



# **Terwillegar Drive Expressway Draft Concept Plan**

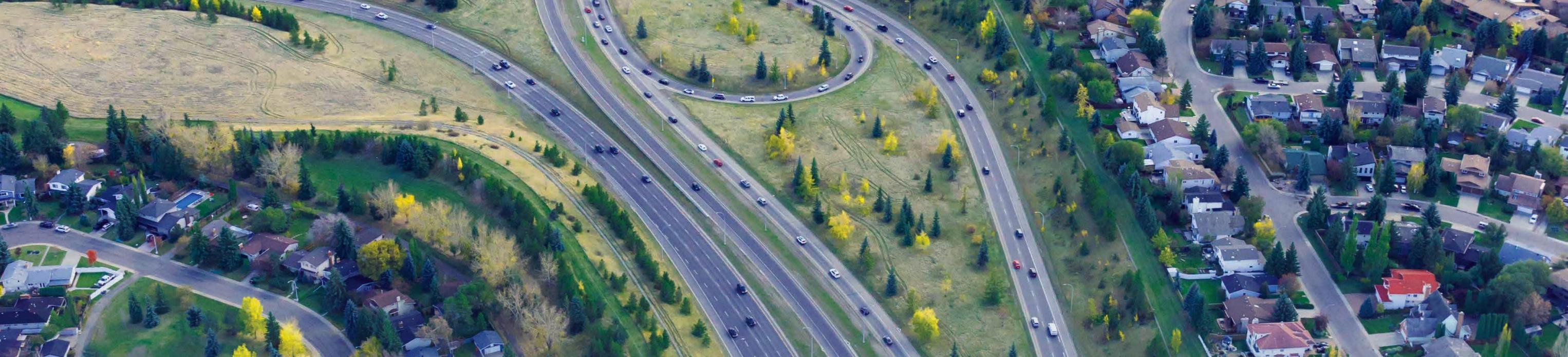
Anthony Henday Drive to Whitemud Drive

**September 18, 2019**

4:00 – 8:00 p.m.

Learn more by going to: [edmonton.ca/terwillegardrivestudy](https://edmonton.ca/terwillegardrivestudy)

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# Let's Talk

Tonight you can:

- + View and ask questions about the recommended concept plan
- + See how your input was used to refine plans for transit, pedestrians and cyclists, and landscape naturalization of the corridor
- + Learn about the next steps for the project

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# Project Overview

**Study Purpose:** To validate and update the plan for the future of Terwillegar Drive from Anthony Henday Drive to Whitemud Drive

**Need:** Terwillegar Drive is an important roadway for the movement of goods and services, transit and commuters.

It is an important connector to 170 Street (Terwillegar Drive south extension) south of Anthony Henday Drive, which is planned to be a freeway to Leduc. The corridor is congested during peak hours.

**Goals:** Alleviate congestion

Provide for efficient, safe movement of all users (drivers, pedestrians, cyclists and transit users), locally and regionally

# Project Timeline

We are here



## Fall 2017

Study start

## November 2017 – February 2018

Public Engagement – draft freeway options

## Spring 2018 – Fall 2018

Further development of the freeway plan and introduction of expressway

## October 2, 2018

Urban Planning Committee – motion direction to advance expressway option

## November – December 2018

Phase 2 Public Engagement – report back on study progress and gather feedback on expressway draft concept plan

## December 2018

Budget decision for funding Terwillegar Drive  
Stage 1 funded (planning, design & construction)  
Stage 2 funded (design & 142 Street pedestrian/cycle bridge planning, design & construction)

## March 2019

Provincial funding

## January – May 2019

Develop recommended concept plan

## September 2019

Phase 3 Public Engagement – report back and share expressway recommended concept plan

## 2019/2020

Engineering design

## 2021/2022

Construction

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# Phase 2 Engagement

## What We Heard

## What We Did

### Vehicle Traffic

- + Improve traffic flow
- + Construct improvements quickly

- + Improvements will increase roadway capacity and reduce congestion
- + Stage 1 funding approved and construction is anticipated for 2021/2022

### Landscape Naturalization

- + Desire for additional trees in open areas and between road and shared-use path (SUP)
- + Feedback about safety (impact to sight-lines), maintenance and species of tree plantings

- + Added boulevard trees on crossing roadways
- + Assessing where and what types of trees to plant (will be confirmed during design)

### 142 Street Pedestrian/Cyclist Bridge

- + Prioritize cost, safety and consistency with existing bridge over Terwillegar Drive
- + Desire for additional bridges over Terwillegar Drive at major intersections for safety

- + What We Heard will be considered as planning and design begins
- + Further engagement opportunities are planned over the next year
- + Additional bridge locations are not included in the scope of the project

# Phase 2 Engagement

## What We Heard

## What We Did

### Transit

- + Mix of perspectives:
  - Bus lane will improve transit use and experience
  - Bus lane will be underused and increase traffic congestion and delays
- + Consider safety, access and amenities at the bus stops

- + Included separated transit lanes with bus-specific traffic signals
- + Added additional upgrades at the bus stops
- + Assessed the traffic and transit impacts using a traffic modelling software
- + Included two rapid bus transit services using Terwillegar Drive, following Stage 1 construction, made up of mostly electric buses

### Shared-Use Path (SUP)

- + North of 40 Avenue, preference for SUP to go around Bulyea Heights neighbourhood (Brookview)
- + Provide access to commercial and residential areas and to existing SUPs
- + Consider safety of users in design (separate SUP from vehicles with space or barrier)
- + Minimize impacts to traffic flow
- + Some feel no shared-use path or bike route is necessary

- + Selected the SUP location that goes around the Bulyea Heights neighbourhood (Brookview)
- + Added additional connections to commercial and residential areas, and existing paths
- + Included SUP crossings on both sides of all crossing roadways
- + SUP meets design standards and is separated by a 4 m or greater boulevard where possible, and may include railings in some areas

## Definitions

### Expressway

A high-capacity roadway, with a slightly lower speed than a freeway, and widely spaced signalized intersections. Speed limit: 70 km/h

### Adaptive Traffic Signal Controls

A technology that allows traffic signal timings to be adjusted in real time based on actual traffic flow conditions.

### Naturalization

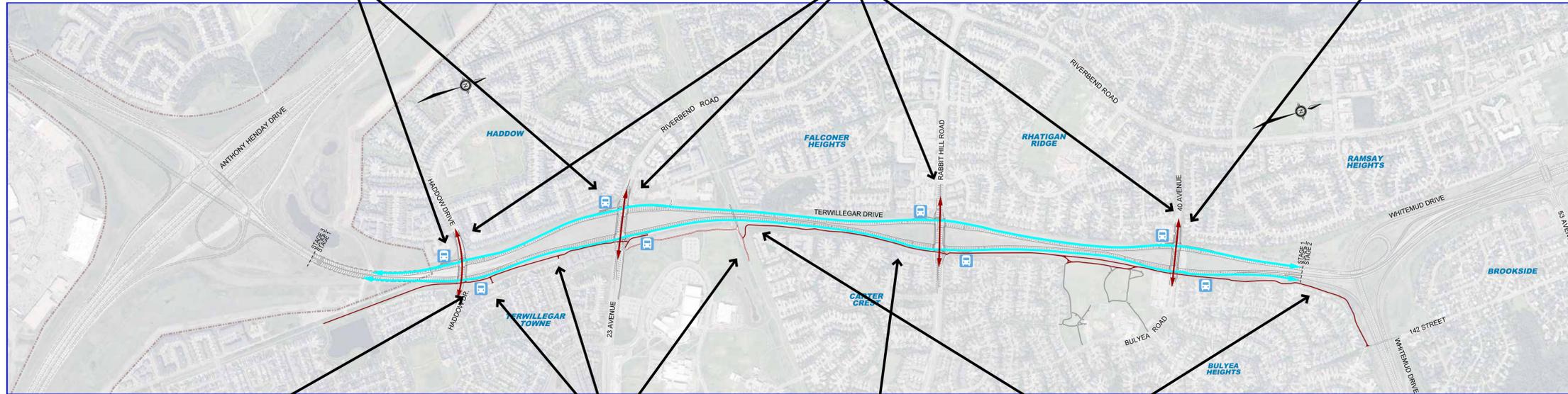
Ecologically-based approach to landscaping, where maintained land is transformed to a more natural state.

# Concept Highlights

Enhanced bus stops at each intersection

Intersection upgrades including new left and right turn lanes

Shared-use path connection on both sides of intersections



Northbound and southbound lanes separated to improve intersection operations

Shared-use path with connections into community

Shared-use path with connection to 142 Street pedestrian/cyclist bridge

Three travel lanes and one separated bus lane in each direction

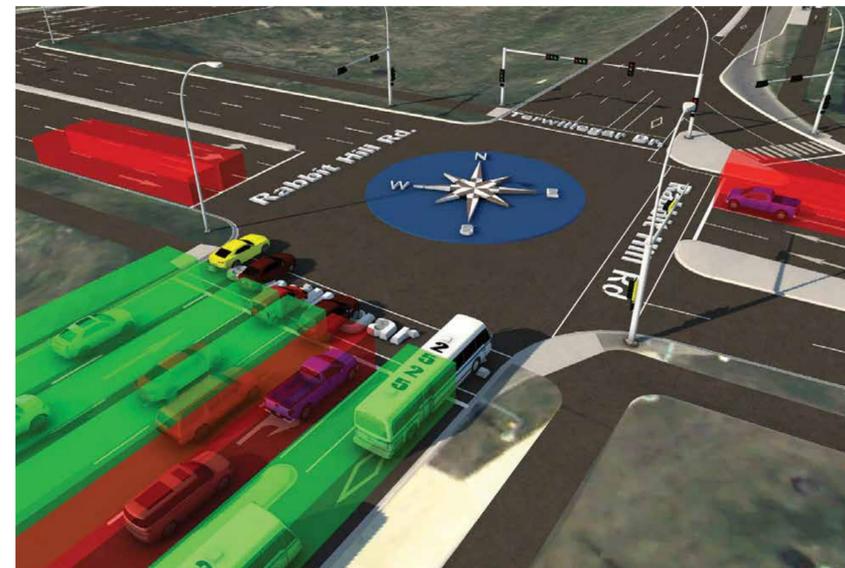


# Roadway Upgrades

- + 6 lanes for drivers (3 in each direction)
- + Additional left and right turning lanes at all crossing roadways
- + Traffic signals that separate the buses from general traffic (currently assessing the use of Adaptive Traffic Signal Controls)
  - Upgrades will allow for more traffic while easing congestion:
    - Upgrades will allow for over 50% more traffic than today's volumes (up to 65,000 vehicles per day)
    - Traffic congestion and delays will be reduced at key locations on Terwillegar Drive



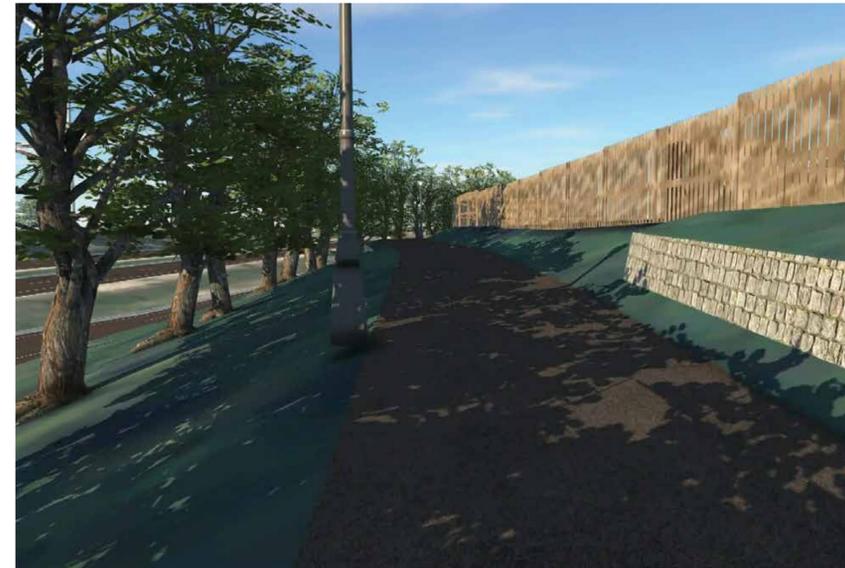
Concept of Terwillegar Drive (Northbound at 40 Avenue).



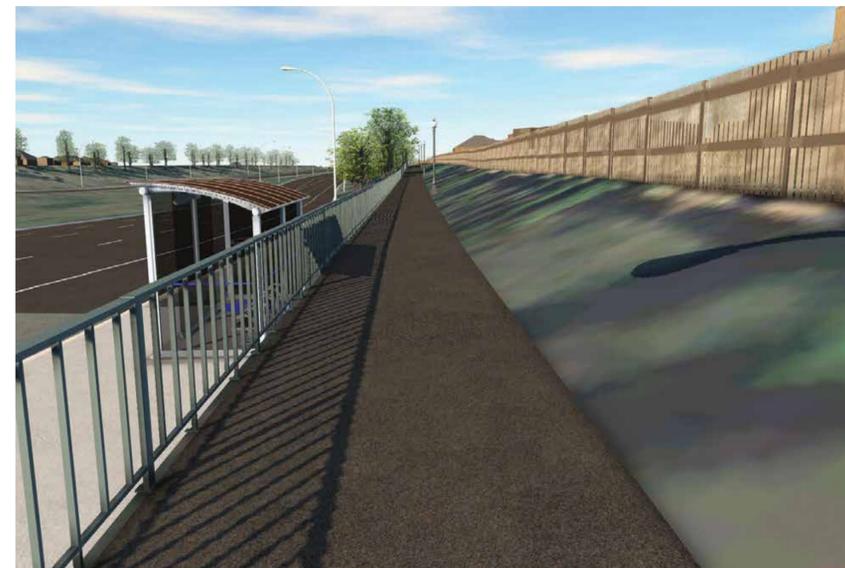
Concept of Terwillegar Drive/Rabbit Hill Road Intersection highlighting transit signal priority.

# Shared-Use Path (SUP)

- + North-South SUP
  - Runs along the east side of Terwillegar Drive, between the roadway and fences, from Haddow Drive to the planned location of the 142 Street pedestrian/cyclist bridge
  - Design minimizes impacts to trees and need for retaining walls
  - Includes connections to bus stops, commercial/residential areas and existing SUP network
  - Includes lighting
  - Railings will be provided where needed
- + East-West SUPs
  - Run along both sides of Haddow Drive, 23 Avenue, Rabbit Hill Road and 40 Avenue at the crossings



Concept of SUP along east side Terwillegar Drive, facing north.



Concept of SUP along east side of Terwillegar Drive facing north including railing.

# Separated Bus Lanes

- + Separated bus lanes (northbound and southbound) from Anthony Henday Drive to Whitemud Drive
- + Bus lanes separated from traffic lanes with a raised concrete median
- + Traffic signals that separate the buses from general traffic
- + Upgrades align with the City's long-term growth plan, the City Plan, and the Mass Transit Study, which identify Terwillegar Drive as a future mass transit route
- + Upgrades support a safe, convenient, reliable and fast transit service, connecting Southwest Edmonton to major destinations in the city.



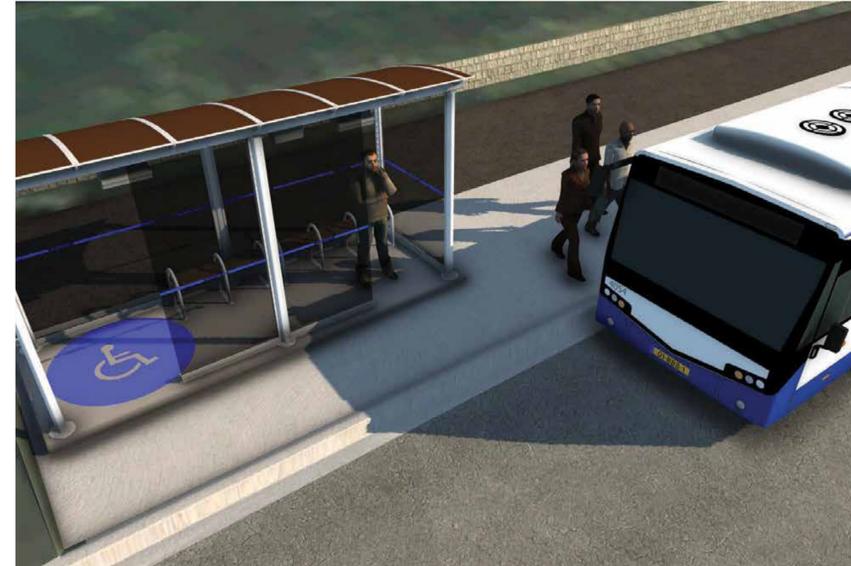
Concept of the separated bus lane, facing north.



Concept of the separated bus lane at a bus stop.

# Enhanced Bus Stops

- + Bus stops located at each intersection (northbound and southbound)
- + Bus stops include:
  - Longer bus pull outs
  - Weather-protected shelters
  - Connections to shared-use paths
  - Lighting
  - Additional amenities and features (e.g., real-time displays) will be confirmed during design



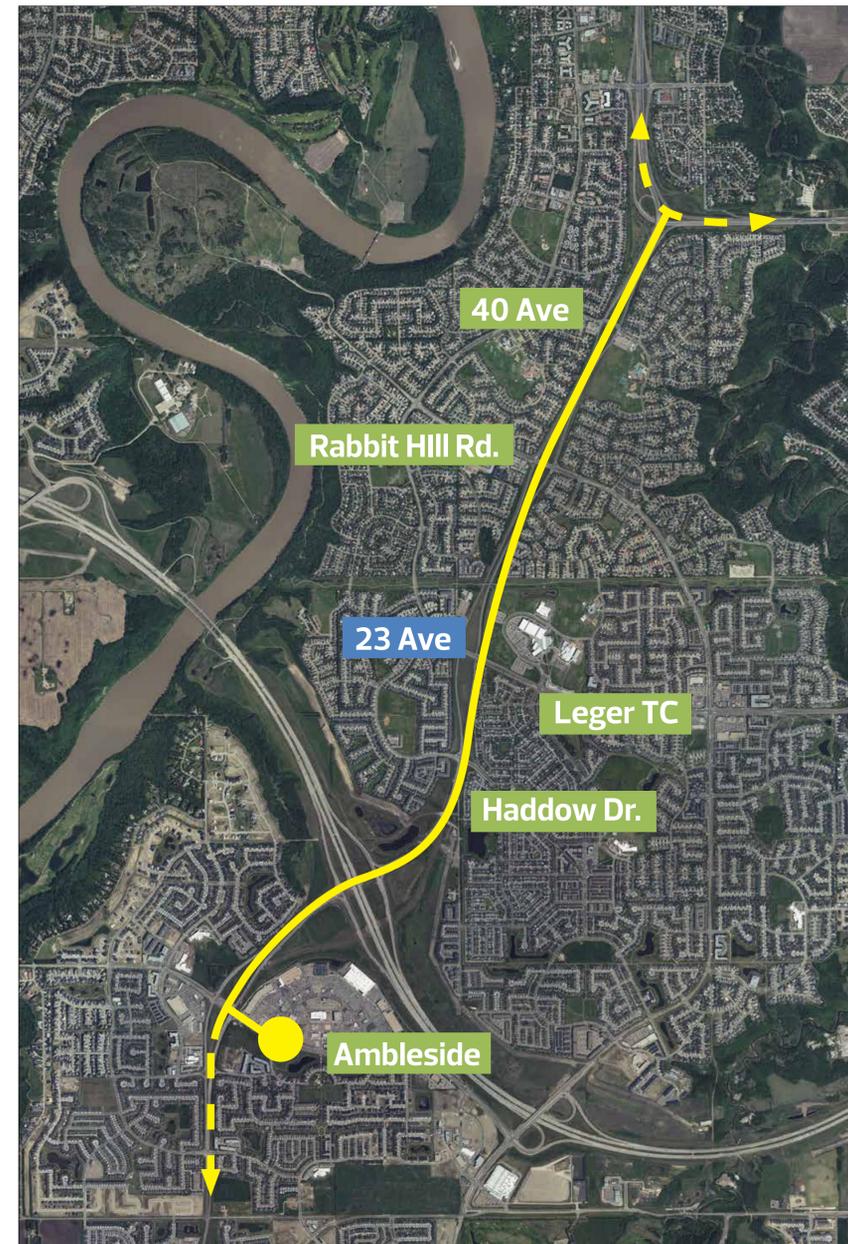
Concept of the transit stop and weather-protected shelter.



Concept of the enhanced stop and bus bay.

# Rapid Bus Transit Service

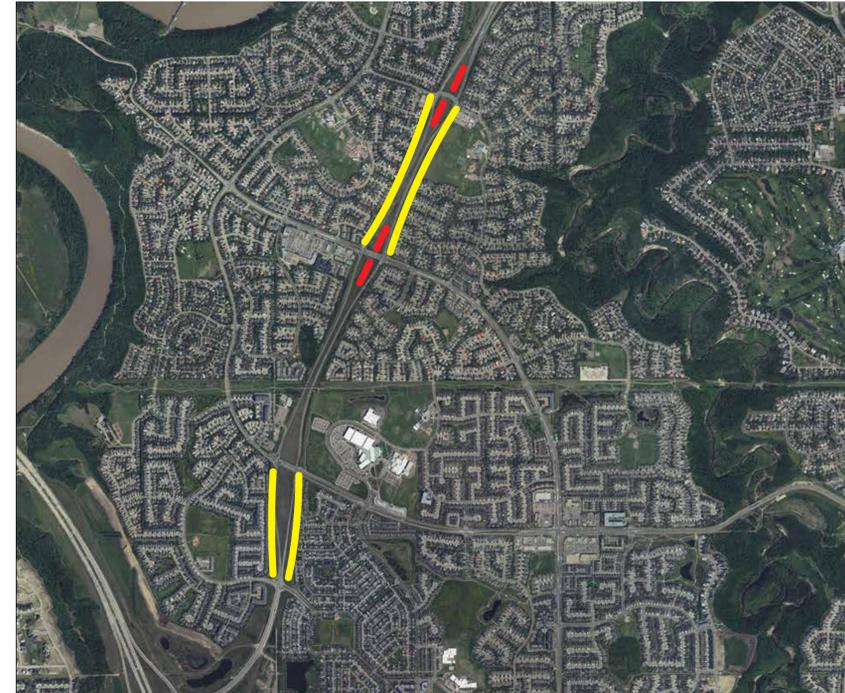
- + Rapid bus service will be introduced when Stage 1 is completed.
- + Service will connect the location of the future Ambleside Park & Ride with South Campus LRT Station
- + Two services are anticipated:
  - **Limited Stop** service: stops at Ambleside, Haddow Drive, 23 Avenue, Leger Transit Centre, Rabbit Hill Road and 40 Avenue
  - **Super Express** service: from Ambleside to South Campus with one stop at 23 Avenue



Proposed rapid bus service stops locations.

# Landscape Naturalization

- + Boulevard trees included along all crossing roadways (e.g., 23 Avenue, Rabbit Hill Road)
- + Preference for tree locations includes the median and boulevards as shown
- + The project team is assessing where and what types of trees to plant (will be confirmed during design)



Highlighted areas indicate areas where tree planting was suggested by public input. Yellow indicates locations for boulevard trees, red indicates locations in the median.



Example image of boulevard trees.

# 142 Street Pedestrian/Cyclist Bridge

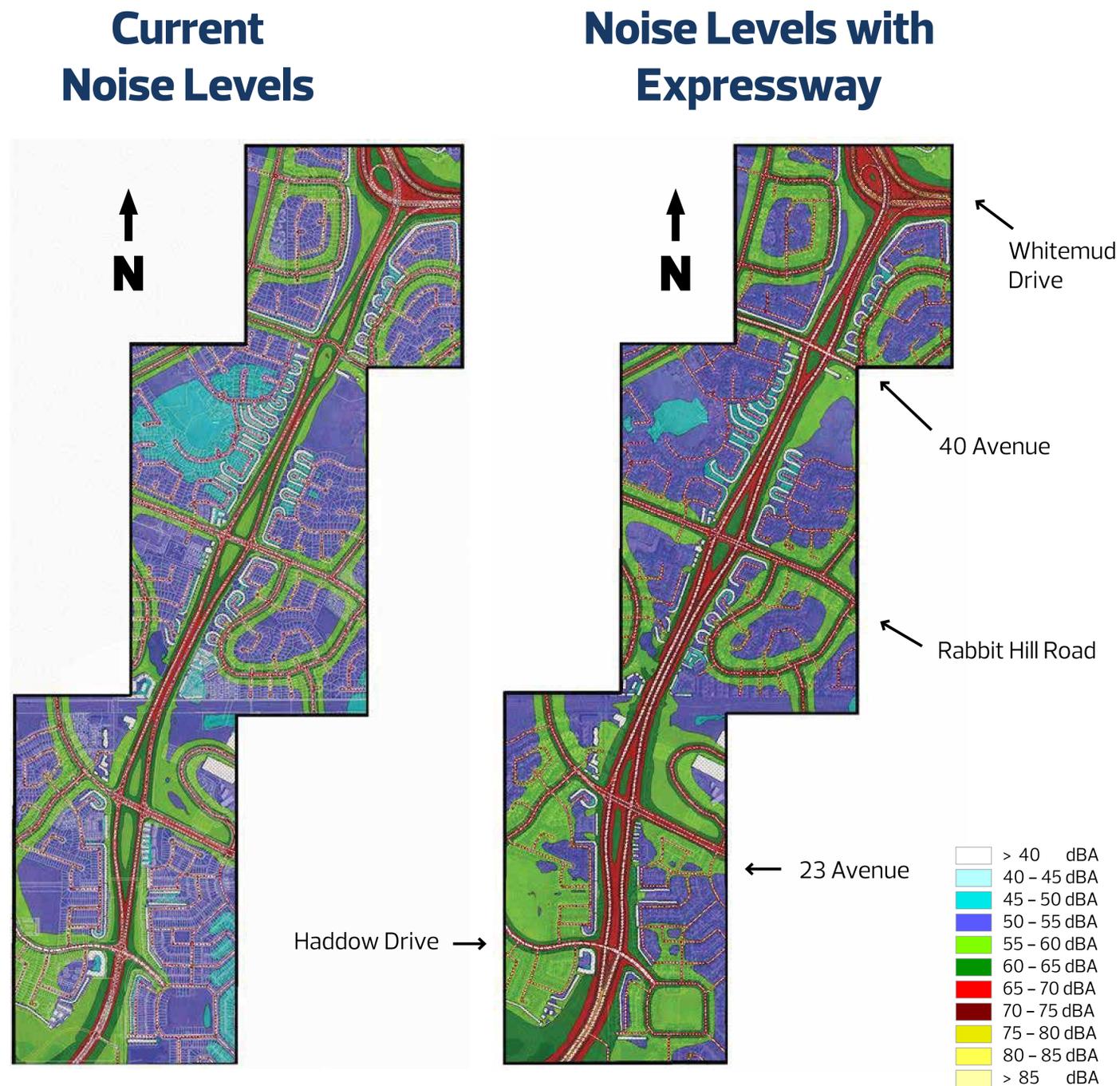
- + Funding has been approved for planning, design and construction within the 2019–2022 Capital Budget
- + Planning and design to begin soon
- + Further engagement opportunities are being planned. Your input will be considered as the City moves forward



Existing pedestrian bridge over Terwillegar Drive.

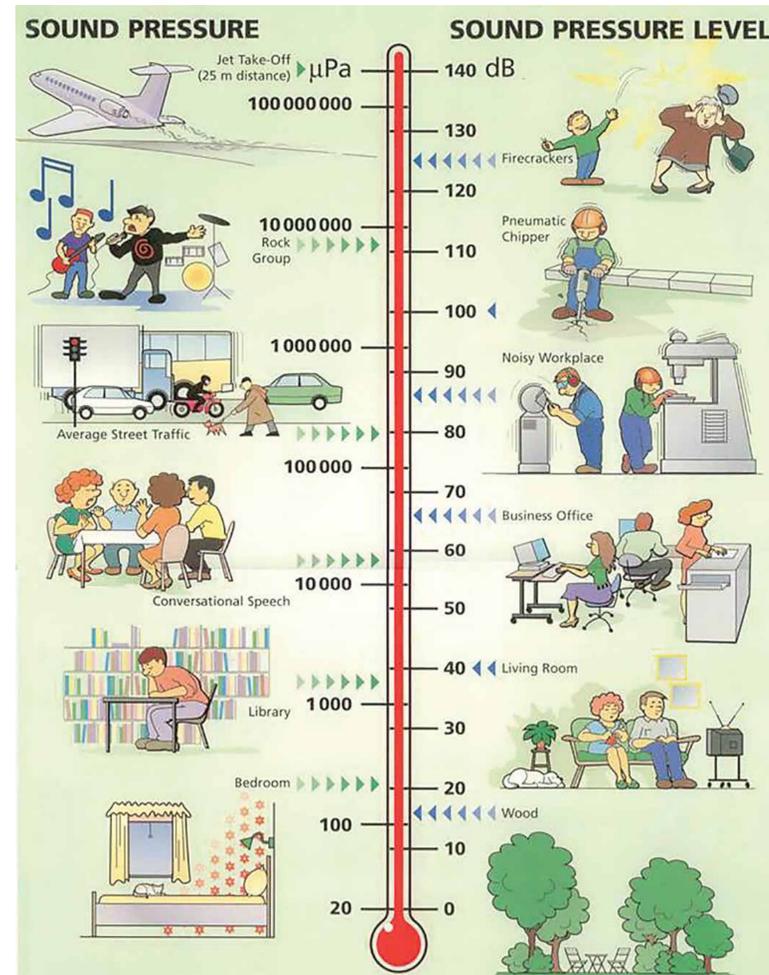
# Noise Assessment

- + A noise assessment determined that future traffic noise levels as a result of the expressway are expected to be below or at 65 dBA.
- + Noise fences or walls are only considered when noise levels exceed 65 dBA in private residential backyards (City's noise policy C506A).



# Understanding Noise

- + Noise is measured using the Decibel (dB) Scale
- + The Decibel Scale is a base-10 logarithm scale (similar to Richter Scale)
- + Double the traffic volume does not result in double the noise
  - 2 times traffic volume results in only 3 dBA increase, which is barely noticeable
  - 10 times traffic volume results in a 10 dBA increase, perceived as approximately twice as loud



# Expressway Construction Staging

## Stage 1 | Capital Budget 2019–2022

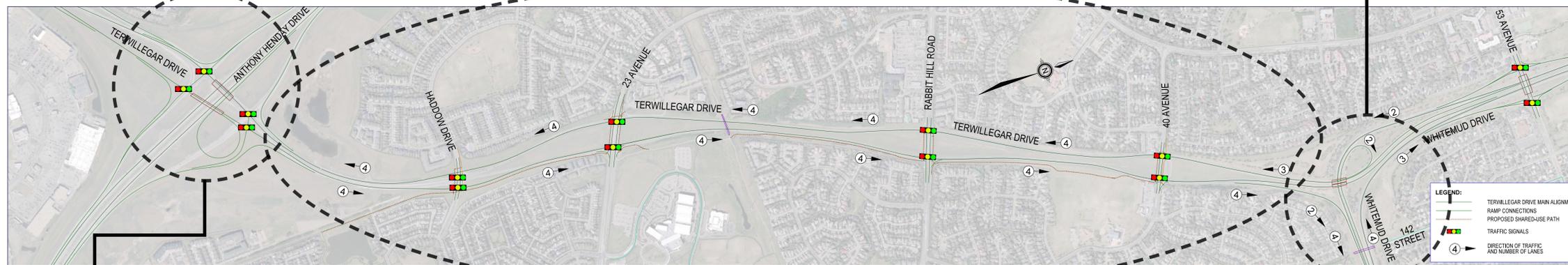
Expressway between Anthony Henday Drive and Whitemud Drive

**\$100 million – Design and Construction Funding Approved**

## Stage 2 | Capital Budget 2023–2026

Whitemud Drive Interchange improvements and Rainbow Valley Bridge widening

**\$140 million – Design Funding Approved**



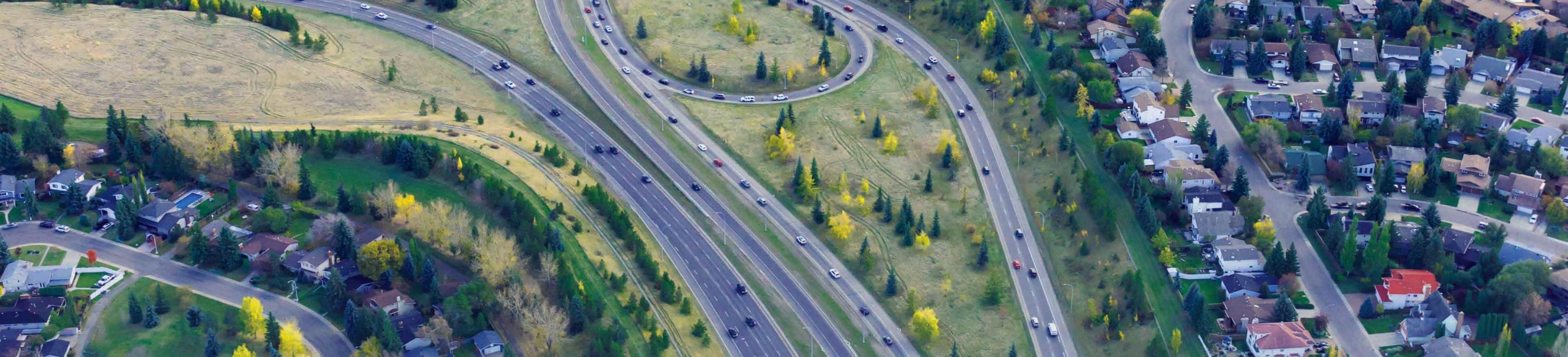
## Stage 3 | Capital Budget 2027–2030

Anthony Henday Drive Interchange

Subject to additional planning and approvals by the Province

**\$60 million – Unfunded**





# Funding Approved: Next Steps

## Stage 1:

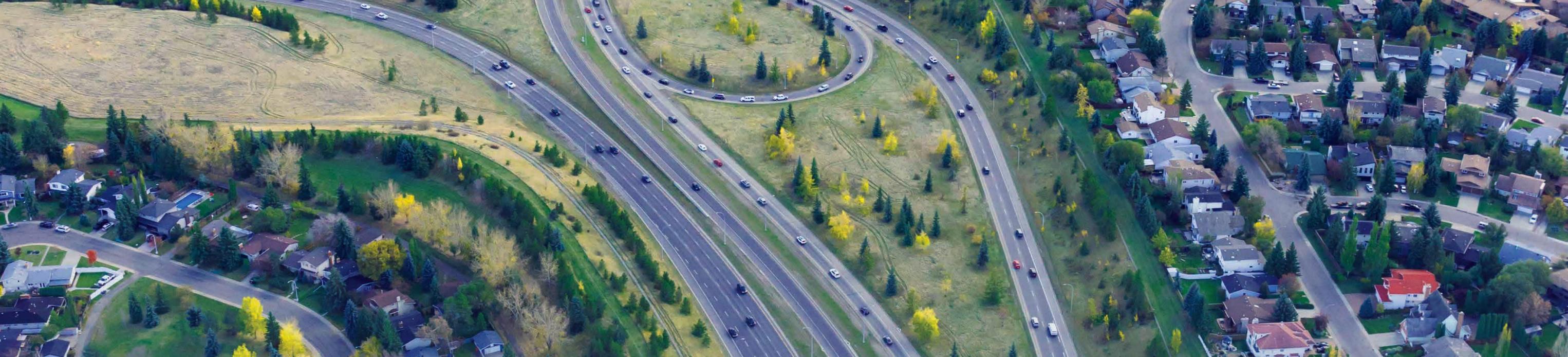
2019–2020	Complete design
2020	Site preparations and utility relocation
2021–2022	Anticipated construction

## Stage 2:

2019–2022	Whitemud Drive Interchange & Rainbow Valley Bridges: Design
2020–2022	142 Street Pedestrian/Cyclist Bridge: Planning, design and Construction

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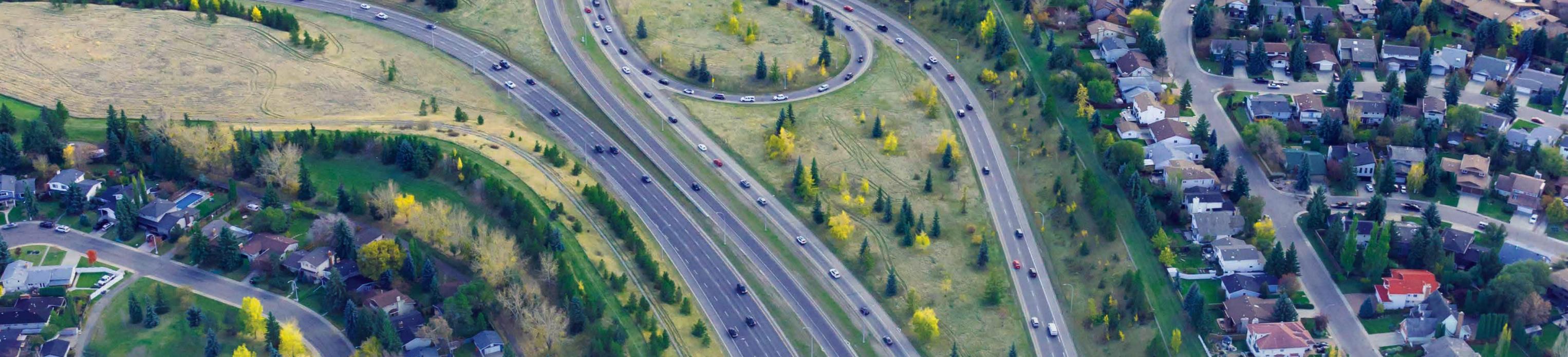


# Thank you for attending

Visit [edmonton.ca/terwillegardrivestudy](https://edmonton.ca/terwillegardrivestudy) for project updates.

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# Video Fly Through

Watch the video to see intersection operations and bus priority movements.

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