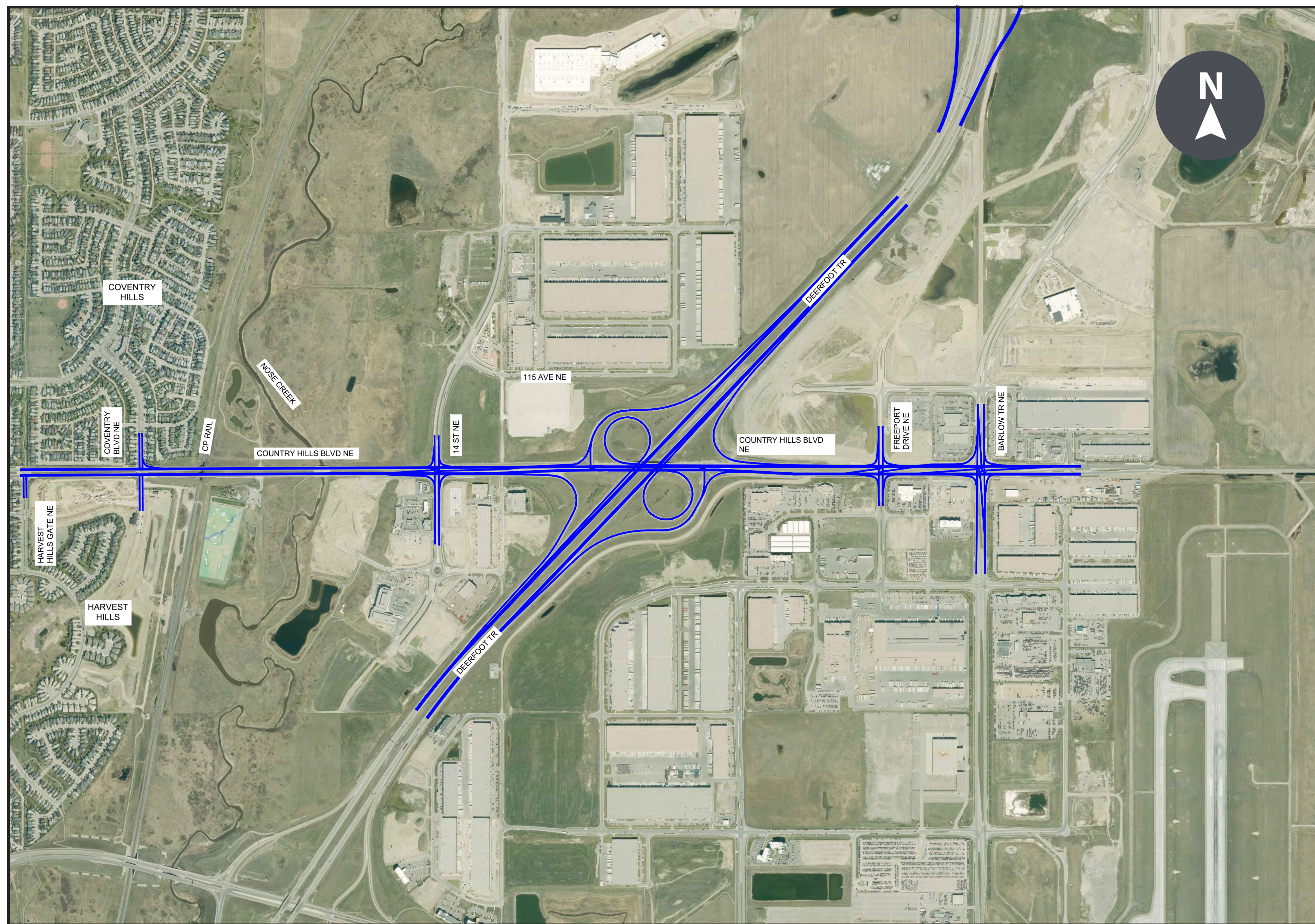


Welcome

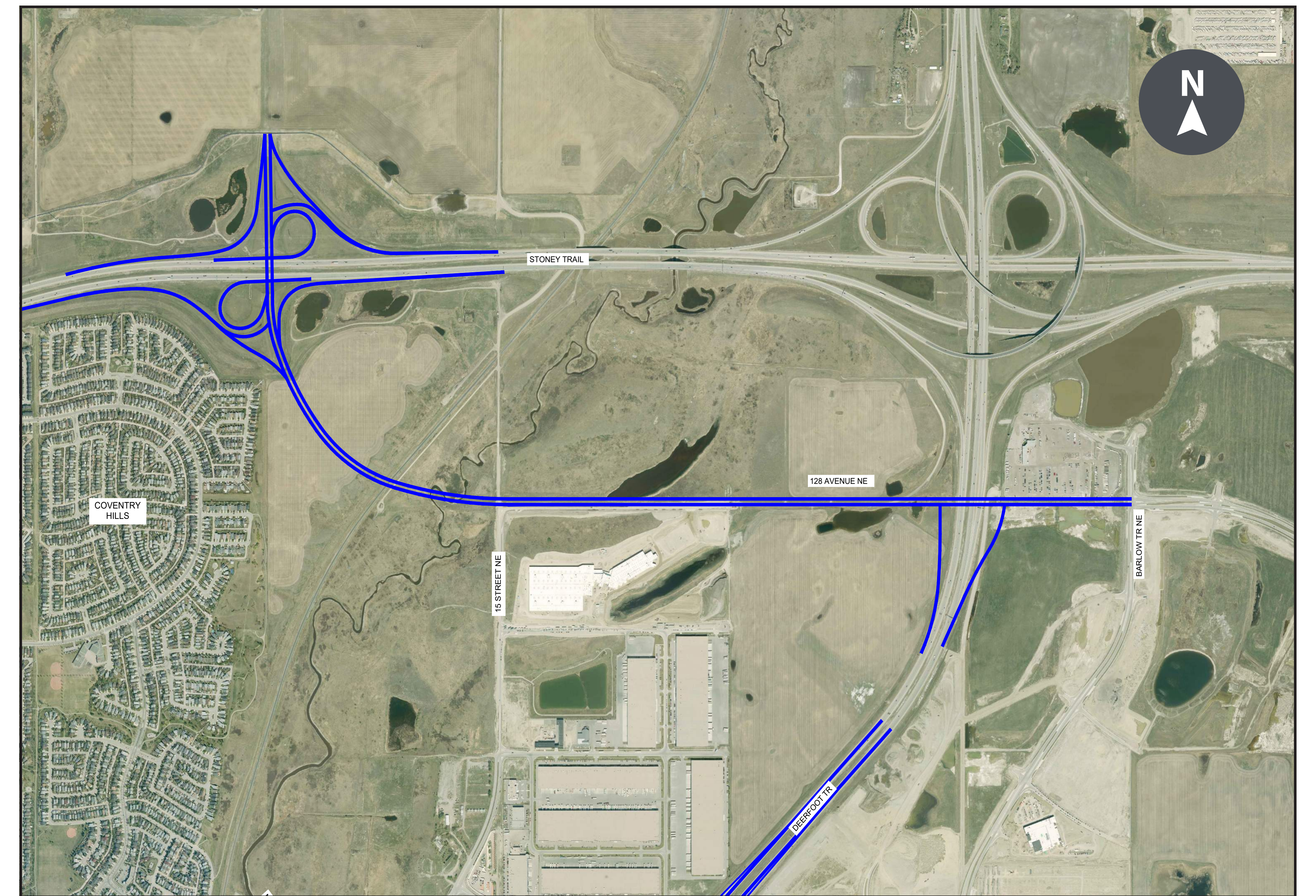
Country Hills Boulevard N.E. Study Area



Objectives

- Develop widening plan along Country Hills Boulevard N.E. between Deerfoot Trail and Coventry Boulevard N.E. from four to six lanes, including continuous multi-use pathways.
- Examine widening strategies for existing bridges over CP Rail, Nose Creek and Deerfoot Trail.
- Better accommodate and improve safety for both current and future travel modes in the study area.

128 Avenue N.E. Study Area



Objectives

- Plan for a new connection for 128 Avenue N.E. between Barlow Trail and Stoney Trail that will accommodate all modes of transportation.
- Review previous interchange plans at both Deerfoot Trail and Stoney Trail.
- Examine new crossings over CP Rail and Nose Creek.
- Incorporate safety best practices considering all travel modes within the study area.

Study Process



Gather and review available project information

Conduct existing conditions studies



Develop design concepts and conduct preliminary / initial evaluation



Final review and evaluation



Develop preferred study area plan

Submit for City approval process

Discover ideas, opportunities, challenges and develop evaluation criteria for the study area with stakeholders and the public.



Review stakeholder and public feedback

Explore potential concepts and evaluation results with stakeholders and the public



Review stakeholder and public feedback

Present preferred plan to stakeholders and the public



Review feedback and refine plan

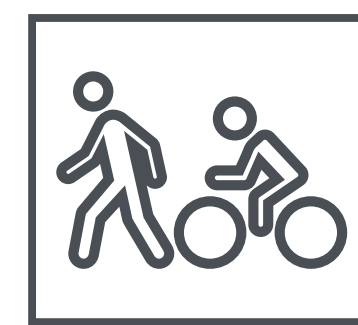
Post final plan online





What We Heard: Country Hills Boulevard N.E.

Overall Themes We Heard in the Discover Phase



Pathways and Connectivity:

- It is important to accommodate pedestrians and cyclists along the study corridor.
- There are missing segments of pathways.
- It is important to design pathways with safety in mind.



Traffic Operations:

- Concerns about merging to and from Deerfoot Trail N.E.
- Desire to see improved traffic flow and reduced congestion.

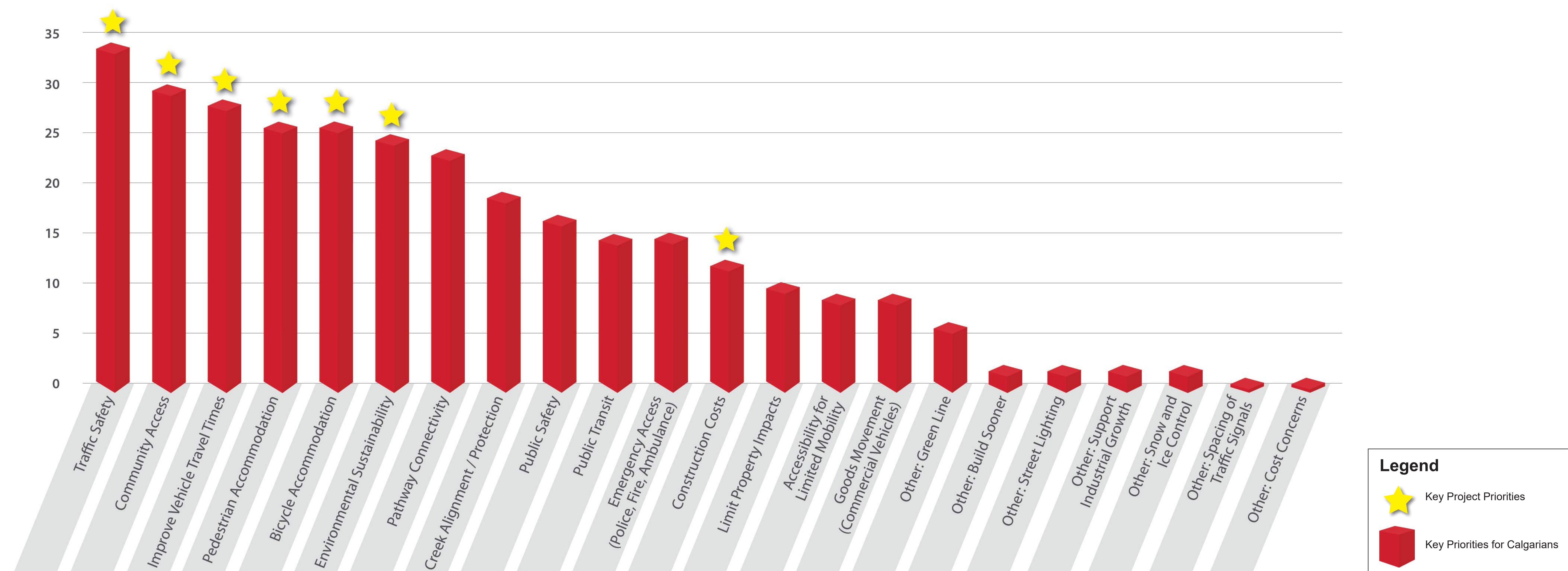


Bridge Widening:

- The width of the bridge across the creek constricts how many lanes of traffic can travel Country Hills Boulevard N.E.
- Desire to see improvements to the bridge crossing Deerfoot Trail.

Key Project Priorities

Combining feedback from Calgarians in the Discover Phase and City priorities identified the following key project priorities which were used to evaluate options.

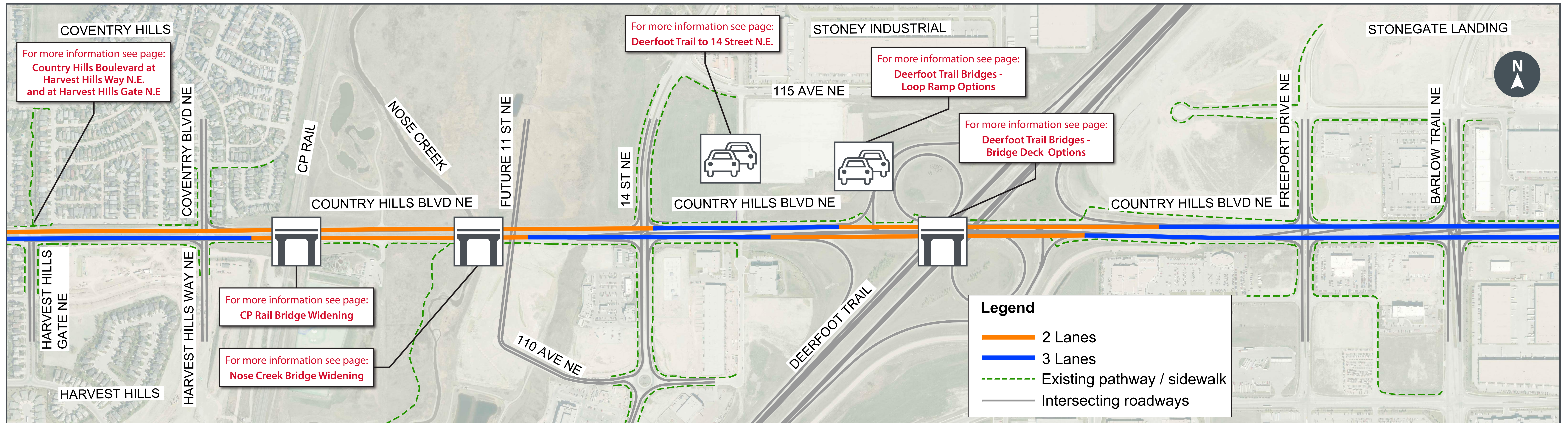




Country Hills Boulevard N.E.

The City is undertaking a functional planning study to widen Country Hills Boulevard N.E. and address key issues between Deerfoot Trail N.E. and Coventry Boulevard N.E. Using technical analysis and feedback from Calgarians in the Discover Phase, we have developed several concepts and options and would like your feedback to develop the recommended plan.

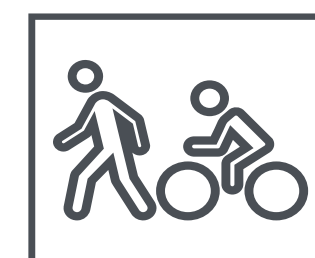
Key Considerations Map



Project Objectives

- Develop widening plan along Country Hills Boulevard N.E. between Deerfoot Trail N.E. and Coventry Boulevard N.E. from four to six lanes, including continuous multi-use pathways.
- Examine widening strategies for existing bridges over CP Rail, Nose Creek and Deerfoot Trail.
- Better accommodate and improve safety for both current and future travel modes in the study area.

Key Considerations



Pathway Connections:

Look for --- on the map to see existing pathways and sidewalks. Note:

- Missing south-side connection from 14 Street N.E. across Deerfoot Trail N.E.
- Missing north-side connection from Harvest Hills Gate N.E. to 14 Street N.E.
- Future pathway connection under Nose Creek Bridge (by others).



Traffic Operations:

Anticipate significant increased traffic along Country Hills Boulevard N.E. when the surrounding industrial area fully develops resulting in:

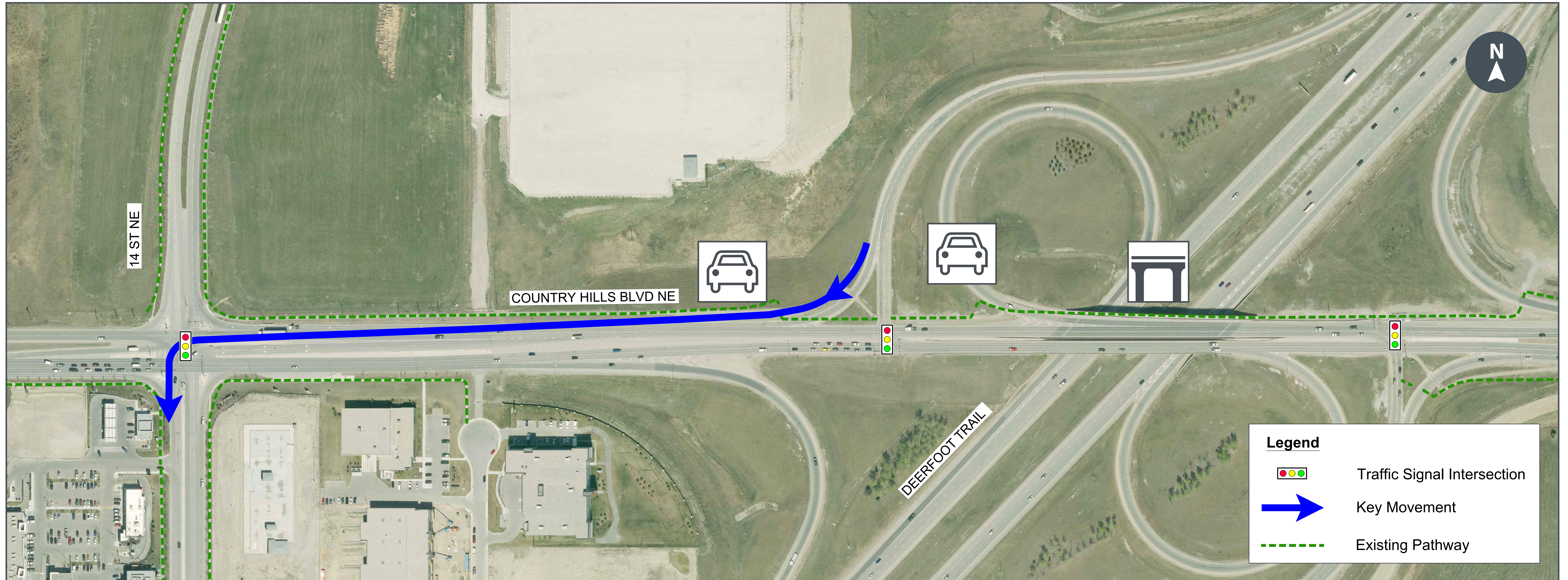
- Long eastbound queue along Country Hills Boulevard N.E. at 14 Street N.E.
- Long westbound left turn queue at Country Hills Boulevard N.E. at 14 Street N.E. affects traffic coming off southbound Deerfoot Trail N.E.
- Several sections of Country Hills Boulevard N.E. will require widening to three lanes (See --- on the map).
- Westbound Country Hills Boulevard N.E. requires widening to three lanes from Deerfoot Trail N.E. to Coventry Boulevard N.E. and Harvest Hills Way N.E.



Bridge Widening:

- How to widen three existing bridges (see symbols on map) to accommodate 4 m paths on both sides and three traffic lanes in each direction.

Deerfoot Trail Interchange



Deerfoot Trail N.E. to 14 Street N.E.:

There are challenges travelling from southbound Deerfoot Trail N.E. to southbound 14 Street N.E. as drivers need to weave across multiple lanes of traffic. We have developed four options as potential solutions for your input.

For more information see page: Deerfoot Trail N.E. to 14 Street N.E.



Bridge Loop Ramps:

Changes to the bridges over Deerfoot Trail N.E. provide an opportunity to explore the exit ramps. We have developed two options for your input.

For more information see page: Deerfoot Trail Bridges - Loop Ramp Options.



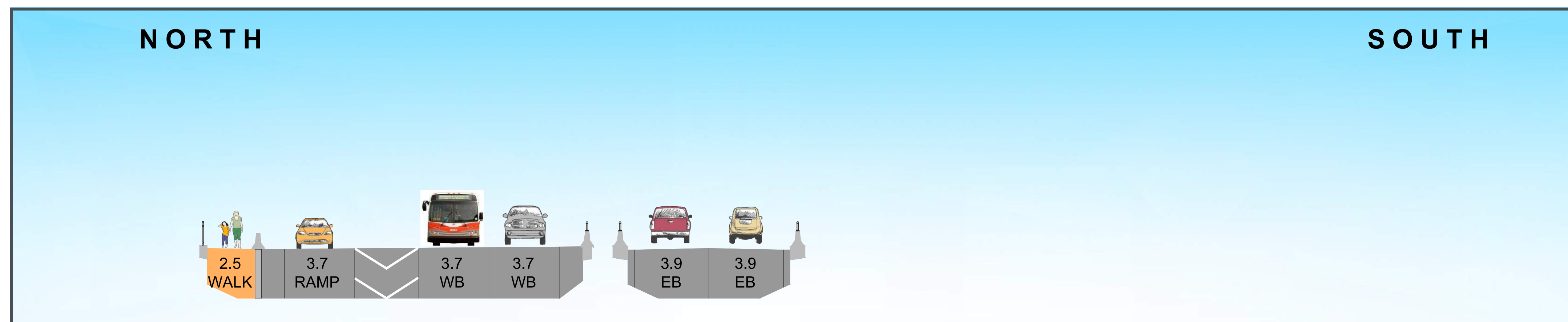
Bridge Widening:

There are two existing bridges crossing over Deerfoot Trail N.E. and we have developed bridge replacement and widening options for your input.

For more information see page: Deerfoot Trail Bridges - Bridge Deck Options.

Deerfoot Trail Bridges – Bridge Deck Options

Using what we heard from Calgarians in the Discover Phase, the project team developed three options for widening the Deerfoot Trail Bridges.



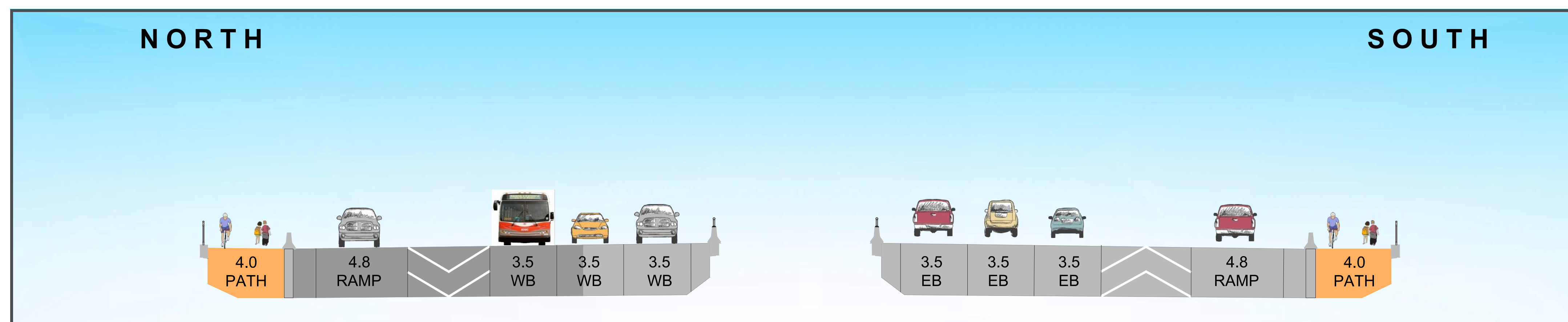
DEERFOOT TRAIL EXISTING BRIDGE CROSS SECTION

Existing Bridge Conditions:

North bridge provides two westbound lanes and exit ramp.
2.5 m sidewalk on the north side.
South bridge provides two eastbound lanes.
No pathway connection on the south side.

All options provide the following:

- Six lanes on Country Hills Boulevard N.E.
- Continuous pathway or sidewalk connections along both sides of Country Hills Boulevard N.E.
- New south bridge.

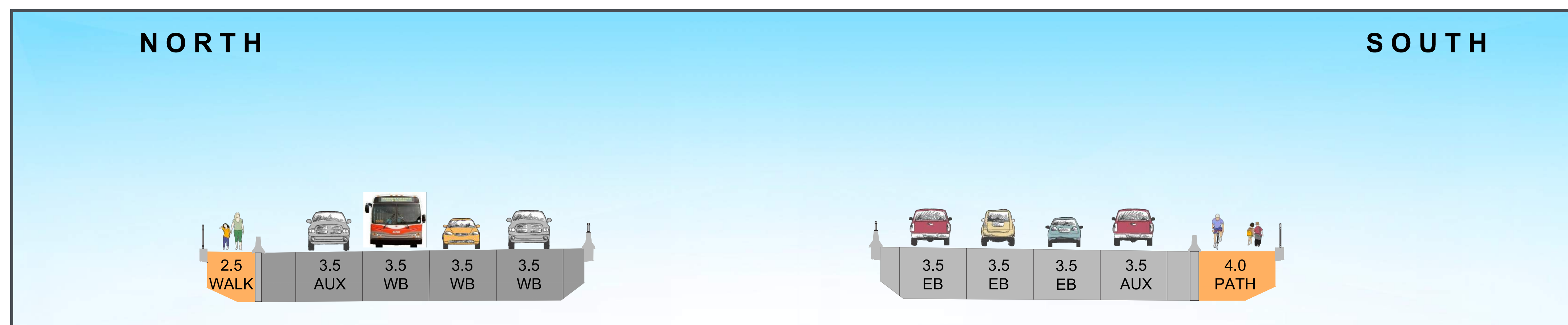


DEERFOOT TRAIL OPTION A BRIDGE CROSS SECTION

Option A – Widen North Bridge

Cost: \$\$\$ (6.6 m of bridge widening and 27.6 m of new bridge width).

- Widen north-side pathway width along Deerfoot Trail Bridge.
- Widen north bridge to the south to accommodate additional westbound lane and pathway widening to 4 m.
- Construct new south bridge to accommodate future eastbound lanes and 4 m south-side pathway.

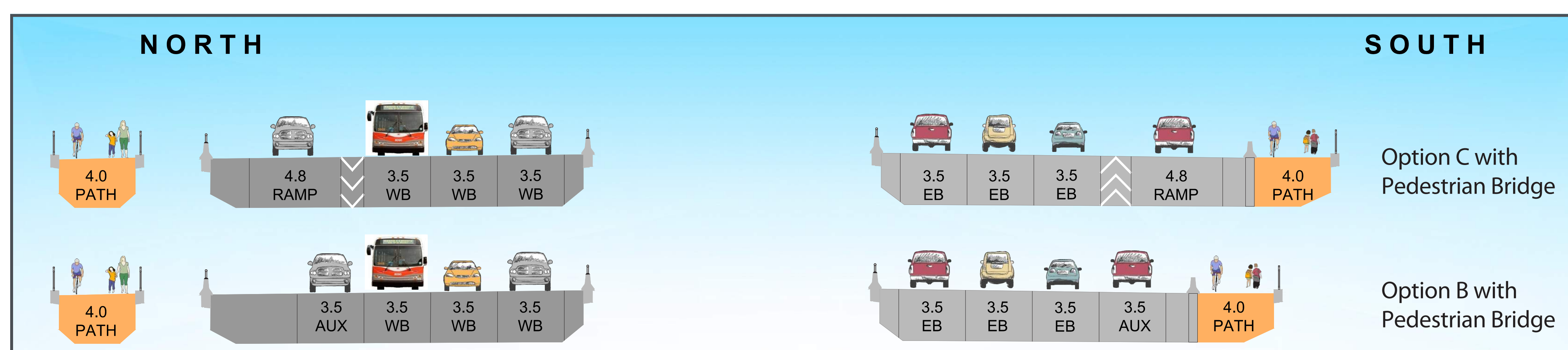


DEERFOOT TRAIL OPTION B BRIDGE CROSS SECTION

Option B – North Bridge Remains

Cost: \$ (21.6 m of new bridge width).

- Modify lane markings on north bridge to accommodate three westbound lanes and right turn merge lane to exit ramp. North sidewalk to remain at 2.5 m wide.
- Construct new south bridge to accommodate three eastbound lanes, right turn merge lane to exit ramp and south-side pathway. Add 4 m pedestrian connection on the south bridge.



DEERFOOT TRAIL OPTION C BRIDGE CROSS SECTION

Option C – Build Separate Pedestrian Bridge

Cost: \$\$ (24.5 m of new bridge width and 4.9 m wide pedestrian bridge).

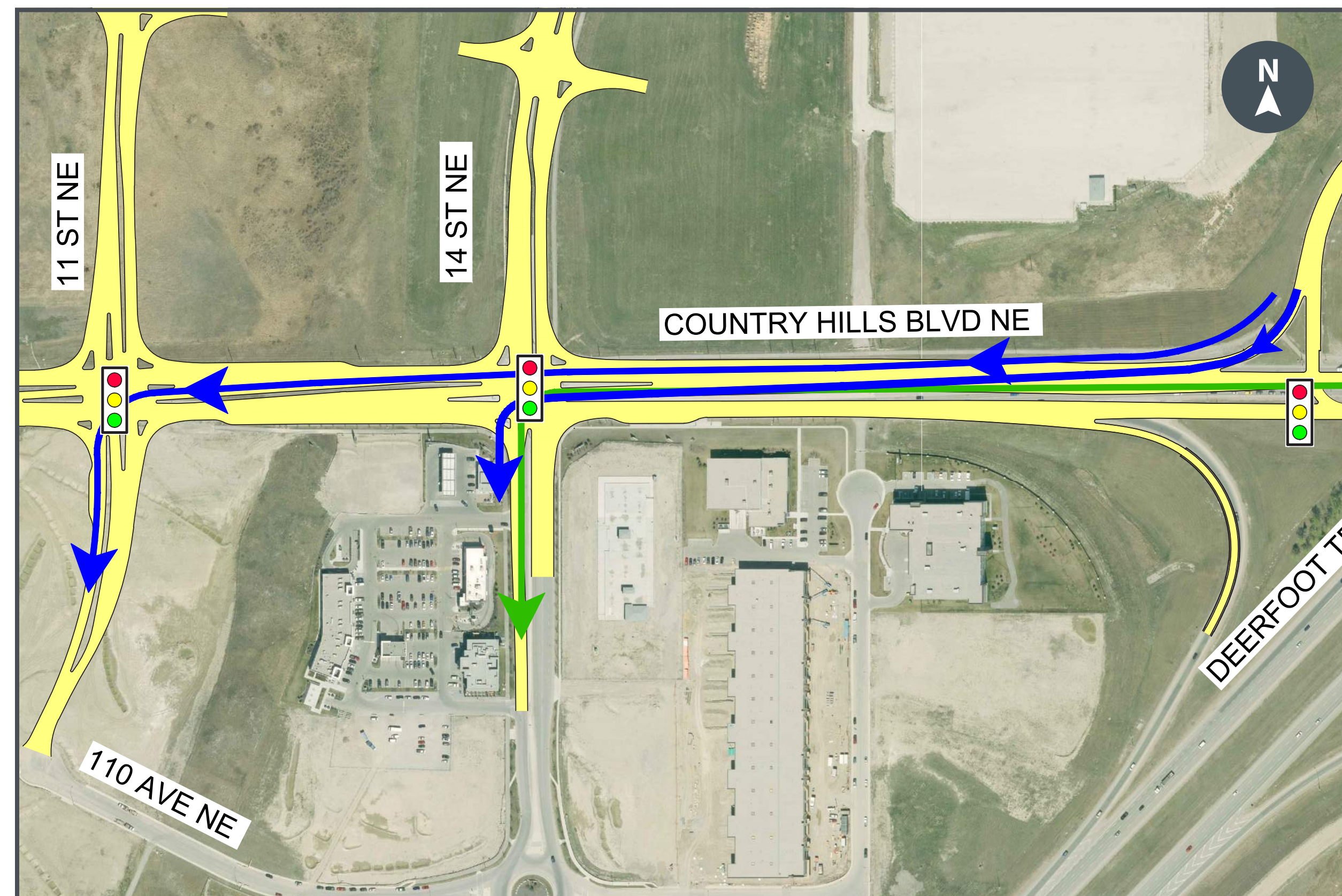
- Construct a separate pedestrian bridge on the north side to accommodate a 4 m pathway.
- Use space for existing pathway on north bridge to accommodate three westbound lanes and ramp.
- Construct new south bridge to accommodate future eastbound lanes, a ramp and south-side pathway. Add 4 m pedestrian connection on the south bridge.



Deerfoot Trail to 14 Street N.E.

Using what we heard from Calgarians in the Discover Phase, the project team developed four options for Deerfoot Trail N.E. to 14 Street N.E.

Option A: Base Case (Existing)



Description:

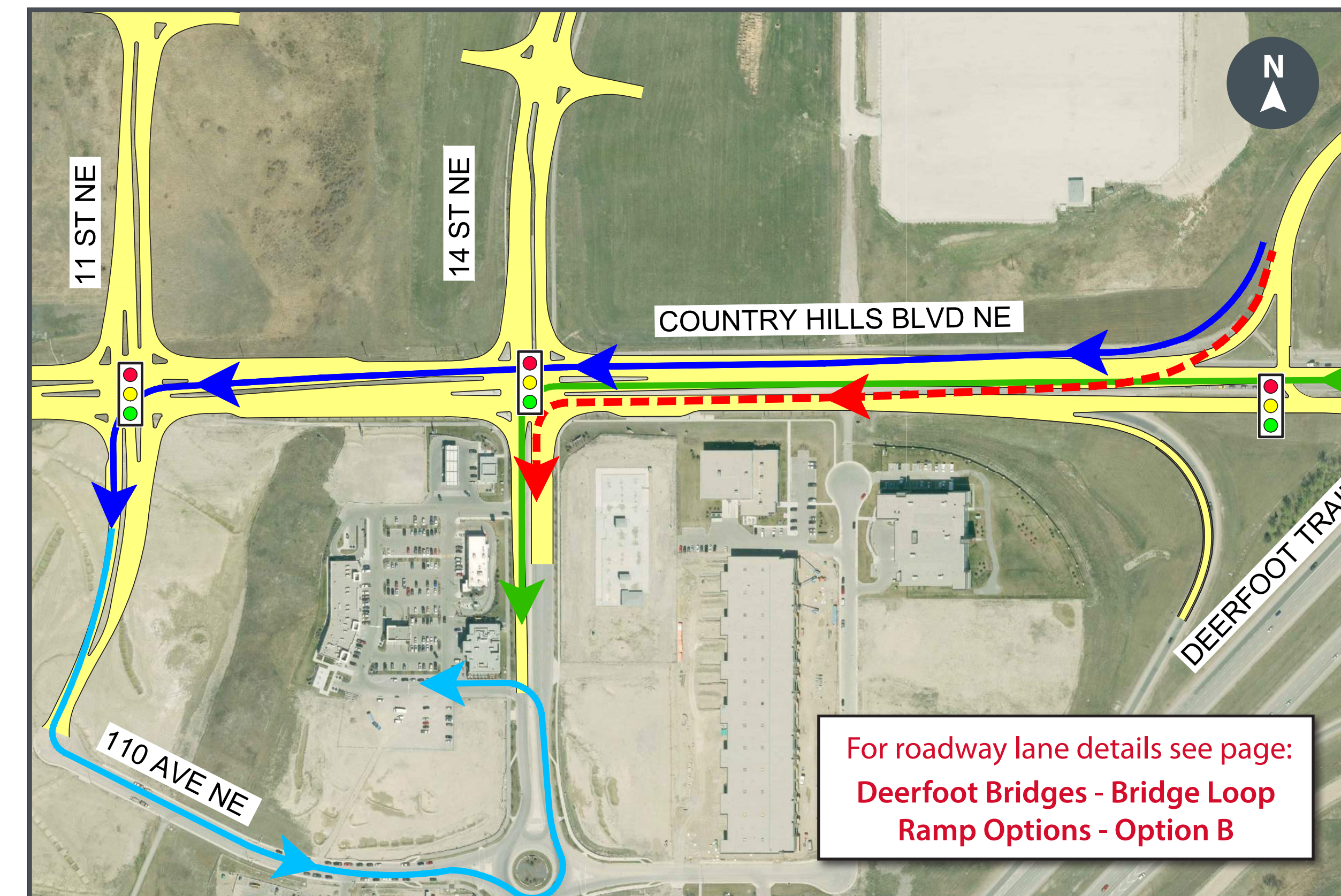
Cost: \$

- Vehicles coming from southbound Deerfoot Trail N.E. onto westbound Country Hills Boulevard N.E. making left turns at 14 Street N.E. and 11 Street N.E.

Operating Issues:

- Traffic weaving issue between Deerfoot Trail N.E. west junction and 14 Street N.E.

Option B: Median from Deerfoot Trail N.E. to 14 Street N.E.



Description:

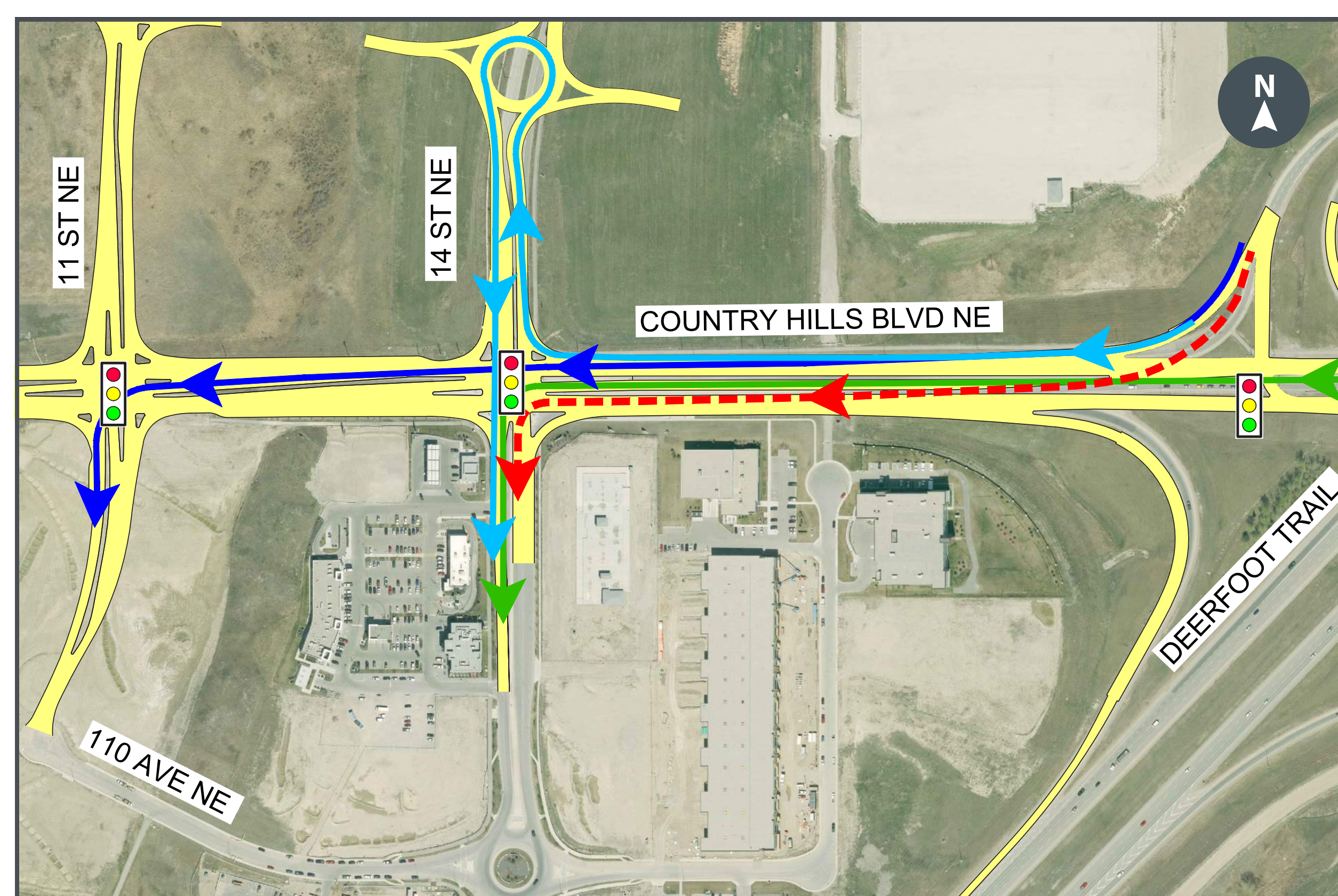
Cost: \$

- Restrict left turns from southbound Deerfoot Trail N.E. to southbound 14 Street N.E.

Alternate Route:

- Redirect traffic to turn southbound at 11 Street N.E.

Option C: Median from Deerfoot Trail N.E. to 14 Street N.E. Roundabout



Description:

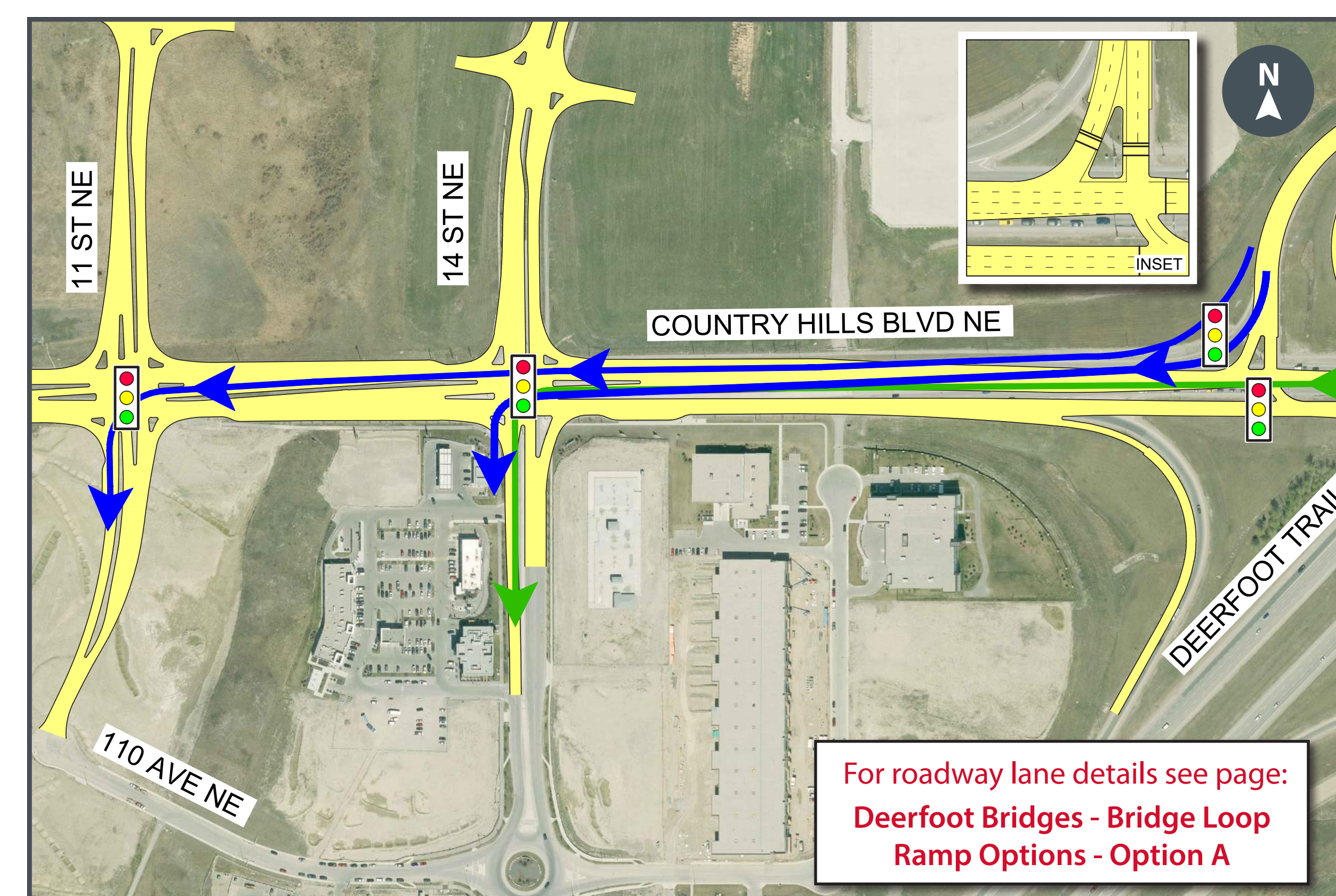
Cost: \$\$

- Restrict left turns from southbound Deerfoot Trail N.E. to southbound 14 Street N.E.

Alternate Route:

- Provide roundabout at 14 Street N.E. and 115 Avenue N.E. to accommodate southbound travel on 14 Street N.E. for vehicles coming from southbound Deerfoot Trail N.E..

Option D: Signalized Dual Right Turn



Description:

Cost: \$

- Provide signalized dual right turn for vehicles coming from southbound Deerfoot Trail N.E. onto westbound Country Hills Boulevard N.E. to eliminate safety issues and provide a direct route.

Legend

- Proposed Roadway (Yellow line)
- Traffic Signal Intersection (Traffic light icon)
- Restricted Traffic Movement (Red dashed arrow)
- Permitted SB DT to SB 14 Street Movement (Blue arrow)
- Permitted WB CHB to SB 14 Street Movement (Green arrow)
- Alternative Route (Light blue arrow)

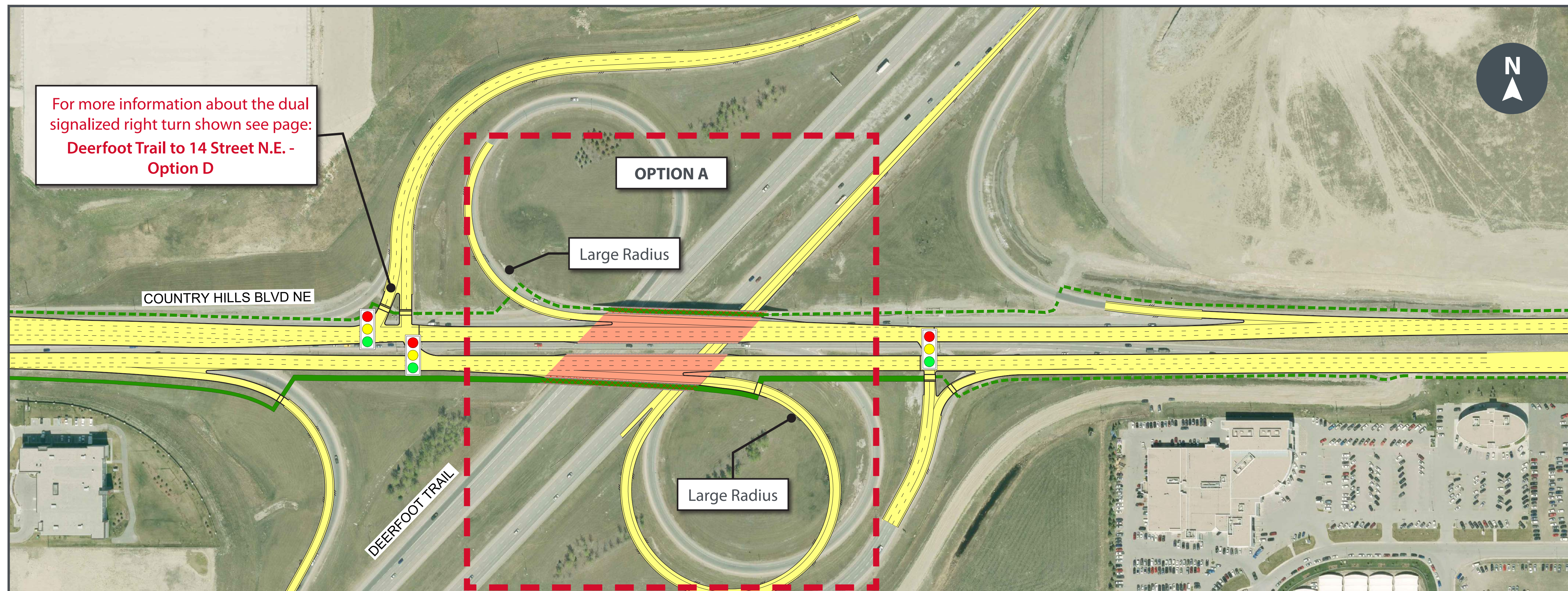
Benefits and Impacts	Option A	Option B	Option C	Option D
Eliminates traffic weaving between interchange junction and 14 Street N.E.		✓	✓	✓
Direct route to access businesses and commercial areas	✓			✓

Legend:

- ALIGNED WITH PRIORITIES (Green circle)
- LESS ALIGNED WITH PRIORITIES (Yellow circle)
- LEAST ALIGNED WITH PRIORITIES (Pink circle)

Public and City Key Priorities	Option A	Option B	Option C	Option D
Traffic safety	●	●	●	●
Community access	●	●	●	●
Improved vehicle travel times	●	●	●	●
Pedestrian accommodation	●	●	●	●
Bicycle accommodation	●	●	●	●
Environmental sustainability	●	●	●	●
Pathway connectivity	●	●	●	●
Construction costs	●	●	●	●

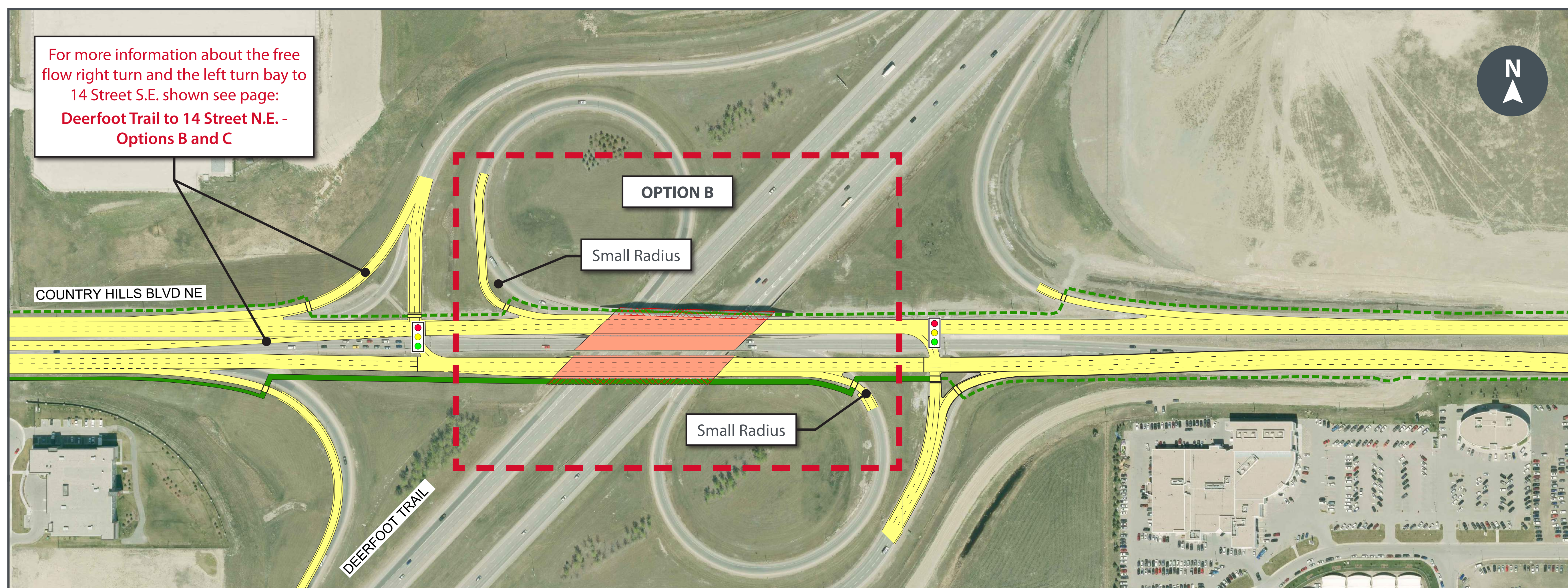
Deerfoot Bridges – Bridge Loop Ramp Options



Option A: Large Radius Exits

Cost: \$\$\$

- 50 km/h speed at crosswalk.
- Requires north bridge widening.
- Requires a larger south bridge.
- Requires more loop ramp modification.



Option B: Small Radius Exits

Cost: \$\$

- 30 km/h speed at crosswalk.
- No widening of north bridge required.
- Requires a smaller south bridge.
- Minimal loop ramp modification required.

Legend

	Traffic Signal Intersection		Existing Pathway
	Proposed Roadway		Proposed Pathway
	Proposed Bridge		Existing Pedestrian Bridge
			Proposed Pedestrian Bridge

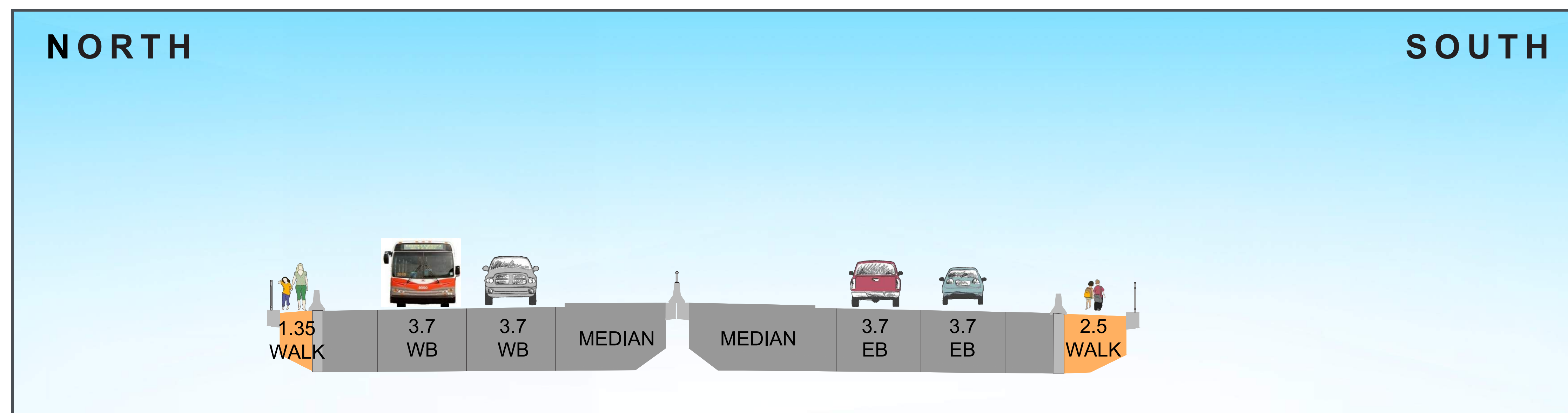
Legend:

	ALIGNED WITH PRIORITIES		SOMEWHAT ALIGNED WITH PRIORITIES		LESS ALIGNED WITH PRIORITIES
--	-------------------------	--	----------------------------------	--	------------------------------

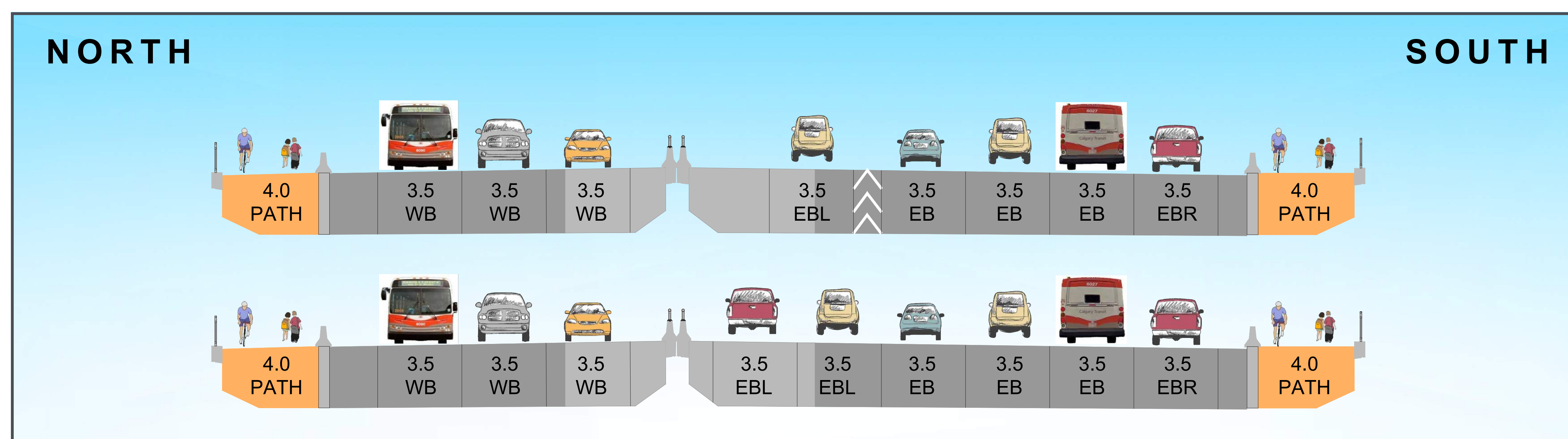
Public and City Key Priorities	Option A	Option B
Traffic safety		
Community access		
Improved vehicle travel times		
Pedestrian accommodation		
Bicycle accommodation		
Environmental sustainability		
Pathway connectivity		
Construction costs		

Nose Creek Bridge Widening

The project team reviewed how to widen the existing Nose Creek bridges.



NOSE CREEK EXISTING BRIDGE CROSS SECTION



NOSE CREEK PROPOSED BRIDGE CROSS SECTION

Existing Bridges Condition:

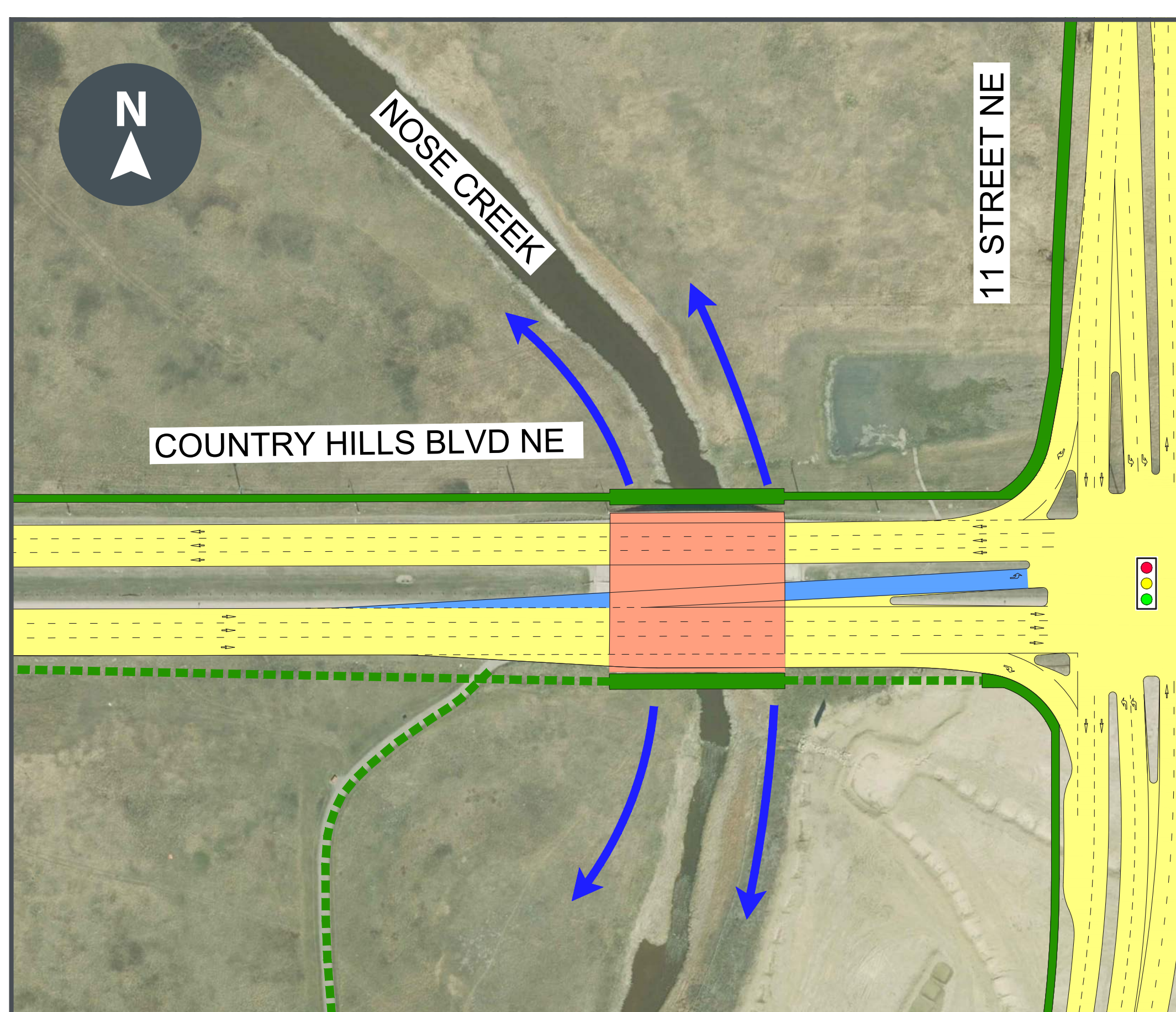
- North bridge provides two westbound lanes.
- South bridge provides two eastbound lanes.
- 1.35 m sidewalk on the north side.
- 2.5 m sidewalk on the south side.
- This bridge was planned to accommodate 3 m wide paths with 2.5 m vertical clearance.

All stages provide the following:

- Six lanes on Country Hills Boulevard N.E.
- Pathways along both sides of Country Hills Boulevard N.E.

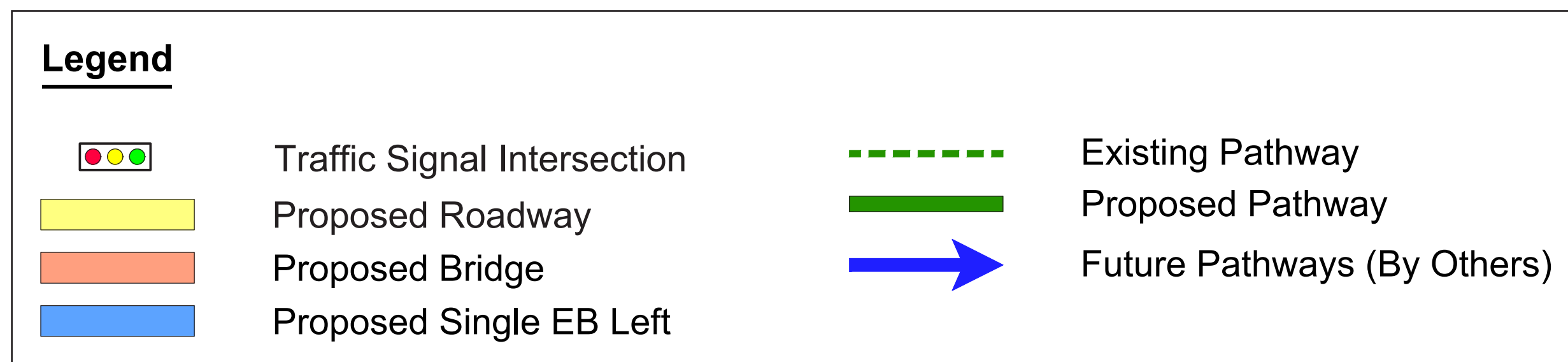
Nose Creek Bridge Widening Highlights:

- Modify existing bridge median to accommodate three westbound and three eastbound lanes. This improves mobility along Country Hills Boulevard N.E.
- The south bridge will be widened to accommodate both a single left turn or a dual parallel left turn for eastbound Country Hills Boulevard N.E. to northbound 11 Street N.E. traffic. A single left turn lane is planned, but it could be converted to a dual left turn in the future.
- The south bridge can be widened to better accommodate eastbound Country Hills Boulevard N.E. to southbound 11 Street N.E. traffic with the an additional right-turn lane.
- North pathway widened from 1.35 m to 4 m.
- South pathway widened from 2.6 m to 4 m.

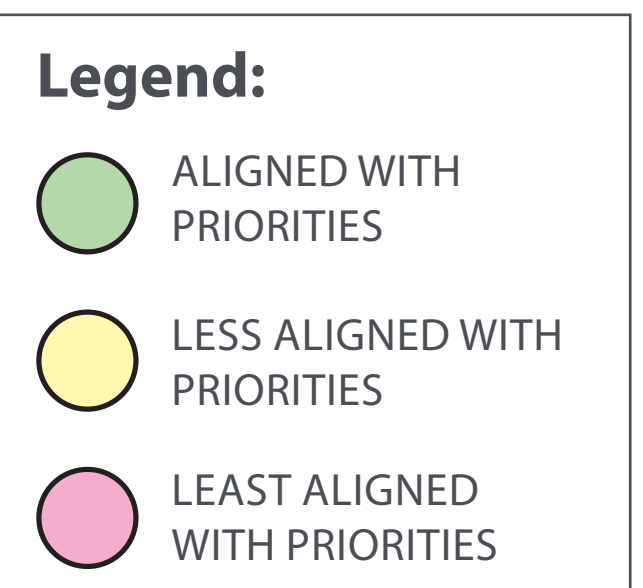


Single Eastbound Left Turn Lane at Country Hills Boulevard and 11 Street N.E. Previously Considered in Development Plans:

- Uses wider lane widths from approved area planning.
- Left turn capacity acceptable.
- Separated left-turn lane.
- More distance from bridge barrier.

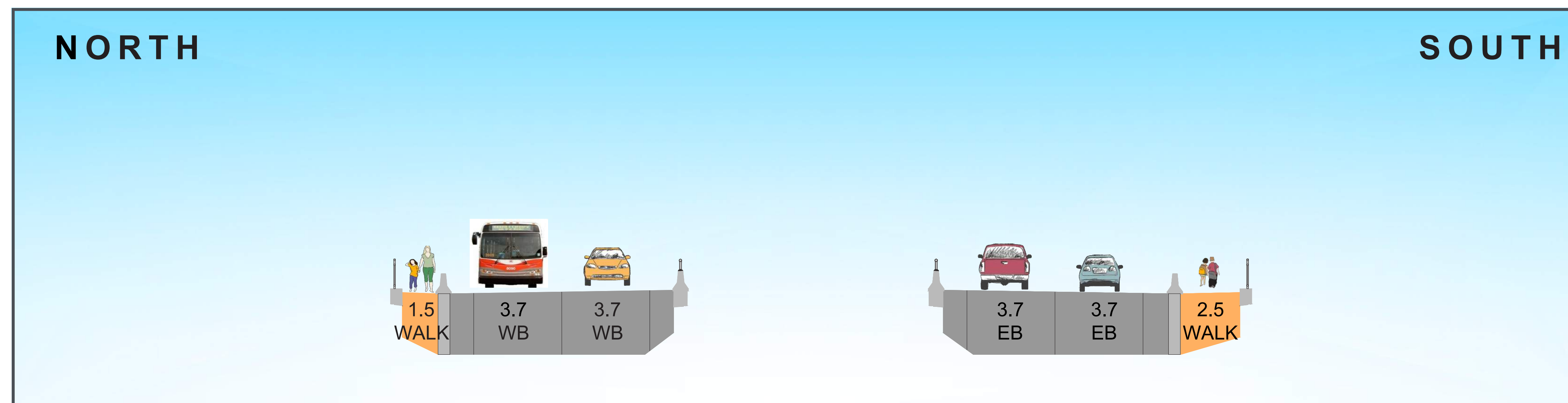


Public and City Key Priorities	Existing	Proposed
Traffic safety		
Community access		
Improved vehicle travel times		
Pedestrian accommodation		
Bicycle accommodation		
Environmental sustainability		
Pathway connectivity		
Construction costs		

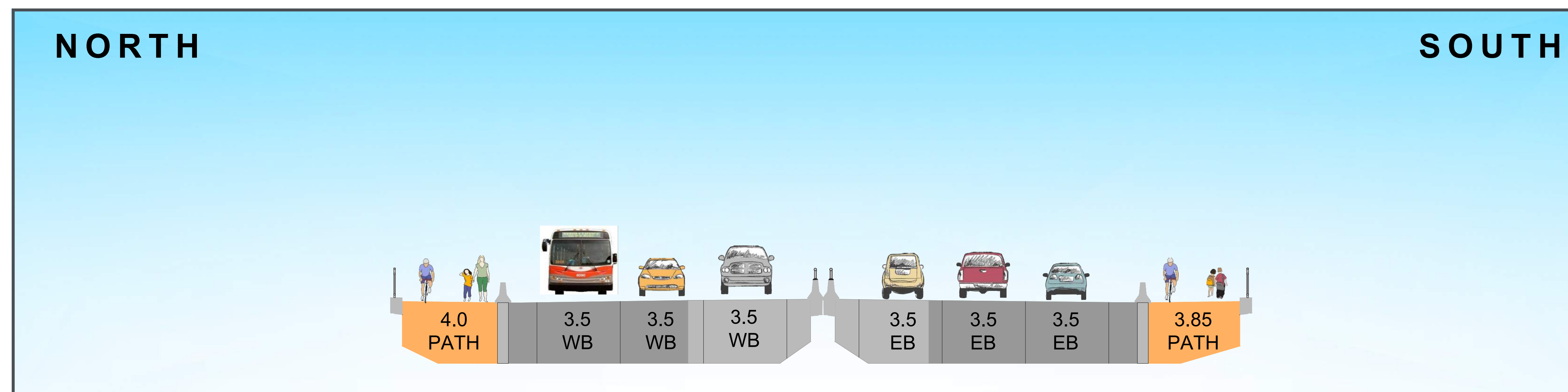


CP Rail Bridge Widening

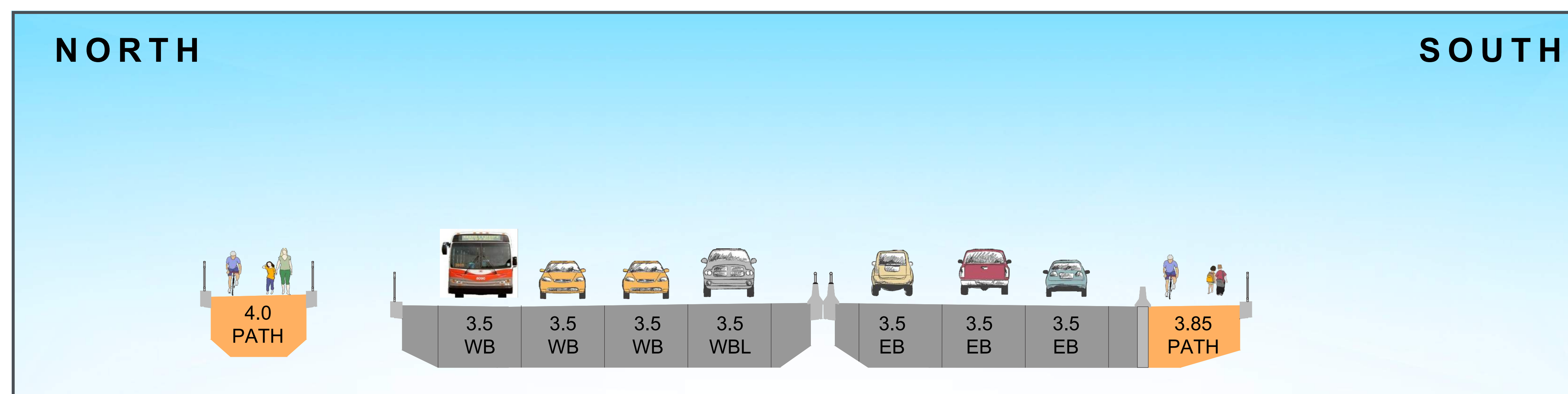
Using what we heard from Calgarians in the Discover Phase, the project team reviewed how to widen the existing CP Rail bridge.



CP RAIL EXISTING BRIDGE CROSS SECTION



CP RAIL PROPOSED STAGE 1 BRIDGE CROSS SECTION



CP RAIL PROPOSED STAGE 2 BRIDGE CROSS SECTION

Existing Bridges Condition:

North bridge provides two westbound lanes.
 South bridge provides two eastbound lanes.
 1.5 m sidewalk on the north side.
 2.5 m sidewalk on the south side.

All stages provide the following:

- Six lanes on Country Hills Boulevard N.E.
- Pathways along both sides of Country Hills Boulevard N.E.

Stage 1

- Widen both bridges to accommodate three westbound and eastbound lanes to improve mobility along Country Hills Boulevard N.E.
- Widen north pathway from 1.5 m to 4 m.
- Widen south pathway from 2.5 m to 3.85 m.

Stage 2

- Construct a separate pedestrian bridge on the north side to accommodate 4 m pathway.
- Modify westbound lane markings to accommodate a longer westbound left turn lane to southbound Harvest Hills Way N.E.

Legend:

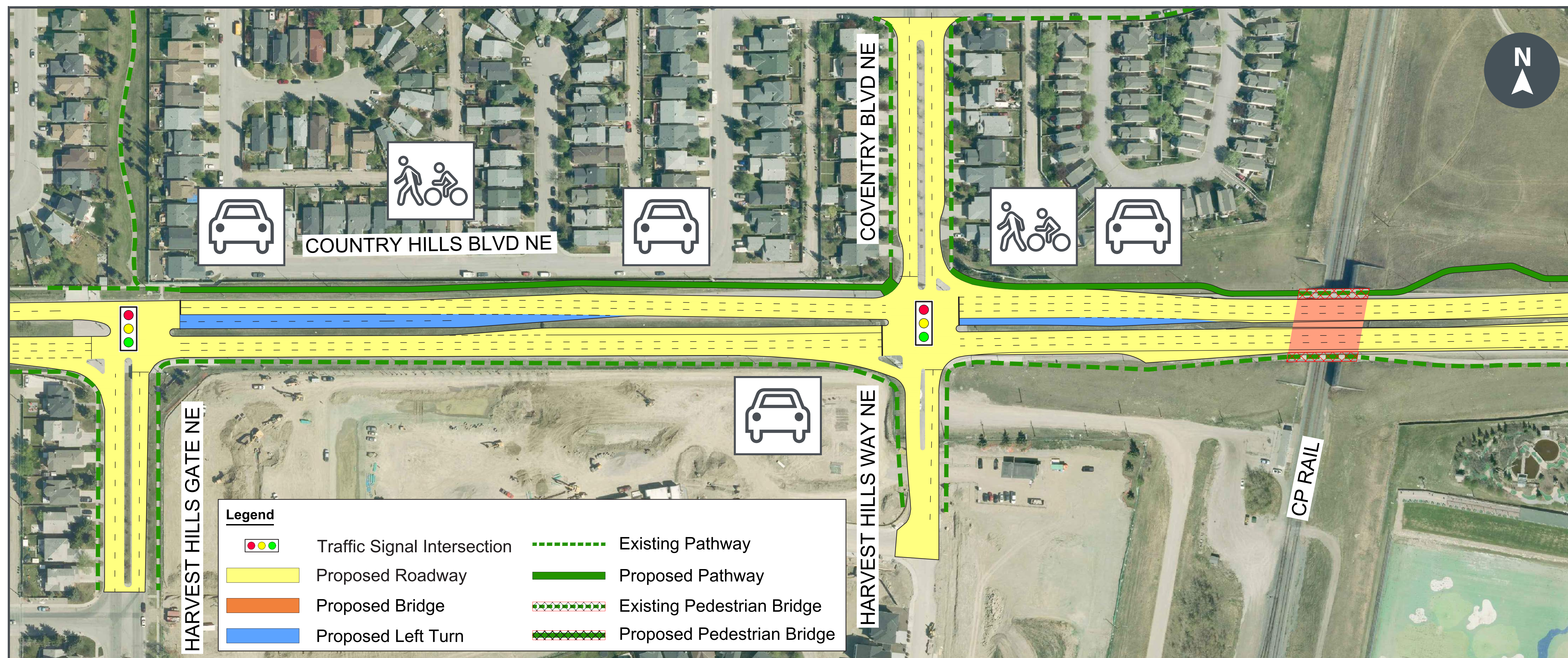
- ALIGNED WITH PRIORITIES
- LESS ALIGNED WITH PRIORITIES
- LEAST ALIGNED WITH PRIORITIES

Public and City Key Priorities	Existing	Proposed	Public and City Key Priorities	Existing	Proposed
Traffic safety			Bicycle accommodation		
Community access			Environmental sustainability		
Improved vehicle travel times			Pathway connectivity		
Pedestrian accommodation			Construction costs		

Country Hills Boulevard at Harvest Hills Way N.E. and at Harvest Hills Gate N.E.

The project team reviewed how the staged widening of the CP Rail Bridge aligns with nearby intersections to the west.

Stage 1



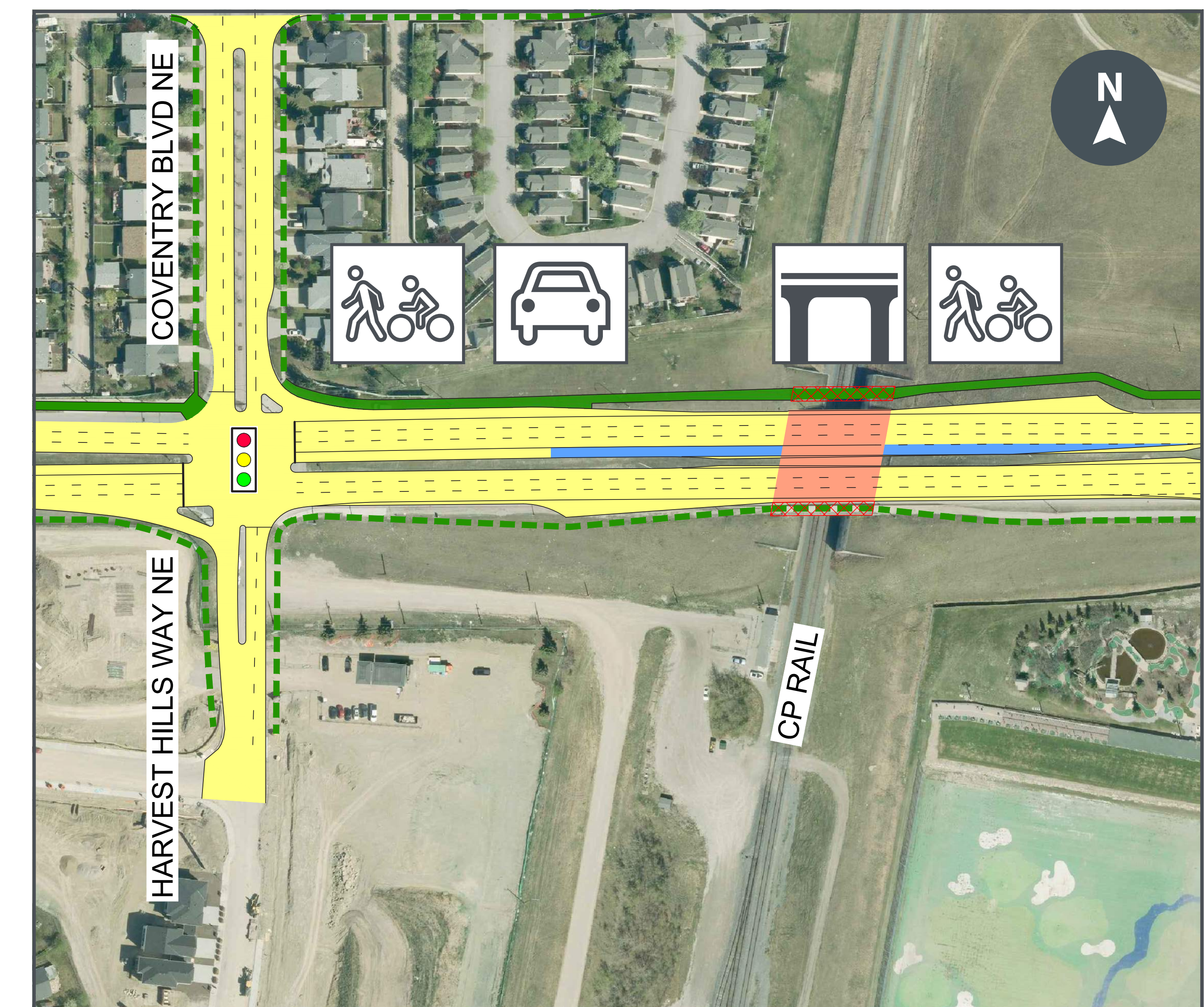
Stage 1 - Harvest Hills Gate Intersection Highlights:

- Modify single westbound left turn lane to dual left turn lane.
- Two westbound lanes remain.
- Provide 3 m pathway connection to existing north pathway.

Stage 1 - Harvest Hills Way Intersection Highlights:

- Provide 3 m missing pathway connection to north side of the CP Rail Bridge.
- Accommodate three westbound and three eastbound lanes through the intersection and across the CP Rail Bridge.
- Widen the sidewalk on the north side of the bridge to become 4 m path and widen the pathway on the south side of the bridge to 3.85 m.

Stage 2



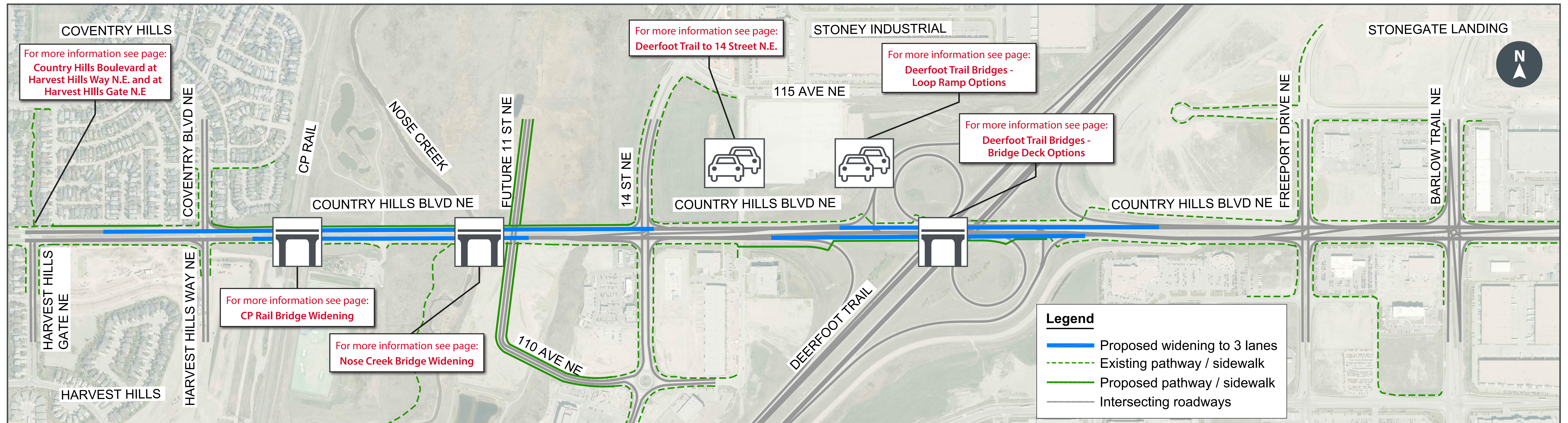
Stage 2 - CP Bridge Highlights:

- Build new pedestrian bridge north of the existing CP Rail Bridge.
- Modify westbound lane markings on Country Hills Boulevard N.E. to accommodate a longer left turn lane to southbound Harvest Hills Way N.E.



Options Summary: Country Hills Boulevard N.E.

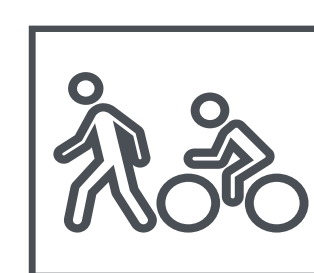
We have summarized the various options developed to address key issues. For more details on any of these options, please see the page(s) identified on the map below.



Project Objectives

- Develop widening plan along Country Hills Boulevard N.E. between Deerfoot Trail N.E. and Coventry Boulevard N.E. from four to six lanes, including continuous multi-use pathways.
- Examine widening strategies for existing bridges over CP Rail, Nose Creek and Deerfoot Trail.
- Better accommodate and improve safety for both current and future travel modes in the study area.

What We Have Explored



Pathway Connections and Widths:

- Provide pathway continuity along both sides of Country Hills Boulevard N.E. from Harvest Hills Gate N.E. to Barlow Trail N.E..
- Various pathway widening and pedestrian bridge options were explored along Country Hills Boulevard N.E.



Traffic Operations:

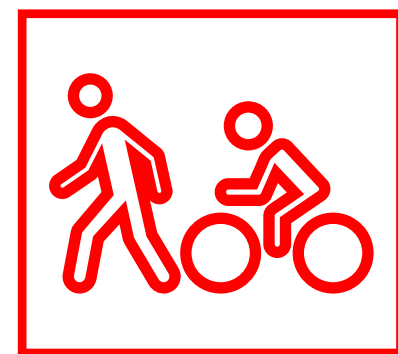
- Four options to improve westbound operations between Deerfoot Trail N.E. to 14 Street N.E.
- Single and dual eastbound left turn operations at Country Hills Boulevard N.E. and 11 Street N.E.
- Staging options at Country Hills Boulevard N.E. and Harvest Hills Way N.E. to improve westbound operation.
- Dual westbound left turn at Country Hills Boulevard N.E. and Harvest Hills Gate N.E. to improve westbound operation.
- Widen Country Hills Boulevard N.E. to three lanes from Deerfoot Trail N.E. to Coventry Boulevard N.E. and Harvest Hills Way N.E.



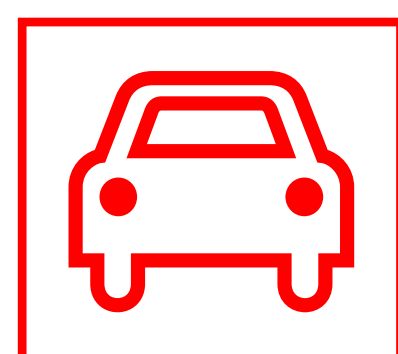
Bridge Widening:

- Widening options to accommodate wide paths and three traffic lanes in each direction at Deerfoot Trail Bridge, Nose Creek Bridge and CP Rail Bridge.

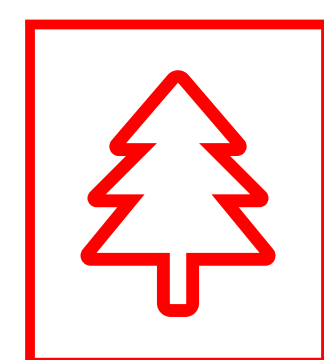
Overall Themes We Heard in the Discover Phase



- It is important to accommodate pedestrians and cyclists along the study corridor.
- There are missing segments of pathways.
- Desire for safe active modes crossing of Deerfoot Trail.



- Provide connection for all modes of transportation.
- Support for industrial growth and goods movement.

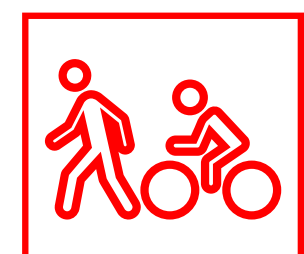
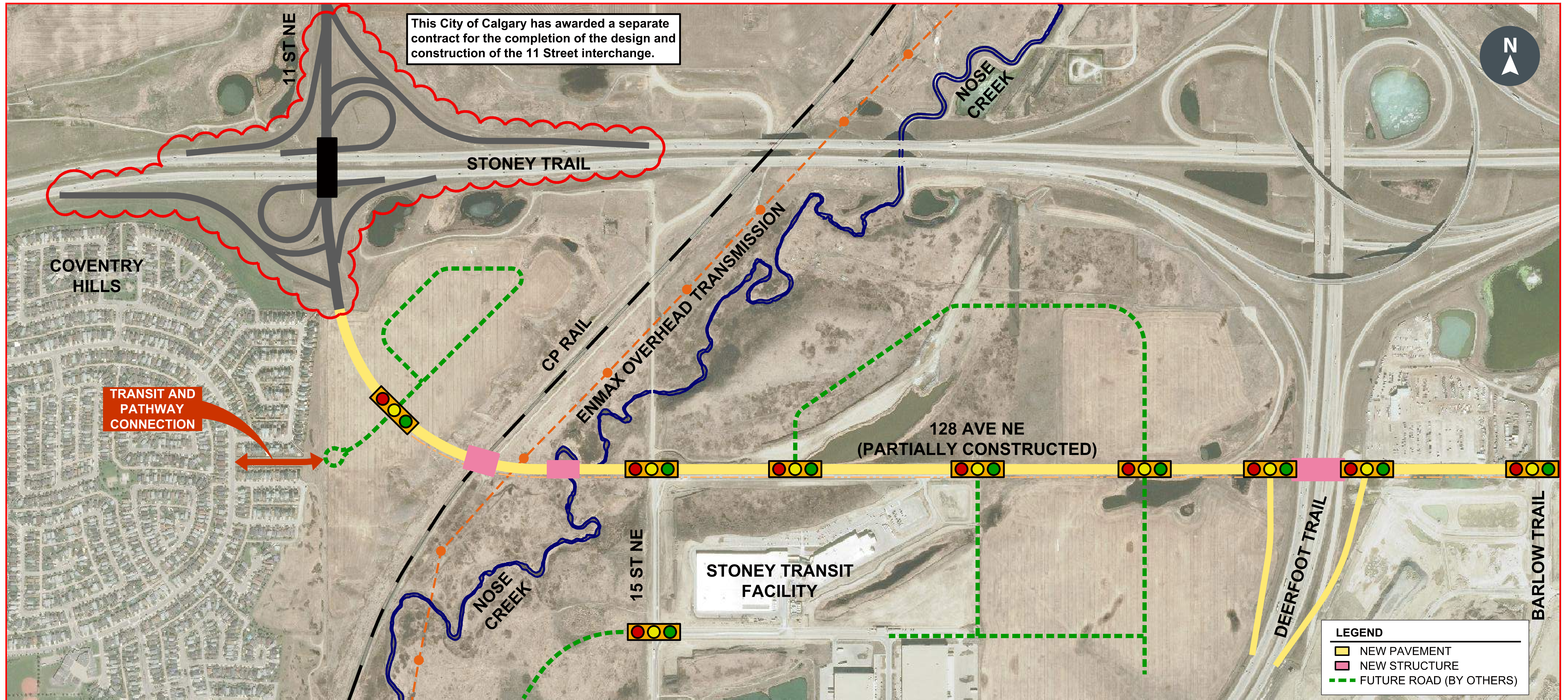


- Nose Creek alignment and protection is a priority.



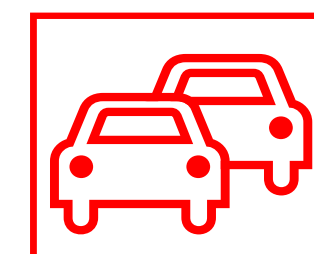
- Participants expressed concern about the proximity of the 128 Avenue N.E. interchange to the one at Stoney Trail N.E. and Deerfoot Trail, however the 128 Avenue N.E. interchange location is in alignment with the existing transportation plans of the Provincial Government.

The City is undertaking a functional planning study to provide an east-west connection through the Stoney Industrial Area between Stoney Trail N.E. and Barlow Trail N.E. Using technical analysis and feedback from Calgarians in the Discover Phase, we have developed concepts and alignment options and would like your feedback to develop the recommended plan.



Pathway and Community Connectivity:

- Multiple existing and planned pathways within and adjacent to the 128 Avenue N.E. study area, with a number of gaps or missing links.
- The 128 Avenue N.E. corridor will be important in closing multiple gaps in the pathway system.
- Linkage to the Coventry Hills community required.



Traffic Accommodations:

- Ultimate cross section is six lanes, divided.
- Accommodate all modes of travel along the corridor.
- Access management and spacing requirements, with multiple intersections along 128 Avenue N.E. to service adjacent land.

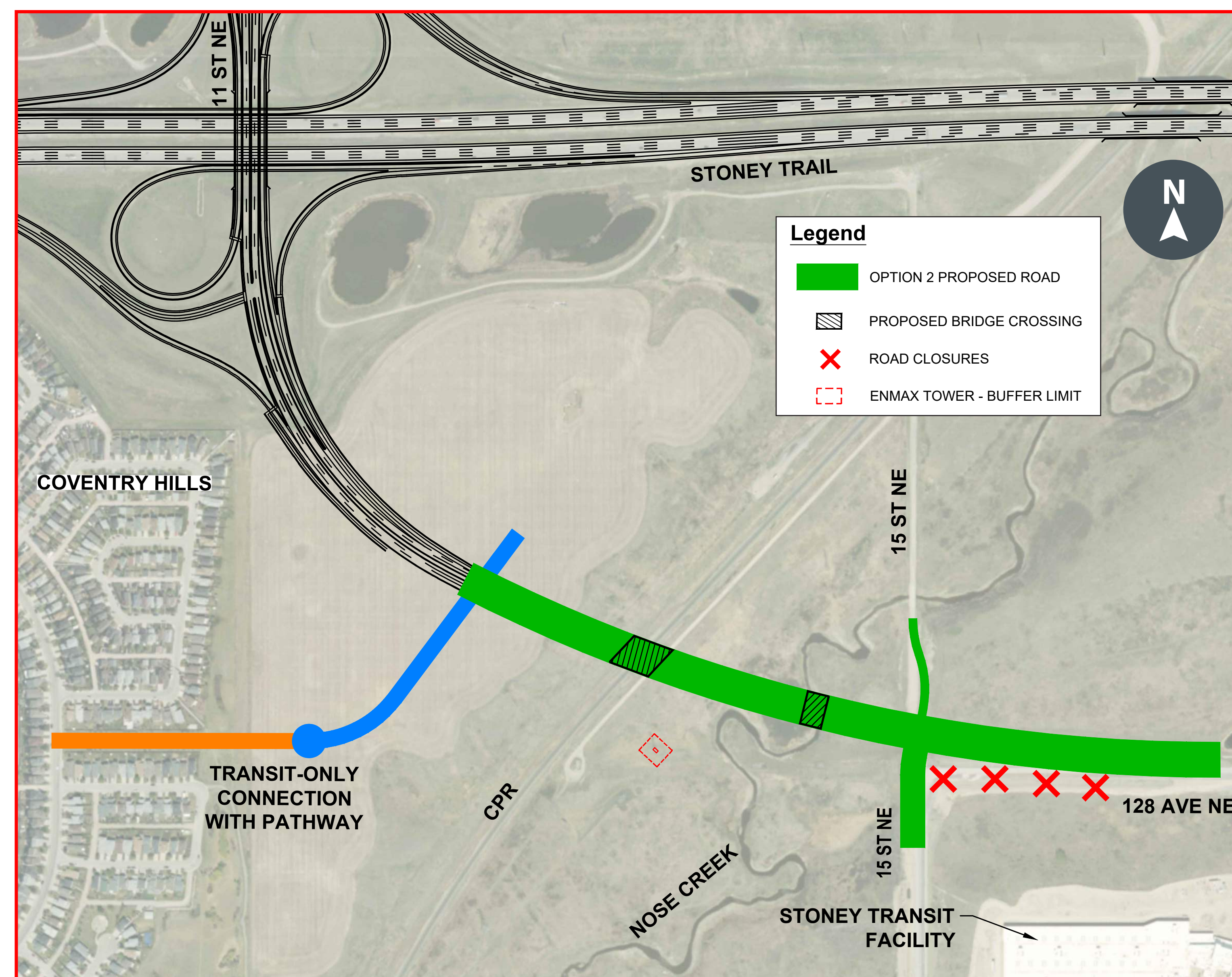
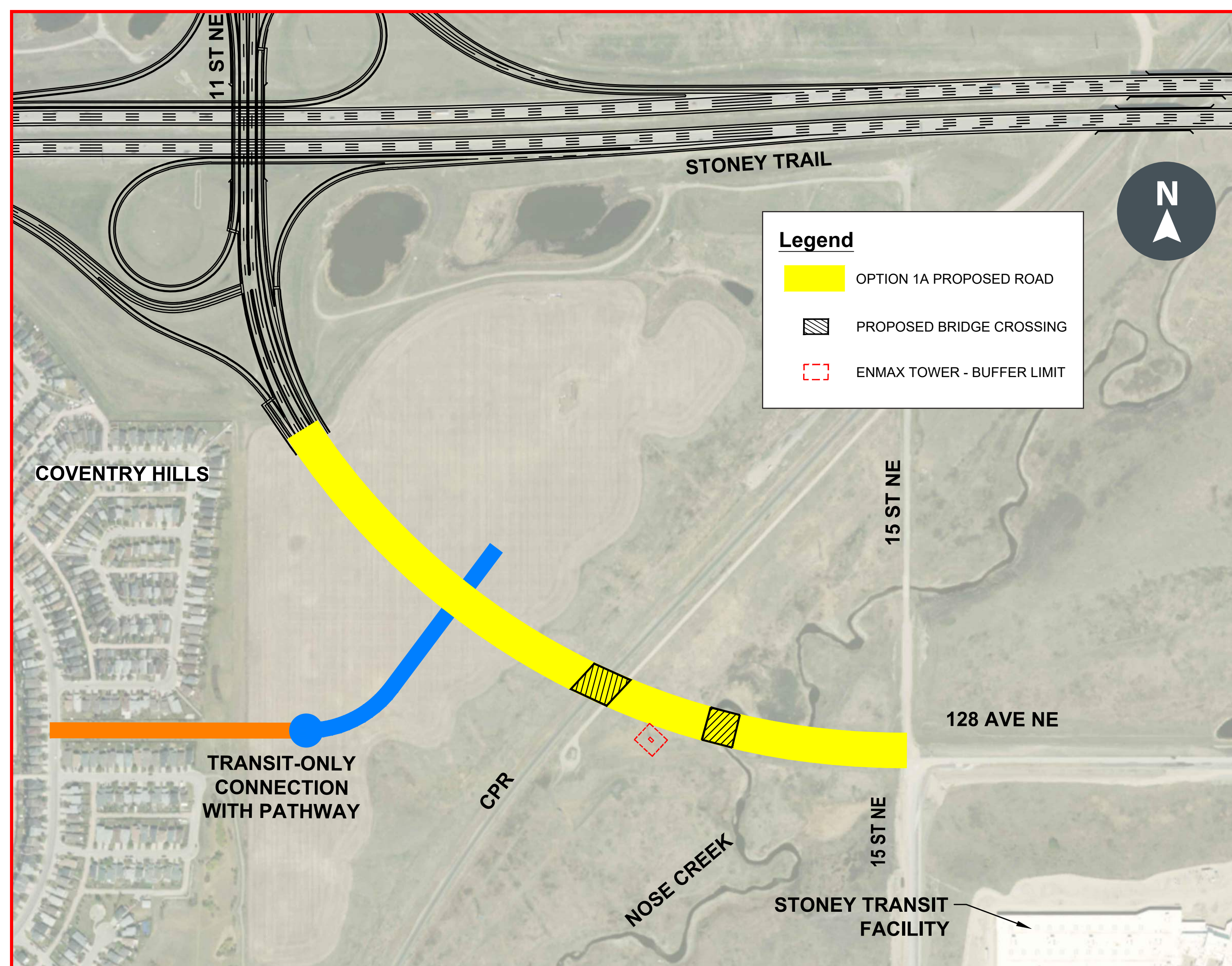


Design Constraints West of 15 Street N.E.:

- Multiple utilities impacted (e.g., watermain, overhead power lines).
- Significant east-west grade difference, with new grade-separated crossings of the CP Rail lines and Nose Creek. Creek realignment will be required at the crossing point.
- Access requirements for adjacent developable land.

Maintain Existing 15 Street N.E. Intersection

Relocate 15 Street N.E. Intersection

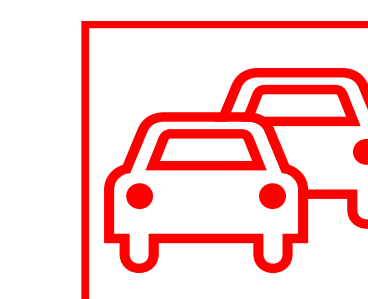


Option 1

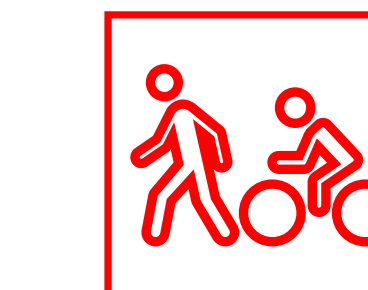
- No impact on 15 Street N.E. intersection.
- Minimal construction impacts.
- Most impact on deep utilities.
- Immediately adjacent to Enmax tower.

Option 2

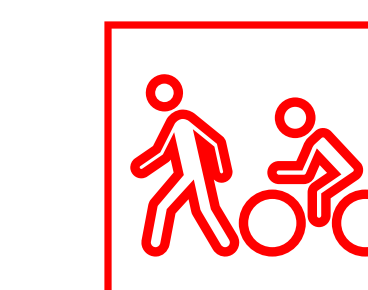
- Requires reconstruction of a portion of 128 Avenue N.E.
- Some disruption during construction.
- Increased property impact (east of 15 Street N.E.).
- Least impact on deep utilities (compared to Option 1).
- Largest offset from Enmax tower.



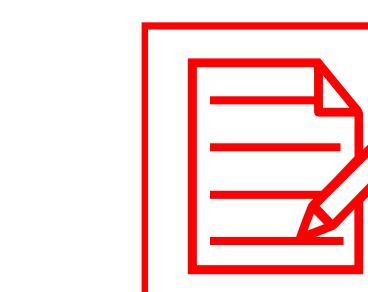
Ultimate six-lane divided cross section proposed for 128 Avenue N.E.



3.5 m pathways to be provided along both sides of 128 Avenue N.E., with connectivity to existing and future pathway network.



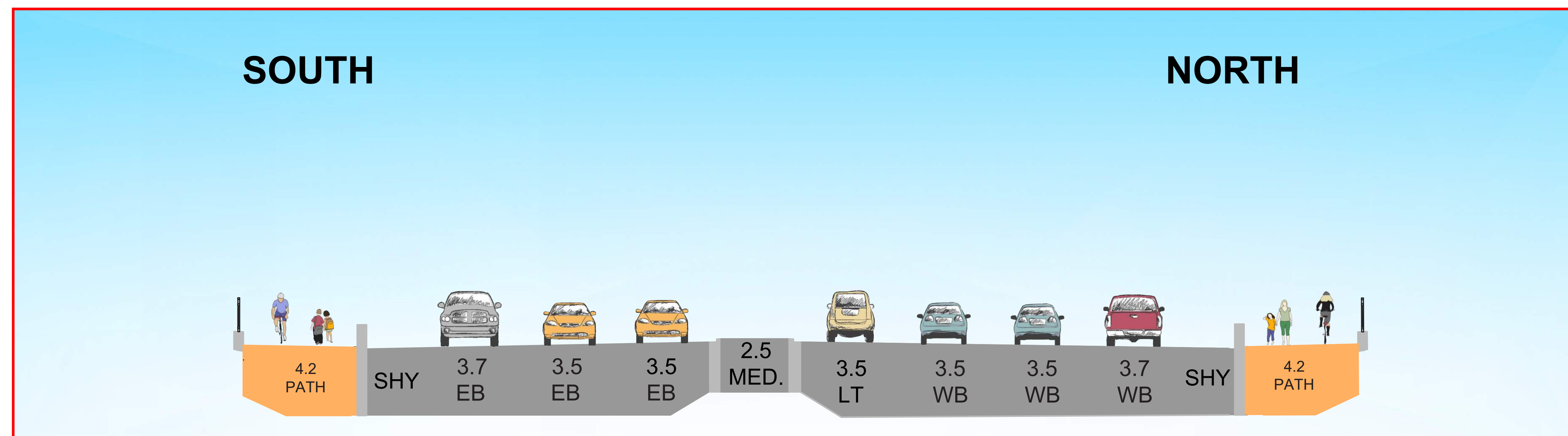
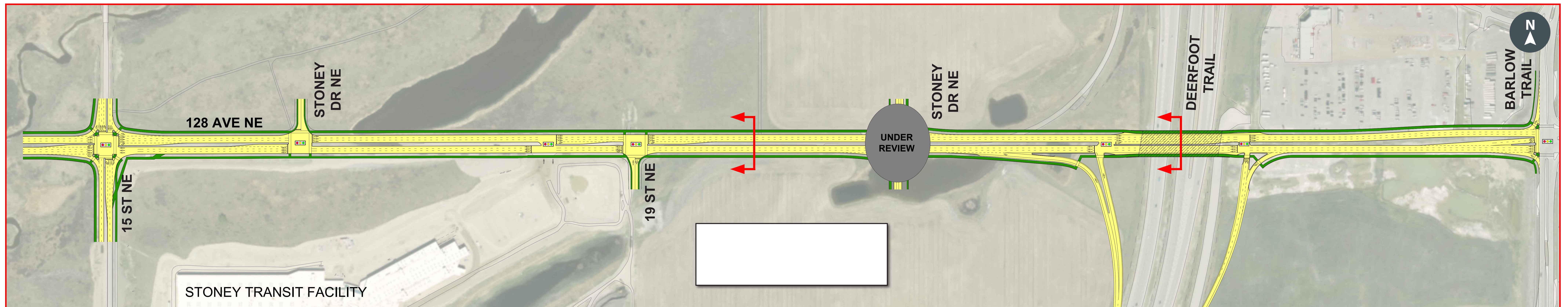
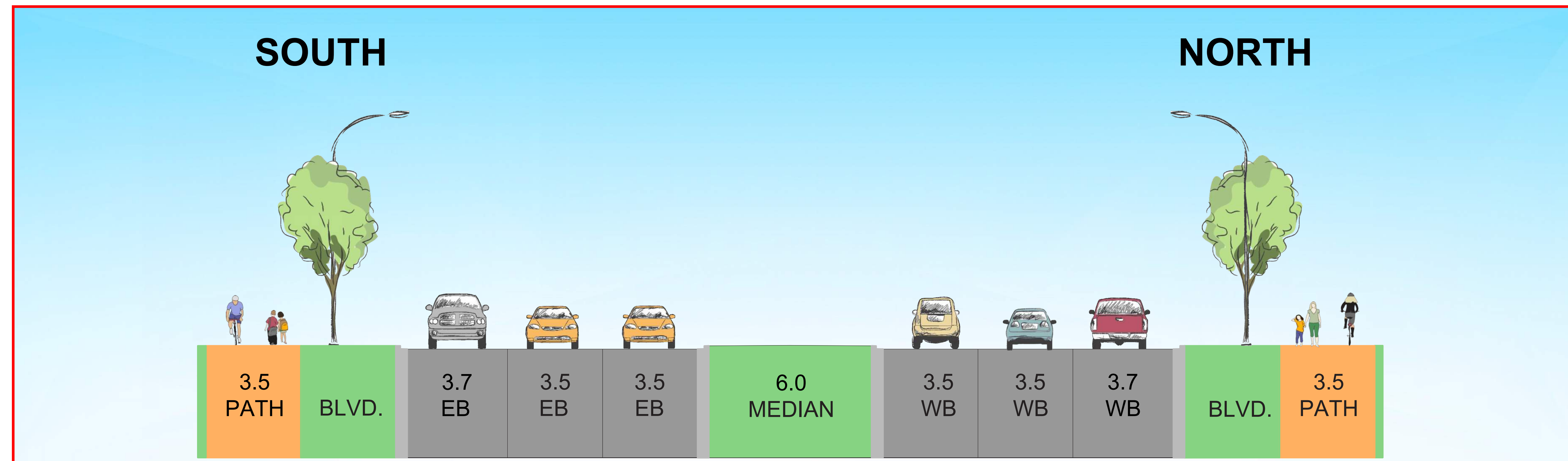
Future transit-only connection and pathway link with Coventry Hills community confirmed.

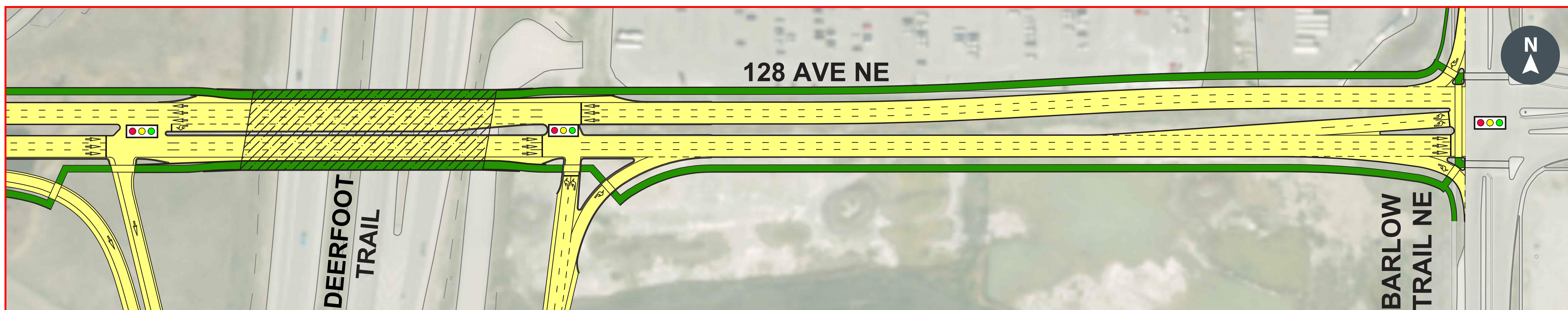
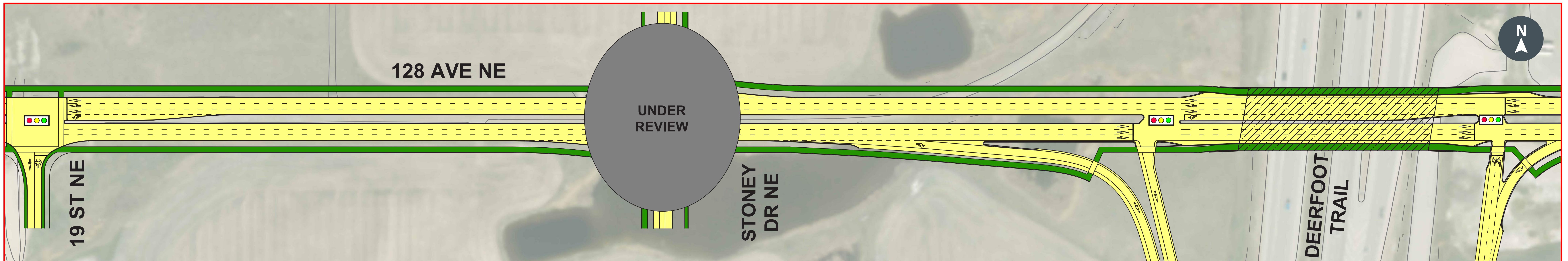
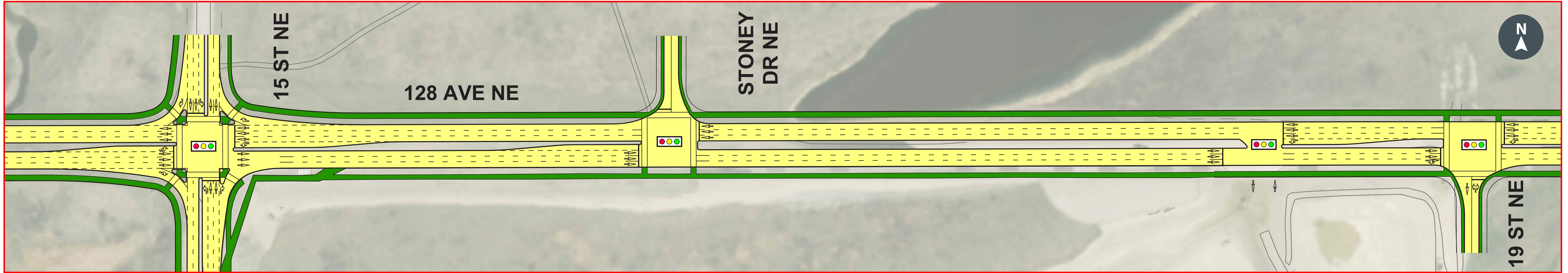


Raising Enmax power lines for adequate clearance above 128 Avenue N.E.

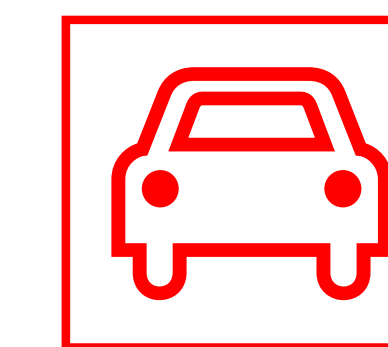
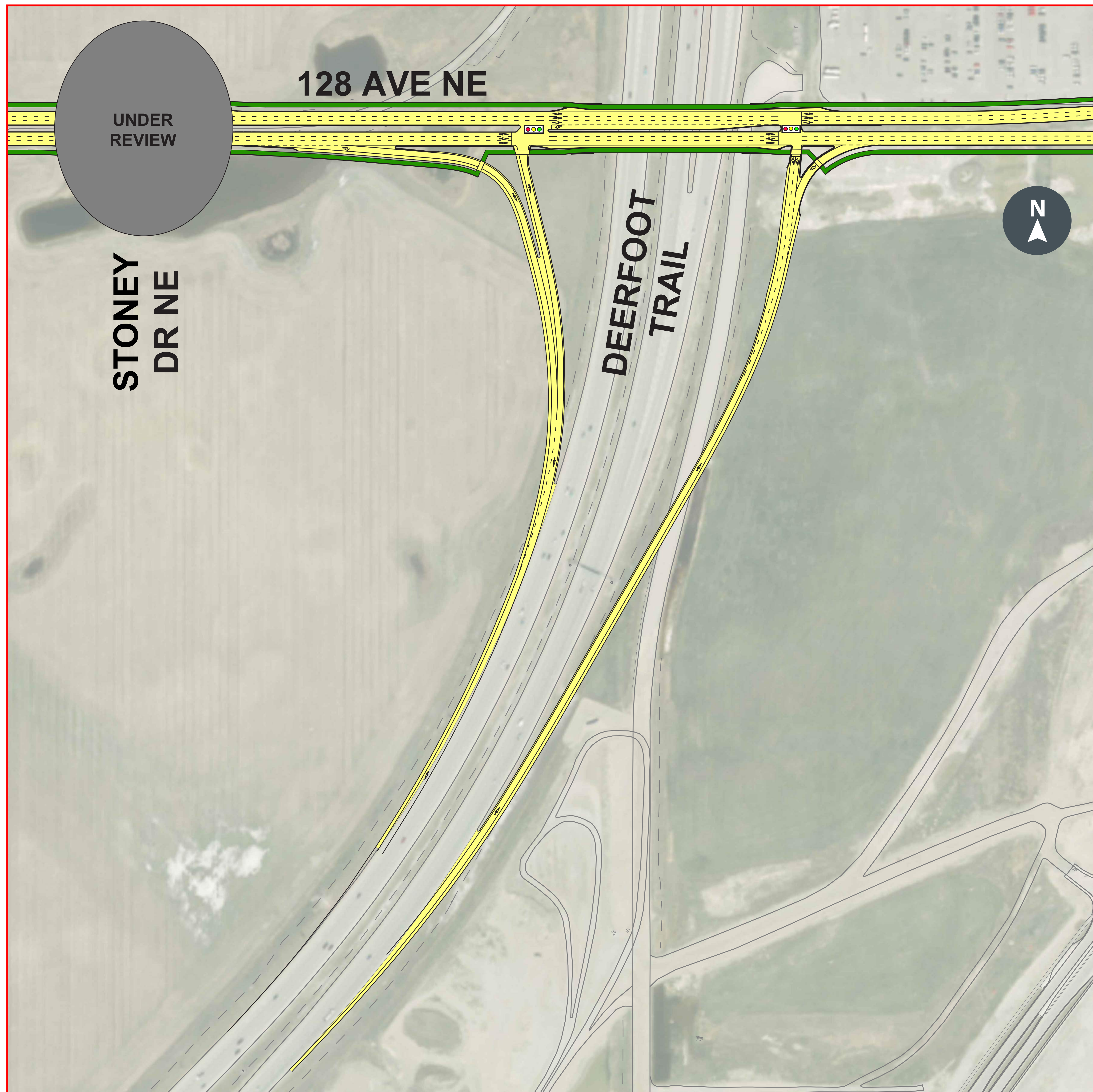


Realignment and protection of Nose Creek at the crossing point. Realignment and mitigation measures to be confirmed once a preferred alignment is identified.

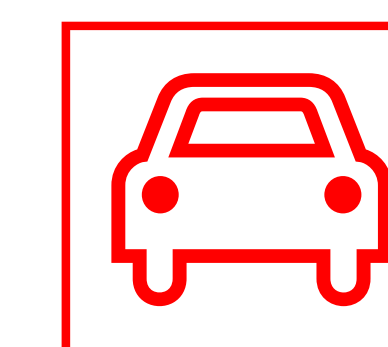




- Ultimate six-lane divided cross section on 128 Avenue N.E.
- Interim stages for roadway and Deerfoot Trail interchange to be determined based on progress of area development activity.



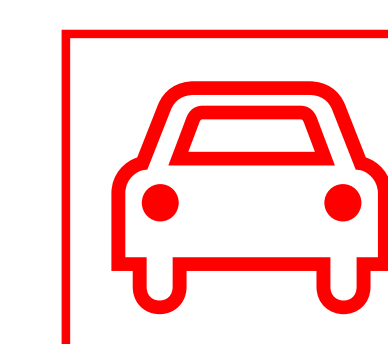
A “Half Diamond” interchange configuration has been confirmed. This is consistent with previous planning for this interchange. No viable alternative configurations were identified or evaluated.



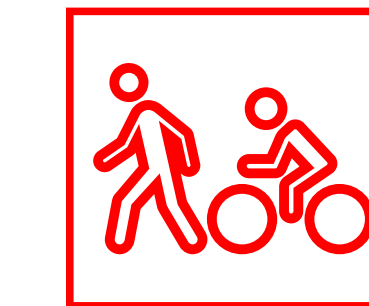
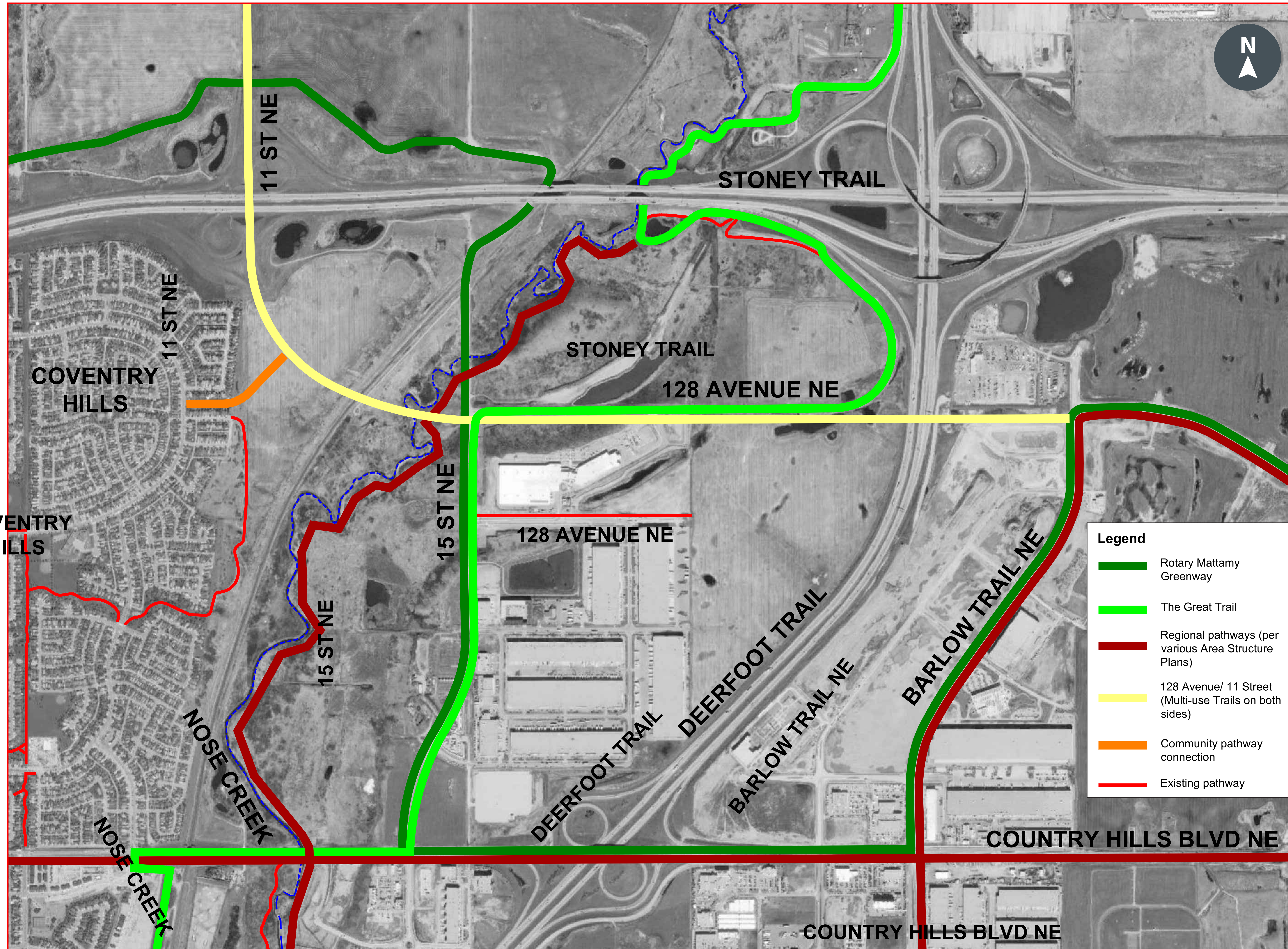
East and west ramp terminal intersections will be signal controlled.



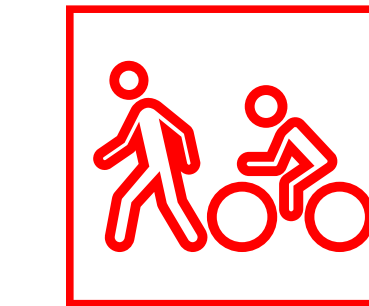
Staged implementation of the interchange can be considered, depending on the location, intensity and pace of area development.



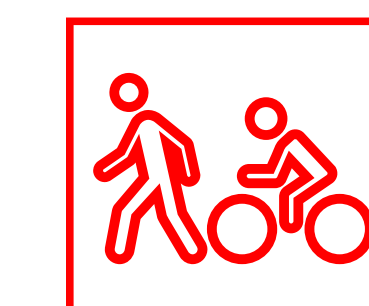
Operating conditions between 128 Avenue N.E. and Country Hills Boulevard N.E. interchanges have been assessed and determined to be acceptable.



There are multiple existing and planned pathways within and adjacent to the 128 Avenue N.E. study area, with a number of gaps or missing links.



Completion of the 128 Avenue N.E. corridor, with pathways along both sides and a crossing of Deerfoot Trail N.E., will close multiple gaps in the pathway system.



The Coventry Hills community will be linked to the pathway system with the proposed connection (jointly with a transit-only link).

Next Steps



1. Discover Phase: Document and Assess Existing Conditions (Completed December 2019)
2. **Explore Phase:** Development and Analyze Concepts (January - July 2020)
 - The online survey is open until **July 26, 2020** at calgary.ca/CountryHillsWidening or calgary.ca/128AveNE
3. Reveal Phase: Presentation of Recommended Plan (August - December 2020)



How will public feedback be used?

The City will prepare a What We Heard report summarizing all feedback following this and future public engagement sessions. Your input will help inform the design concept and the preferred plan for the Country Hills Boulevard N.E. and 128 Avenue N.E. study areas.

For ongoing project updates, information regarding future engagement events, or to sign up for email updates, visit calgary.ca/CountryHillsWidening or calgary.ca/128AveNE.

Thank you for your interest.

Please take a moment to provide your feedback online. Your feedback will help us improve our future engagement events.