### We come

### Highway 20 Twinning Functional Planning Study

Open House #1 April 25, 2024 5:00 - 8:00 p.m.

Alberta Transportation and Economic Corridors would like to inform you of this project, and the work completed to date. Please review the display boards and let our project team know if you have any questions.

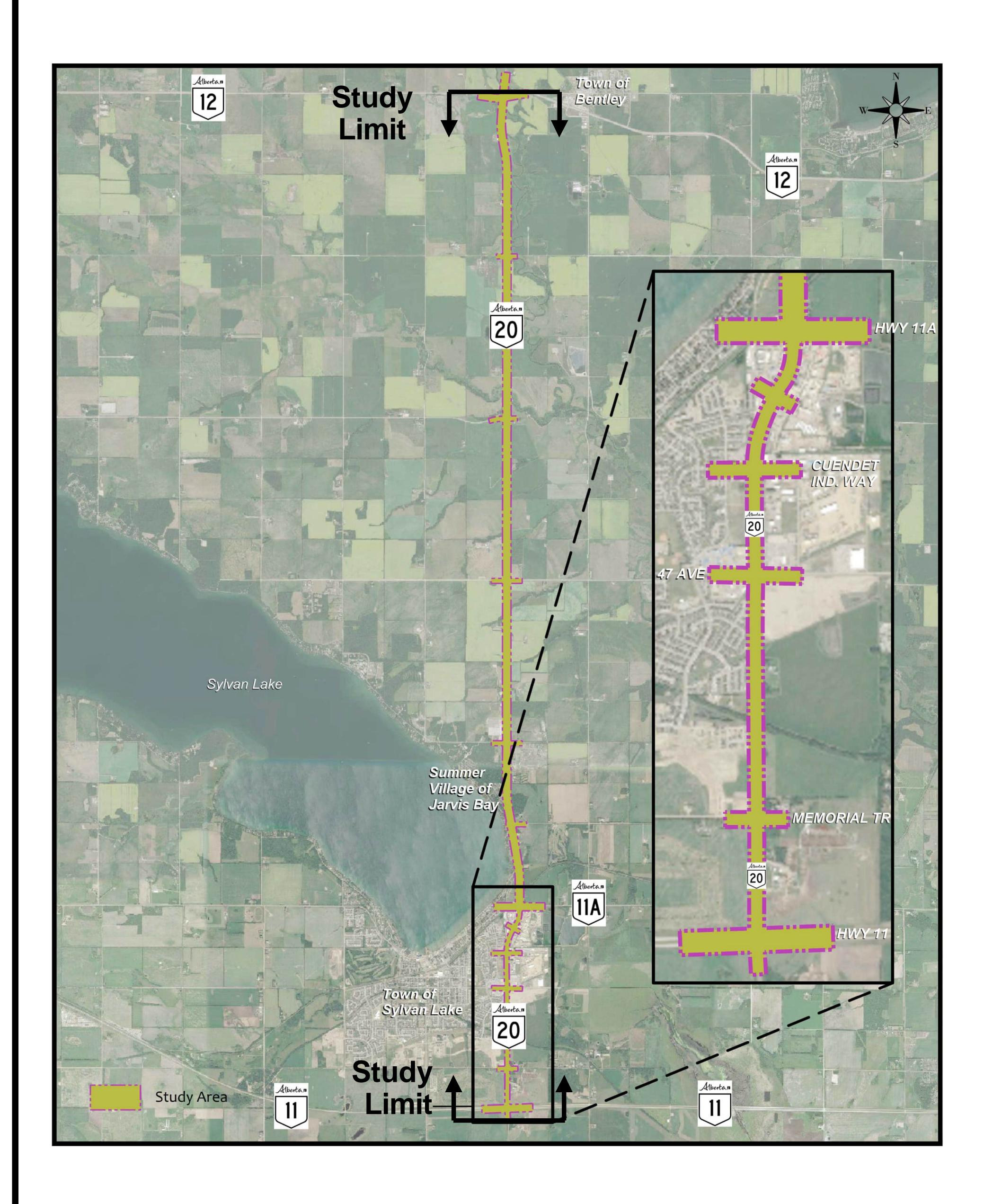
#### At this Open House you will be able to:

- > Learn about the project and the options under consideration as part of the study
- > Share your feedback on the twinning alignment options





## Study Overview



#### Study Purpose:

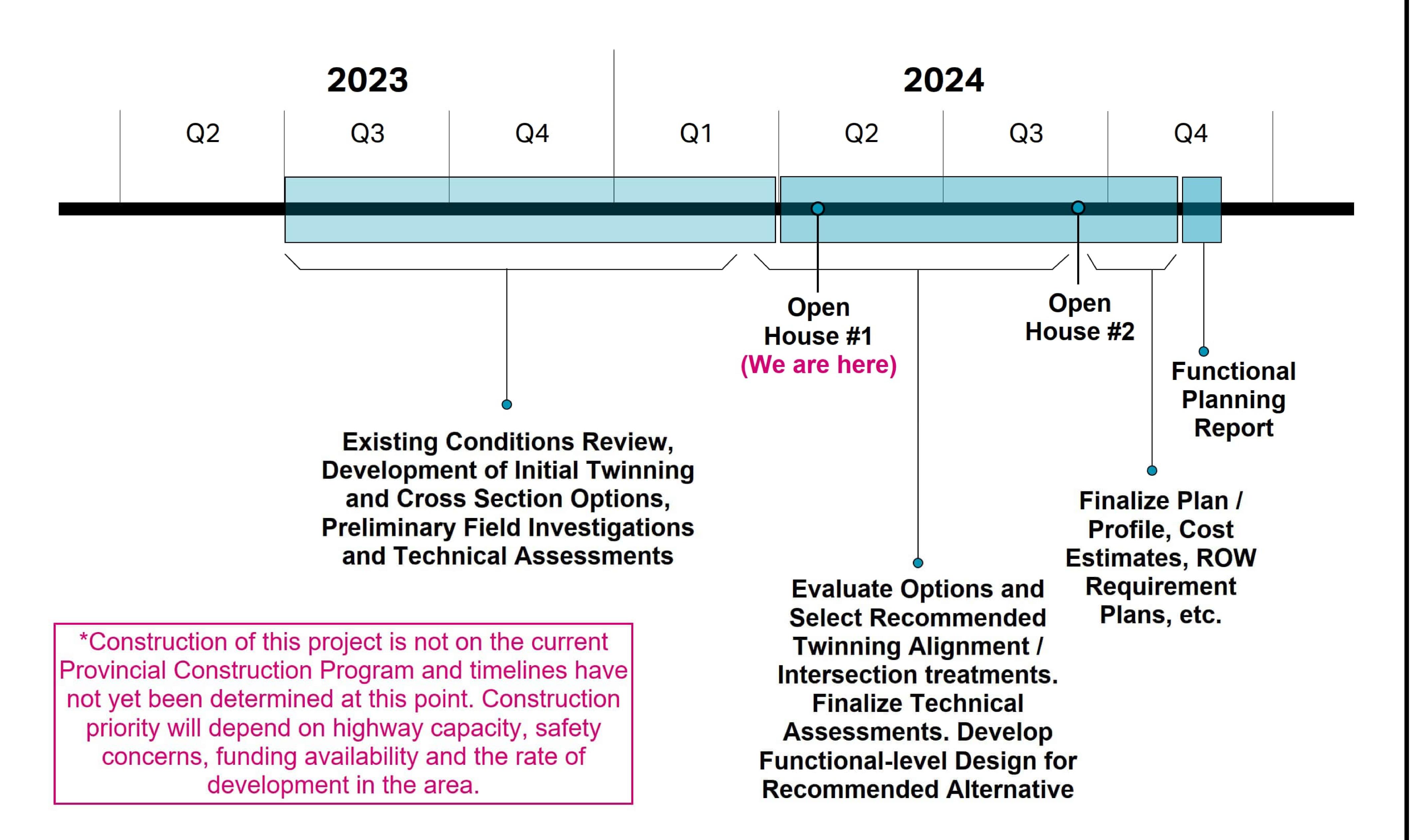
The primary purpose of this study is to complete highway alignment and cross section planning for the twinning of Highway 20 from its current two-lane cross section to a four-lane divided highway cross section, between Highway 11 at the south end of the Town of Sylvan Lake and Highway 12 near Bentley (approx. 20 km).

#### Study Objectives / Goals:

- ☐ Confirm the right-of-way requirements for the highway twinning
- Identify associated access management requirements
- Identify operational and intersection improvements along the corridor, with roundabouts as the preferred intersection treatment within Sylvan Lake, where feasible



### Study Timeline

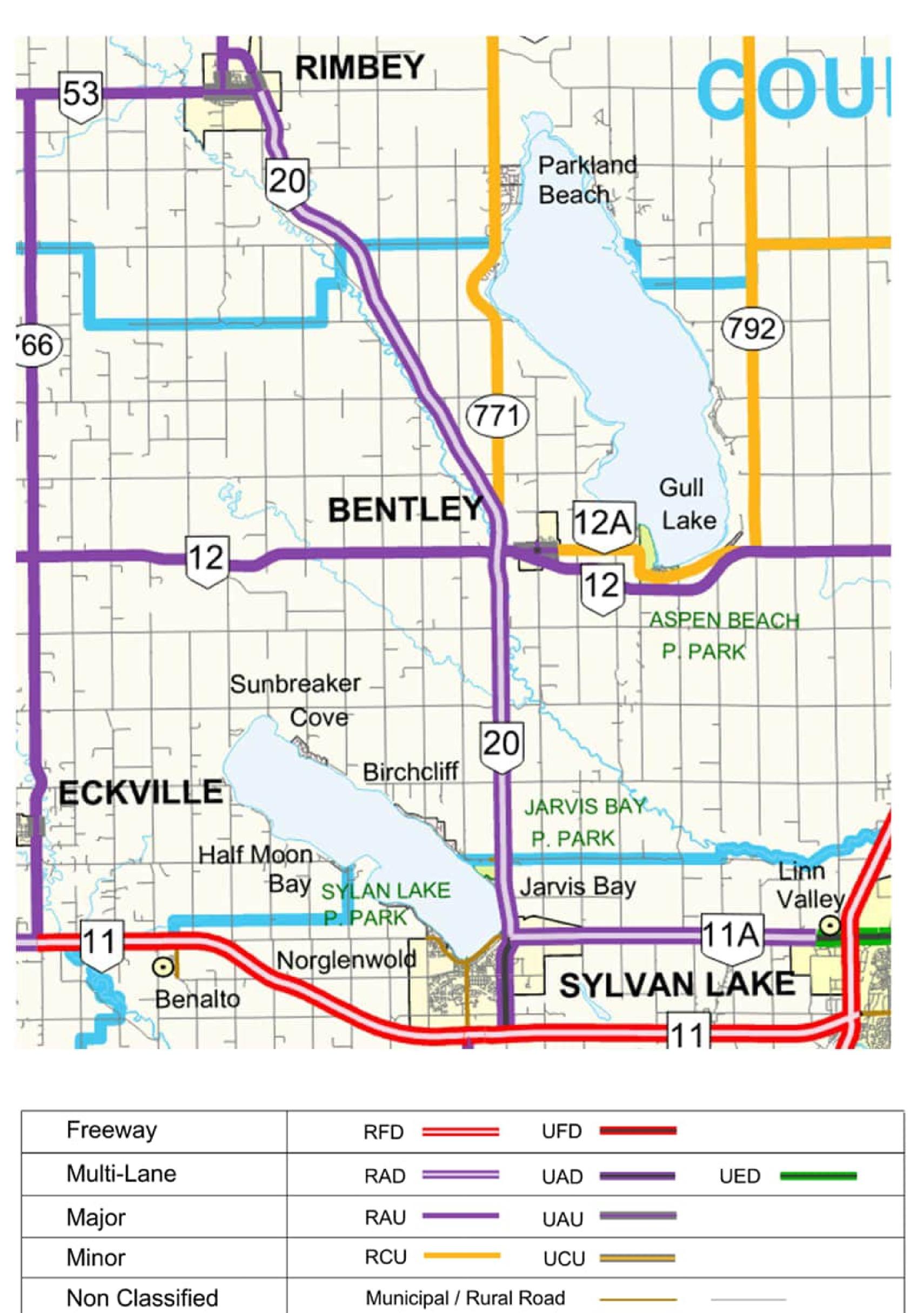






# Why Twinning?

- Highway 20, from Sylvan Lake to Rimbey, is classified as RAD or "Rural Arterial Divided" which ultimately requires a twinned rural cross section.
- Within Sylvan Lake, the classification is UAD or "Urban Arterial Divided" ultimately requiring a twinned urban cross section.
- Highway 20 is also designated as a "Level 2" highway in the provincial network.
  - Level 2 highways accommodate the movement of people, goods, and services intra-provincially.
  - They serve to connect provincially significant areas such as population centres over 5,000 and typically serve long trips.



Freeway	RFD — UFD —
Multi-Lane	RAD — UED —
Major	RAU —— UAU ——
Minor	RCU —— UCU ——
Non Classified	Municipal / Rural Road ———— ———



### Key Issues

#### Within Sylvan Lake:

- > Limited ROW availability in some areas
- > High traffic volumes with multiple intersections
- Pedestrian activity
- > Seasonal / tourist traffic (high proportion of drivers unfamiliar with the area)

#### Urban-Rural Transition:

- Moderate-to-high traffic volumes, with multiple intersections
- > Speed transition required
- > Some pedestrian activity

#### Rural Area:

- > Wide ROW required for the highway
- > Land requirements
- > Access management
- > Close proximity to the Blindman River



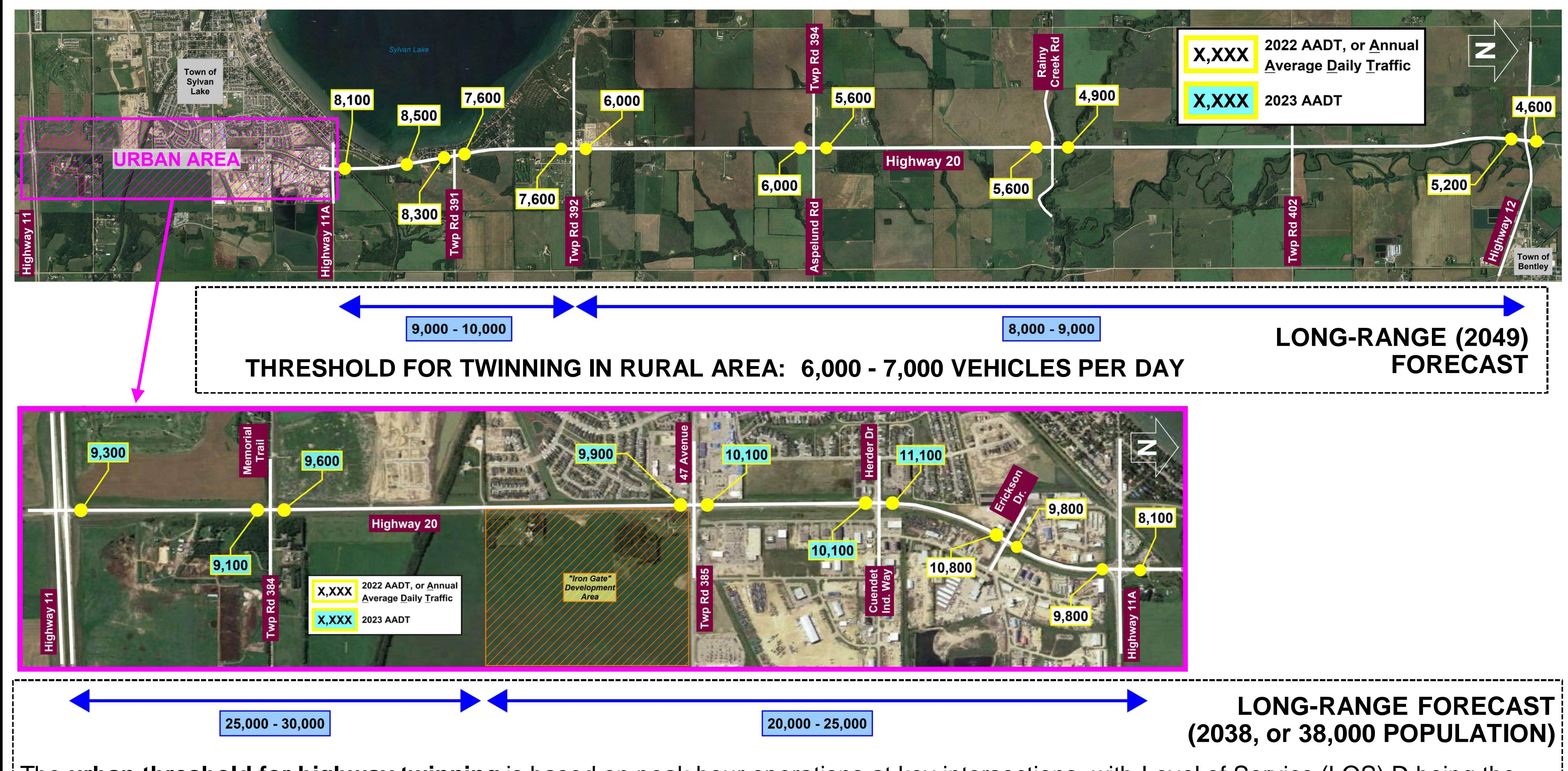
#### **Primary Evaluation Factors - Overall:**

- > Land impacts / ROW requirements
- > Environmental impacts
- Access Management requirements
- Utility impacts
- Capital cost





### Traffic Volumes



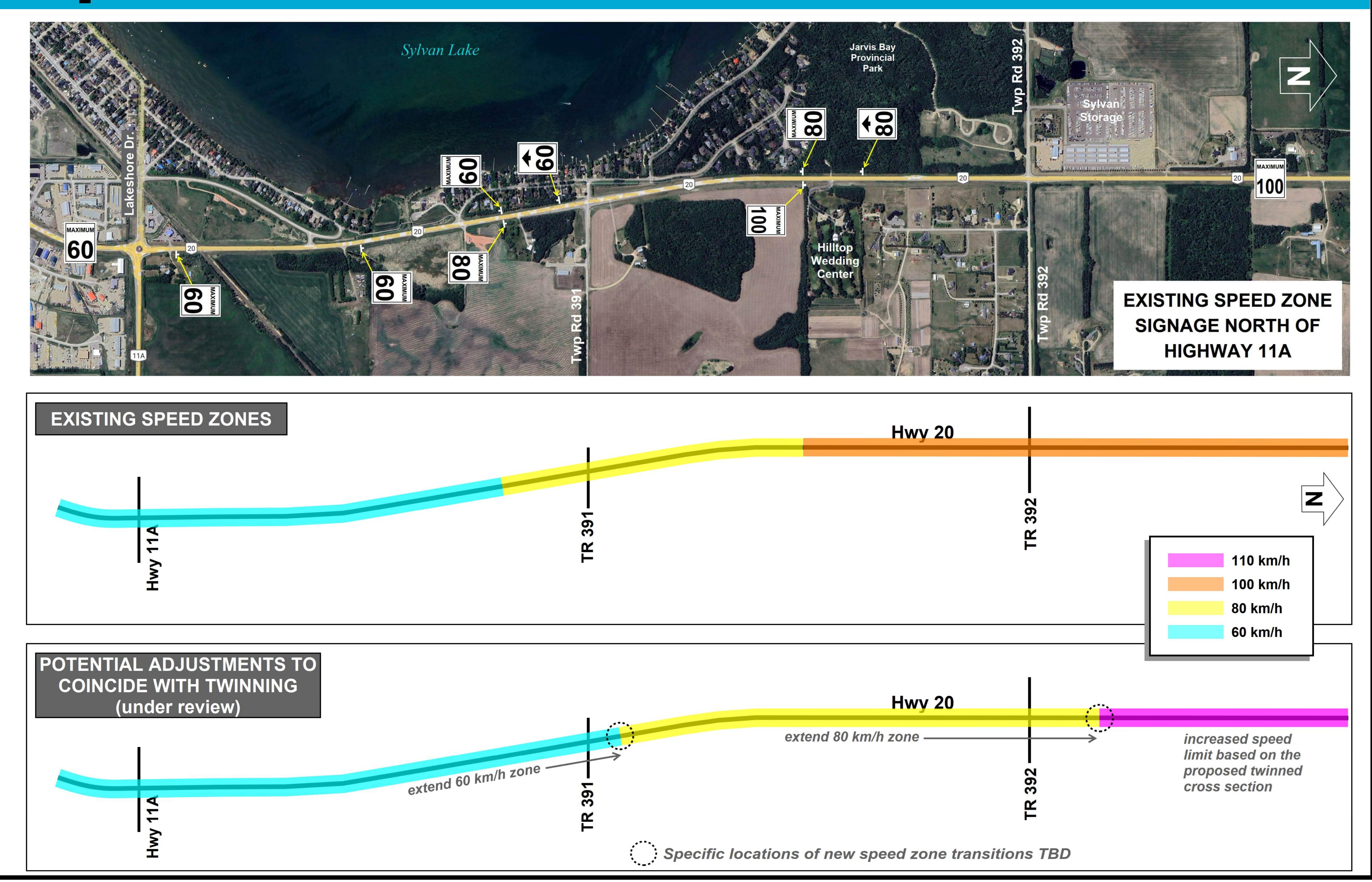
The urban threshold for highway twinning is based on peak hour operations at key intersections, with Level of Service (LOS) D being the threshold for improvements. Based on the long-range forecast volumes, twinning of Highway 20 through all intersections is required.

NOTE: The Town of Sylvan Lake's 2022 Transportation Master Plan (TMP) notes some current operational concerns along Hwy 20. For example, several movements at the Herder Dr, 47 Ave and Memorial Tr intersections were found to be operating at LOS E (nearing their respective capacities). The TMP also notes that operating conditions for the westbound and southbound approaches to the Hwy 20/Hwy 11A roundabout suggest that this roundabout is expected to be approaching capacity with continued near-term traffic growth.





## Speed Limit Zones







## Highway 20 Twinning Overview

This is an "urban-to-rural" transitional area, both in terms of the posted speed limit and the proposed highway cross section.

Several options for this area are presented, following the three main twinning concepts. Highway 20 Twinning ... THE BIG PICTURE







Within this area, widening/ twinning of Highway 20 needs to occur to the EAST side of the existing road, based on the amount of development along the west side.

Therefore, the three twinning concepts presented are all identical in this area.

Within this area, the three twinning options presented differ only in where we transition the widening/twinning between the east side and the west side.

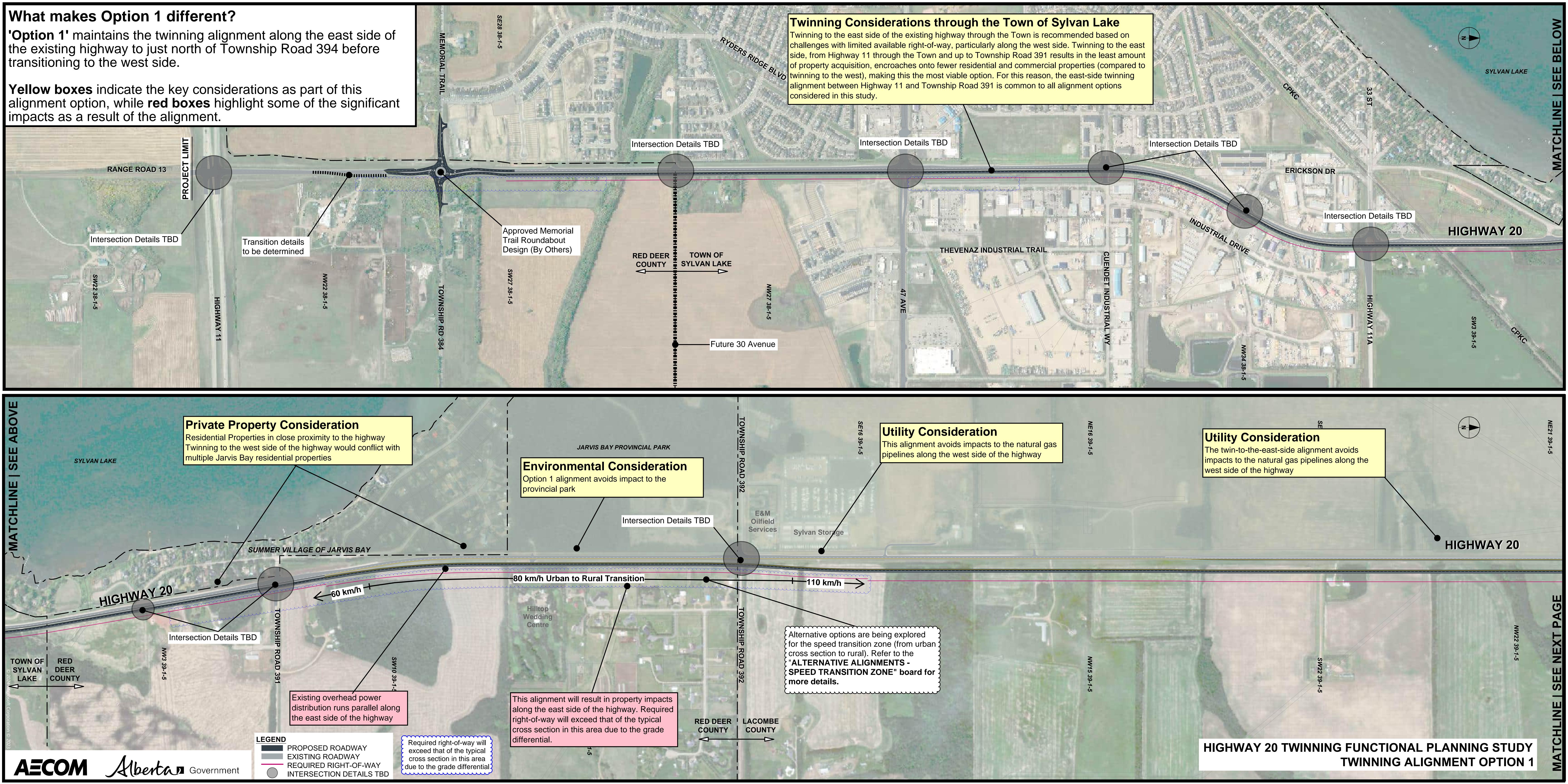
There is some flexibility in where we make the transition. Key factors include land impacts, utility infrastructure, proximity to intersections, and environmentally sensitive areas.

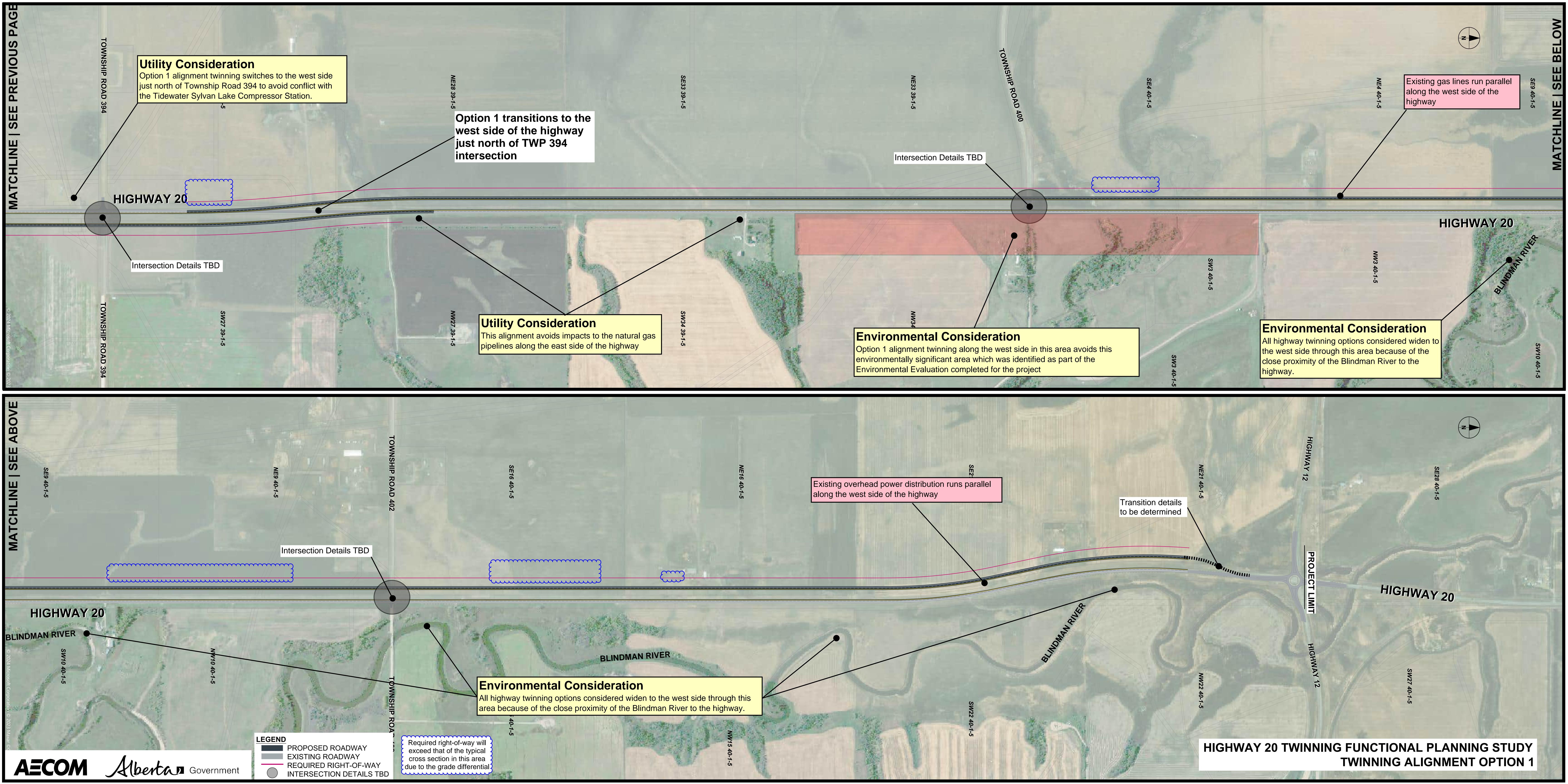
Within this area, widening/ twinning of the highway needs to occur to the WEST side of the existing road, based on the close proximity of the Blindman River along the east side.

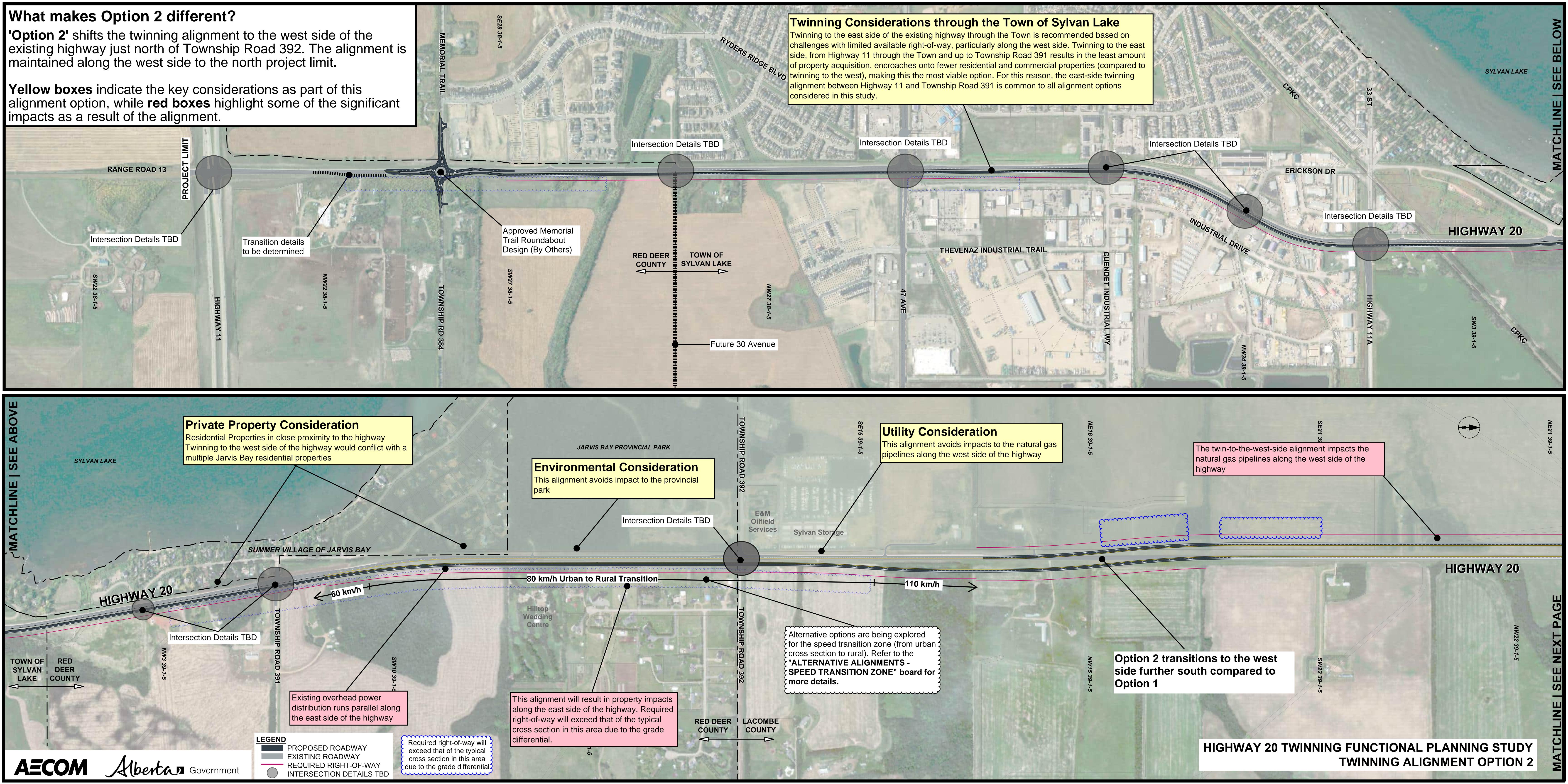
Therefore, the three twinning concepts presented are all identical in this area.

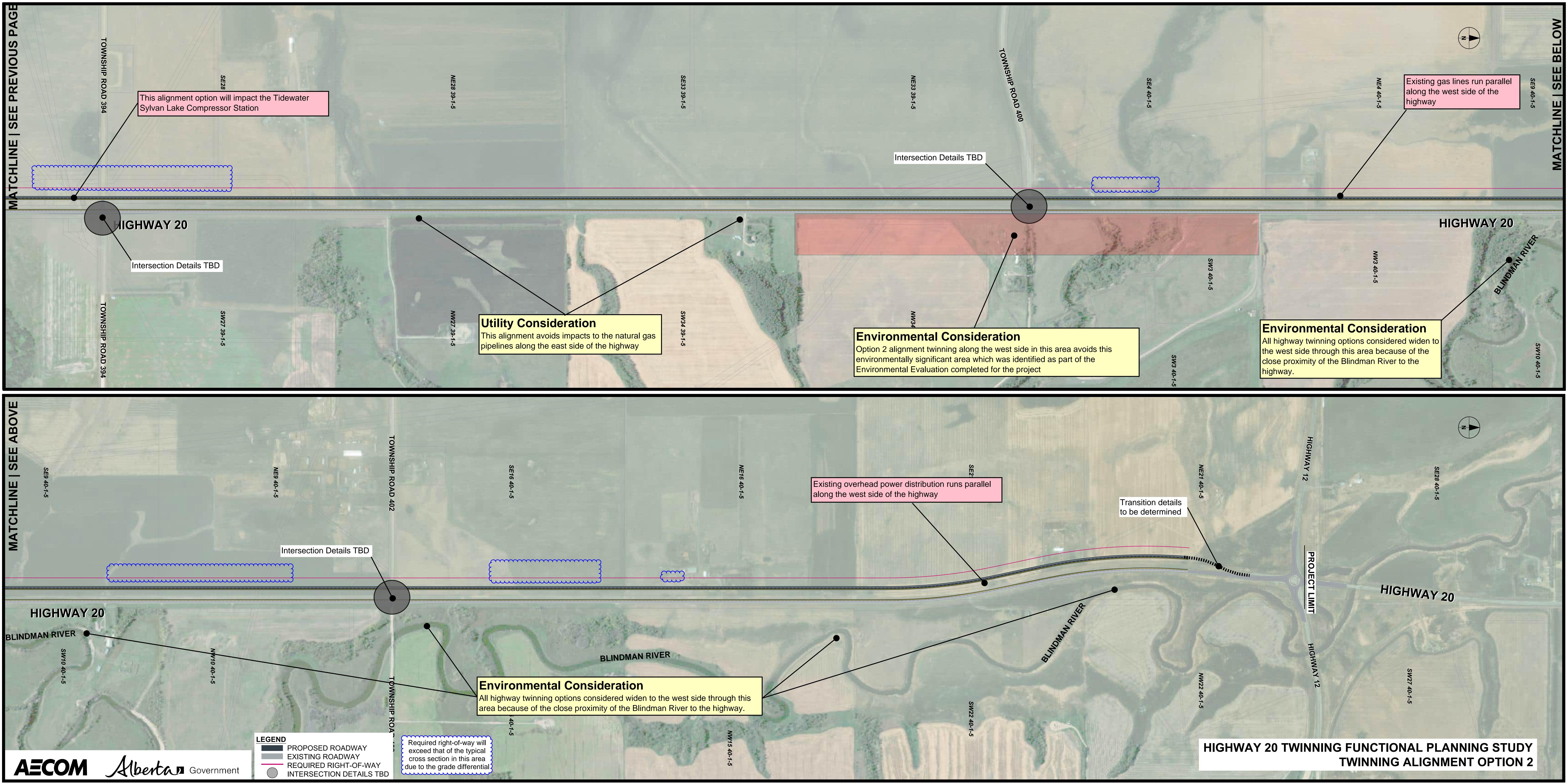


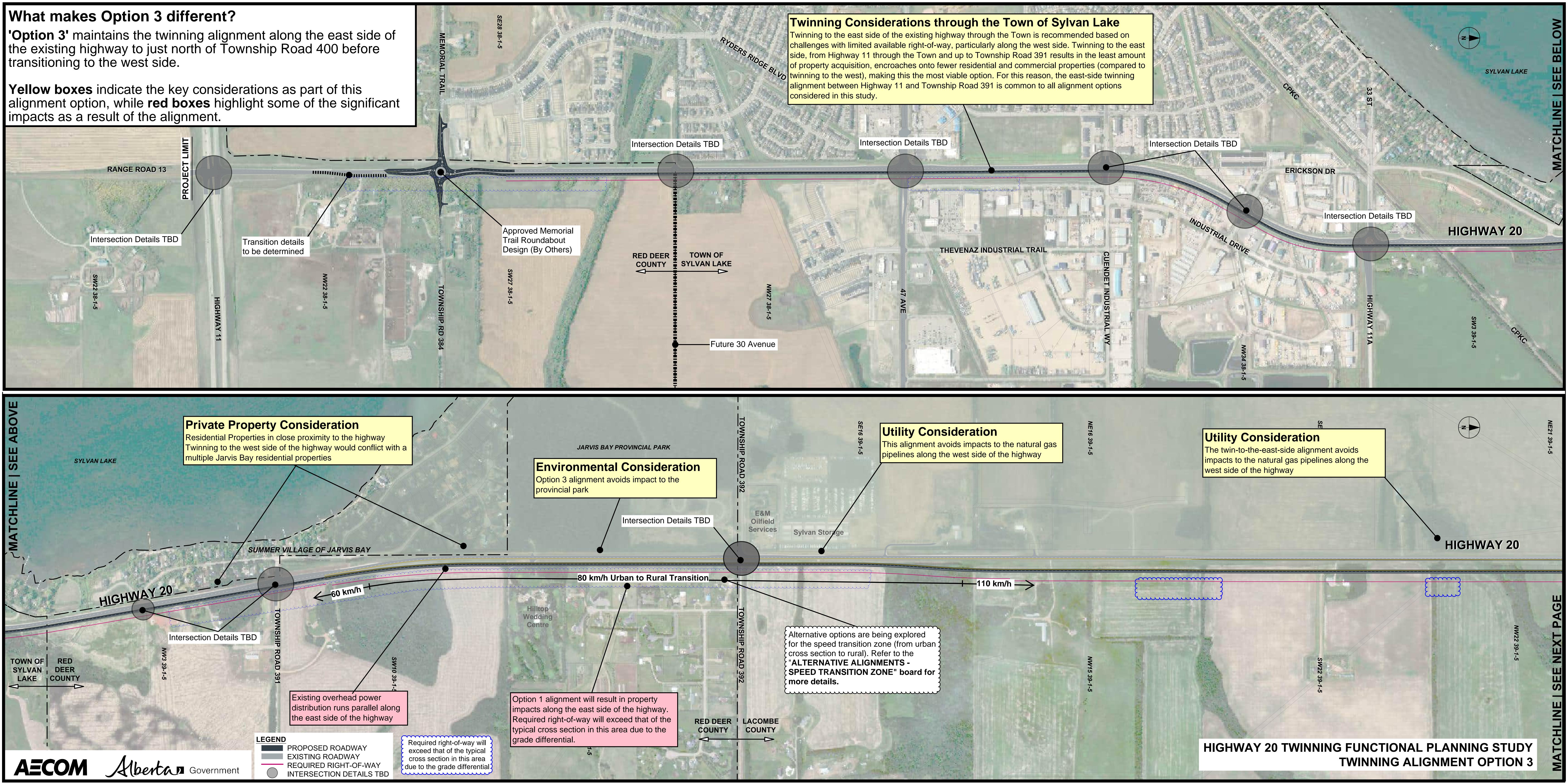


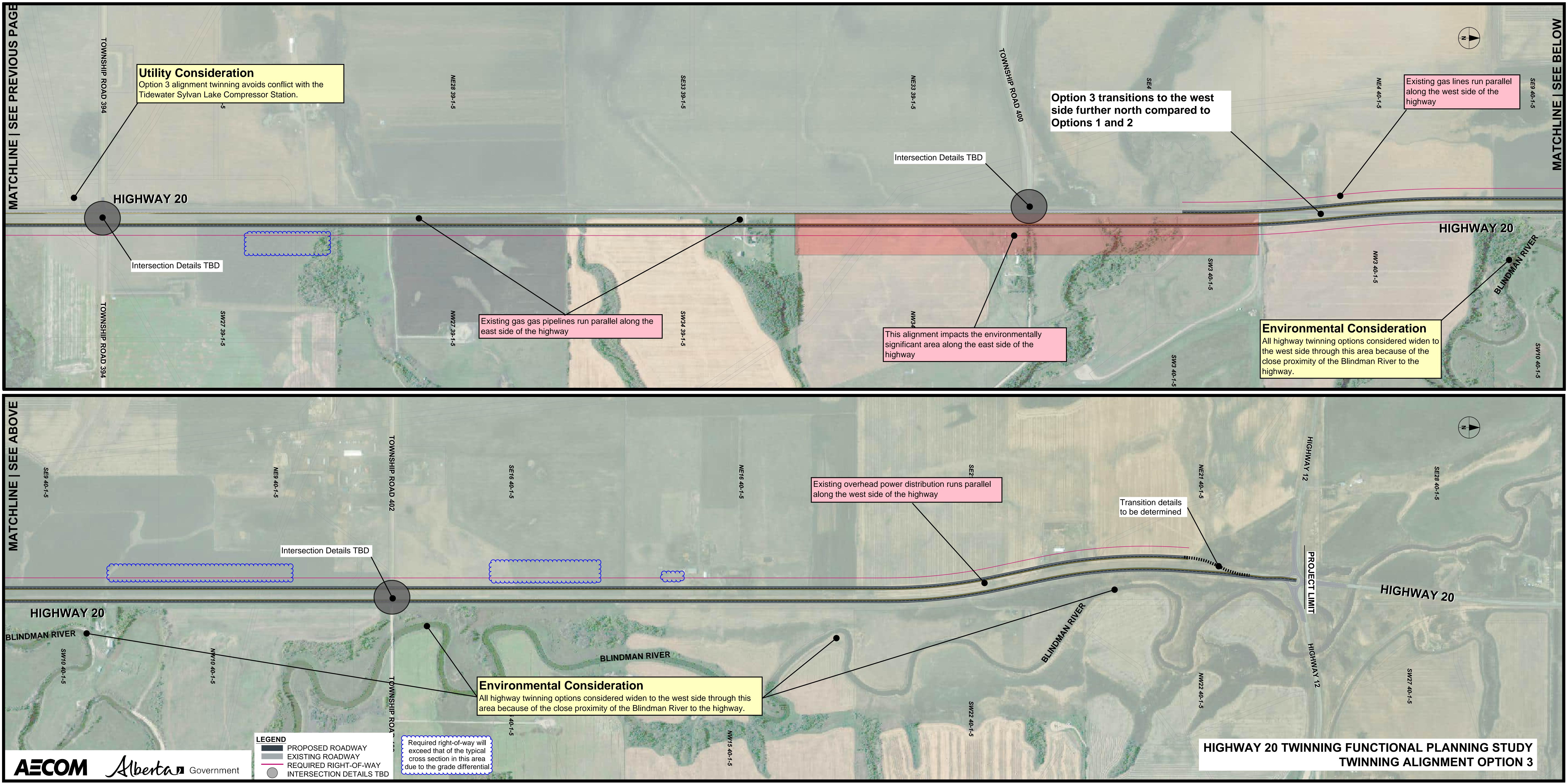


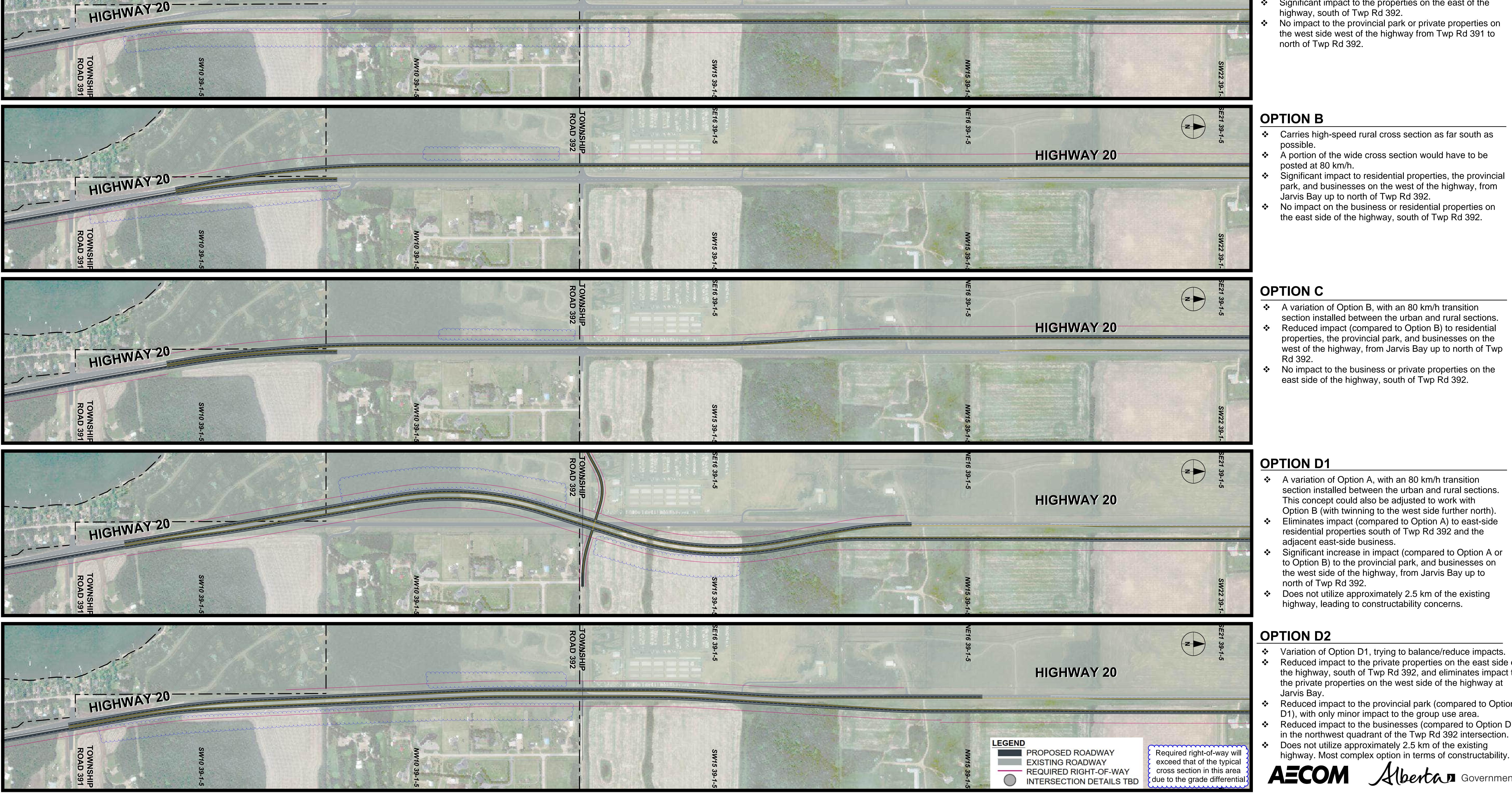












**ALTERNATIVE ALIGNMENTS - SPEED TRANSITION ZONE** 

#### **OPTION A**

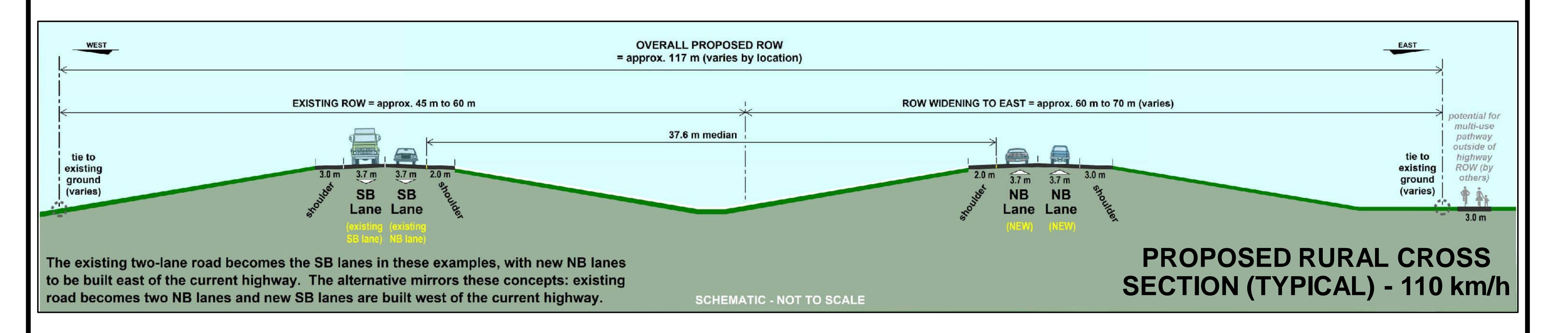
HIGHWAY 20

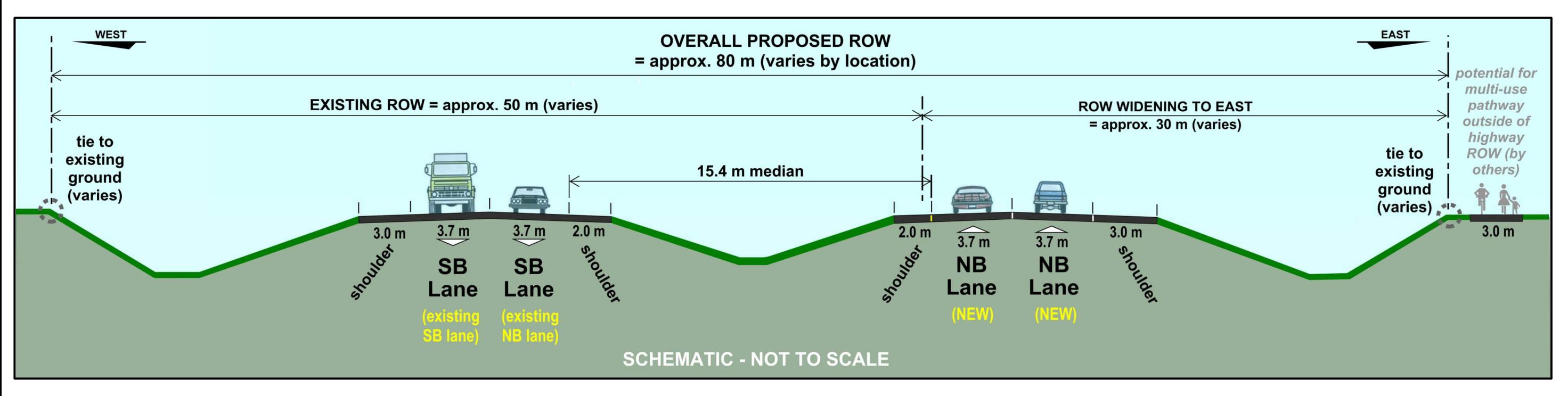
- Carries high-speed rural cross section as far south as
- A portion of the wide cross section would have to be posted at 80 km/h.
- Significant impact to the properties on the east of the
  - No impact to the provincial park or private properties on the west side west of the highway from Twp Rd 391 to
- Carries high-speed rural cross section as far south as
- A portion of the wide cross section would have to be
- Significant impact to residential properties, the provincial park, and businesses on the west of the highway, from
- No impact on the business or residential properties on the east side of the highway, south of Twp Rd 392.
- A variation of Option B, with an 80 km/h transition section installed between the urban and rural sections.
- Reduced impact (compared to Option B) to residential properties, the provincial park, and businesses on the west of the highway, from Jarvis Bay up to north of Twp
- No impact to the business or private properties on the east side of the highway, south of Twp Rd 392.

- section installed between the urban and rural sections. This concept could also be adjusted to work with Option B (with twinning to the west side further north).
- Eliminates impact (compared to Option A) to east-side residential properties south of Twp Rd 392 and the adjacent east-side business.
- Significant increase in impact (compared to Option A or to Option B) to the provincial park, and businesses on the west side of the highway, from Jarvis Bay up to
  - Does not utilize approximately 2.5 km of the existing highway, leading to constructability concerns.
- Variation of Option D1, trying to balance/reduce impacts.
- Reduced impact to the private properties on the east side of the highway, south of Twp Rd 392, and eliminates impact to the private properties on the west side of the highway at
- Reduced impact to the provincial park (compared to Option D1), with only minor impact to the group use area.
- Reduced impact to the businesses (compared to Option D1)
- Does not utilize approximately 2.5 km of the existing highway. Most complex option in terms of constructability.

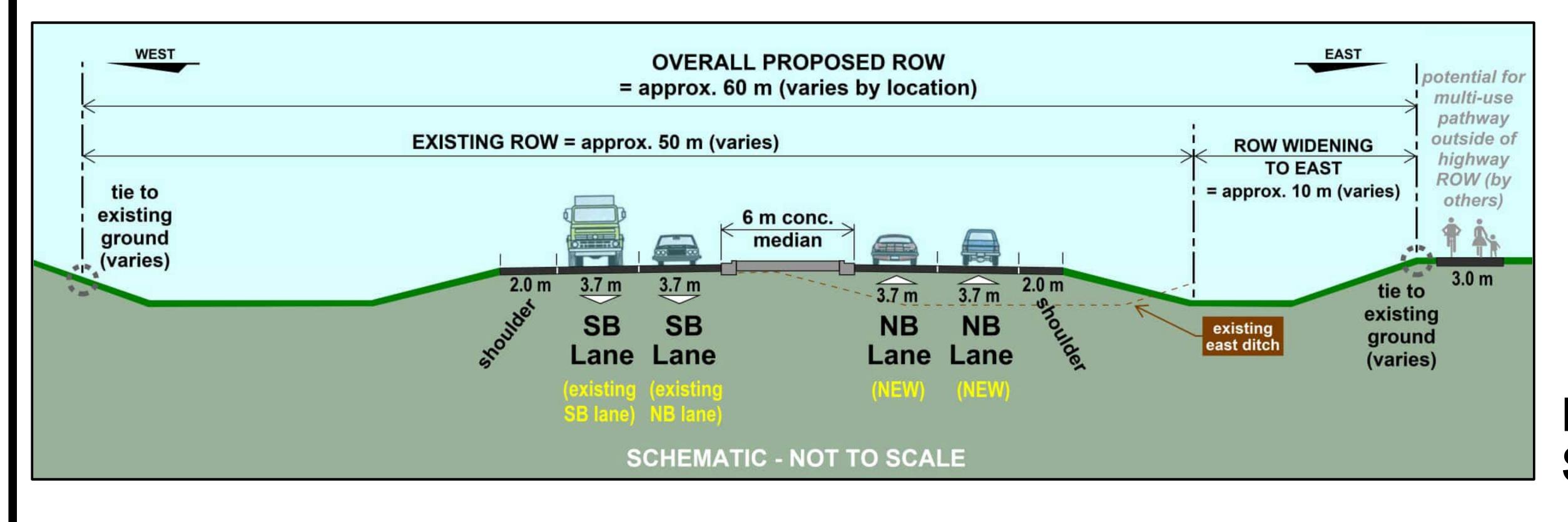


### Cross Sections





PROPOSED TRANSITIONAL CROSS SECTION (TYPICAL) -80 km/h



PROPOSED URBAN CROSS SECTION (TYPICAL) - 60 km/h





### Next Steps ...

#### The project team will:

- > Review the feedback from the public open house and stakeholder meetings to inform the evaluation of the alignment options.
- Complete further technical analysis of the options and select a recommended twinning alignment and associated intersection treatments and access management.
- > Present the recommended plan to stakeholders and the public in Fall 2024 through another Open House to gather final feedback.

Construction Timeline: Construction of this project is not on the current Provincial Construction Program and timelines have not yet been determined at this point. Construction priority will depend on highway capacity, safety concerns, funding availability and the rate of development in the area.



### Than X Mou

Thank you for attending the Highway 20 Twinning Open House session. Before you leave, please take a moment to fill out the provided evaluation / feedback form.

If you would like to submit your comments at a later time, please email to the AECOM Project Manager prior to May 3, 2024: glen.holland@aecom.com

The information shown here today will be available on the project website: www.alberta.ca/highway-20-functional-planning-study

The project website can also be accessed by scanning the QR code below:





