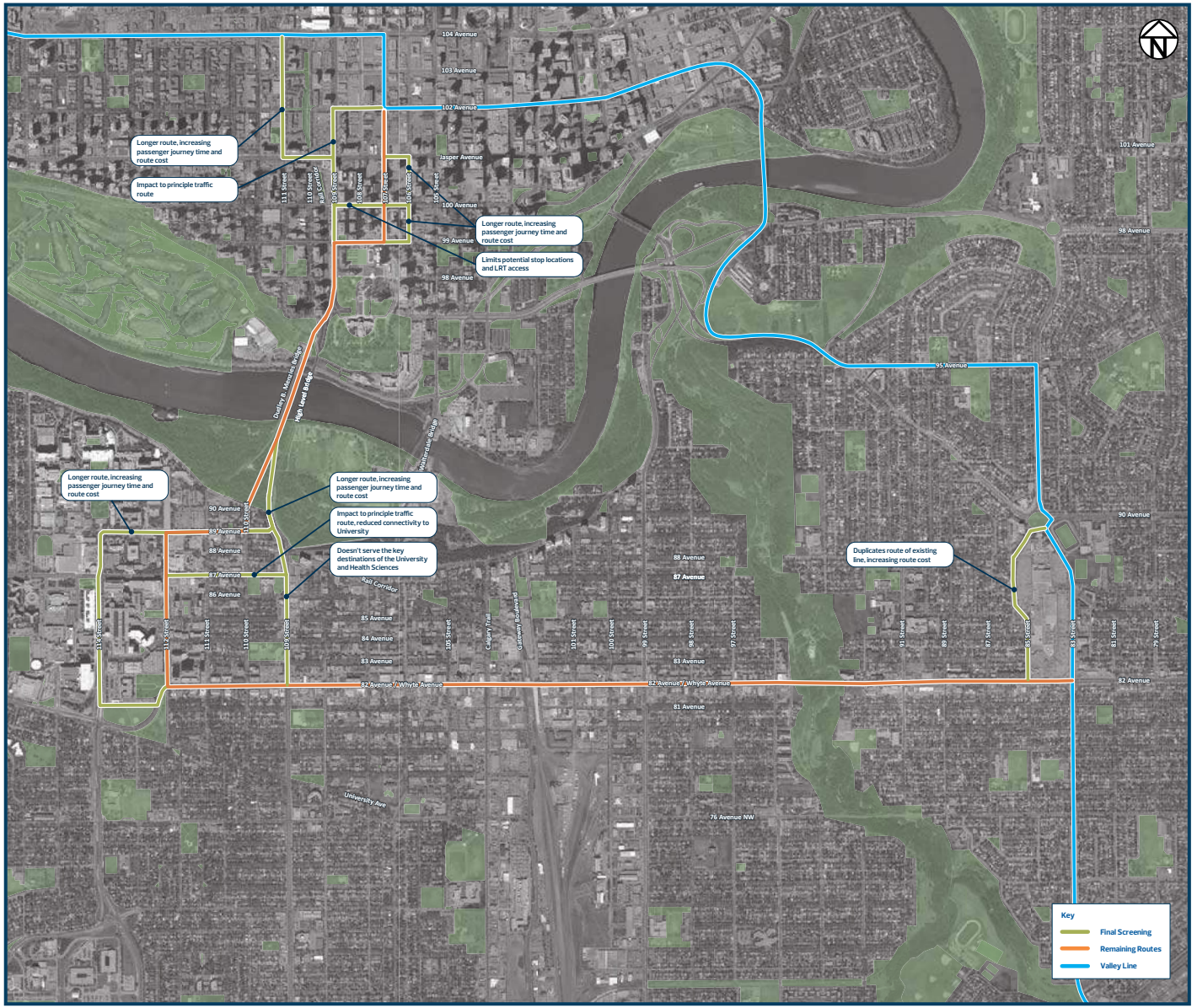


VIABLE ROUTES TO PREFERRED ROUTE

The remaining routes were evaluated to identify a preferred route that best meets the City's desired study outcomes.

Reasons sections were discounted include:

- Extended route length/travel time
- Environmental, property or traffic impacts

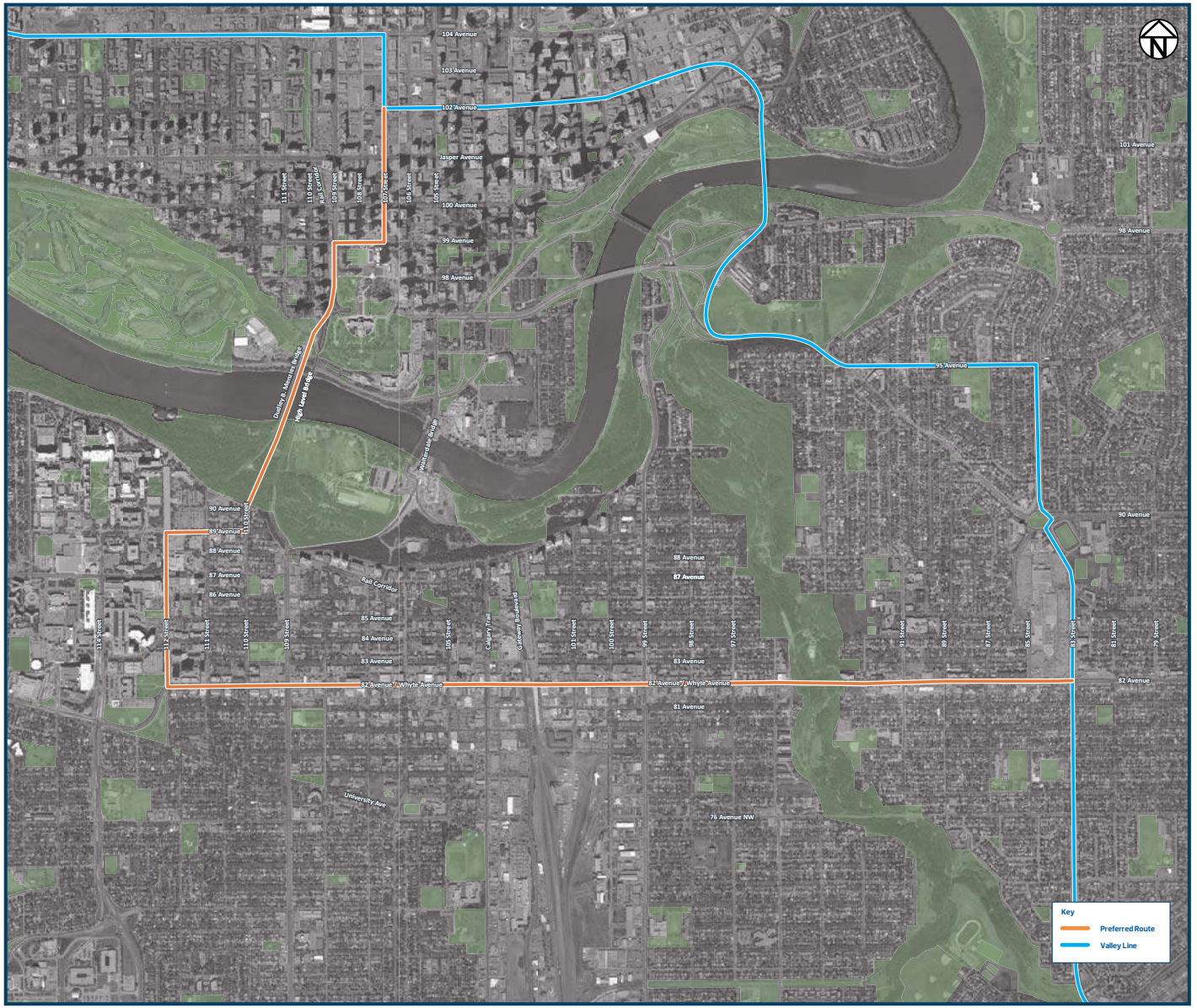


PREFERRED ROUTE

The preferred route as shown, from Downtown to Bonnie Doon is proposed to use:

- 107 Street
- 99 Avenue
- West of 109 Street
- New Bridge
- 110 Street
- 89 Avenue
- 112 Street
- 82 Avenue/ Whyte Avenue

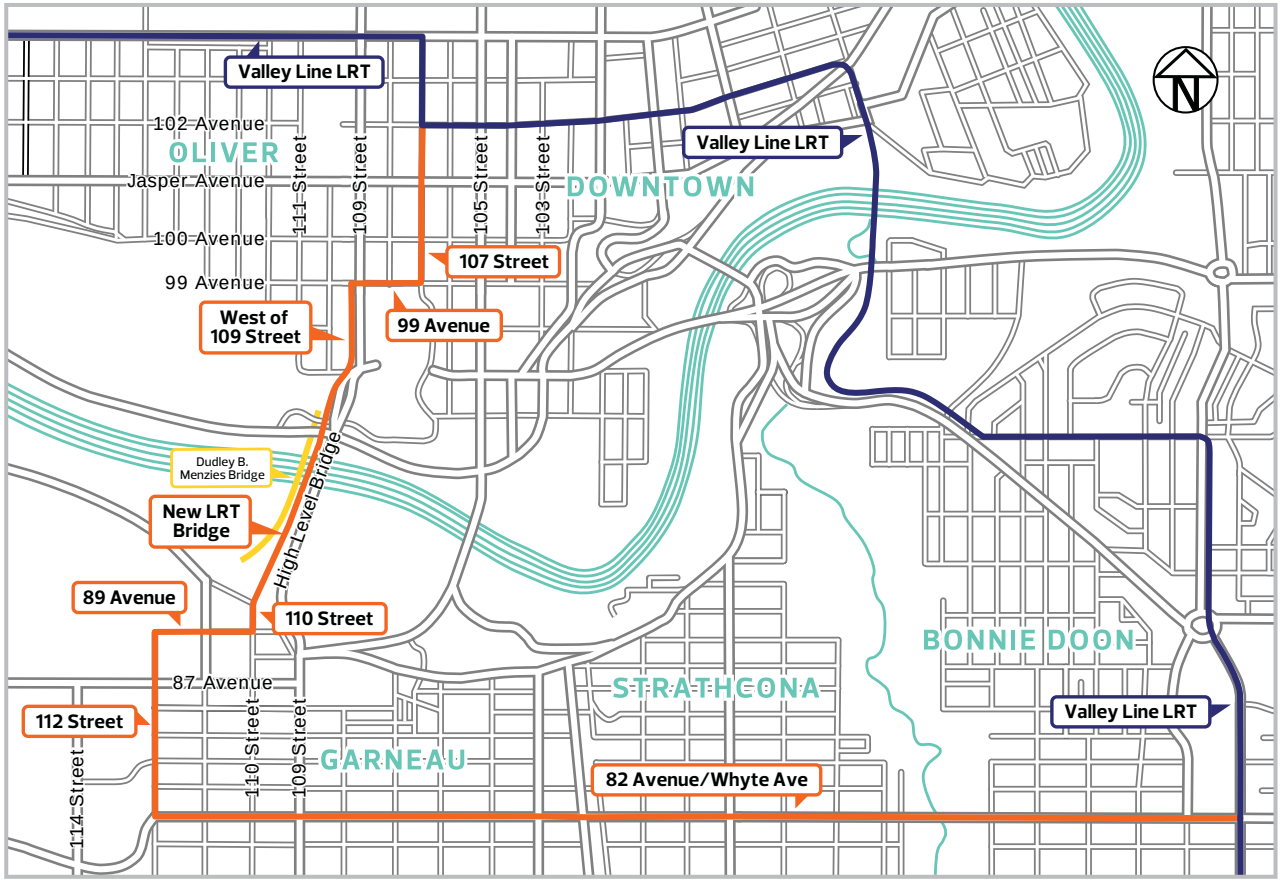
The City will continue to explore options and possible approaches to mitigate any issues raised by the public and stakeholders prior to City Council approval of the route.



PREFERRED ROUTE

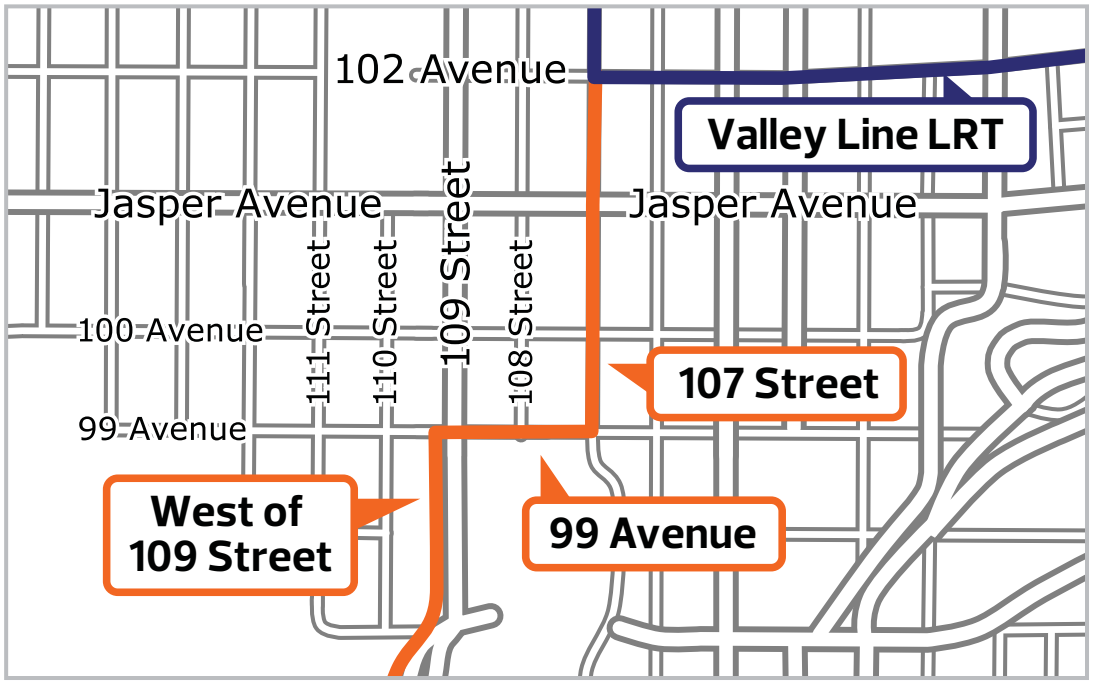
Benefits of Preferred Route

- Connects University of Alberta North and Saint Jean Campus
- Provides direct link between downtown and Old Strathcona
- Supports Whyte Avenue, 109 Street and downtown businesses
- Provides a significant increase in transit capacity within an existing high transit use corridor
- Supportive of the existing higher density and vibrancy along the route
- Supportive of planned CP Rail Yard redevelopment and Bonnie Doon redevelopment
- Encourages walking and transit
- Removes vehicle traffic and reduces need for parking in old Strathcona
- Provides opportunity for wider connectivity of the LRT network to and from the route
- Supportive of the development of the wider bicycle network and integration
- Provides seamless or one transfer connections to all quadrants of the City



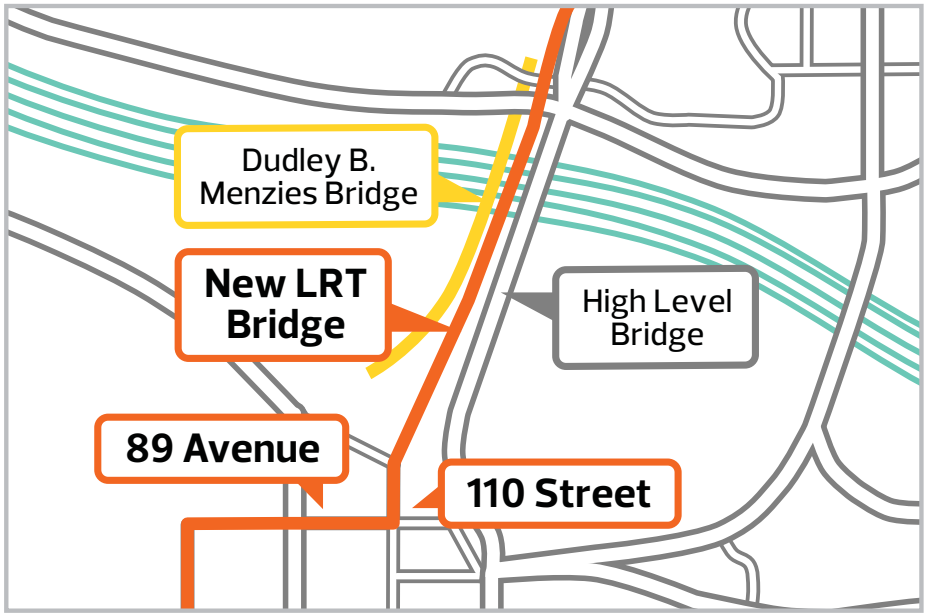
DOWNTOWN ROUTE SEGMENT

- Connects to Valley Line West LRT at 107 Street/102 Avenue (details to be determined).
- Provides transfer connection to Capital and Metro lines at Corona Station.
- Provides low-floor connections to Alberta Legislature and surrounding business and community.
- Increases LRT connections into downtown.



CROSSING THE RIVER

- Public preference to use High Level Bridge.
- With or without extensive upgrades, High Level Bridge deemed not able to support additional load of LRT.
- Significant upgrades/modifications are not possible due to the heritage status of the High Level Bridge.
- Dudley B. Menzies Bridge (Capital and Metro Lines LRT bridge) is not viable for low-floor LRT.

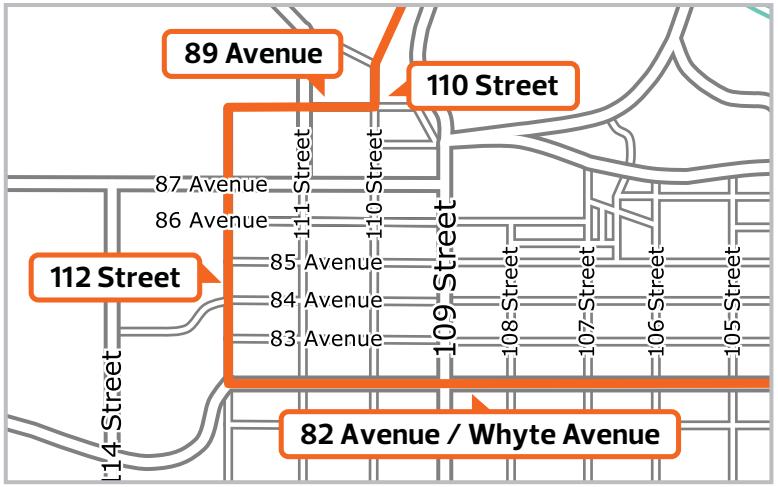


- Alternative crossing locations studied to east and west of High Level Bridge.
- New bridge to be located between High Level Bridge and Dudley B. Menzies Bridge.
- Bridge details to be considered during next phase of study. All efforts will be made to minimize visual and environmental impacts in the river valley.

UNIVERSITY OF ALBERTA AND WHYTE AVENUE SEGMENTS

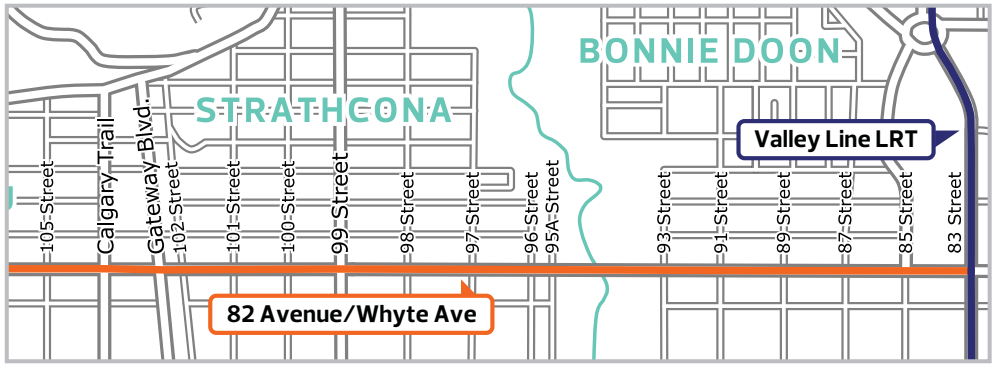
University of Alberta

- Integrates well with Metro and Capital LRT lines, transit and regional bus services
- Supports University of Alberta's pedestrian focused campus
- Provides connection between University of Alberta North Campus and Campus Saint Jean
- Provides direct LRT service for Garneau



Whyte Avenue

- Preferred technical and public east/west connection over 76 Avenue
- Provides direct LRT service for Strathcona, Queen Alexandra, Ritchie, King Edward Park and Bonnie Doon
- Provides access to significant ridership and links to key destinations
- Offers additional transportation choice for this main street



EAST EDMONTON SEGMENT

- Public identified preference for possible routes starting on 82 Avenue or 90 Avenue and extending east
- Initial analysis of route options farther east revealed more in-depth studies of the area are required
- This additional work will be deferred to a future study
- A preferred LRT route east of Bonnie Doon will not be identified as part of the Centre LRT Study

NEXT STEPS

Concept Design Phase – Option Development

During the next phase – concept planning, we will focus on how best to utilize the space within the existing right-of-way and minimize property impacts. To accommodate the LRT, we will consider possible solutions and trade-offs including using space currently used for:

- Traffic lanes
- On-street parking
- Trees and medians
- Boulevard space

The following principles will be used:

- Make use of existing transportation corridors
- Minimize property impacts
- Mitigate impact to property and business access
- Maximize people carrying capacity of corridor
- Integrate transit, pedestrian and bicycle networks
- Mitigate or minimize impact to general traffic
- Ensure emergency vehicle access and priority

Once the concept plan is complete, the priority for, and timing of, the next stage of design and construction will be determined by City Council and available funding.

WHAT HAPPENS NEXT?

The online survey is open until March 16, 2018

Your input from today's session will help finalize the preferred route to be presented to City Council in Spring 2018. Should you wish to provide further comments, you may request to speak at City Council.

If City Council approves the preferred route, the City will present further Concept options to the public for your feedback in early summer 2018. The Concept options will incorporate your input from this phase of engagement and inform you how it was used.

Thank you

For more information or to share your voice please visit:

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