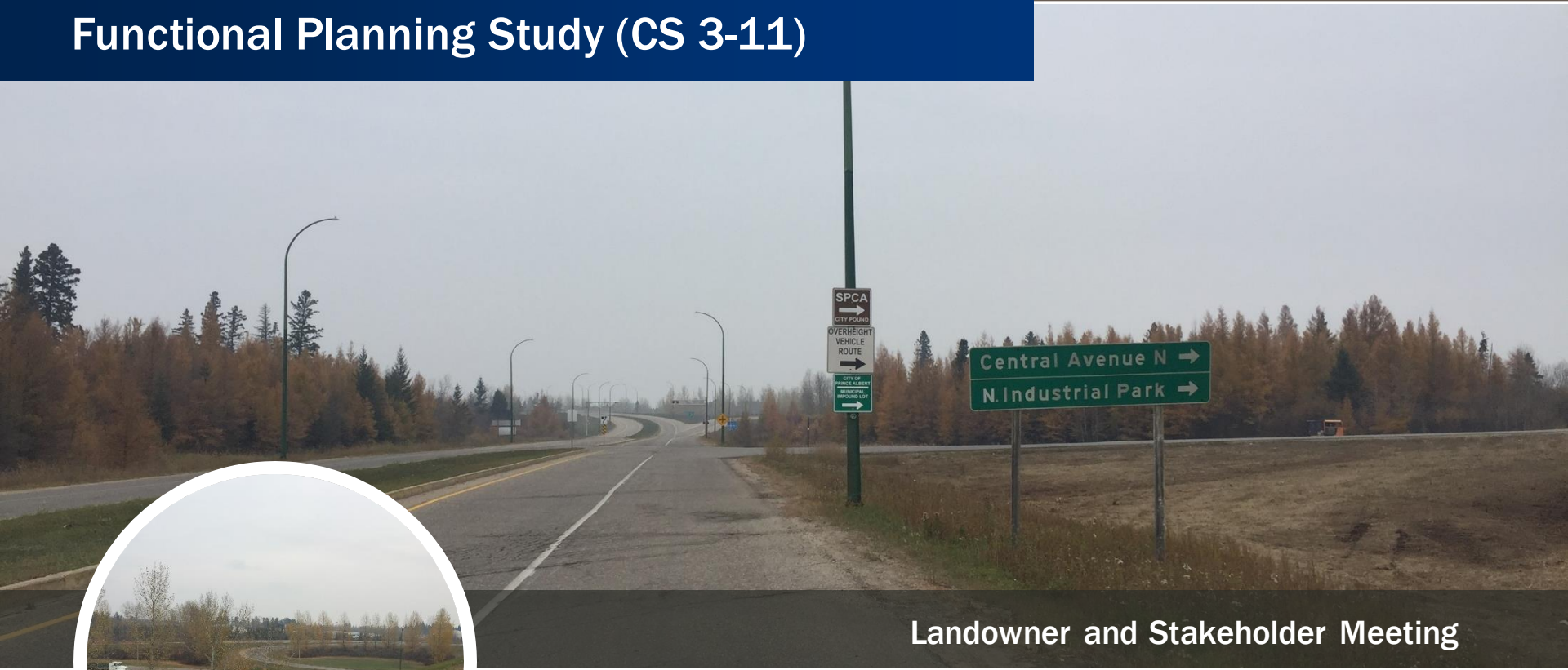


Highway 3, 2, and 55, North of Prince Albert Functional Planning Study (CS 3-11)

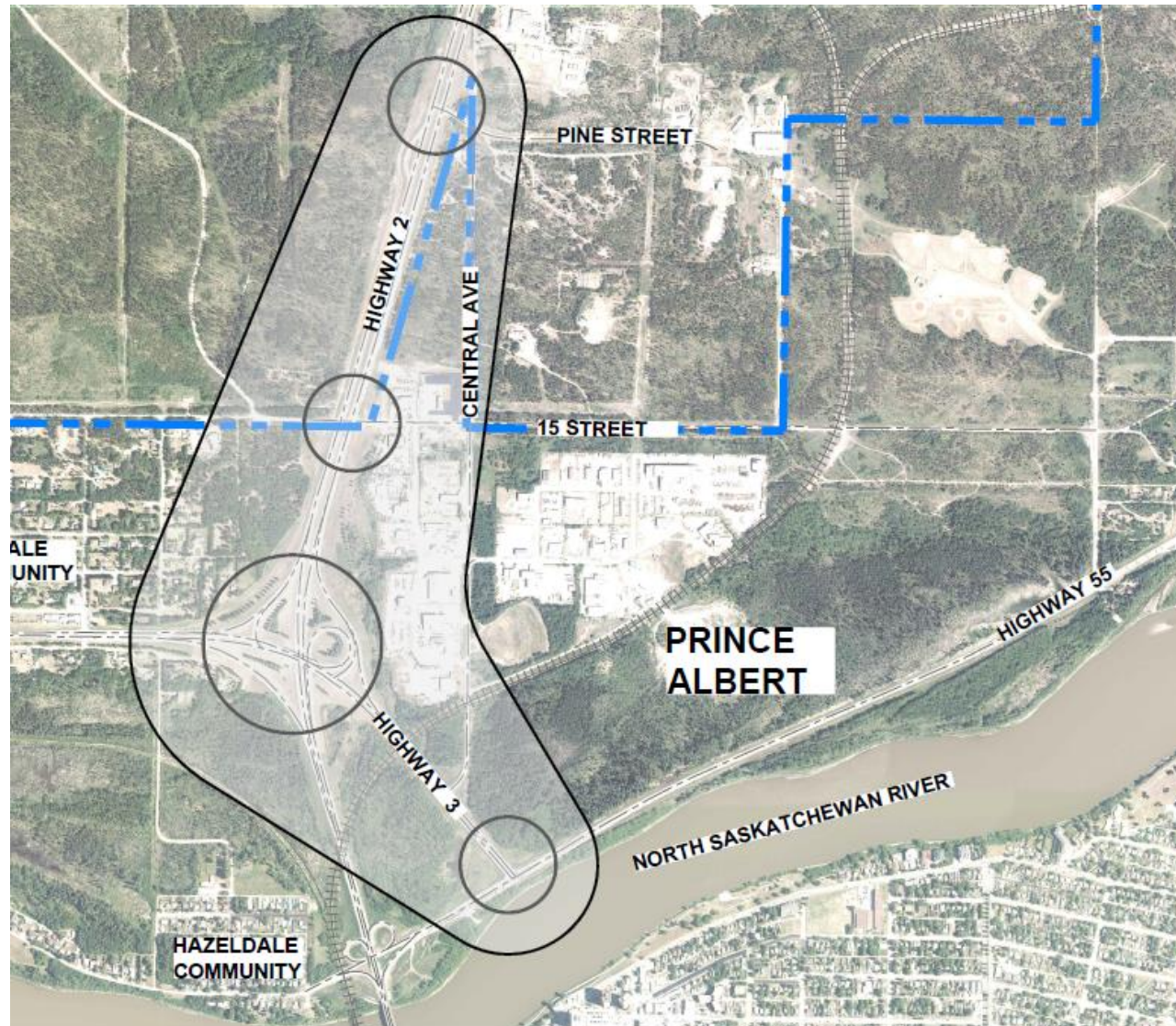


Landowner and Stakeholder Meeting

Introduction

- Tetra Tech was retained by MoH to complete Hwy 2, 3, and 55 Functional Planning Study
- Study Focus: Hwy 2 / 15 Street NE; Hwy 2 / Pine Street; and Hwy 3 / Hwy 55 intersections
- Background:
 - Height restriction (4.5 m) under the Highway 2 overpass along Highway 55
 - Existing truck bypass route - Central Avenue to 15 Street NE to access Hwy 2
- Issue:
 - Highway 2 (4-lane Divided) has a narrow median width that contributes to queuing issues
 - Similar issues exist at Highway 2 and Pine Street intersection
 - Trucks conducting circle checks in the vicinity of Highway 3 and Highway 55 intersection
- Study Purpose: Evaluate future safety improvements that can accommodate truck traffic and formulate a plan to relieve traffic flow pressures.

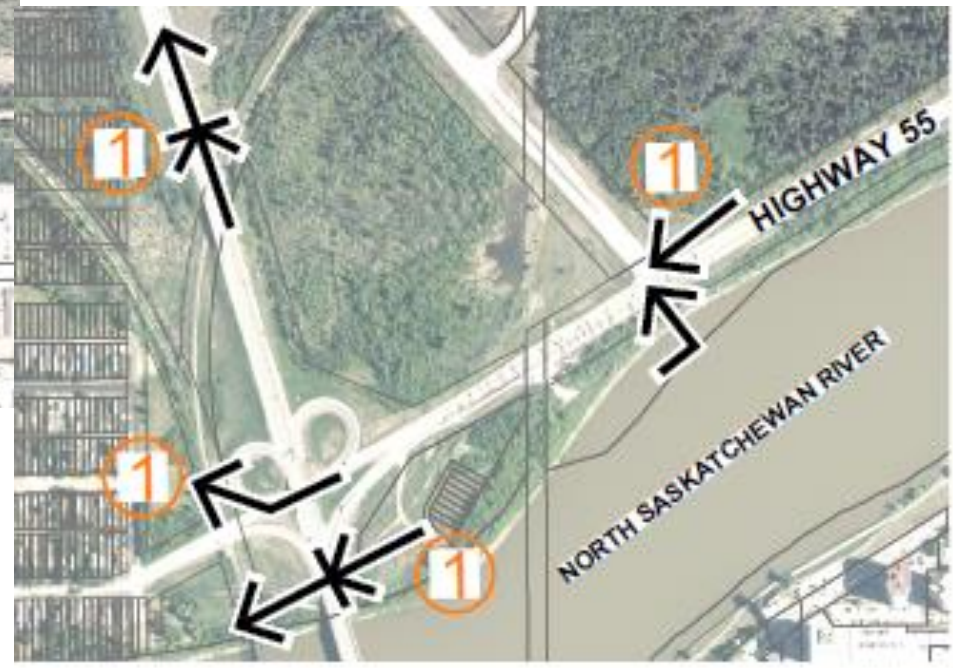
Study Area and Location



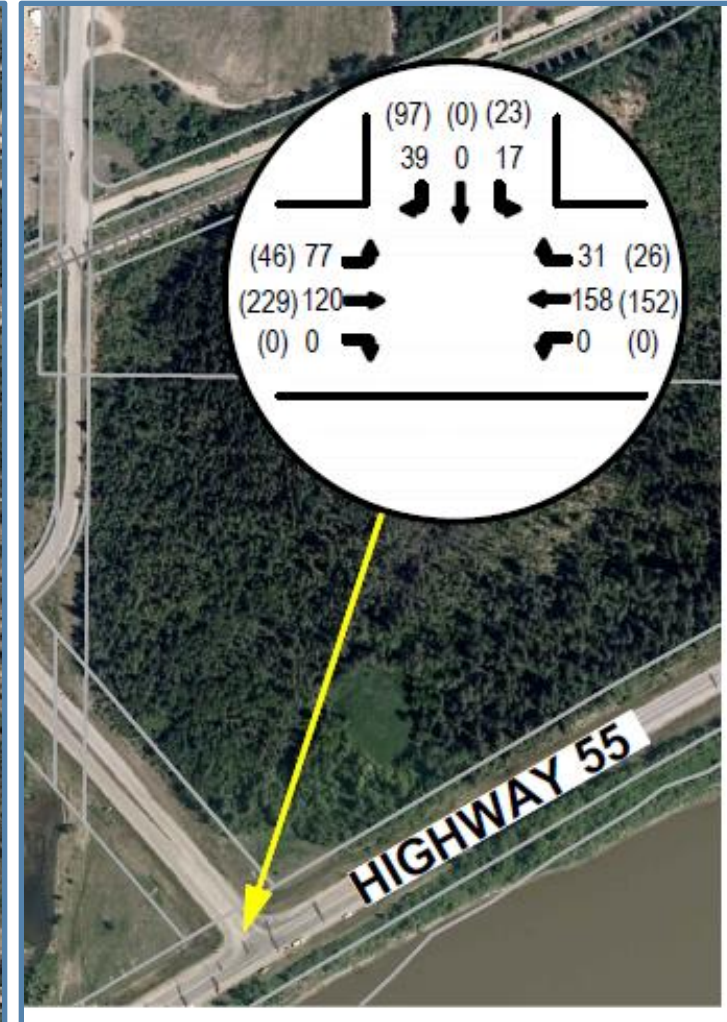
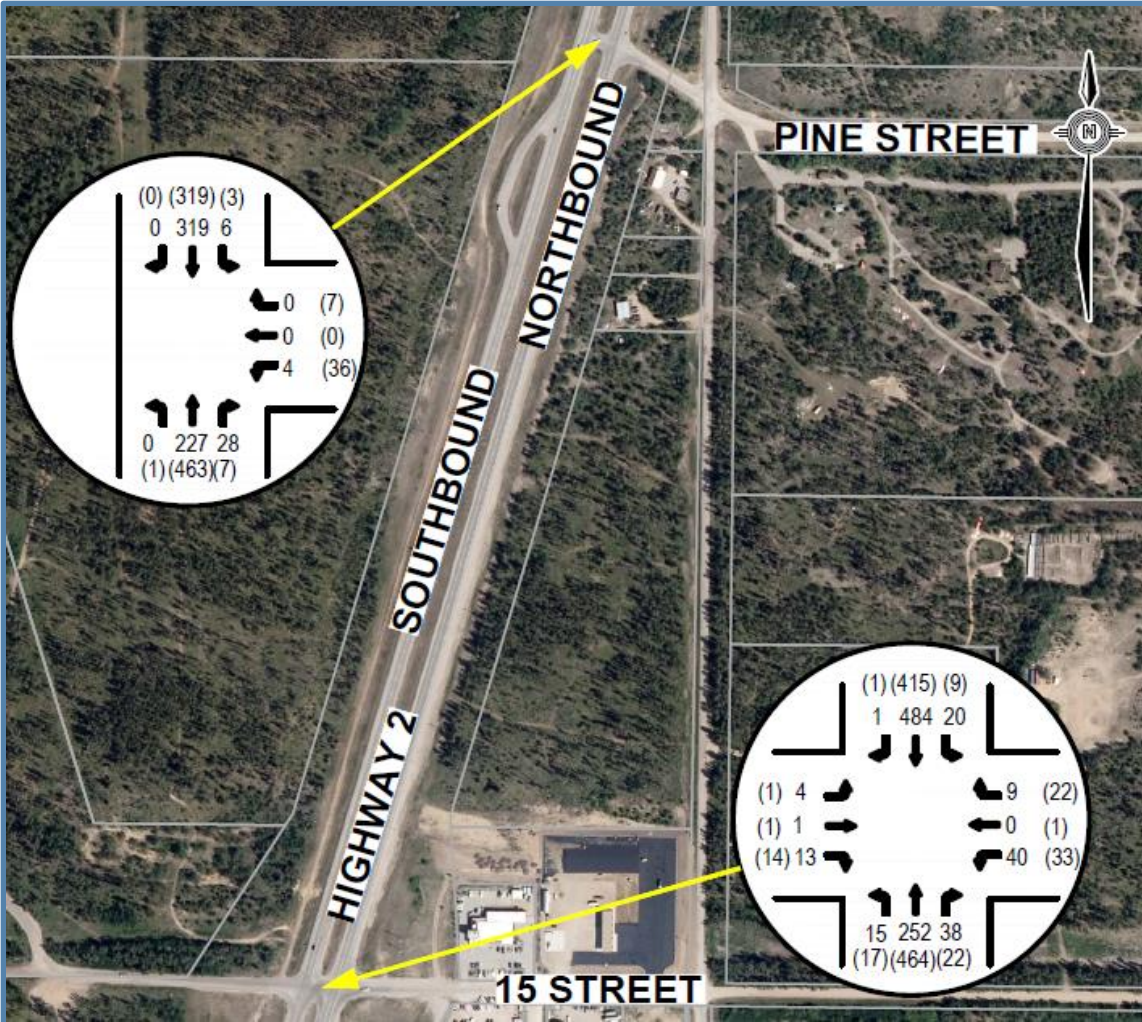
Collision History (2011 to 2021)



- No collision trends identified within the study area



Traffic Volumes (2022 Peak Hour Volumes)



Summary of Traffic Analysis (Existing Conditions)

Existing Conditions: Winter 2022						
INTERSECTION:	APPROACH LOS				CRITICAL MOVEMENT	
	WB	EB	NB	SB	Movement	LOS (Delay)
Highway 2 / 15 Street						
A.M. Peak Hour	C	B	A	A	WB	15.7
P.M. Peak Hour	C	B	A	A	WB	15.1
Highway 2 / Pine Street						
A.M. Peak Hour	B	n/a	A	A	WB	11.7
P.M. Peak Hour	B	n/a	A	A	WB	8.4
Highway 3 / Highway 55						
A.M. Peak Hour	A	A	n/a	B	SBL	12.2
P.M. Peak Hour	A	A	n/a	B	SBL	11.8
Existing Conditions: Summer 2022 (Applied Factors)						
INTERSECTION:	APPROACH LOS				CRITICAL MOVEMENT	
	WB	EB	NB	SB	Movement	LOS (Delay)
Highway 2 / 15 Street						
A.M. Peak Hour	D	C	A	A	WB	25.6
P.M. Peak Hour	D	B	A	A	WB	26.1
Highway 2 / Pine Street						
A.M. Peak Hour	B	n/a	A	A	WB	14.8
P.M. Peak Hour	B	n/a	A	A	WB	14.7
Highway 3 / Highway 55						
A.M. Peak Hour	A	A	n/a	B	SBL	13.1
P.M. Peak Hour	A	A	n/a	B	SBL	12.4

Existing Safety Risks

Hwy 2 and 15 Street NE Intersection

- Highway 2 - narrow median (approx. 18 m)
 - No median refuge for trucks
- NB left turn lane length
 - Appears substandard for deceleration
- No SB right turn lane – slow down in through lane
- No EB right turn merge lane – enter into through lane
- Potential weaving issue between 15 St intersection and Highway 2 SB off-ramp

Existing Safety Risks Hwy 2 and Pine Street

- Highway 2 - narrow median (approx. 18 m)
 - No refuge for trucks
- No intersection treatment
 - Deceleration/acceleration in Hwy 2 through lanes
- Intersection approximately 50 m north of SB truck pull-out
 - Potential weaving issues between Pine Street and truck pull-out, if required

Existing Safety Risks

Hwy 3 and Hwy 55 Intersection

- NE corner – evidence of off-tracking
- SB sight distance potentially block by right-turning WB trucks
- Trucks conducting circle checks on highway shoulder

Conceptual Improvement Options Hwy 2 & 15 St NE Intersection

- Option 1 - Median Widening
- Option 2 – SB Median Acceleration Lane (MAL)
- Option 3 – Roundabout
- Option – Install Traffic Signal – Screened Out
- Option 4 – Construct WB – SB Loop Ramp at Hwy 3 Interchange and 15 Street Intersection Closure

Conceptual Improvement Options Hwy 2 and 15 St NE Intersection

OPTION 1 MEDIAN WIDENING



ADVANTAGES

- Allows waiting in the median until safe to continue left turn or crossing of intersection
- Allows trucks enough space to wait at the median to cross or to turn left

DISADVANTAGES

- Long segment of Highway 2 reconstruction
- Potential weaving issues between 15 Street and off-ramp
- Does not conform to Highway Access Control requirements

OPTION 2 MEDIAN ACCEL. LANE



ADVANTAGES

- Improves westbound left turns
- Reduces speed differentials

DISADVANTAGES

- Difficulty merging from left side
- Narrower median increases safety risk
- Merge point located at curve
- Difficult to access off-ramp to Highway 3
- Does not conform to Highway Access Control requirements

OPTION 3 ROUNDABOUT



ADVANTAGES

- Promotes lower speed
- Reduces vehicle to vehicle conflict points

DISADVANTAGES

- Inconsistent with drivers' expectation on divided highways
- Delay to Highway 2 traffic
- Northbound Highway 2 required to slow down after an interchange

Conceptual Improvement Options Hwy 2 and 15 St NE Intersection



ADVANTAGES

- Free-flow access from Highway 3 westbound to Highway 2 southbound
- Familiar interchange design for the public
- Eliminates conflict points at Highway 2 and 15 Street intersection
- Aligns with Highway Access Control requirements

DISADVANTAGES

- Rerouting accesses for businesses and public services
- Requires upgrading Central Ave to accommodate traffic demand

Conceptual Improvement Options Hwy 2 and Pine St Intersection

- Option 1 - Median Widening
- Option 2 – SB Median Acceleration Lane (MAL)
- Option 3 – Roundabout
- Option – Install Traffic Signal – Screened Out
- Option 4 – Construct WB – SB Loop Ramp at Hwy 3 Interchange and Pine Street Intersection Closure or Right-In, Right-Out (RIRO)

Conceptual Improvement Options Hwy 2 and Pine St Intersection

OPTION 1 MEDIAN WIDENING



ADVANTAGES

- Allows waiting in the median until safe to continue left turn or crossing of intersection
- Median refuge for trucks

DISADVANTAGES

- Long segment of Highway 2 reconstruction
- Requires right-of-way to re-instate truck pull-out
- Potential weaving issues between 15 Street and truck pull-out

OPTION 2 MEDIAN ACCEL. LANE



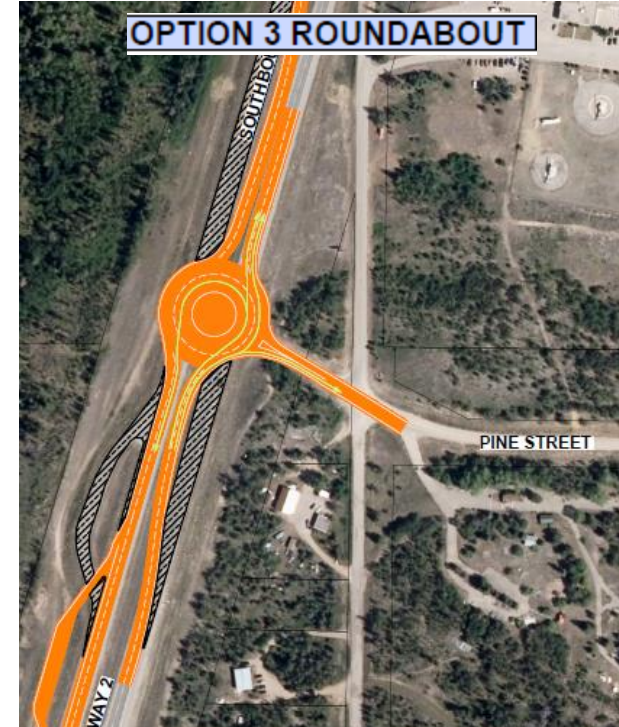
ADVANTAGES

- Improves westbound left turns
- Reduces speed differentials

DISADVANTAGES

- Difficulty merging from left side
- Narrower median increases safety risk
- Weaving issue to access Highway 2 southbound truck pull-out

OPTION 3 ROUNDABOUT



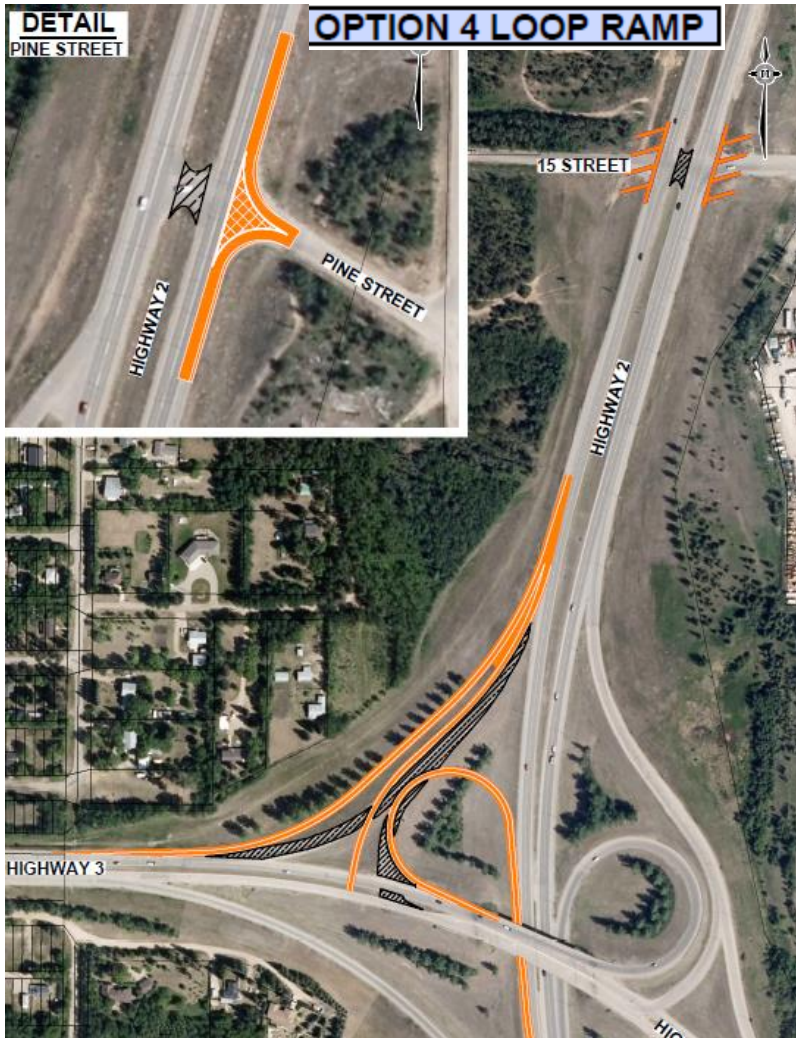
ADVANTAGES

- Promotes lower speed
- Reduces vehicle to vehicle conflict points

DISADVANTAGES

- Inconsistent with drivers' expectation on divided highways
- Delay to Highway 2 traffic

Conceptual Improvement Options Hwy 2 and Pine St Intersection



ADVANTAGES

- Free-flow access from Highway 3 westbound to Highway 2 southbound
- Familiar interchange design for the public
- Reduces conflict points at Highway 2 and Pine Street intersection
- Aligns better with Highway Access Control requirements

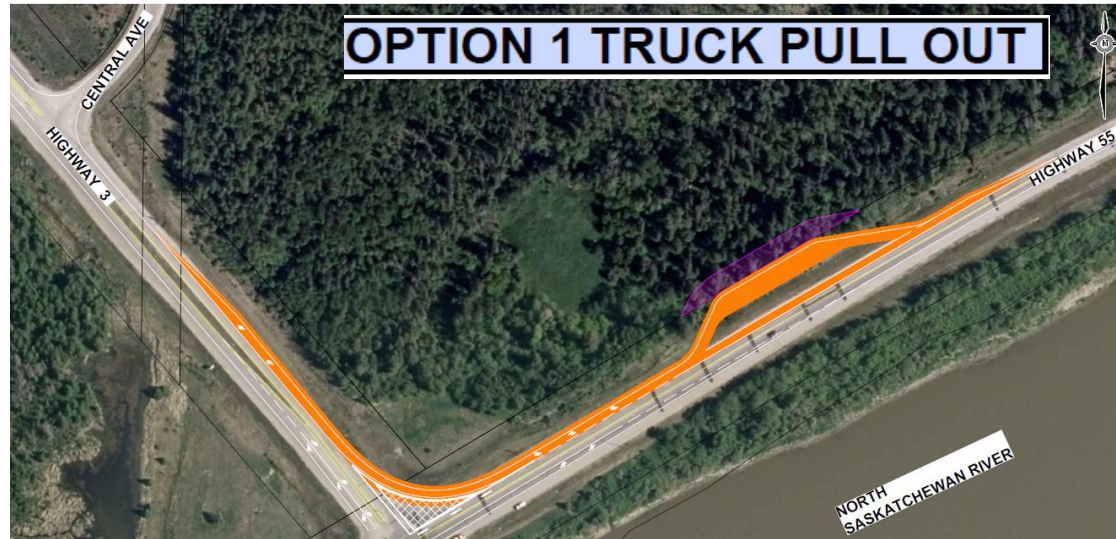
DISADVANTAGES

- Rerouting accesses for businesses and public services
- Requires upgrading Central Ave to accommodate traffic demand

Conceptual Improvement Options

Hwy 3 / 55 - Truck Pull-out Location

OPTION 1 TRUCK PULL OUT



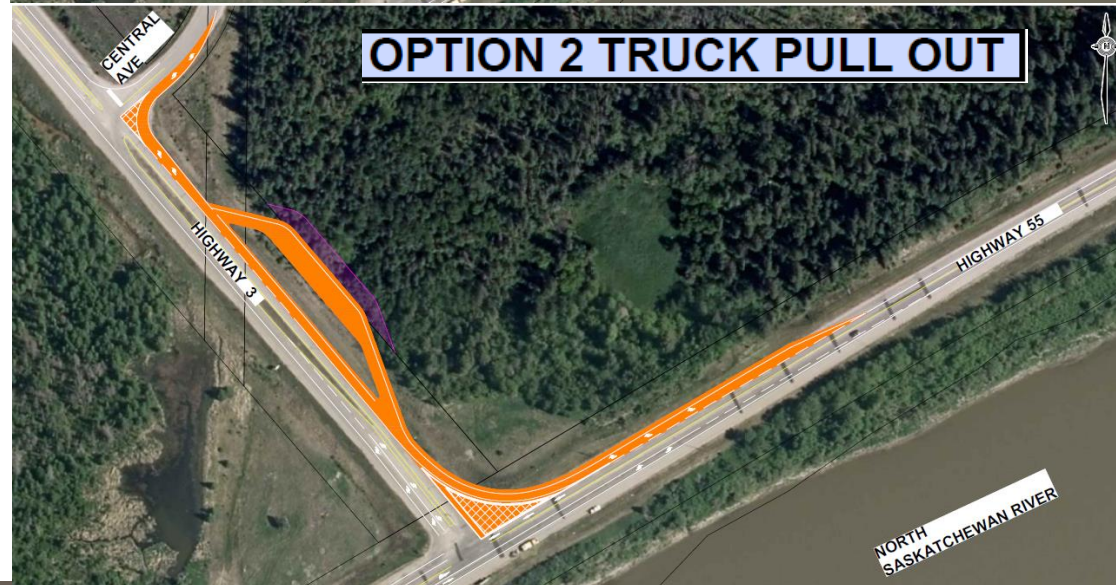
Advantages

- Simple access design from Highway 55
- Direct access to right-turn lane
- Less acceleration/deceleration requirements for trucks

Disadvantages

- Right of Way impacts
- Located along a 90 km/h highway

OPTION 2 TRUCK PULL OUT



Advantages

- Located along a slower (60 km/h) highway
- Access to facility after trucks have slowed down for the right-turn

Disadvantages

- Right of Way impacts
- Limited weaving space along Hwy 3 (between Hwy 55 and Central Ave)
- Increases driver confusion and complexity of the environment

Next Step

- Continue consultation with stakeholders
- Virtual Public Open House (end of October)
- Compare/Evaluate Conceptual Improvement Options
- Identify Preferred Option
- Virtual Public Open House (Tentatively end of February)
- Document Findings and Project Close-Out