DEPARTMENT OF TRANSPORTATION

Highway 7 Corridor Study
City of Shorewood

Intended Meeting Outcomes

1

Review refined alternatives

2

Present Evaluation Matrix

3

Discuss refined alternatives and obtain feedback from City of Shorewood

Agenda

1. Study overview
2. Study needs
3. Segment review and updates
4. Alternatives and revisions
5. Evaluation matrix
6. In-depth alternatives review (roll plots)
7. Next Steps

Study Overview

- Background
  - 18-mile corridor from Hopkins Crossroad to western Hennepin Co line
  - Legislative appropriation $750k
  - Planned upcoming projects
  - Road safety audit (RSA) July 2022
- Goals
  - Understand conditions and needs of the roadway
  - Develop alternatives that support current and future land uses
  - Identify improvements to associate with MnDOT Pavement project scheduled for 2029
  - Determine implementation of other projects including potential costs, funding alternatives, and timeframes
- Risks
  - Current scope of FY 29 paving project doesn't address all needs
  - Different stakeholders may have different visions of corridor

Study Needs

Vehicle Safety	• Crash history
Vehicle Mobility	• Current and future operations
Walkability/Bikeability	• Multimodal crash history • Lack of connections along and across
Additional Considerations	• *Pavement Conditions* • *Social, Economic, and Environmental Impacts* • *Others may arise in future projects*

Need - Vehicle Safety

Intersections over Critical and K&A Rates (8 Total)
Many others with similar characteristics.

High crash rate segments (2 Segments)
Near or Exceed Critical Rates

St Bonifacius

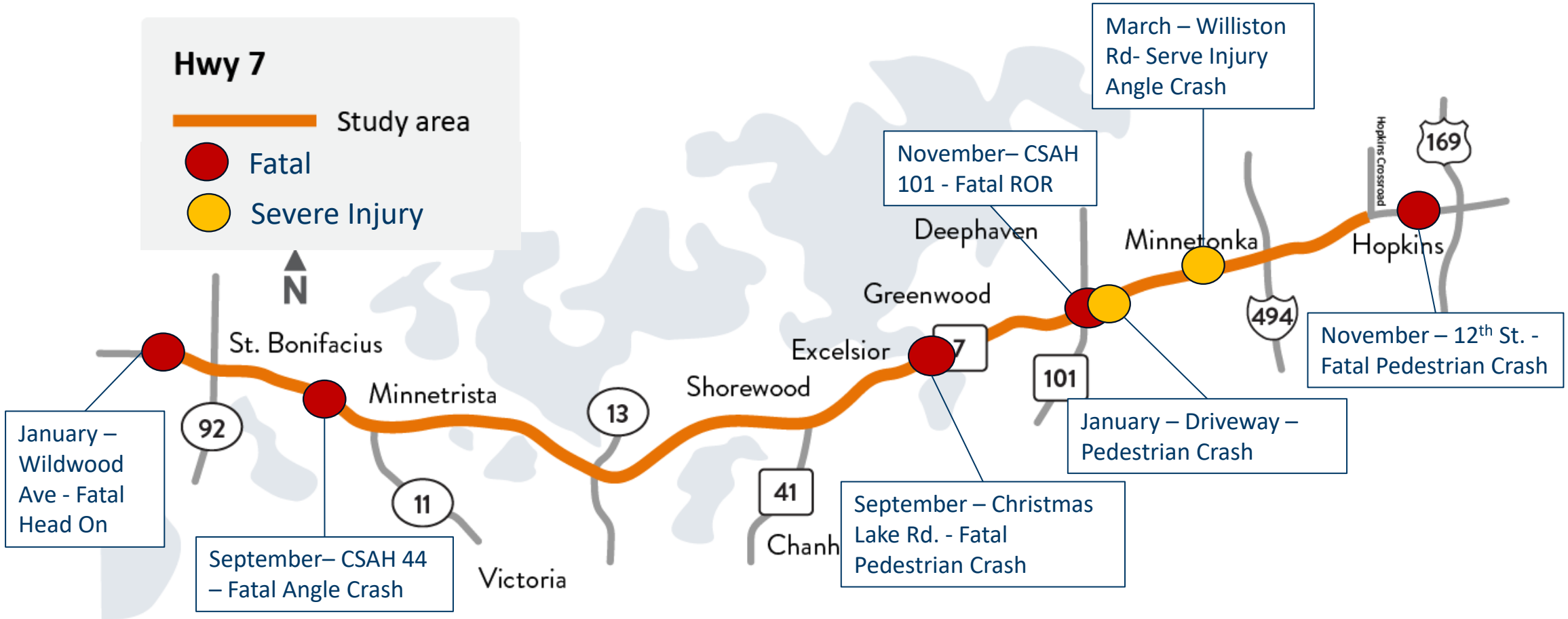
Excelsior

Victoria

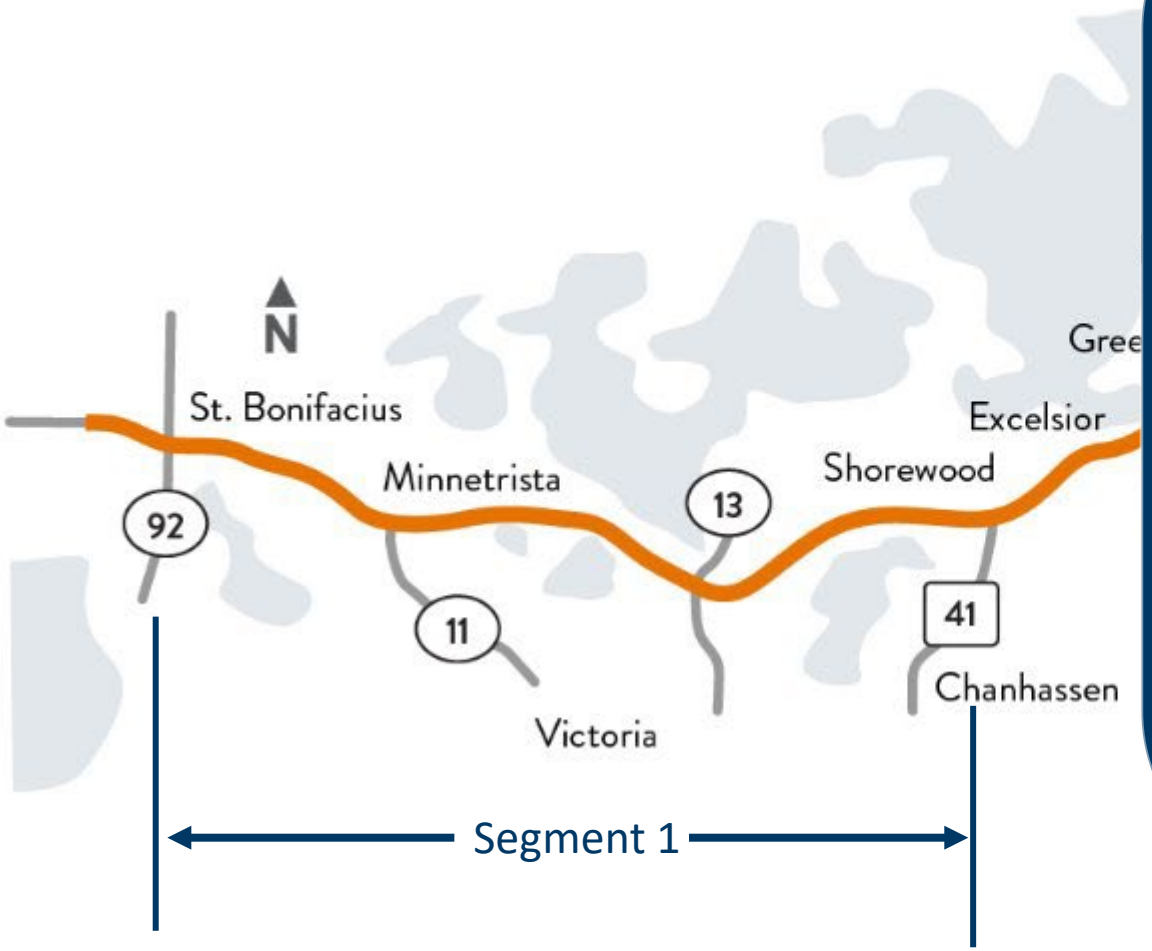
Common Severe Injury and Fatal Crash Types

- Head On
- Run Off Road
- Red Light Running
- Right Angle at Unsignalized Intersections

2024 Severe Crashes



Segment 1 Alternatives



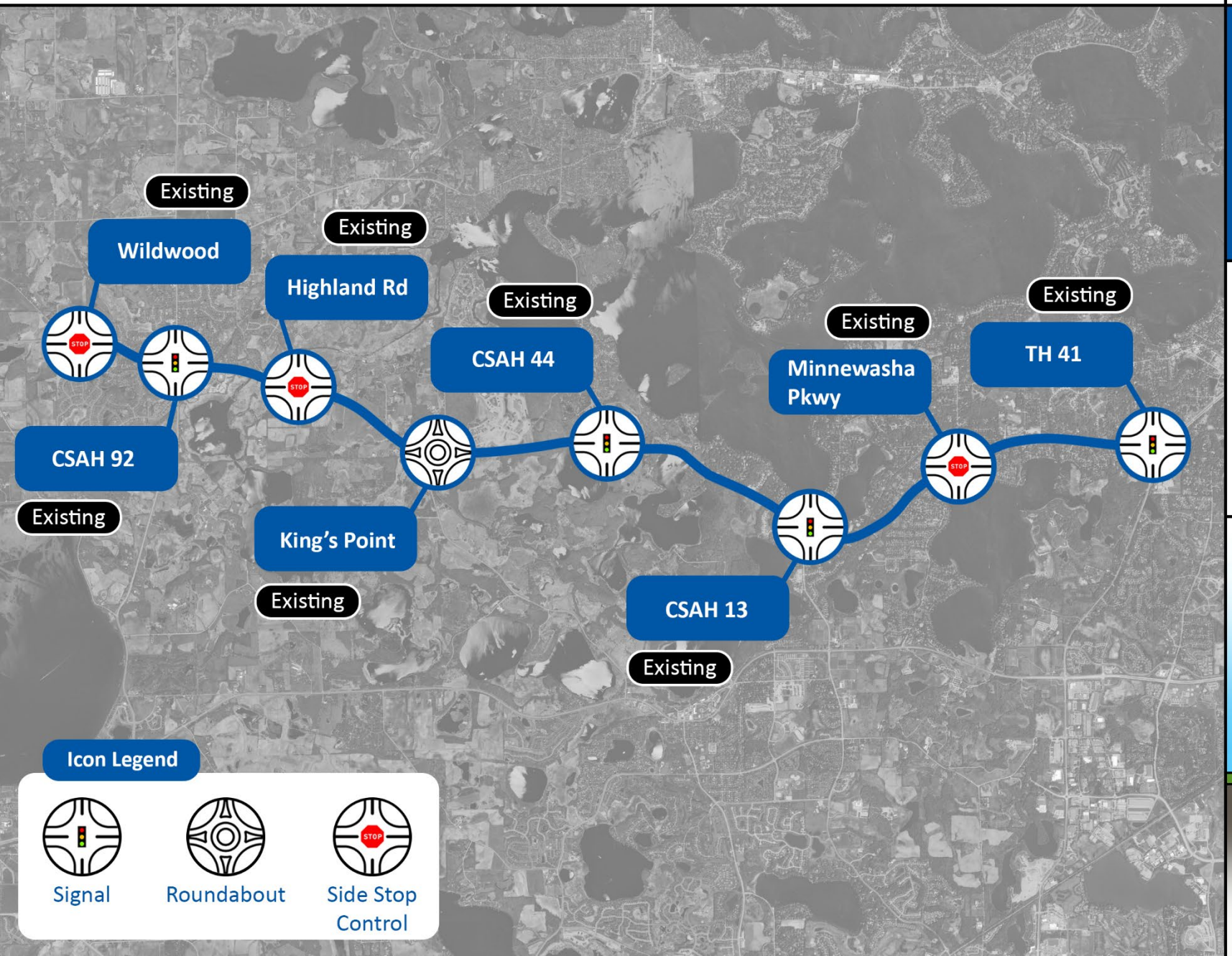
Alternatives

1. No Build
2. Access Controlled - Roundabout Corridor
3. ~~Adding Local Connections~~ *Alternative Eliminated*
4. Access Controlled – Non-Traditional Intersections

TH 7 Corridor Study: Alternative 1 (No Build)

Segment 1

Assumes Only Minor Safety and/or Capacity Improvements



Intersections:

- Existing roundabout at King's Point
- Stop control at Minnewasha Parkway
- All other intersections stay signalized

Segments:

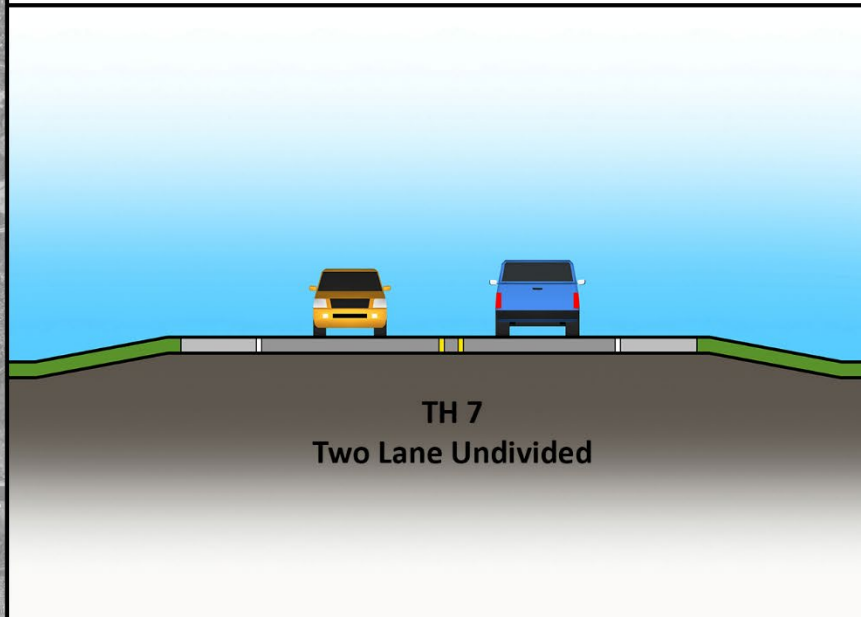
- Two lane undivided between intersections

Pros:

- Cost Savings
- Minimize environmental impacts

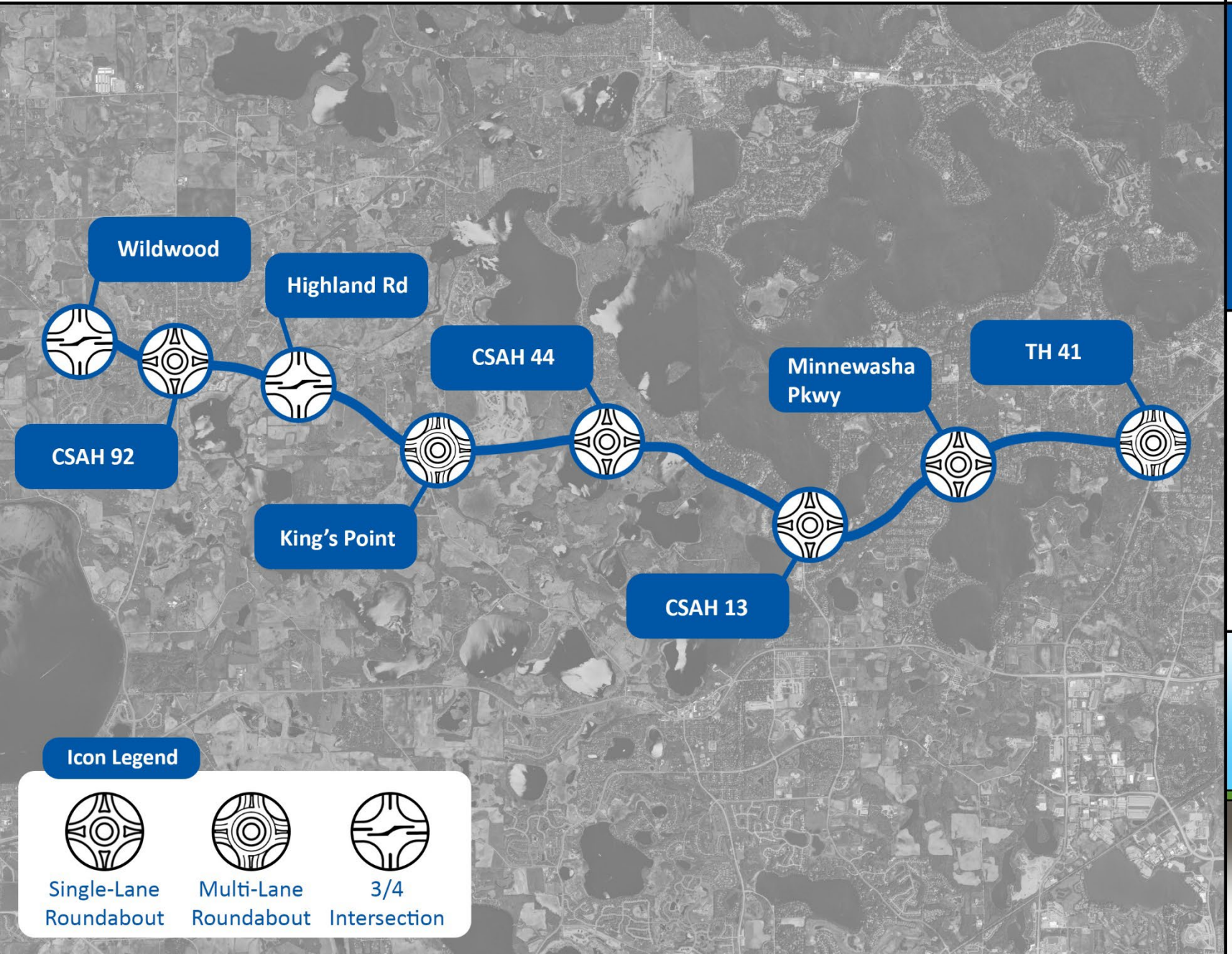
Cons:

- Minimal safety and operations benefits



TH 7 Corridor Study: Alternative 2 (Roundabouts)

Segment 1



Reduce Conflict Points With Roundabouts and Median

Intersections:

- 3/4 Intersection at Wildwood & Highland Rd
- Roundabouts at CSAH 92, CSAH 44, CSAH 13, Minnewasha Parkway
- Multi-lane roundabouts at King's Point & TH 41

Segments:

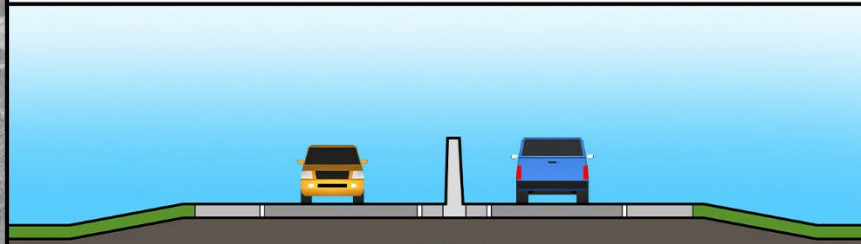
- Raised median between intersections

Pros:

- Improved safety for intersection & segment related crashes
- Anticipated intersection delay reductions

Cons:

- Public acceptance
- Longer travel distances

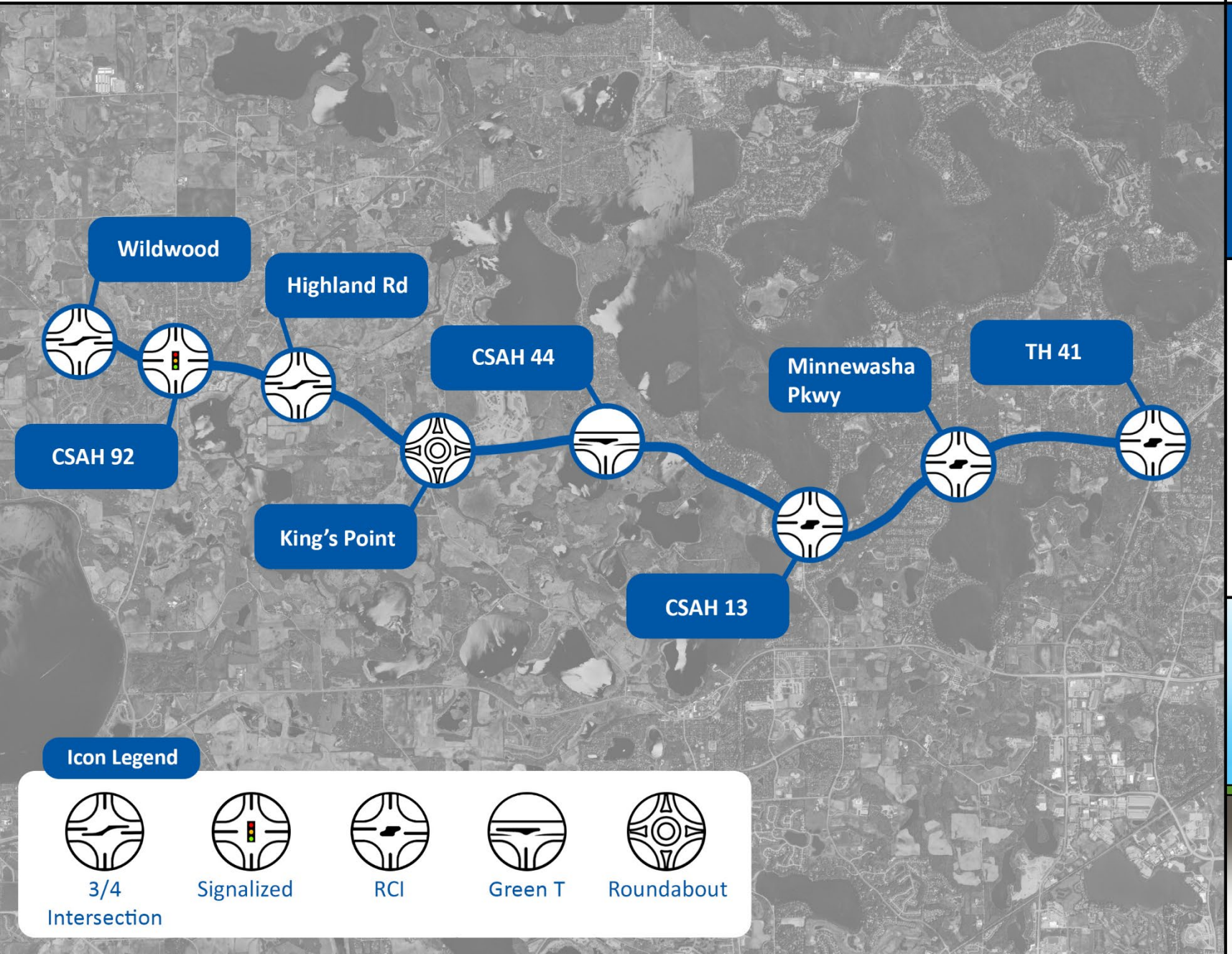


TH 7
Two Lane Divided w/ Concrete Median

TH 7 Corridor Study: Alternative 4 (Improved Intersections)

Segment 1

Intersection Improvements Only



Intersections:

- 3/4 Intersection at Wildwood & Highland Rd
- Signalized Intersection at CSAH 92
- Green T at CSAH 44
- RCIs at CSAH 13 (signalized), Minnewasha Pkwy, TH 41
- Roundabout at King's Point

Segments:

- Raised median between intersections

Pros:

- ✓ Mainline travel time
- ✓ Improved safety for intersection & segment related crashes

Cons:

- ✗ Potential increase in off-peak sideroad delay
- ✗ Pedestrian crossing safety (non-signalized locations)
- ✗ Increased cost & impacts
- ✗ Longer Travel Distances

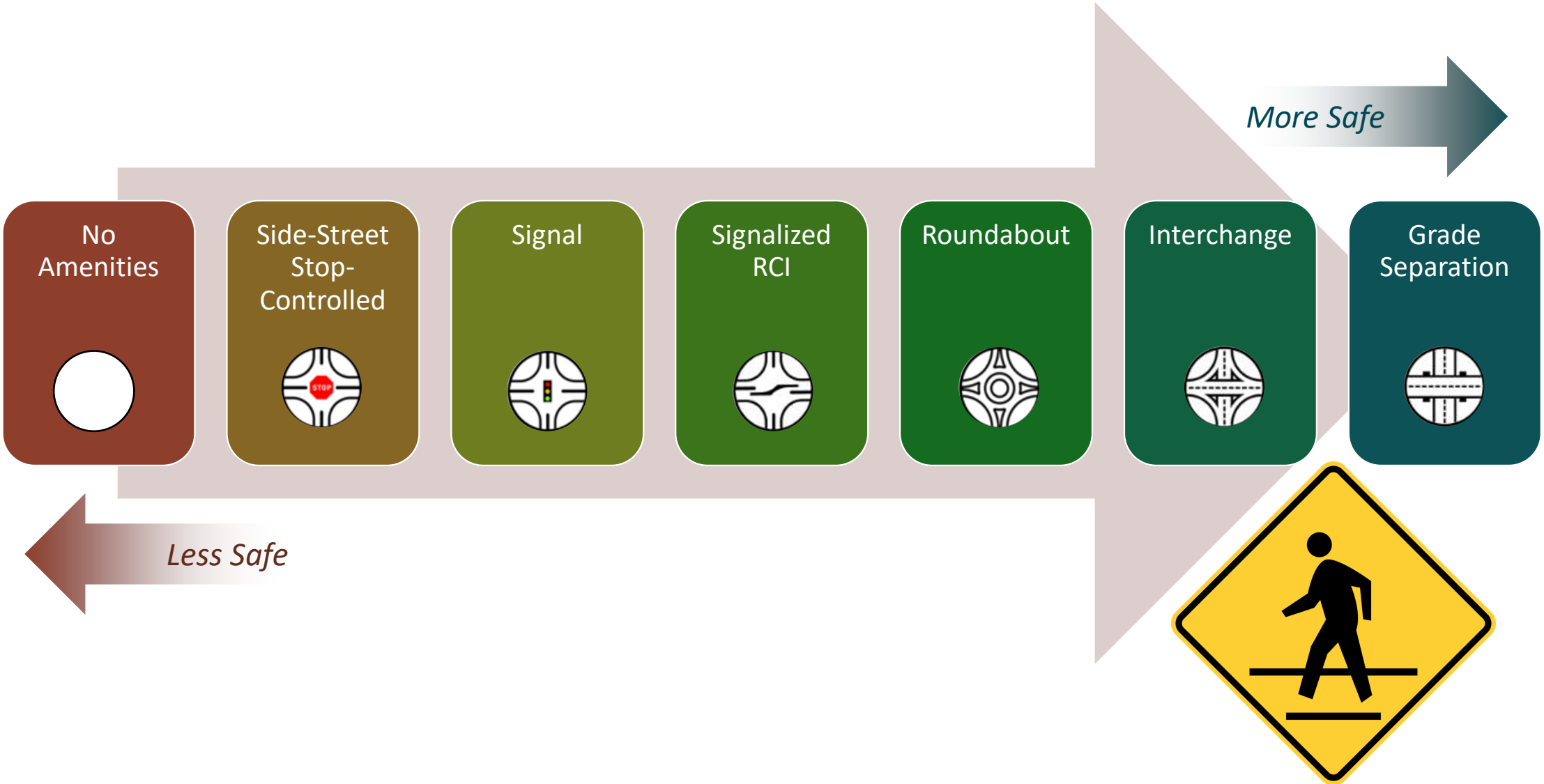
TH 7
Two Lane Divided w/ Concrete Median

Segment 1
(Wildwood to TH 41)

Alternatives Evaluation

Category	Metric	Segment 1 – Alternative 1 No Build	Segment 1 – Alternative 2 Access Controlled Roundabouts	Segment 1 – Alternative 4 Reduced Conflict Intersections
Vehicle Safety	Expected Change in Intersection Crash Costs	◆	◆◆◆	◆◆
	Expected Change in Segment Crash Costs	◆	◆◆◆	◆◆◆
Vehicle Mobility	Major Roadway Delay	◆◆	◆◆◆	◆◆◆
	Minor Roadway Delay	◆◆	◆◆◆	◆◆◆
	Trip Length	◆◆◆	◆	◆
	Expected Change in Queuing	◆◆	◆◆	◆◆◆
Walkability /Bikeability	Ped/Bike Safety	◆◆	◆◆◆	◆
	Ped/Bike Mobility	◆	◆◆	◆◆
	Level of Traffic Stress	◆	◆◆◆	◆◆◆
Additional Considerations	Consistency with Plans	◆	◆◆	◆◆
	Estimated Cost	◆◆◆	◆◆	◆◆
	Maintenance Impacts	◆◆◆	◆◆	◆
Social, Economic, Environmental (SEE)	Drainage Impacts	◆◆◆	◆◆	◆
	Right-of-Way Impacts	◆◆◆	◆◆	◆
	Historic/Cultural Resources	◆◆◆	◆◆	◆
	Environmental Justice	◆◆	◆◆◆	◆◆◆
	Section 6(f) Resources	◆◆◆	◆◆	◆◆

Pedestrian Safety



Regional Trail Facility

Segment 1

- Continuous trail (where feasible)
- Some local connections may be required

Segment 2

- Improved connections between TH 41 and CSAH 101
- Trail lower priority east of CSAH 101

Next Steps

- **Public Engagement** – April/May
- **Recommended Alternative** – May/June
  - TAC - June
- **Implementation Plan** – June/July
  - TAC – August
- **Final Report** – August/September

Questions?

Faith.Xiong@state.mn.us

Project Manager

Aimee.Jefferson@state.mn.us

Deputy Project Manager

3/4 Configuration Intersection at Eureka Road

Mobility

Scenario		Southbound Left Turn at Eureka Rd	Southbound Right Turn at Eureka Rd	Intersection Delay* at Eureka Rd	Westbound U-Turn at Minnewashta Pkwy	Intersection Delay* at Minnewashta Pkwy	Travel Time from Eureka to Minnewashta	Travel time from Minnewashta to Eureka	RCI Total Travel Time	RCI Total Delay
AM	No-Build Vehicle Delay (s/veh)	42.3	2.7	48.3	--	271.4	--	--	--	--
		39.3	9.7	27.3		26.8				
AM	Build Vehicle Delay (s/veh)	--	4.4	4.4	22.9	22.1	43.9	43.9	115.0	27.3
			15.2	15.2	2.5	10	43.9	43.9	105.4	17.7

- Total intersection delay is reduced with 3/4 Configuration

**Intersection delay at Eureka Road and Minnewashta Parkway is presented as the worst approach delay*

Safety

Movements	No Build Crash Frequency						Build Crash Frequency					
	K	A	B	C	PDO	TOTAL	K	A	B	C	PDO	TOTAL
Southbound Left Turn (SBL)	1	1	1	2	2	7 ↔	0	0	0	0	0	0
Westbound Right Turn (WBR)	0	0	0	0	1	1	0	0	0	0	1	1
Single Vehicle	0	0	0	0	2	2	0	0	0	0	2	2
Total						10	Total					3

- Significant crash history at TH 7 & Eureka Rd
- 3/4 Configuration eliminates fatal and serious injury crashes for SBL movement
- SBL at Eureka will be redirected to the WB U-turn at Minnewashta Pkwy

3/4 Configuration Intersection at Eureka Road

Access Closures at Galpin Lake Rd, Chaska Rd & Water St

- Proposed concept closes TH 7 accesses at Water St/Chaska Rd and Galpin Lake Rd
  - Access management, operations, and safety benefits
- Movements will be rerouted to utilize TH 41, CSAH 19, and Mill St

	No-Build (Closed/Redirected Accesses)			No-Build (New Accesses)				Total Redirected (New Accesses + Redirected Volumes)		
	AM	PM	ADT (Movement)	Route	AM	PM	ADT (Movement)	AM	PM	ADT (Movement)
Water St WBR	17	35	327	CSAH 19 WBR	322	390	4865	339	425	5192
Water St SBR	46	53	621	CSAH 19 SBR	117	170	1430	163	223	2051
Chaska Rd WBL	68	154	1280	TH 41 WBL	518	363	3825	586	517	5105
Chaska Rd NBR	56	28	343	TH 41 NBR	530	489	4762	586	517	5105
Galpin Lake Rd NBR	159	106	1322	Chaska Rd NBR + TH 41 NBR	586	517	5105	745	623	6427

*No existing counts for Galpin Lake Rd reroute to TH 7 via Mill Street ramp

Access Closures at Galpin Lake Rd, Chaska Rd & Water St