

Terwillegar Drive Expressway Draft Concept Plan

Anthony Henday Drive to Whitemud Drive



November 28

5:00 – 8:00 p.m.

December 1

10:00 a.m. – 3:00 p.m.

ADVISE

Learn more by going to: edmonton.ca/terwillegardrivestudy

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Let's Talk

Today you can:

- Learn about the new direction for Terwillegar Drive
- View and ask questions about the draft concept plan
- Provide feedback on proposed plans for transit, pedestrians and cyclists, and landscape naturalization of the corridor

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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.

Corridor is congested during peak hours.

Goals: Alleviate congestion

Provide for efficient, safe movement of all users, locally and regionally

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Project Timeline



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How We Got Here

Following February 27, 2018 Council Motion:

- Potential updates to freeway assessed to meet Council direction and address public feedback
- Challenges with freeway
 - Removes south access at Hadow Drive
 - Transit stops only possible at service roads or ramps
 - Parallel shared-use path not possible
 - Significant height/visual impacts of bridges to provide all access for 40 Avenue/Bulyea Road
 - Land acquisition potentially required
- Expressway considered as alternate solution
 - High level analysis conducted
 - Better meets Council direction and public feedback
 - Lower cost and fewer construction stages for similar operations
- October 2, 2018 – Urban Planning Committee Motion to advance expressway

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Phase 1 Engagement

What We Heard

- Alleviate congestion quickly

- Maintain all current neighbourhood accesses

- Minimize traffic diversion through area neighbourhoods

- Include options for transit users, pedestrians and cyclists

- Address safety, noise and aesthetic issues

What We Did

- Advance expressway plan, with shorter implementation timeline than a freeway
- Stage 1 includes widening the full length of the corridor to 8 lanes.
- Stage 1 includes widening the intersections. City is assessing Adaptive Traffic Signal Controls to improve traffic flow.
- Stage 2 includes widening ramps on the Terwillegar Drive/ Whitemud Drive interchange, and Rainbow Valley Bridge.

- All neighbourhood accesses have been maintained

- Improving traffic flow on Terwillegar Drive will minimize shortcutting traffic through adjacent neighbourhoods

- Allowed for dedicated transit lane in each direction, and bus stops along the corridor. Transit service is being assessed.
- Provided shared-use path along east side of corridor and connections across all intersections

- Reduced congestion helps to reduce frequency of collisions
- Assessed noise levels. Projected noise levels do not exceed City's noise policy
- Considering planting additional trees on the corridor

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Definitions

Freeway

A high-capacity, high-speed, free-flowing roadway without signalized intersections.

- Speed limit: 80 km/h
- Conditions unsuitable for transit, pedestrian and cycle paths on corridor

Local Example: Whitemud Drive

Expressway

A high-capacity roadway, with a slightly lower speed than a freeway, and widely spaced signalized intersections.

- Speed Limit: 70 km/h
- Potentially allows for Adaptive Traffic Signal Controls
- Conditions suitable for transit, pedestrian and cycle paths on corridor

Local Examples: Manning Drive, Gateway Boulevard/Calgary Trail
100 Avenue/Stony Plain Road (Anthony Henday Drive to 170 Street)

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Expressway and Freeway Comparison

Themes	Expressway	Freeway
Cost (+/- 50%)	\$300 million Stage 1: \$100 million	\$1.2 billion Stages 1, 4, 5, 6: \$370 Million
2030 Travel Times in peak periods <i>Note: Do-nothing is 12 - 12.5 minutes in peak periods</i>	8 - 8.5 minutes	9 - 9.5 minutes <i>*Full freeway not constructed by 2030</i>
Construction	3 stages 10 years to construct based on current funding model. Widening between Anthony Henday Drive and Whitemud Drive completed in Stage 1 (first four years)	8 stages 30 years to construct based on current funding model
Access	Maintains all current neighbourhood access	Removes south access at Haddow Drive Potentially removes north access at 40 Avenue
Traffic Diversions	Improves traffic flow on Terwillegar Drive which will minimize shortcutting traffic through adjacent neighbourhoods	Traffic potentially diverted through neighbourhood roads
Transit Opportunities	Potential for dedicated transit lanes and bus stops along Terwillegar Drive	Potential for bus on shoulder with stops on service roads
Active Transportation	Shared-use path along Terwillegar Drive and connections across intersections	Pedestrian access on crossing roads
Aesthetics	Similar to existing configuration	High bridge (3 level) structure at 40 Avenue/Bulyea Road - at height of second storey windows
Land Acquisition	No land required	Land required potentially to accommodate some interchanges

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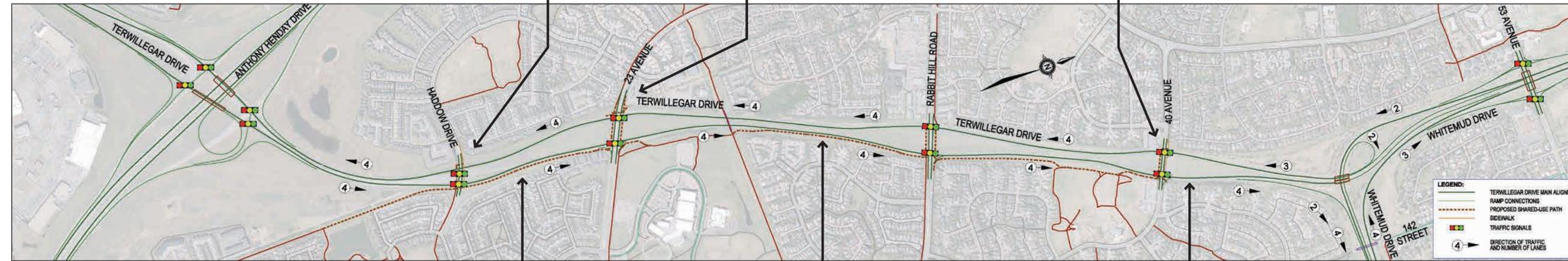
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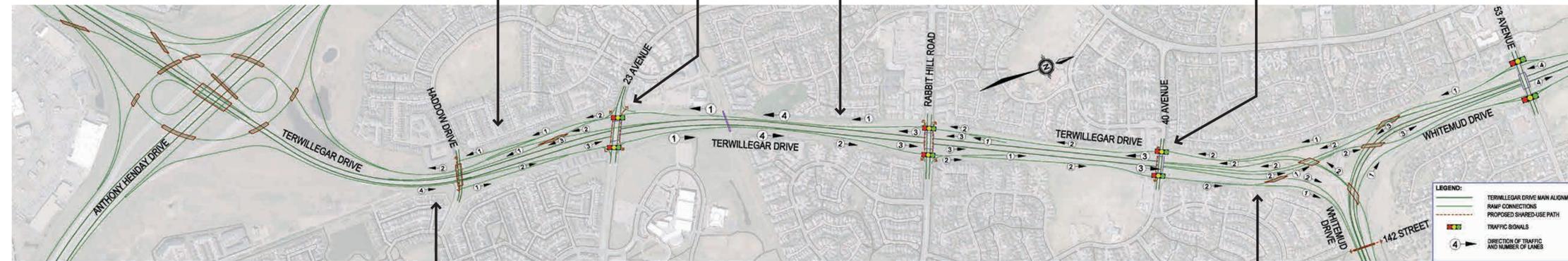
Expressway

(new direction for Terwillegar Drive)



Freeway

(No longer being considered)



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Draft Expressway Concept Plan

Motorist

- Widening of roadway and intersections
 - Four lanes in each direction
 - Additional turning lanes at all intersections
 - Adaptive Traffic Signal Controls (“Smart Signals”) that may further improve operations (under consideration)
- Widening of Whitemud Drive/ Terwillegar Drive interchange ramps and Rainbow Valley Bridge
 - Westbound to southbound ramp: widen to two lanes
 - Northbound to eastbound ramp: widen to two lanes

Pedestrian/Cyclist

- Shared-use path along east side of corridor
- Shared-use path connections across all intersections
- 142 Street pedestrian/cyclist bridge

Transit

- Allows for potential future dedicated transit lanes (one in each direction)
- Allows for bus stops along the corridor

Landscaping

- Continue landscape naturalization
- Considering additional localized tree planting

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Traffic Analysis

- Expressway traffic flow operations were assessed using a traffic modelling tool with projected traffic volumes in 2030
 - Forecasted volumes are based on projected growth in southwest Edmonton
 - Currently up to 40,000 vehicles per day
 - Up to 75,000 vehicles per day in 2030

Watch the Video to See

- Morning peak
 - Congestion reduced on northbound Terwillegar Drive in the morning
- Evening peak
 - Congestion reduced on Terwillegar Drive southbound in the evening
 - Congestion reduced on Whitemud Drive westbound to Terwillegar Drive southbound (interchange loop ramp)

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Expressway Proposed Project Staging

Stage 1 | Capital Budget 2019–2022

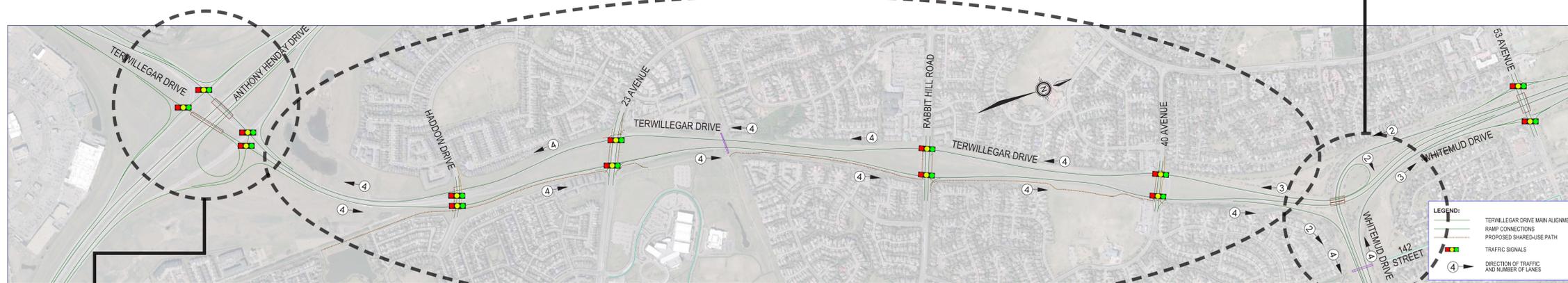
Expressway between Anthony Henday Drive and Whitemud Drive

\$100 million

Stage 2 | Capital Budget 2023–2026

Whitemud Drive Interchange improvements and Rainbow Valley Bridge widening

\$140 million



Stage 3 | Capital Budget 2027–2030

Anthony Henday Drive Interchange

Subject to additional planning and approvals by the Province

\$60 million

Concept Level Costs are +/- 50%

Each stage requires City Council funding approval

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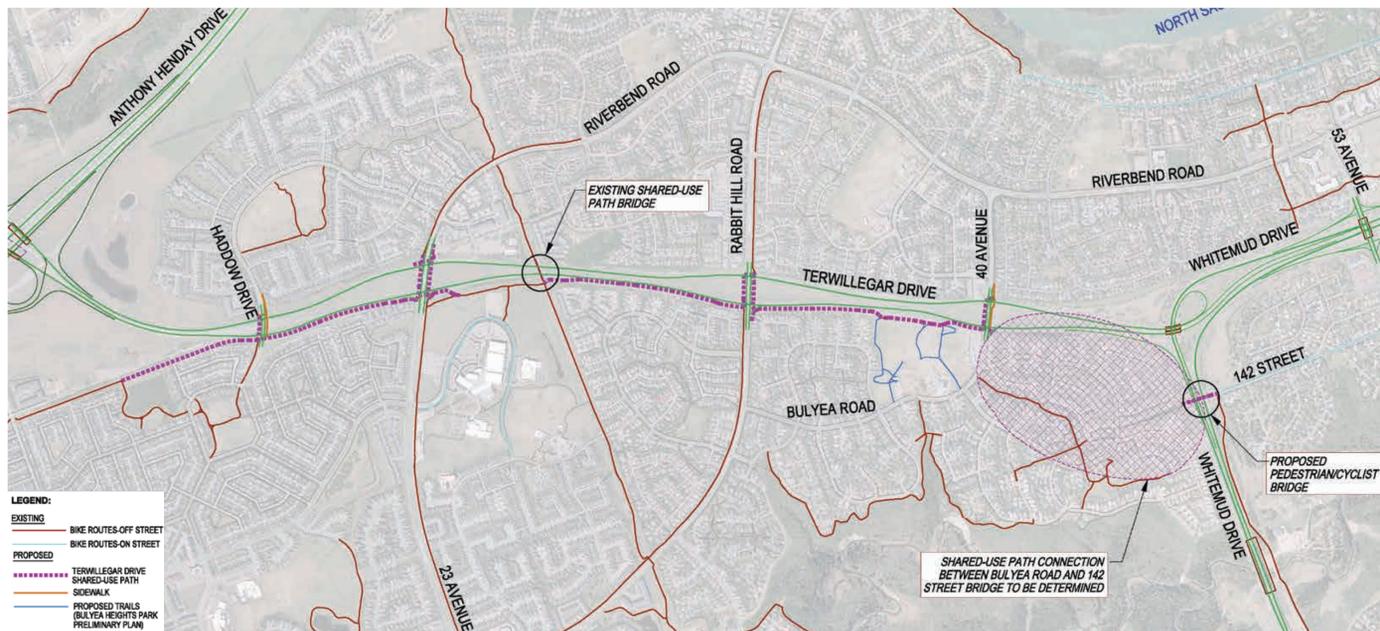
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Shared-Use Path

- The draft plan includes a shared-use path on the east side of Terwillegar Drive and connections across the intersections and to adjacent intersections.
- Aligns with the City's Bicycle Transportation Plan
- The City is assessing options for the route between 40 Avenue and the 142 Street pedestrian bridge



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Let's Talk

What could be improved about the location of the proposed shared-use path?

For the connection between 40 Avenue and 142 Street, would you prefer:

A) a direct route (a shared-use path along Terwillegar Drive and Whitemud Drive)

OR

B) a route through the neighbourhood via a mix of shared-use paths and on-street bike lanes?

What access points are important to you along this connection?

Leave your comments on sticky notes on the shared-use path plan on the table or in the survey.

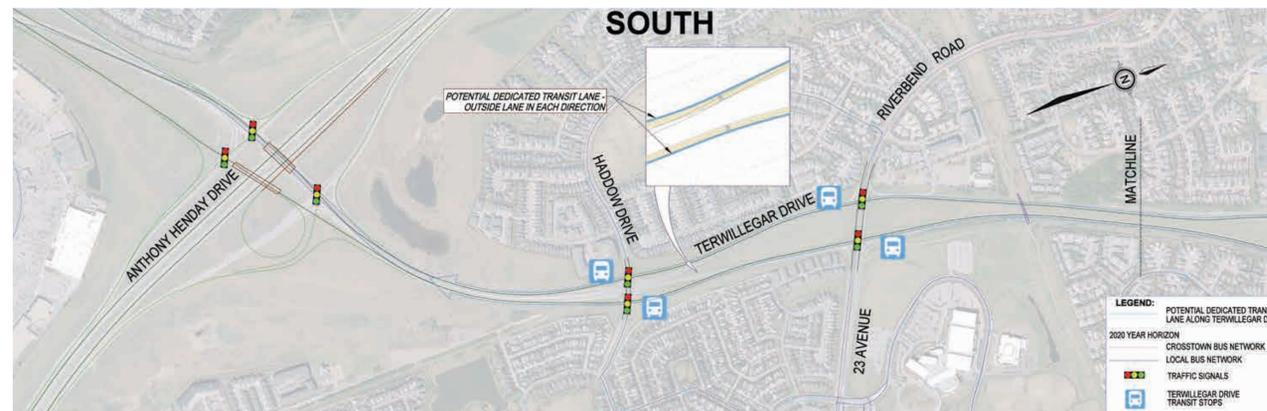
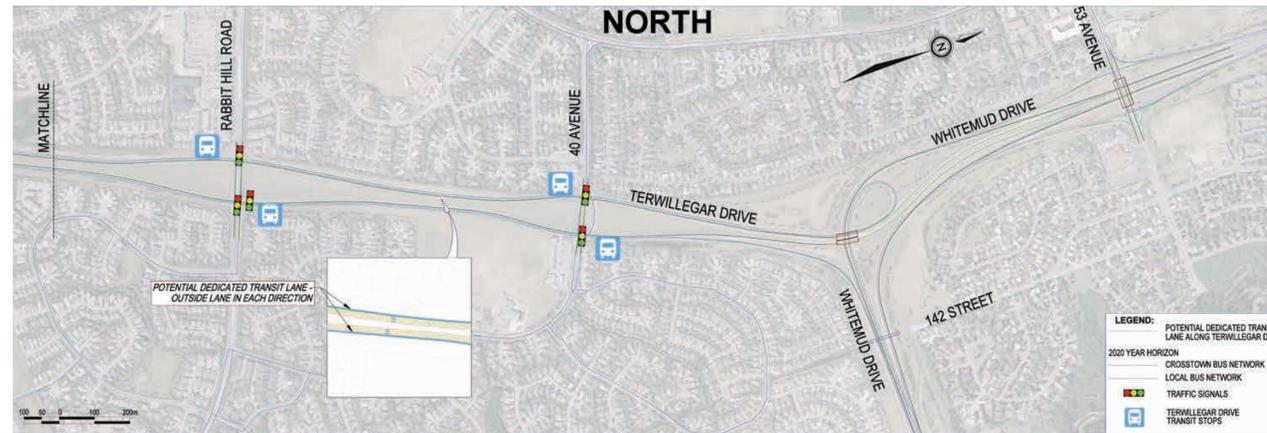
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Transit

- The draft plan allows for dedicated transit lanes and bus stops
- The City's bus network is changing through the Bus Network Redesign project. New bus routes will be implemented in 2020, prior to upgrades to Terwillegar Drive
- Transit service on Terwillegar Drive once Stage 1 of the expressway is constructed is currently under review by Edmonton Transit Service (ETS) and as part of the City Plan



Let's Talk

Share your thoughts on the potential dedicated transit lanes and stop locations along Terwillegar Drive.

Leave your comments on sticky notes on the expressway draft concept plan or in the survey.

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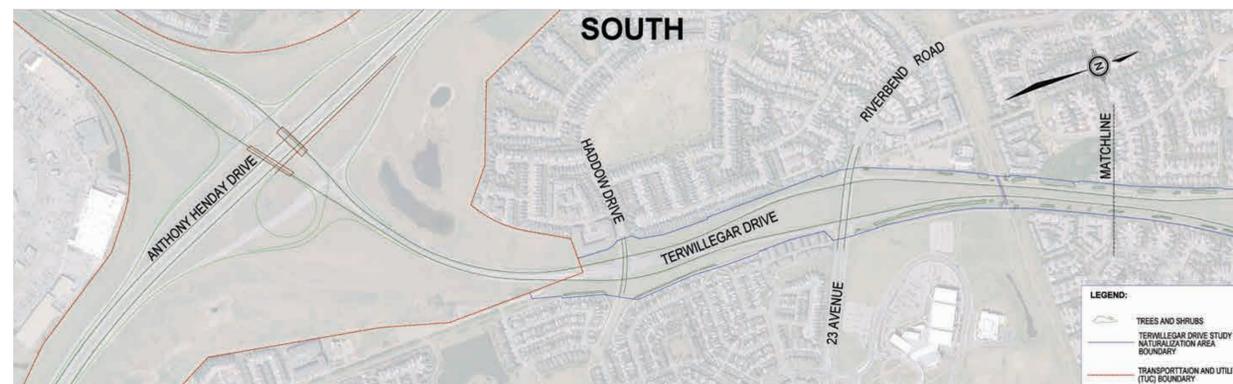
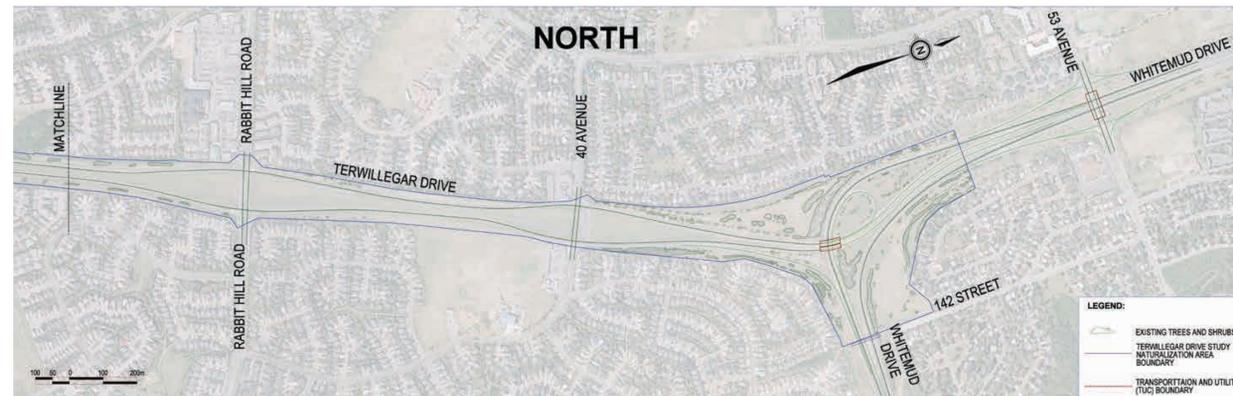
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Landscape Naturalization

- The landscaping on Terwillegar Drive is currently becoming naturalized and proposed to remain this way
- Naturalization is an ecologically-based approach to landscaping
- Maintained land is transformed to a more natural state, including trees, shrubs and wildflowers
- The City is considering planting more tree pockets to accelerate naturalization, as part of this project and future initiatives



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Where along Terwillegar Drive is there an opportunity to plant pockets of trees.

Leave your comments on sticky notes on the landscape plan on the table or in the survey.

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142 Street Pedestrian/Cyclist Bridge

- A pedestrian/cyclist bridge is proposed as part of Stage 2 over Whitemud Drive between Bulyea Heights and Brookside at 142 Street
- Different bridge styles are currently being explored

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Which bridge styles would you like to have and why?

Leave your comments on sticky notes on the shared-use plan on the table or in the survey.

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Bridge Option A: Cable-Stayed Bridge

Location: Deerfoot Trail near 32 Avenue N., Calgary

Bridge details:

- High visual impact
- Mid to high cost (relative to other options)
- High tower height – proportional to bridge length



Bridge Option B: Girder Bridge – Single Span

Location: Sanderling Drive and Country Hills Boulevard, Calgary

Bridge details:

- Low visual impact
- Mid to high cost (relative to other options)
- Low height with optional safety cage on top



Bridge Option C: Tied Arch Bridge

Location: Shaganappi Trail, Calgary

Bridge details:

- High visual impact
- Mid cost (relative to other options)
- Medium height – proportional to bridge length



Bridge Option D: Pony Truss Bridge

Location: Stoney Trail, Calgary

Bridge Details:

- High visual impact
- Mid to high cost (relative to other options)
- Medium height – height of trusses increases with bridge length



Bridge Option E: Girder Bridge – Multi Span

Location: Terwillegar Drive, Edmonton

Bridge Details:

- Low visual impact
- Low cost (relative to other options)
- Low height with optional safety cage on top

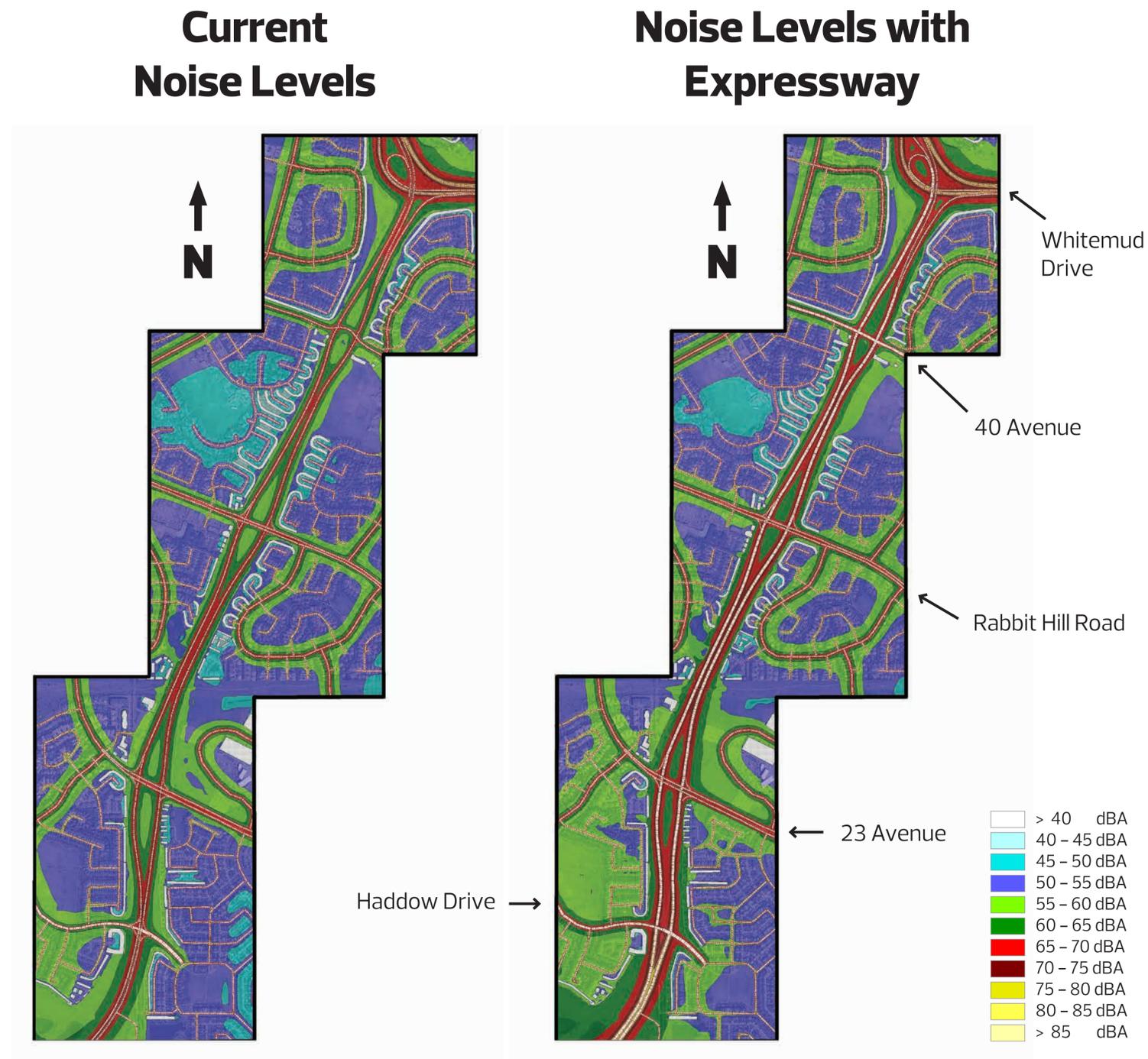
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Noise Assessment

- 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).



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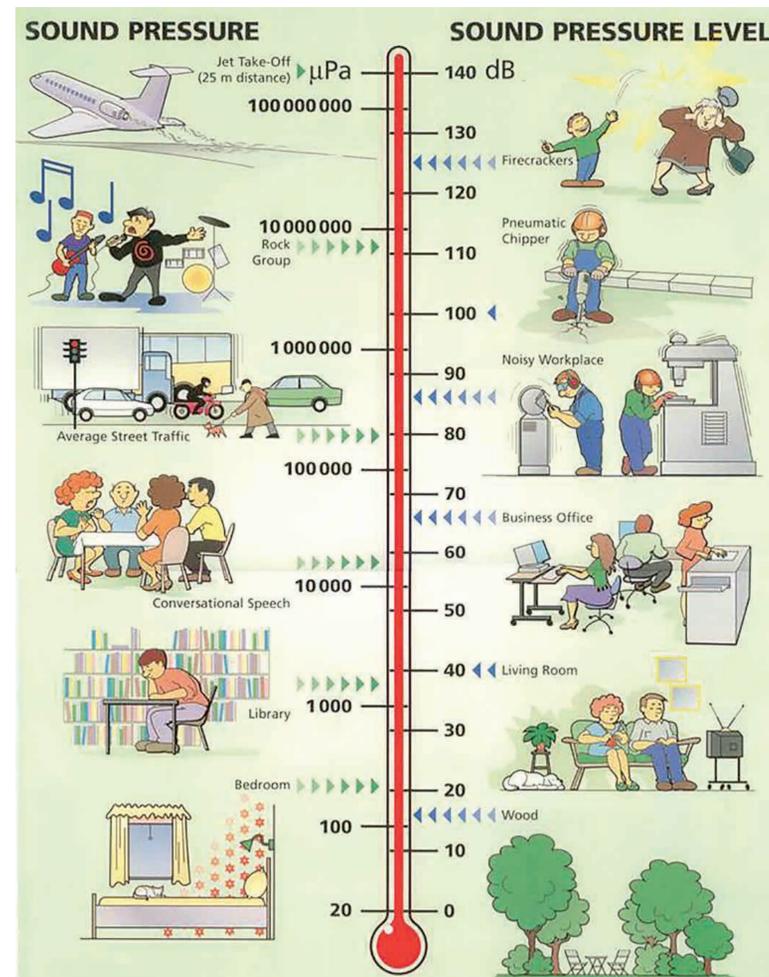
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Understanding Noise

- 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



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Next Steps

Oct – Dec 2018	Draft expressway plan public engagement
Dec 2018	City Council decision on funding Stage 1
Late Spring 2019	Develop recommended expressway plan
Late Spring 2019	Share recommended expressway plan with you
2019/20	Design – if funding approved
2021/22	Begin construction of Stage 1 – if funding approved

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Thank You

- Complete our survey today or online until December 21, 2018
- Leave comments on table maps

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