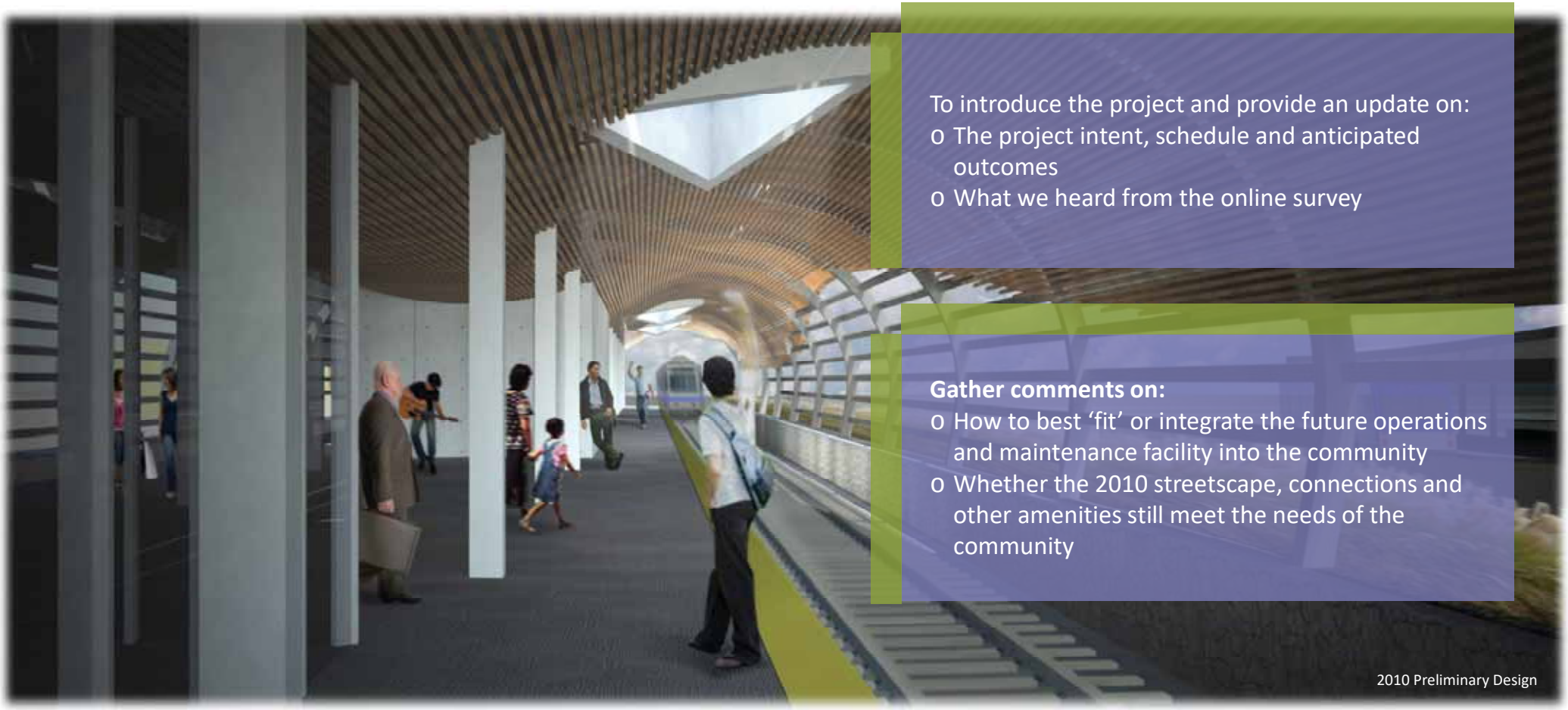
CAPITAL LINE SOUTH LRT EXTENSION INTRODUCTION

What: The 2010 preliminary design for the Capital Line South LRT Extension will run from the current Century Park Station to Ellerslie Road. It will connect to the Heritage Valley Park and Ride located at the northwest corner of Ellerslie Road and 127 Street.

When: The preliminary design refresh is expected to be completed by the end of 2018.

CAPITAL LINE SOUTH LRT EXTENSION
MEETING PURPOSE



To introduce the project and provide an update on:

- The project intent, schedule and anticipated outcomes
- What we heard from the online survey

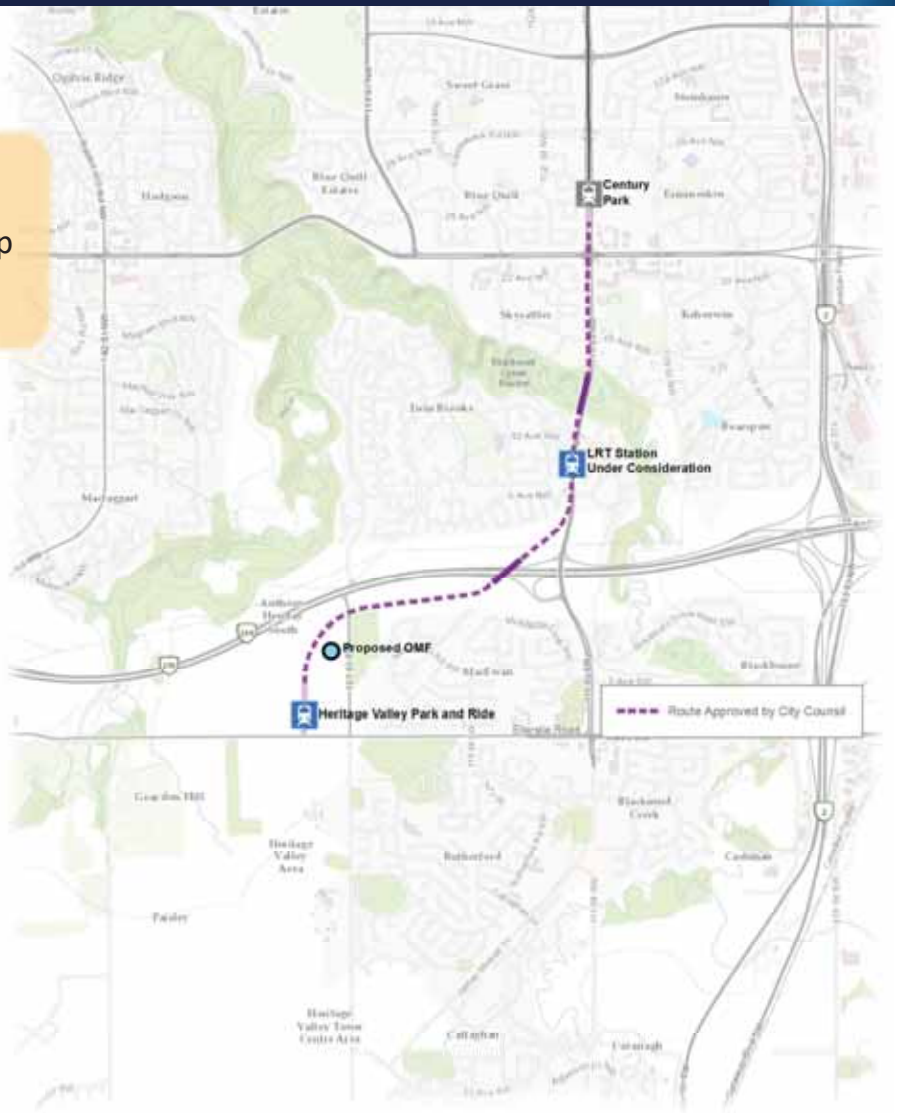
Gather comments on:

- How to best 'fit' or integrate the future operations and maintenance facility into the community
- Whether the 2010 streetscape, connections and other amenities still meet the needs of the community

2010 Preliminary Design

PROJECT HISTORY

WHERE DO YOU LIVE?
Please place a dot on the map to show us where you live



Preliminary engineering for an LRT extension of the Capital Line from Century Park to Ellerslie Road Transit Centre was completed in 2010. This high-floor LRT extension of the Capital Line is 4.5 km and includes:

- An underpass at 23 Avenue;
- Bridges crossing Blackmud Creek and Anthony Henday Drive; and
- A future operations and maintenance facility (OMF) south of Anthony Henday Drive.

At the south end of this project is a future combined LRT station, transit centre, and the Heritage Valley Park and Ride facility on the northwest corner of Ellerslie Road and 127 Street.

WHY IS THE 2010 PRELIMINARY DESIGN BEING LOOKED AT NOW?

The 2010 preliminary design is being reviewed, and updated where required, because:

- The design needs to meet current design standards
- New technology may be incorporated into the design
- Sustainable Urban Integration (SUI) guidelines for high-floor LRT are being updated. These guidelines will place a higher value on aesthetics and 'fitting' or integrating the LRT into the adjacent communities. This may require changes to the 2010 design of the landscape, trails and other elements enjoyed by people along the corridor
- A Grade Separation Assessment Framework was developed in 2017. This is a City Council approved process that identifies the level of need for a bridge or underpass at intersections that the LRT will cross. 9th and 12th Avenues, Saddleback Road, and Ellerslie Road will be assessed using this framework.
- An operations and maintenance facility (OMF) in south Edmonton will be needed to store and provide light maintenance for the LRT vehicles. How the identified site fits into the community will need to be considered
- A station at Twin Brooks may be considered
- Federal funding became available for the project
- An updated preliminary design will help ready the City for construction as funds become available

This preliminary design update will be completed in September 2018

What is a design standard?
A design standard defines the best way to design and build a quality element. For example, LRT tracks will need a specific amount of space around them for the LRV (light rail vehicle or 'car') to move on the track. Standards will say what these requirements are and will include such things as safety requirements, size, materials, etc.

What is a grade separation?
A grade separation is where LRT is physically separated from street-level traffic with a bridge or underpass


Portland, USA


Pittsburg, USA

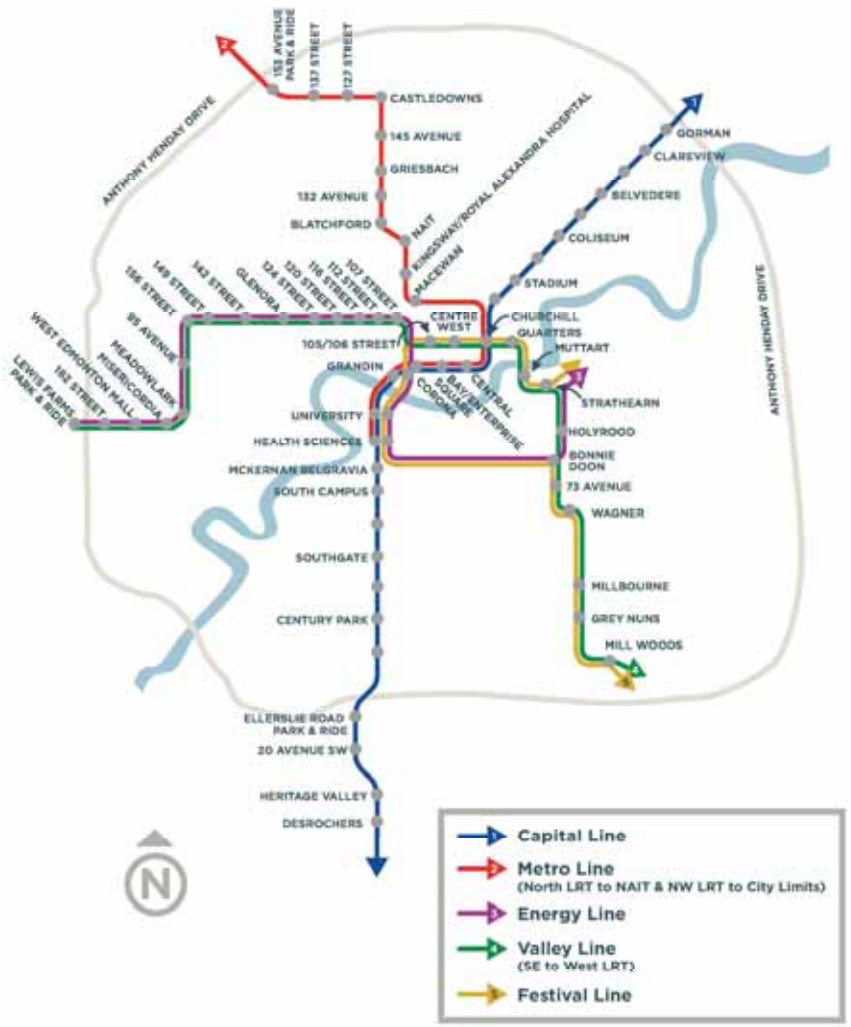

Stuttgart, Germany


Los Angeles, USA

WHAT IS BEING CONSIDERED?

The refresh of the preliminary design will look at many things, including:

- LRT Network Plan
- Project history/2010 preliminary design
- Environment
- Existing and future land uses
- Existing drainage patterns
- Indigenous traditional uses
- Noise and vibration
- Access to properties/neighbourhoods
- Public input and community desires
  - Aesthetics (look and feel)
  - Streetscape
  - Landscape
  - Connectivity
- Blackmud Creek conditions such as: soils, slope stability, water flow, and fish and animal habitat
- Existing and future traffic requirements
- Recreational activities along/crossing the LRT corridor
- Alternative types of existing and future transportation
  - Pedestrian
  - Bicycle
  - Transit
- Utilities, pipelines and other services
- Safety
- Cost
- Policies
- Technical design standards



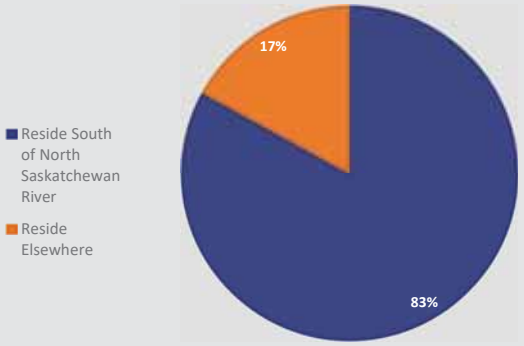
WHAT WE HEARD – SURVEY RESULTS

The Capital Line South LRT Extension online survey was launched in late July and closed September 30, 2017.
The intent of the survey was to obtain:

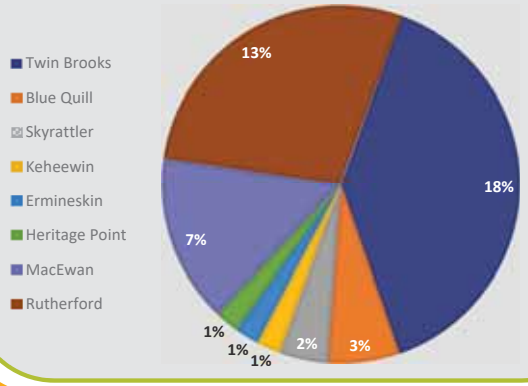
- Input on LRT use
- Input on the 2010 preliminary design to determine if the themes still meet the needs of today
- Input on a potential station at Twin Brooks
- Confirm and rank major design considerations and concerns identified in 2010

1,687 surveys were completed. THANK YOU

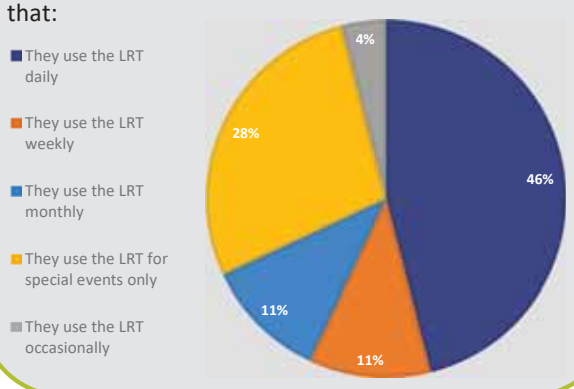
83% of the total responses were from south of the North Saskatchewan River:



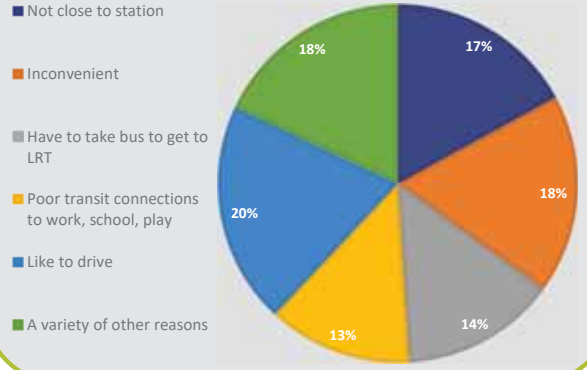
46% of total responses were from communities adjacent to the extension (from 23 Avenue south)



89% of the total responses indicate they have used, or currently use, LRT. Those who use the LRT indicated that:



Edmontonians who indicated they do not use the LRT gave the following reasons in this survey:



WHAT WE HEARD – SURVEY RESULTS

A number of questions were asked to confirm if the design themes developed in 2010 still reflect the communities and landscapes the LRT extension will move through.

Extensive public consultation and a Stakeholder Information Panel (SIP) made up of community members helped to develop these themes in 2010.

WHAT WE HEARD – SURVEY RESULTS

SIP Members Preferred:

Urban Transition Theme Features:

Along 111 Street to 9th Ave NW

The **Urban Transition Theme** is comprised of natural features including an alternating wood-styled concrete and stone visual screen wall along private residential properties, grass, trees and other plantings. There would a security fence along the LRT and stylized light standards. A shared-use path would be included on the west side of 111 Street.

Plants selected for this zone typically would grow in Blackmud Creek ravine and they would be planted in curving naturalized beds. Some flowering trees and shrubs would be added for seasonal colour.

WHAT WE HEARD – SURVEY RESULTS

The **Nature Theme** aims to increase the human connection to the natural environment. The LRT station is semi-enclosed by a curved, tree-formed canopy that provides a high degree of shelter with natural ventilation, clear views to and from the station, and access to natural light. Stone walls and baskets, along with organic shaped lighting add to the theme. A darker 'river' of paving stone is set into alternating sandblasted and saw-cut concrete walks.

Large trees provide shade during the summer, while allowing sunshine to warm LRT users in the winter. Low-level vegetation provides seasonal interest and a visual screen. The screen connects the station with the natural elements of the surrounding community.

93%
agreed this theme was appropriate

LRT Station 2010 Preliminary Design

WHAT WE HEARD – SURVEY RESULTS

Theme and Treatment of Bridges and Underpasses

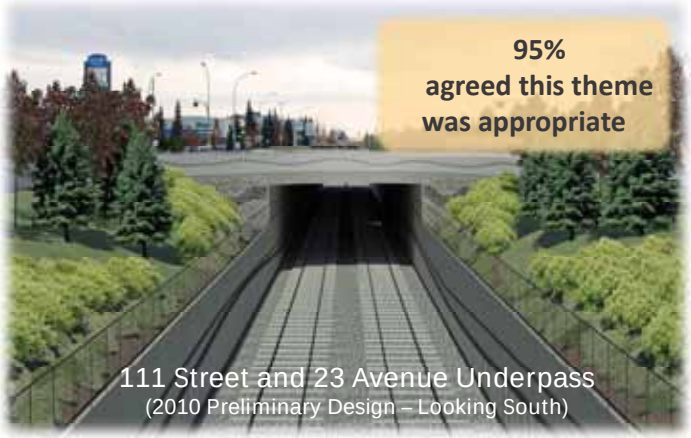
In 2010, two locations were planned along the Capital Line South LRT Extension with a bridge and one location with an underpass. Each was given a specific look that reflects the site and the characteristics considered important by the Stakeholder Information Panel and public during the previous preliminary design process in 2010. In the survey, we asked if the proposed themes were still considered appropriate.

LRT Bridge over Anthony Henday Drive
(2010 Preliminary Design – Looking East)

This bridge would use the **Nature Theme**.

111 Street and 23 Avenue Underpass
(2010 Preliminary Design – Looking South)

This bridge would have a shared-use path as part of the structure. It would be developed using the **Urban Transition Theme.** Lighting would be included to increase visibility and safety.



111 Street and 23 Avenue Underpass
(2010 Preliminary Design – Looking South)

This underpass would use the **Urban Transition Theme** and would include: portal wall (the walls leading to and over the underpass) patterning, security fencing and grass, trees, and other plantings.

WHAT WE HEARD – SURVEY RESULTS

A station at Twin Brooks is being considered. In our survey, we asked:
Do you think LRT riders would benefit from a station next to Twin Brooks

	Overall	Outside of Twin Brooks	Twin Brooks Only
Response	Percent of Responses	Percent of Responses	Percent of Responses
Yes	60%	60%	58%
No	17%	19%	11%
Don't Know	23%	21%	31%
Total	**1 687**	**1 382**	**305**

In 2010, we heard that the following items were of major concern. In our survey, we asked:
Which one of these is the most important to you?

Important Preliminary Design Concerns from 2010	Percent of Responses
Traffic impacts during and after construction	39%
LRT crossings timed with traffic lights	30%
Construction time required and schedule	13%
Impact on property values	11%
Reduced connectivity for pedestrians	7%

In 2010, we heard that these factors needed to be considered in the preliminary design. In our survey we asked:
Which one of these factors is the most important to you?

Important Preliminary Design Considerations from 2010	Percent of Responses
Provide adequate room and all-weather protection at stations	24%
Provide noise attenuation where possible	18%
Improve connectivity into the communities with multi-use trails	18%
Minimize impacts on the environment	15%
If trees need to be removed, relocate them in the neighbourhood and replace lost trees	4%
Use easy to maintain materials and features	4%
Build less expensive bridges and spend money on landscaping and aesthetics along the LRT	3%
Use natural themed landscape and/or screening to shield views of the LRT, station, transit centre and Park and Ride	3%
Use energy-efficient lighting and features	3%
Use a natural suburban theme with lots of trees in transition area	1%
None of these	7%

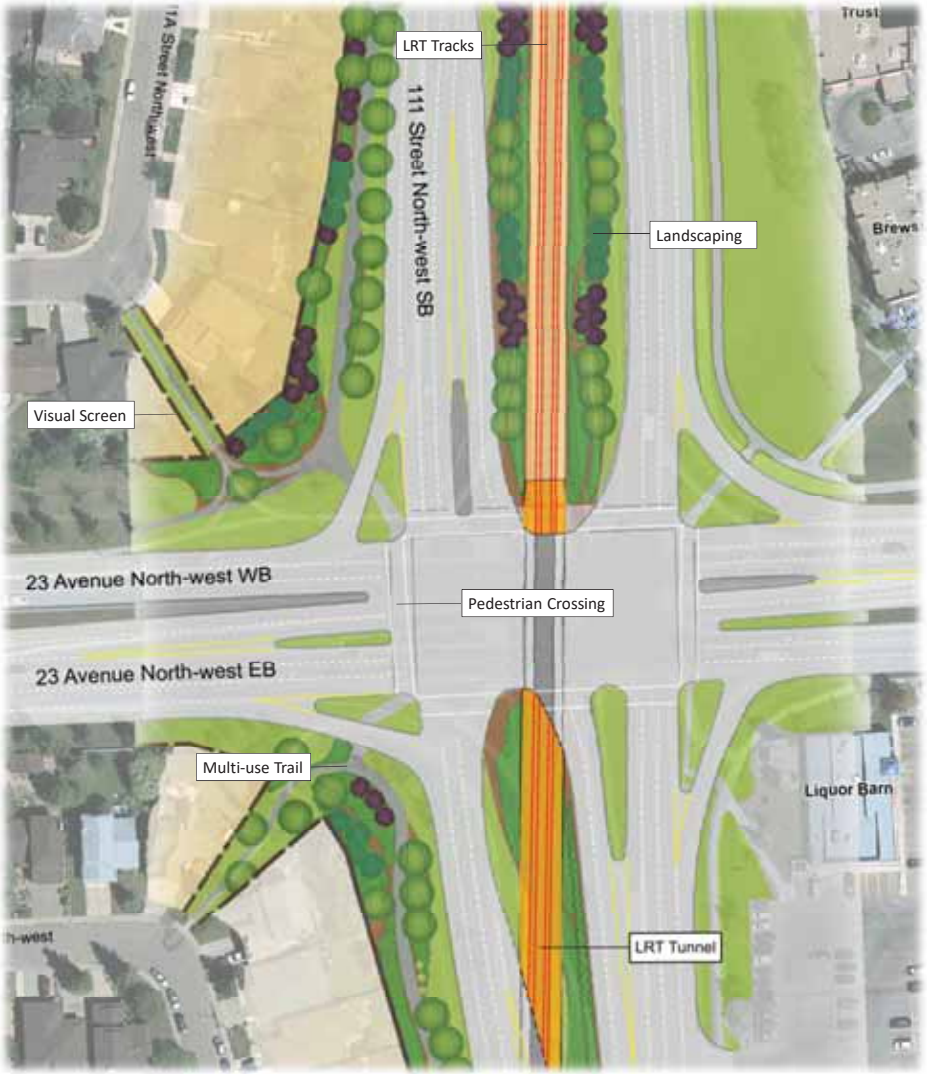
2010 PRELIMINARY DESIGN: STREETSCAPE & LANDSCAPE

The streetscape, including the landscape, shared-use path, pedestrian crossings, noise walls, lighting and site furniture, was designed in 2010.

Please provide any comments you may have on sticky notes and place them on the maps on the tables.

Please comment on:

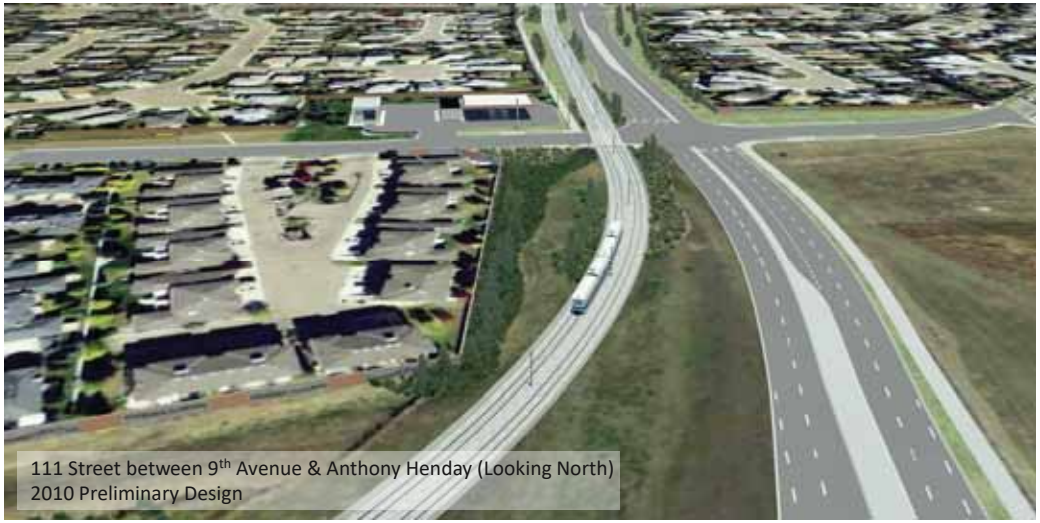
- Trail locations
- Cyclist needs
- Pedestrian needs
- Pedestrian connections into neighbourhoods
- Landscape
- Fencing
- Lighting
- Site furniture – such as benches, waste receptacles
- Other elements



2010 PRELIMINARY DESIGN: STREETSCAPE & LANDSCAPE

111 Street between 9th Avenue & Anthony Henday (Looking North)
2010 Preliminary Design

111 Street and 9 Avenue (Twin Brooks)(Looking South)
2010 Preliminary Design



111 Street between 9th Avenue & Anthony Henday (Looking North)
2010 Preliminary Design

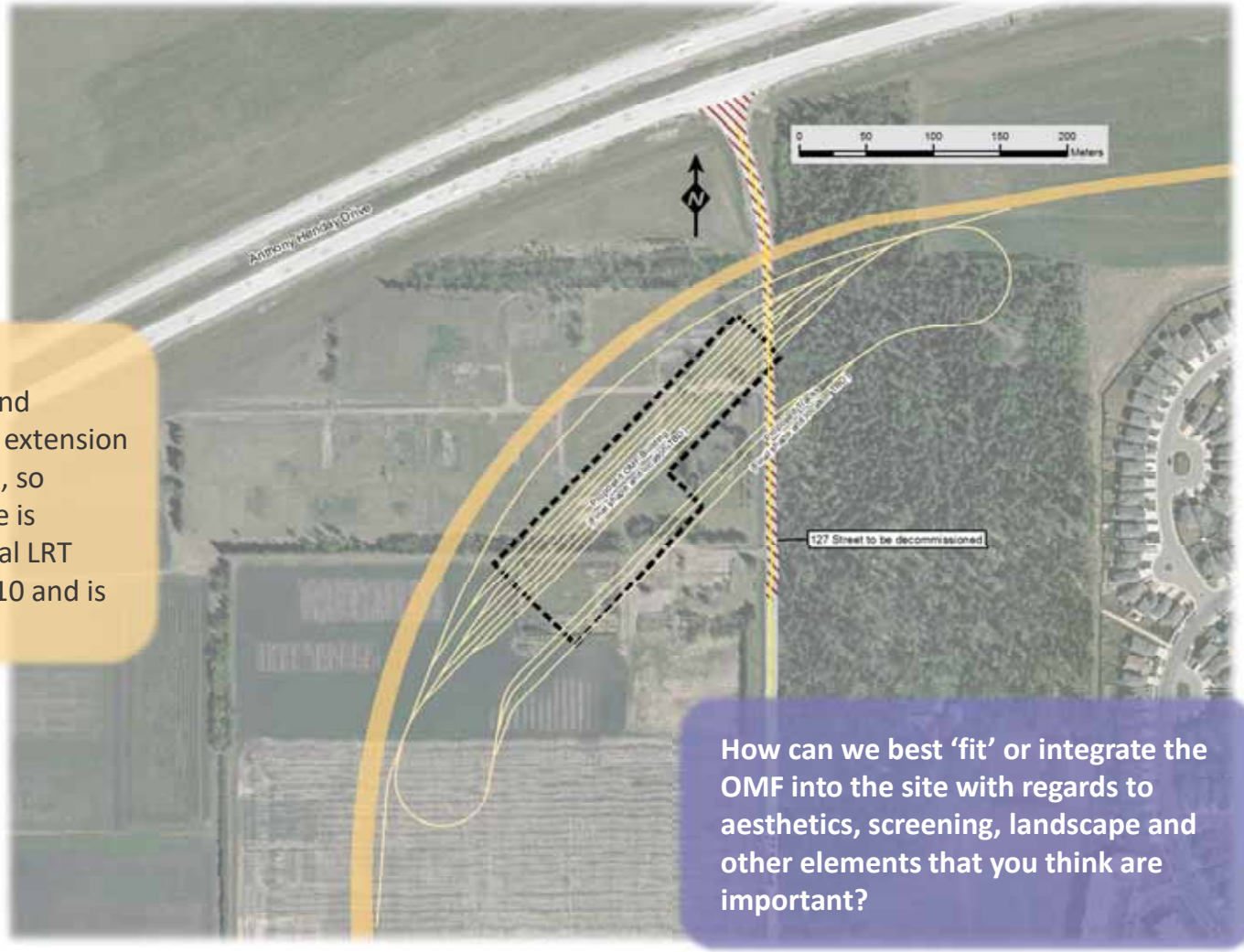
111 Street and 9 Avenue (Twin Brooks)(Looking North)
2010 Preliminary Design

FUTURE OPERATIONS & MAINTENANCE FACILITY (OMF)

What is an OMF?
This OMF is a site that contains a building for LRV (light rail vehicles or LRT 'cars') storage and light maintenance. It will also have tracks to move LRVs around the site and provide storage when they are not in use, e.g. nighttime

Why at this site?
As the LRT Network expands, more storage and maintenance facilities are required. With the extension of the Capital Line, more LRVs will be needed, so additional space for storage and maintenance is required. This site was identified as a potential LRT storage and light maintenance location in 2010 and is now being designed for future use.

When will it be built?
This site is being planned now. It may be constructed as a separate project. The timing for construction has not been decided.



How can we best 'fit' or integrate the OMF into the site with regards to aesthetics, screening, landscape and other elements that you think are important?

GRADE SEPARATION

A grade separation is where LRT is physically separated from street-level traffic with a bridge or underpass.

A LRT Crossing Assessment Framework was developed in 2017. This is a City Council approved process that identifies the level of need for a bridge or underpass at intersections that the LRT will cross.

Intersections being assessed for a potential grade separation along 111 Street include:

- 9th Avenue
- 12 Avenue
- Saddleback Road (19 Avenue)
- Ellerslie Road

The Project Team has completed a preliminary crossing evaluation based on the City of Edmonton's Council approved Crossing Assessment Framework for LRT grade separations.

- Based on the initial preliminary evaluation, the crossings of 9th, 12th and Saddleback Road may not meet the criteria for grade separations
- There is still more technical review and discussion to be completed before arriving at a final decision
- The Ellerslie Road evaluation is ongoing
- There will be an underpass at 23 Avenue; bridges crossing Blackmud Creek and Anthony Henday Drive

The following criteria is being used to assess the Capital Line South LRT Extension Crossing Options:

Accessibility
How the various transportation modes link between one another and with adjacent developments

Network Operations
How the surrounding and broader transportation network is impacted

Urban Design & Social Environment
How the surrounding communities and stakeholders are impacted

Feasibility & Construction
Feasibility, cost and risk assessments

Elevated LRT Example

Surface LRT Example

Below grade LRT Example

NEXT STEPS

Next steps:

- Complete an online or hardcopy comment form by December 13, 2017
- Go to the website (edmonton.ca/capitalsw) for 'What We Heard' summary available in spring 2018
- Sign up for project update emails on the project website to receive notice of future public meetings
- Look for details on the spring 2018 public meetings through project update emails or by checking the project website

Next steps for the project team:

- Post to the project webpage, a summary of feedback and comments received from the online survey and this info session. These comments will be considered in the preliminary design refresh
- Bring an updated preliminary design to the public and stakeholders for input in spring/summer 2018