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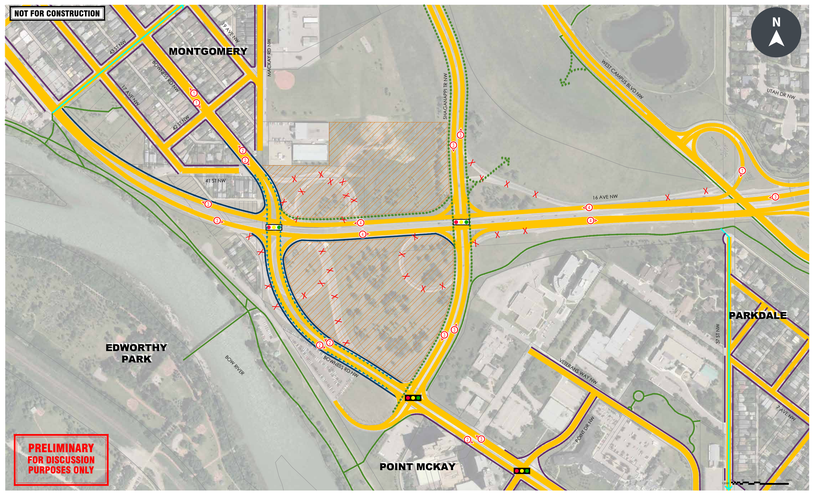
South Shaganappi Study
Phase 3A: Preferred Concept Selection

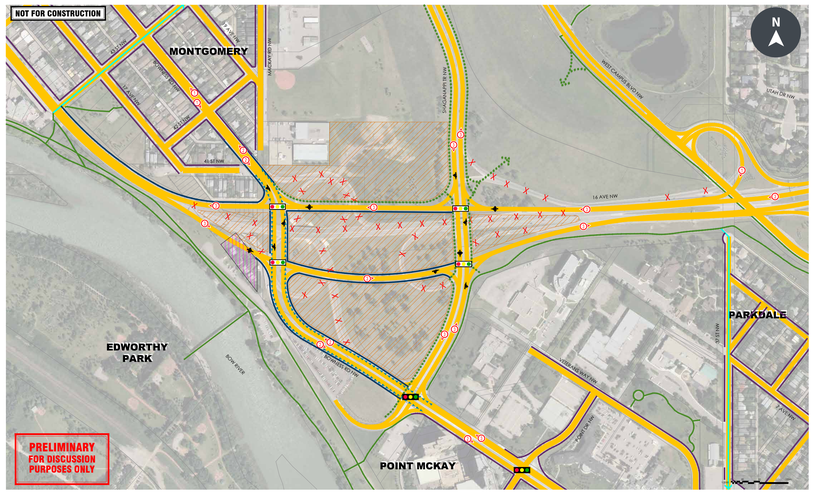
Preliminary Concepts That Were Evaluated

Five preliminary concepts were evaluated by the public and the technical team in November 2016.

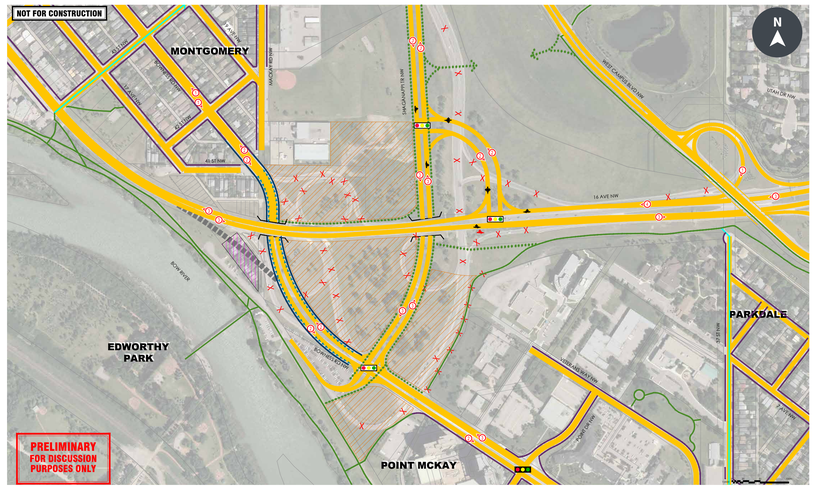
At-Grade Intersections



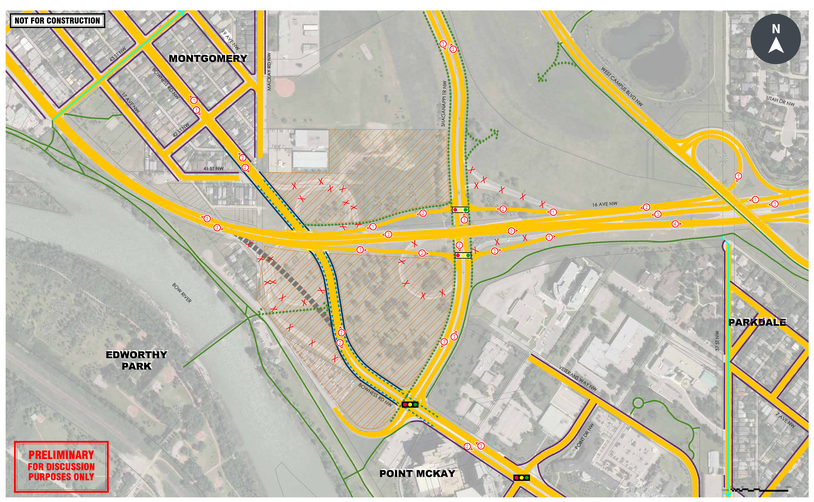
East-West Couplet



Hybrid



Tight Urban Diamond



No Build

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Phase 3A: Preferred Concept Selection

Evaluation Criteria

Each of the preliminary concepts were evaluated by the technical team using the multiple accounts to the right.

The criteria also includes public evaluations that were conducted in November 2016.

The results of the evaluation informed the preferred concept selection.

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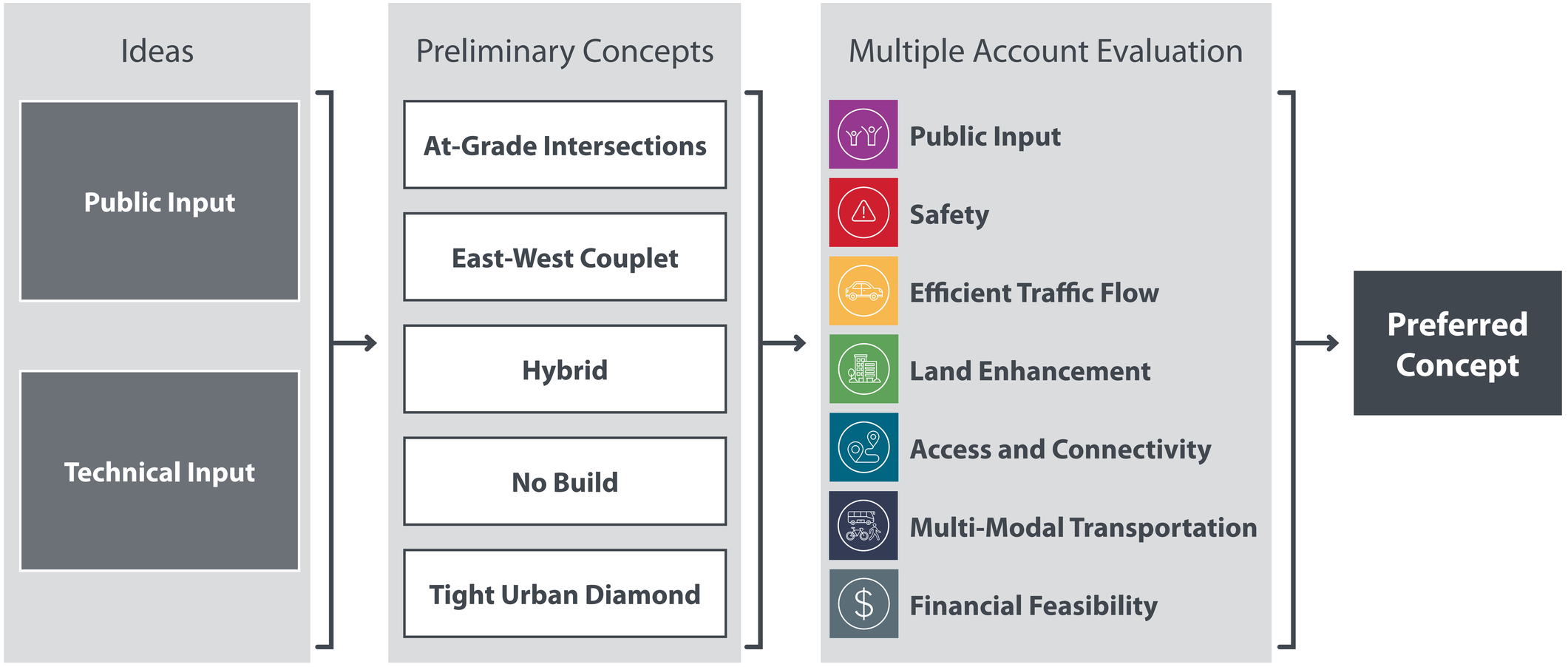
South Shaganappi Study
Phase 3A: Preferred Concept Selection

Preliminary Concept Long-term Evaluation Process



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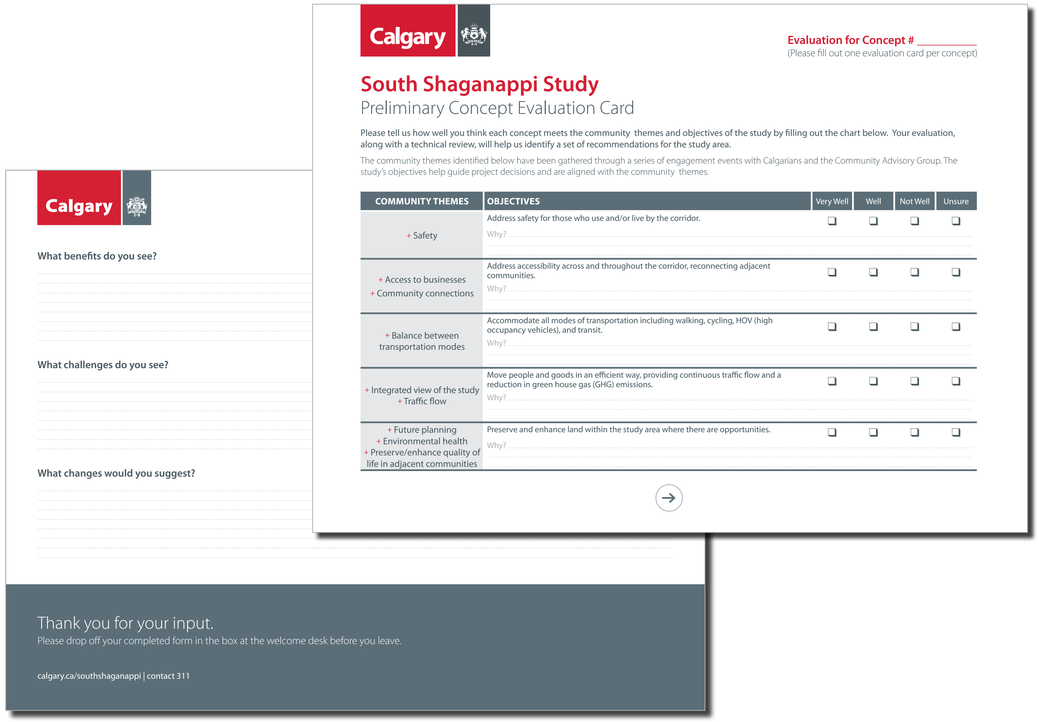
South Shaganappi Study
Phase 3A: Preferred Concept Selection

Public Evaluation

Objective
A plan that reflects the values and priorities of the community.

Evaluation Metrics
Calgarians were asked to evaluate how well each of the preliminary concepts met the community values and project objectives, and explain why. They were also asked to identify benefits, challenges and changes.



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What benefits do you see?

What challenges do you see?

What changes would you suggest?

Thank you for your input.
Please drop off your completed form in the box at the welcome desk before you leave.

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Evaluation for Concept # _____
(Please fill out one evaluation card per concept)

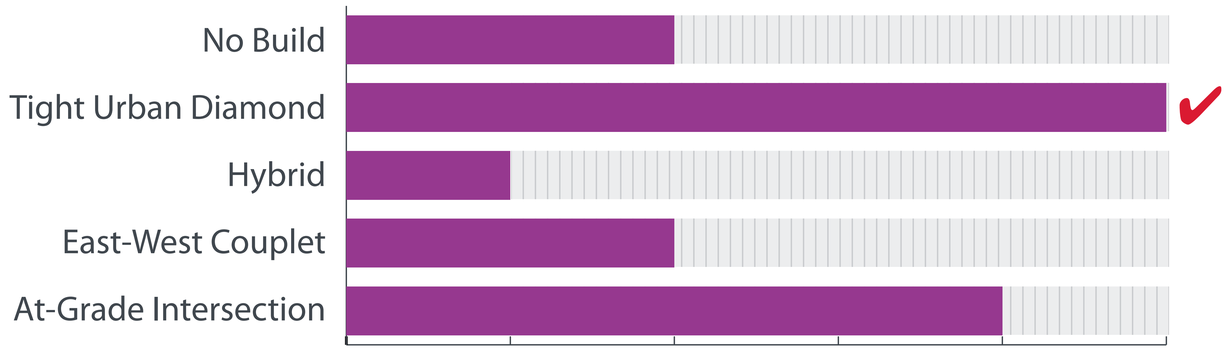
South Shaganappi Study
Preliminary Concept Evaluation Card

Please tell us how well you think each concept meets the community themes and objectives of the study by filling out the chart below. Your evaluation, along with a technical review, will help us identify a set of recommendations for the study area.

The community themes identified below have been gathered through a series of engagement events with Calgarians and the Community Advisory Group. The study's objectives help guide project decisions and are aligned with the community themes.

COMMUNITY THEMES	OBJECTIVES	Very Well	Well	Not Well	Unsure
+ Safety	Address safety for those who use and/or live by the corridor. Why?	❑	❑	❑	❑
+ Access to businesses + Community connections	Address accessibility across and throughout the corridor, reconnecting adjacent communities. Why?	❑	❑	❑	❑
+ Balance between transportation modes	Accommodate all modes of transportation including walking, cycling, HOV (high occupancy vehicles), and transit. Why?	❑	❑	❑	❑
+ Integrated view of the study + Traffic flow	Move people and goods in an efficient way, providing continuous traffic flow and a reduction in green house gas (GHG) emissions. Why?	❑	❑	❑	❑
+ Future planning + Environmental health + Preserve/enhance quality of life in adjacent communities	Preserve and enhance land within the study area where there are opportunities. Why?	❑	❑	❑	❑

Results



Outcomes

The Tight Urban Diamond Concept ranks highest because:
- It provides the easiest access to key community destinations.
- It is a safe and efficient concept for all modes of transportation.
- It leaves open more riverfront land for future use than other concepts.

The Hybrid Concept ranks lowest because:
- It was difficult to understand.
- Traffic flow is not as efficient.
- It is difficult to cross 16 Avenue for people who walk and bike.

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South Shaganappi Study
Phase 3A: Preferred Concept Selection

Public Evaluation: Input We Heard

Preliminary Concept	Themes We Heard from the Community*	
	Benefits	**Challenges**
Tight Urban Diamond	+ Traffic flows more freely on 16th Avenue because there are no signalized intersections. + It is a safe and efficient concept for all modes. + It has quicker access to key community destinations. + It opens up the most land for other uses.	- Higher cost of infrastructure. - Increased signalized intersections on Shaganappi Trail. - Minimal connections for people who walk and bike. - Preference to maintain an exit from 16 Avenue eastbound to Bowness Road.
East-West Couplet	+ Easy to understand for people who drive and provides better traffic flow. + The signalized intersections may result in reduced speeds. + There may be a lower infrastructure cost.	- Too many signalized intersections leading to traffic congestion and lack of flow. - Property impacts. - There may be less land for potential future use.
Hybrid	+ Smoother traffic flow than current design. + Good connections for people who walk and bike.	- Increase in traffic lights may reduce traffic flow. - Crossing 16 Avenue is difficult for people who walk. - Potential higher cost of infrastructure.
At-Grade Intersections	+ An expected lower cost for infrastructure. + The land not used in the roadway is accessible for future use. + Connections are improved for people who walk and bike. + Improves safety and traffic flow by reducing speed and improving traffic movement in all directions.	- Additional signalized intersections contribute to slower commute times and less flow. - Multiple intersections make it more difficult for people who walk and bike to cross the street.
No-Build	+ Lowest cost concept.	- Confusing design with safety issues. - Large pockets of underutilized land. - Doesn't accommodate people who walk or bike.

* Comments were provided online and through two open houses (November 23 and 24, 2016). You can find the full report about this engagement online at: https://www.calgary.ca/engage/Documents/South_Shaganappi_Trail/SSS_Nov2016OpenHouse_WWH.pdf

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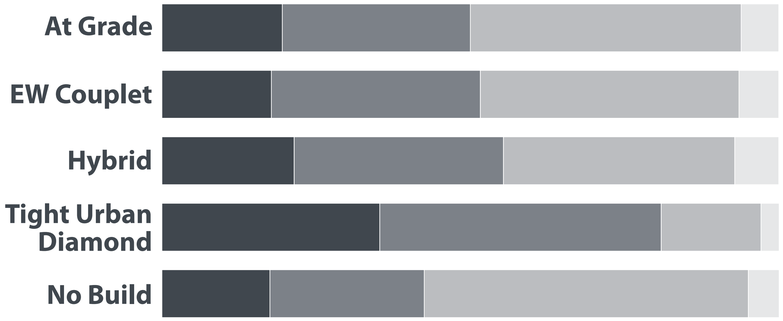
South Shaganappi Study
Phase 3A: Preferred Concept Selection

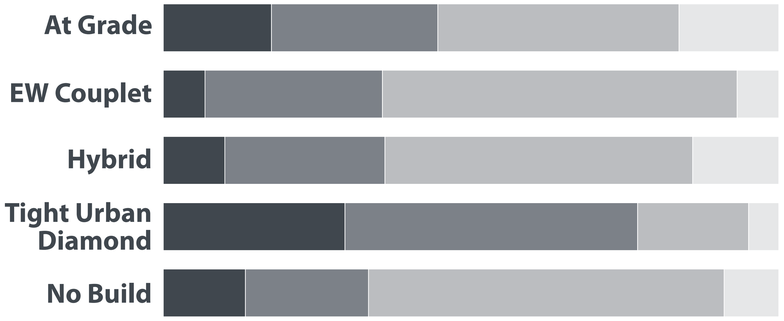
Public Evaluation: Input We Heard

The results shown here reflect the written comments as well as the public's evaluation of the different concepts measured against the study objectives and community values.

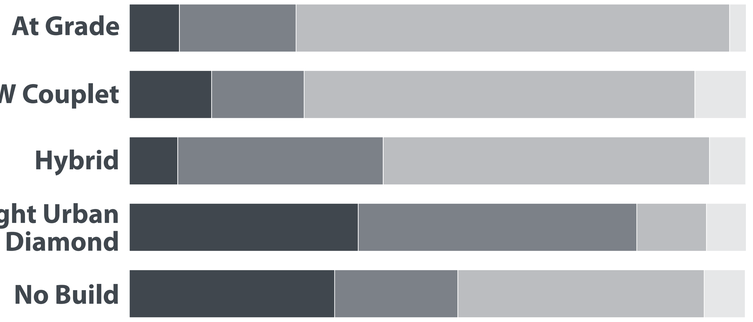
Safety



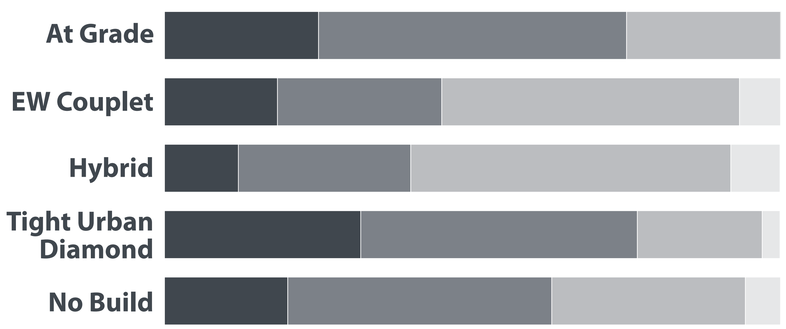
Future planning/ Environmental health/ Preserve/enhance quality of life in adjacent communities



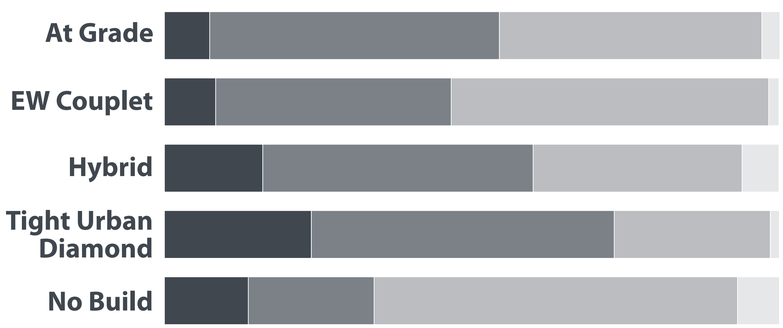
Integrated view of study / Traffic flow



Access to businesses / Community connections



Balance between transportation modes



Very Well | Well | Not Well | Unsure

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South Shaganappi Study
Phase 3A: Preferred Concept Selection

Technical Evaluation: Safety

Objective
Address safety for those who use and/or live by the corridor.

Evaluation Metrics

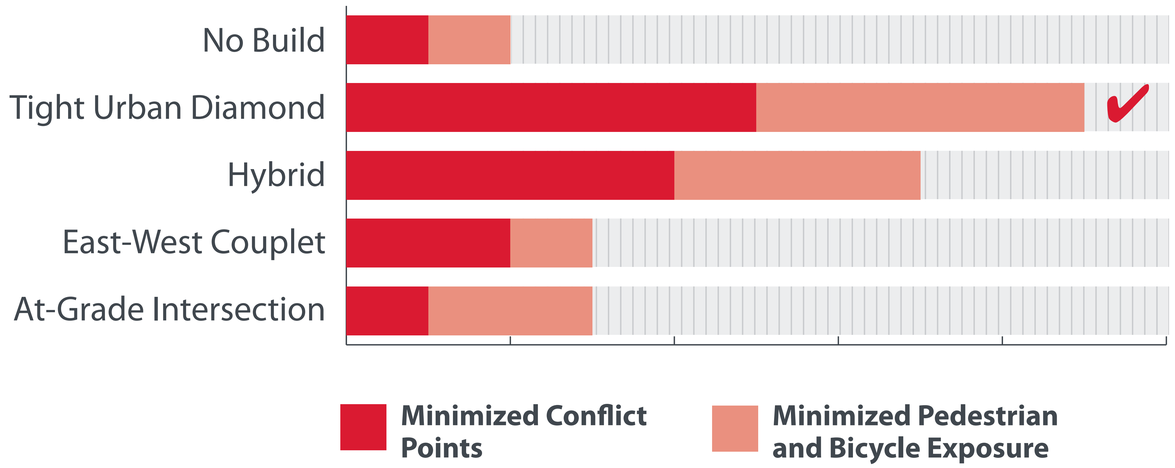
+ **Vehicle Conflict Points**

Minimized number of places where collisions are possible.

+ **Pedestrian and Bike Exposure**

Minimized number of places where people who walk and bike are exposed to vehicle traffic.

Results



Outcomes

Tight Urban Diamond Concept ranks the highest because:

- It separates vehicle traffic along Shaganappi Trail and Bowness Road from vehicle traffic along 16 Avenue.
- It has the fewest number of lane crossings at intersections for people who walk and bike compared to the other concepts.

No Build Concept ranks the lowest because:

- Existing vehicle collision patterns within the study area are higher than The City average.
- There are limited connections for people who walk and bike.

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South Shaganappi Study
Phase 3A: Preferred Concept Selection

Technical Evaluation: Efficient Traffic Flow

Objective
Move people and goods in an efficient way, providing continuous traffic flow and a reduction in greenhouse gas (GHG) emissions.

Evaluation Metrics

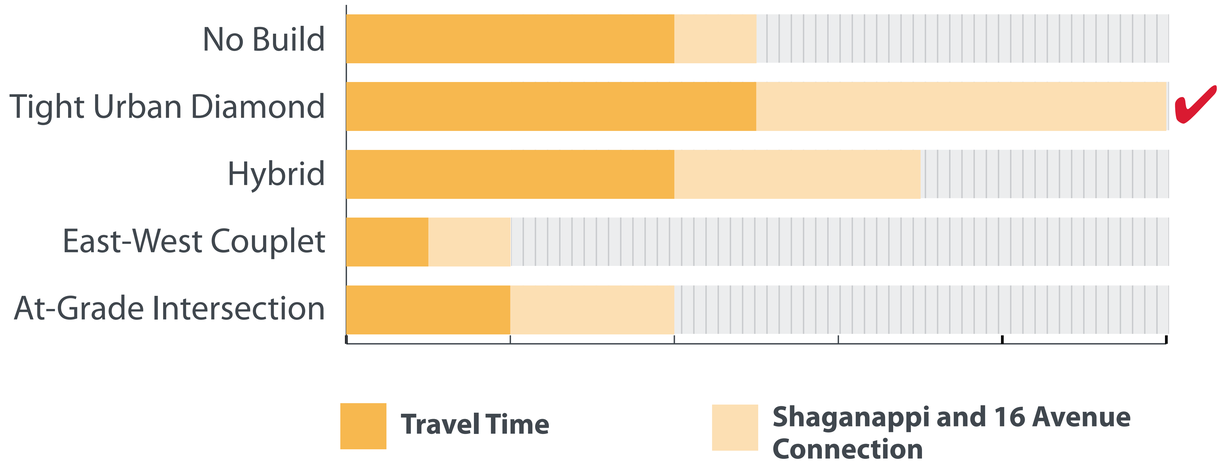
+ **Optimizes Travel Time**

Minimize delays for people who drive through the study area.

+ **Connection Between Shaganappi Trail and 16 Avenue**

Minimize delays for vehicles moving between Shaganappi Trail and 16 Avenue.

Results



Outcomes

Tight Urban Diamond Concept ranks highest because:

- There are no additional traffic lights on 16 Avenue.
- It creates easy access for people who drive in all directions along Shaganappi Trail and 16 Avenue.

East-West Couplet Concept ranks lowest because:

- The anticipated traffic volumes travelling through the study area may create intersection delays.

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South Shaganappi Study
Phase 3A: Preferred Concept Selection

Technical Evaluation: Land Enhancement

Objective
Preserve and enhance land within the study where there are opportunities.

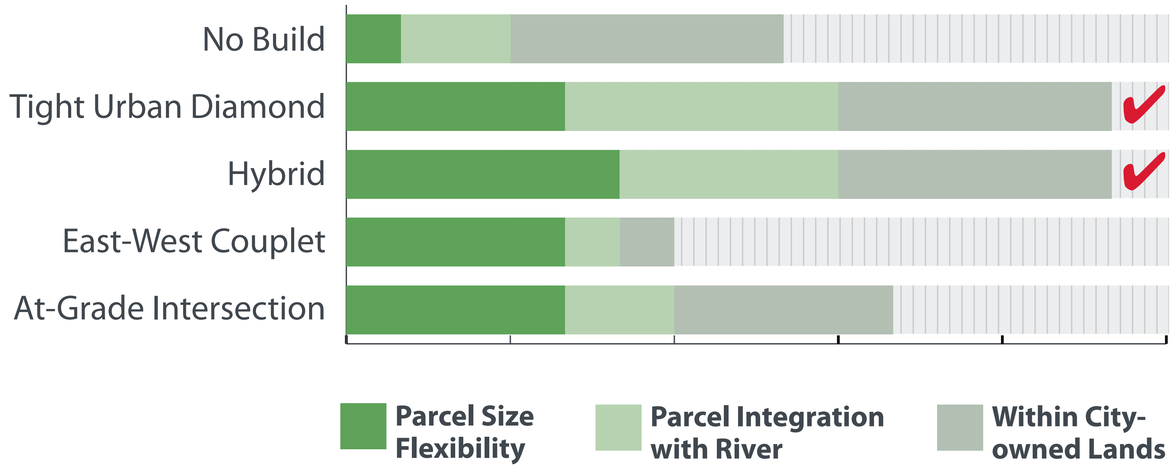
Evaluation Metrics

+ Land Size Flexibility
The land not used for roadways is large enough to support a range of future uses and is easy to access.

+ Land Integration with Bow River
The land not used for roadway could be integrated with the riverfront.

+ Within City-owned Land
The design has minimal impact to private property.

Results



Outcomes

Hybrid and Tight Urban Diamond Concepts rank highest because:

- Remaining land is easy to access.
- Remaining land is easy to integrate with the riverfront.
- They minimize new property requirements for the transportation right of way.

East-West Couplet Concept ranks lowest because:

- More significant property impacts are necessary.

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South Shaganappi Study
Phase 3A: Preferred Concept Selection

Technical Evaluation: Access and Connectivity

Objective
Address accessibility across and throughout the corridor, reconnecting adjacent communities.

Evaluation Metrics

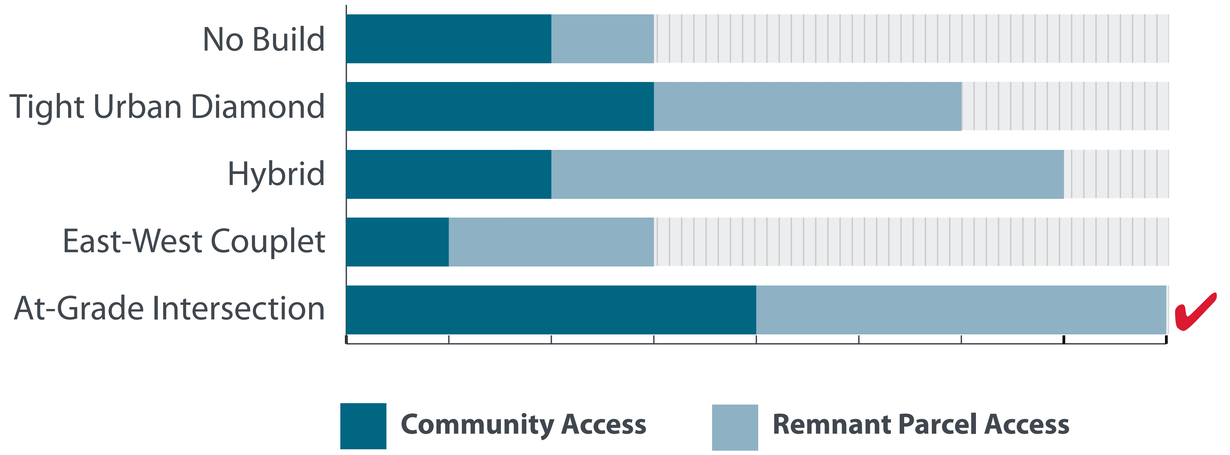
+ **Community Access**

The number of intersections that need to be travelled through to access communities, institutions and businesses in the adjacent communities.

+ **Remnant Land Access**

Ease of access to land that is not being used for roadway.

Results



Outcomes

At-Grade Intersection Concept ranks the highest because:

- It offers the shortest delay and distance travelled for people driving in all directions.

East-West Couplet & No Build Concept rank the lowest because:

- The number of intersections and distance travelled between adjacent communities is higher.
- There are more constraints associated with accessing the land not being used for roadway.

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South Shaganappi Study
Phase 3A: Preferred Concept Selection

Technical Evaluation: Multi-Modal Transportation

Objective
Accommodate all modes of transportation including walking, cycling, HOV (high occupancy vehicles), and transit.

Evaluation Metrics

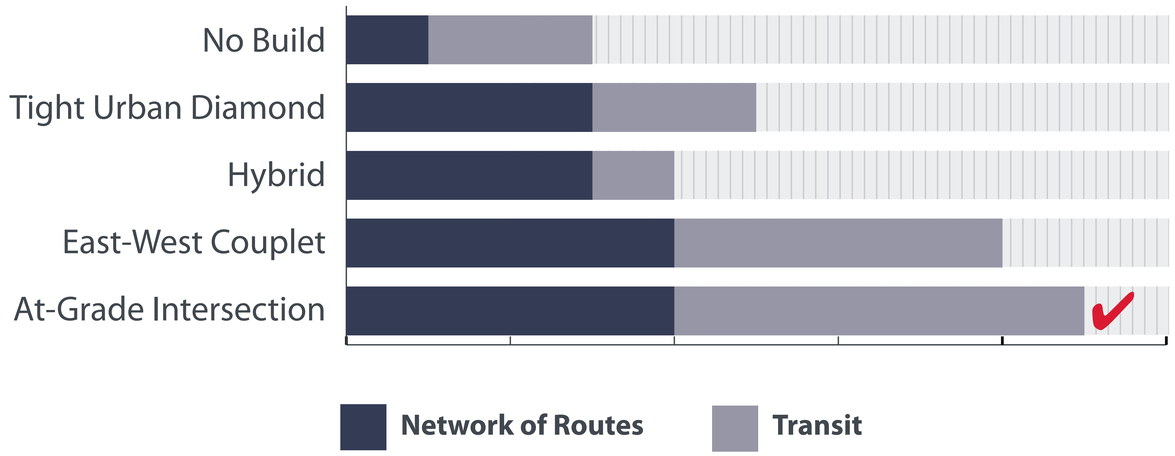
+ **Network of Routes**

The quantity and quality of network connections for people who walk and bike.

+ **Transit**

The degree of flexibility for future bus service to connect between the major roads in the study area.

Results



Outcomes

At-Grade Intersection Concept ranks the highest because:

- It has the most crossing opportunities for people who walk and bike.
- It has the most flexibility for future bus routes.

No Build Concept ranks the lowest because:

- There are limited connections for people who walk and bike.

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South Shaganappi Study
Phase 3A: Preferred Concept Selection

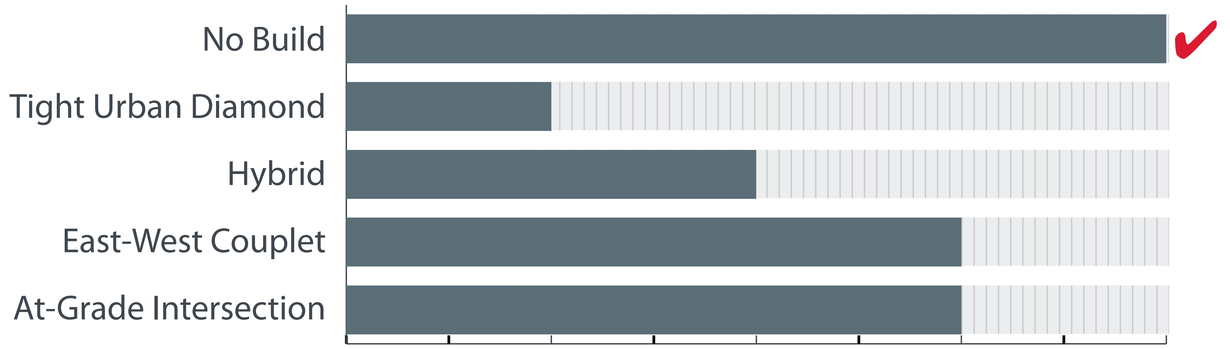
Technical Evaluation: Financial Feasibility

Objective
An affordable and cost-effective service. Costs are achievable, sustainable in the long term and provide good value for money.

Evaluation Metrics

+ Cost to Implement
The estimated capital cost to build the proposed infrastructure.

Results



Key Outcomes

No Build Concept ranks highest because:
- It has the lowest comparative cost because no new infrastructure is required.

Tight Urban Diamond Concept ranks lowest because:
- It has the largest comparative cost because there are substantial changes to existing infrastructure and new bridges required.

South Shaganappi Study
Phase 3A: Preferred Concept Selection

Technical and Public Evaluation:
Overall Rankings

Results

Public Input | **Safety** | **Efficient Traffic Flow** | **Land Enhancement** | **Access and Connectivity** | **Multi-Modal Transportation** | **Financial Feasibility**

Outcome:

The Tight Urban Diamond is the preferred concept because it best meets the technical evaluation criteria, community values and project objectives.

South Shaganappi Study

Phase 3A: Preferred Concept Selection

Draft Long-term Recommended Plan: Tight Urban Diamond

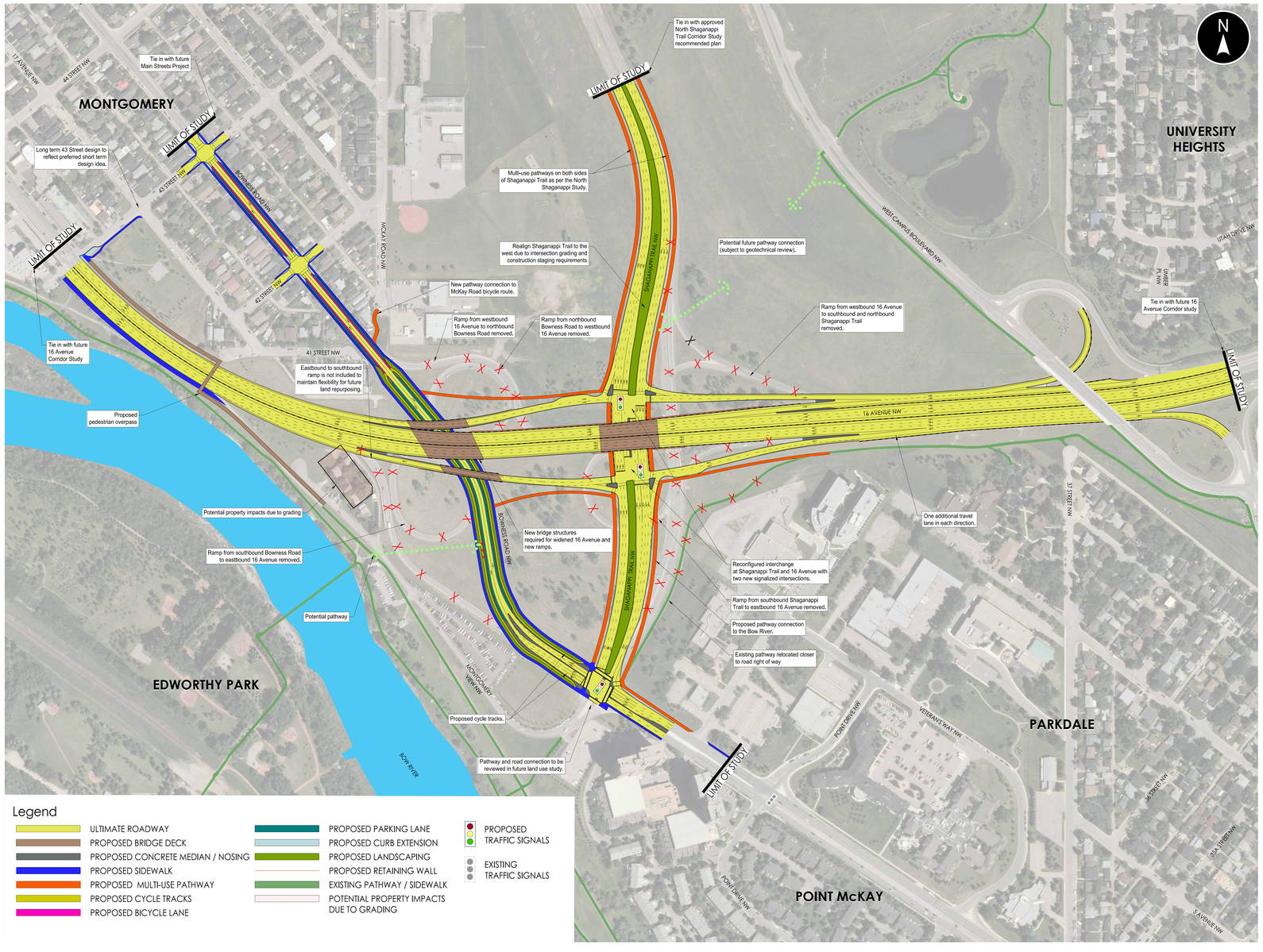
Benefits that address what we heard from Calgarians:

- Facilitates safer traffic movements along 16 Avenue by adding merge ramps to provide access to/from Shaganappi Trail.
- Maintains travel times along 16 Avenue by providing continuous traffic flow.
- Enhances connectivity with cycle tracks on Bowness Road and new pathways along 16 Avenue and Shaganappi Trail.
- Enhances accessibility for people who walk and bike on Bowness Road by providing a continuous connection under 16 Avenue.
- Maintains existing transit service on Bowness Road.
- Encourages people who drive to use 16 Avenue given the additional travel time required to access Bowness Road.
- Provides opportunity to re-purpose land not being utilized by infrastructure for other uses (to be reviewed in a future study).

Trade-offs:

- Removes direct access from 16 Avenue to Bowness Road.
- May result in increased traffic on 43 Street from people who drive attempting to access Bowness Road from 16 Avenue.
- Requires intersection crossings for people who walk and bike along the regional pathways on Shaganappi Trail.
- Reduces flexibility for future transit service along 16 Avenue.
- Possible property impacts to properties along Montgomery View.
- Requires four new bridge structures, which are costly to build and maintain.

People who drive
People who walk and bike
People who take transit
Surrounding communities
Surrounding land
Project costs



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