ALTERNATIVE RANKING

Objective		Criteria	Alternative Concepts		
			Signal Enhancement	SPUI	Roundabout
1 Improve Local and Regional Mobility		Vehicular Operations. How well does the alternative reduce vehicular delay along the corridor?	●	◕	●
		Improve Local Access. How well does the alternative improve the operations and safety of side street approaches along the corridor?	◕	◔	●
		Improve System Resiliency. How successful is the alternative in reducing unexpected delays and breakdowns caused by high volumes?	◔	◑	◕
		Increase Walking/Biking Mobility. To what degree does the alternative expand and/or improve pedestrian and bicycle facilities along the corridor?	◑	○	◕
		Improve Transit Speed and Reliability. How well does the alternative reduce delay experienced by transit vehicles?	◔	◕	●
2 Improve Safety for Motorists, Pedestrians, and Bicyclists		Vehicular Safety. To what degree does the alternative reduce vehicular collisions or conflict points along the corridor?	○	○	●
		Enhance Active Transportation Connectivity and Comfort. How well does the alternative improve the comfort and safety of pedestrian and bicycle facilities along the corridor?	○	◑	◑
		Increase ADA Accessibility. To what degree does the alternative expand and provide ADA accessible facilities along the corridor?	●	◔	◕
3 Other Factors		Implementation Feasibility. What is the impact of the alternative to adjacent structures and properties? Would the alternative extend right-of-way into privately-owned property? (low impact = high benefit)	◕	◑	○
		Environmental Impacts. What is the alternative's environmental impact, especially as it relates to stormwater pollution? (low impact = high benefit)	●	◑	◔
		Project Cost. How do the construction costs for this alternative compare to the others?	$	$ $ $	$ $
		Overall Ranking	**2nd**	**3rd**	**1st**

Satisfaction of Criteria

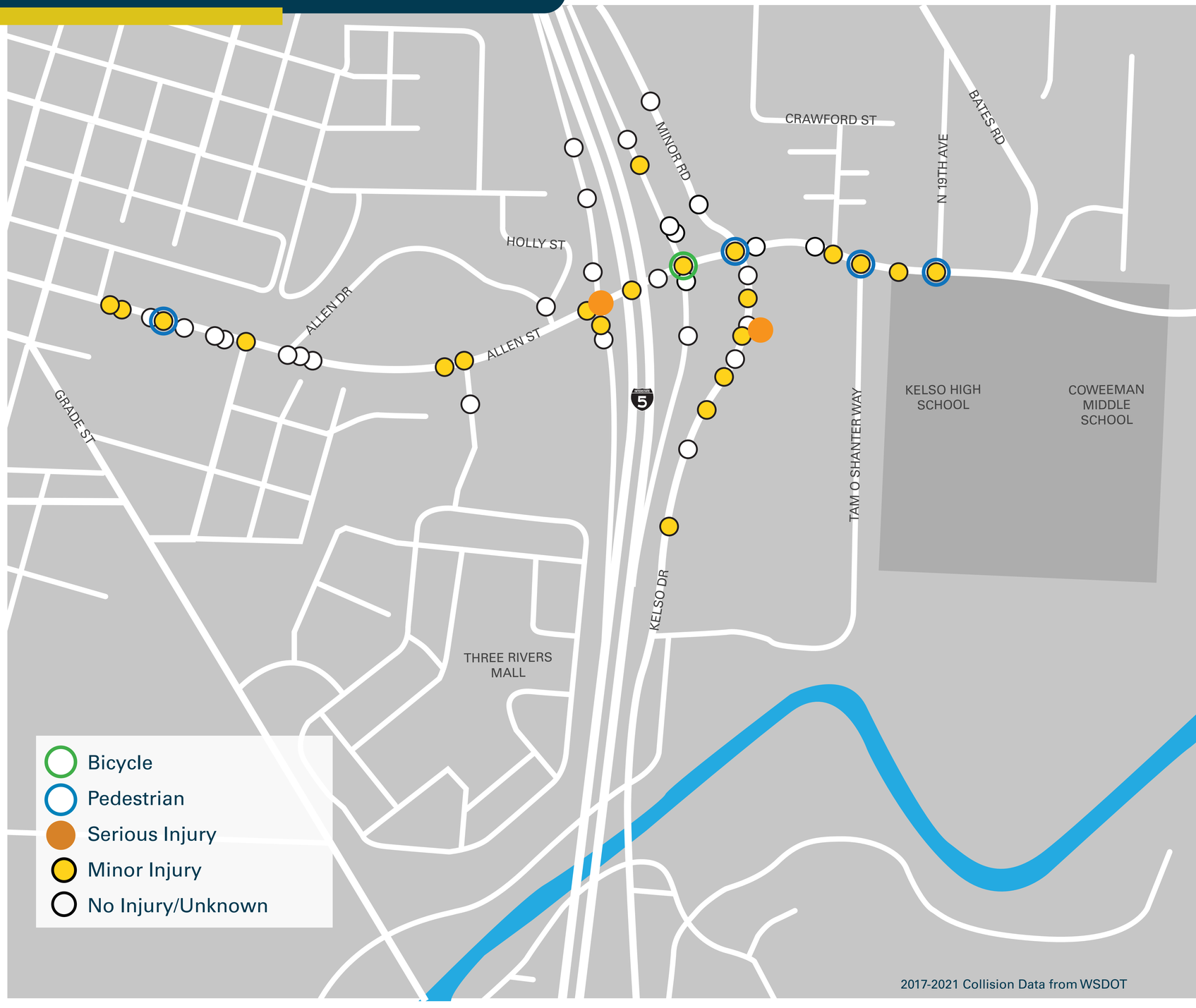
○ No benefit ◔ Low benefit ◑ Medium benefit ◕ High benefit ● Very high benefit

COLLISION HISTORY

Key Observations

Pedestrian and bicycle crashes along Allen St (mostly east of I-5)

Kelso Drive has injury crashes along corridor, usually near access points



DESIGN ALTERNATIVES

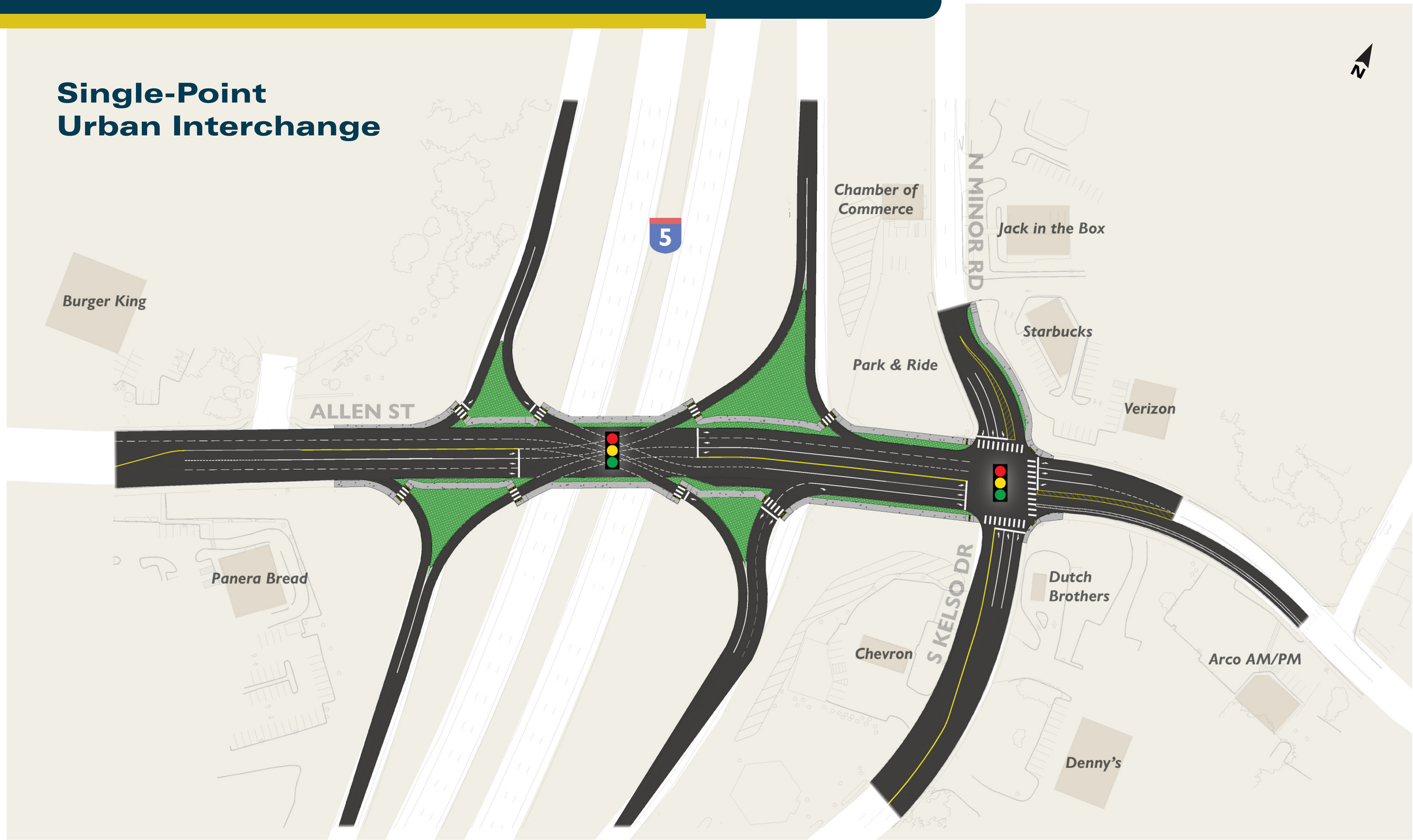
Roundabouts

DESIGN ALTERNATIVES

Traffic Signal & Channelization Enhancements

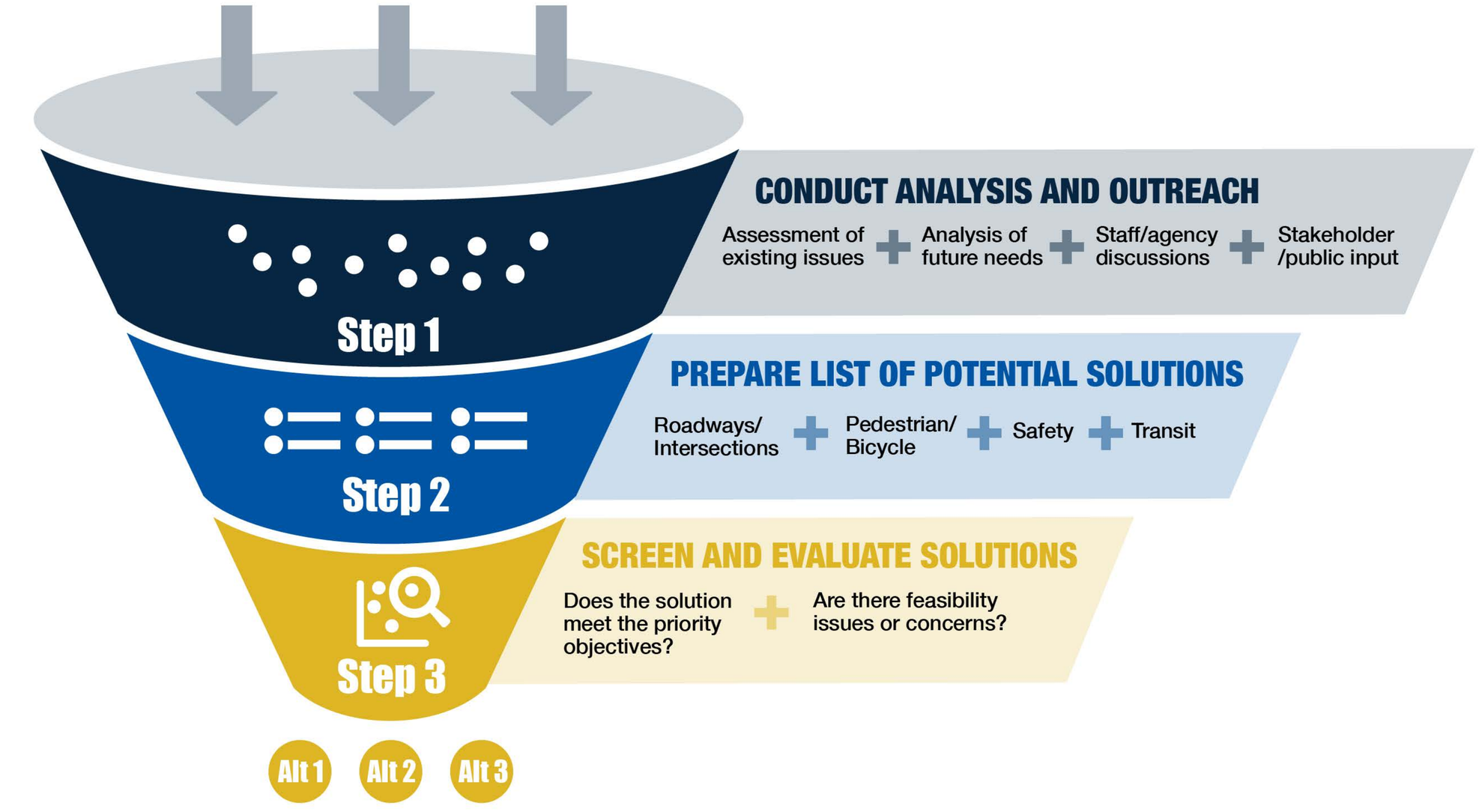
DESIGN ALTERNATIVES

Single-Point Urban Interchange



DEVELOPING THE DESIGN

Developing the Design Alternatives



Preliminary Design Alternatives

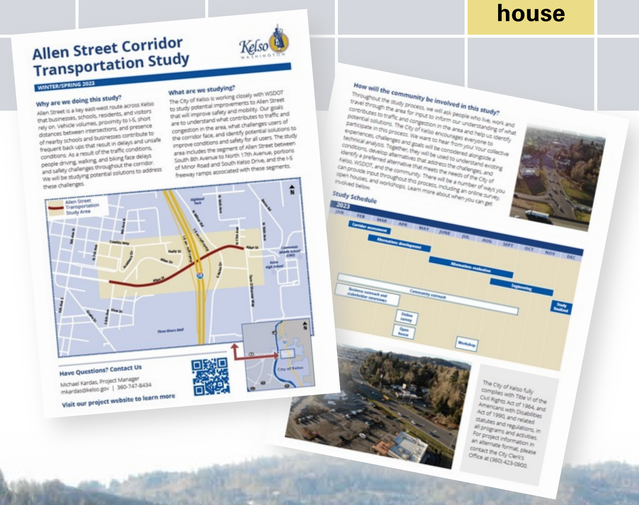
ENGAGEMENT

Type of Community Engagement Activities

Stakeholder Interviews | Corridor Business Outreach | Online Surveys | Open Houses & Workshops | City Council Meetings

Calendar of Events

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Stakeholder engagement										
	Business outreach & stakeholder interviews										
				Online survey							
				Open house							
											Workshop



Stakeholder Interviews

Who we interviewed

Cowlitz 2 Fire & Rescue
Kelso School District
Kelso Longview Chamber of Commerce
Three Rivers Mall
RiverCities Transit
Safeway

What we heard

Most congestion during school drop-off (7:30am) and pick-up (2:45pm) times, afternoon is worst

Inefficient signal timing along corridor, mostly east of I-5 corridor

Major emergency route, school bus route, transit corridor (no bus stops)

Potential solutions

improved signal timing, adjust traffic lanes for more diverse traffic flows, increase pedestrian safety/ visibility with improvements

GOALS & OBJECTIVES

Improve Local and Regional Mobility

Decrease delay along Allen Street and intersections within the study area

Balance corridor operations with local access and “complete street” improvements

Improve system resiliency

Increase mobility through walking and biking

Improved transit speed and reliability

Improve Safety for Motorists, Pedestrians and Bicyclists

Implement improvements to reduce potential for severe, fatal, and total number of crashes

Enhance active transportation connectivity and comfort

Increase ADA accessibility

Collaborate with the Community

Obtain broad input from the public

Obtain approval from Kelso City Council

Seek WSDOT concurrence on the long-term vision

Provide the groundwork for seeking funding for the solutions

STUDY PURPOSE & AREA

To study potential corridor solutions to challenges caused by vehicle volumes, proximity to I-5, short distances between intersections, lack of multimodal infrastructure, and presence of nearby schools and businesses.

These all contribute to issues such as:

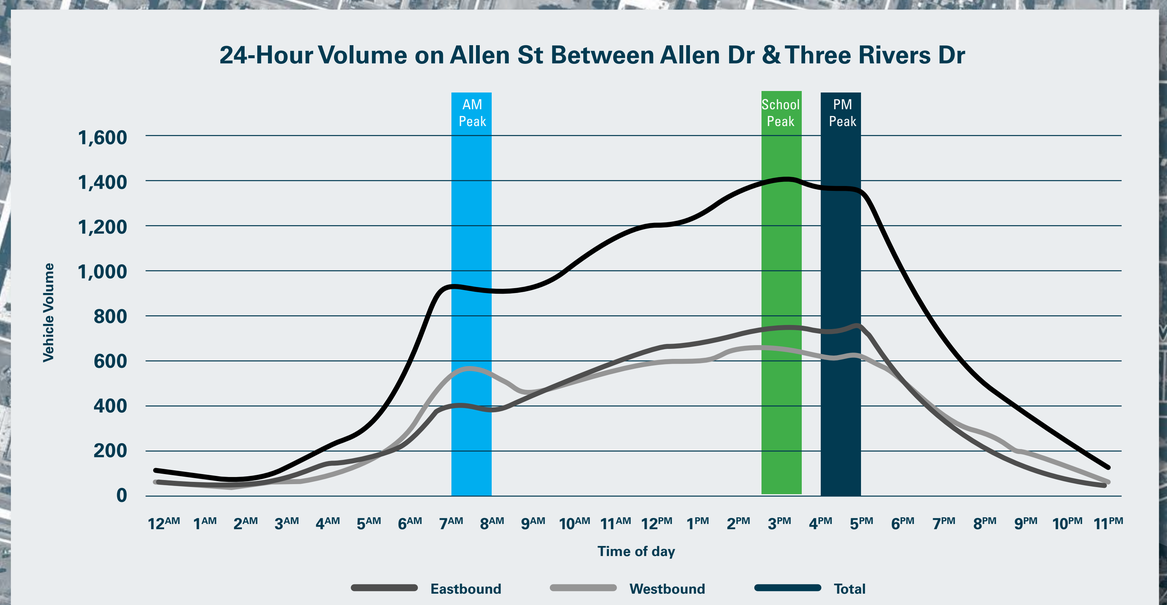
- Congestion and delays
- Safety
- Multimodal connectivity and comfort
- Property and business access

Study Area

- Major I-5 Interchange
- Gateway to Kelso/ Longview
- Regional location for retail and services
- Primary access for schools
- Includes I-5 interchange, Allen St, S Kelo Sr, and N Minor Rd
- Total of 10 intersections

WEEKDAY TRAFFIC VOLUMES

Kelso WASHINGTON | transpogroup



PEDESTRIAN FACILITIES

Sidewalks

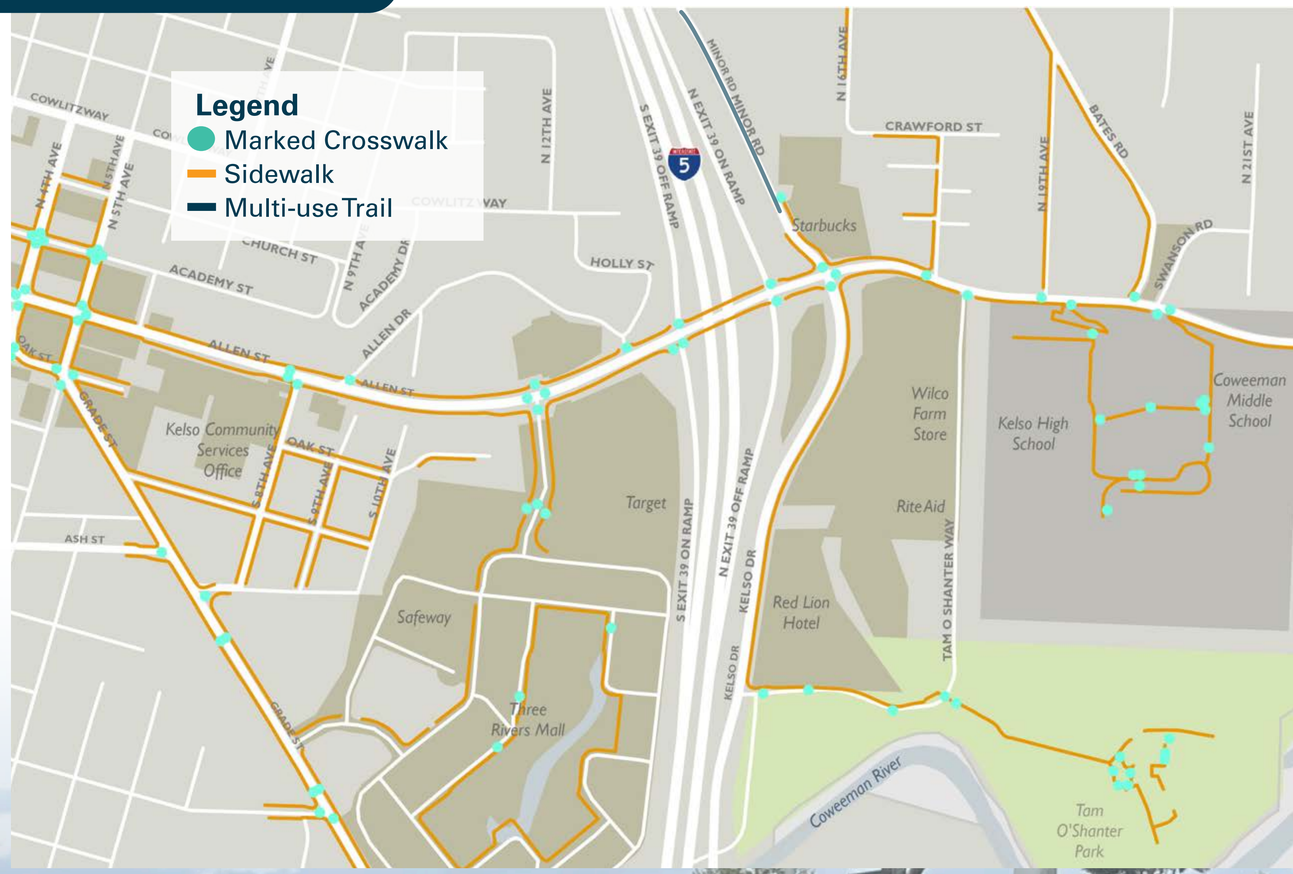
The corridor has sidewalks on both sides of Allen Street, but stakeholders have noted need for improved safety and visibility with these facilities.

Crossing Allen Street

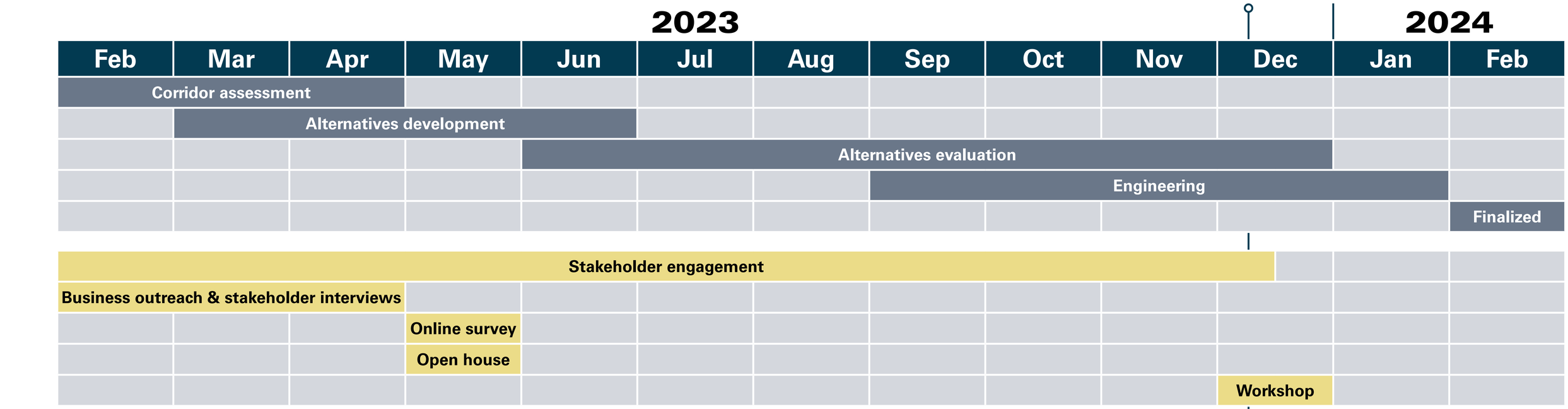
Marked crosswalks along Allen Street are limited within study area. There are two midblock crossings, and crossings at the Kelso Drive and Three Rivers Mall intersections.

Trail Along Minor Road

There is a multiuse trail located along the east side of Minor Road



SCHEDULE & APPROACH



Corridor Assessment

- Data Collection
- Existing Conditions Analysis
- Model Development
- Environmental Scan

Feb–Apr

Develop & Evaluate Alternatives

- Forcast Future Conditions & Needs
- Develop Alternatives
- Evaluate Alternatives Based on Criteria

Mar–Dec

Preliminary Engineering

- Conceptual Plans
- Cost Estimates
- Phasing & Funding Strategy
- Complete WSDOT ICE

Sep–Jan

Study Documentation

- Draft Report
- Agency Reviews
- Final Report

Feb

POTENTIAL SOLUTIONS

Pedestrian & Bicycle Improvements

PROTECTED BIKE LANES

WHAT IS IT? On street bike lanes that are separated from the adjacent motor vehicle travel lane. Separation may be achieved with pavement markings, physical objects such as raised medians, delineator posts or planters, and/or a combination of these improvements.

COST $$$$$

ENHANCED CROSSWALK: RRFB

WHAT IS IT? Adding Rectangular Rapid Flashing Beacon (RRFB) pedestrian signals and other signed and marked enhancements to crosswalks.

COST $$$$$

WIDE SEPARATED SIDEWALK

WHAT IS IT? A sidewalk separated from the roadway, often by a planter strip with vegetation, and typically between 8ft and 10ft wide to allow more space for pedestrians to comfortably walk side by side.

COST $$$$$

ADA CURB RAMP IMPROVEMENTS

WHAT IS IT? Curb ramps provide access between the sidewalk and roadway; improving existing deficient curb ramps to meet current accessibility standards and adding curb ramps where none exist are helpful to all users but are particularly beneficial for people using wheelchairs, strollers, walkers, hand carts, bicycles, and pedestrians with mobility issues.

COST $$$$$

SHARED USE PATHWAY

WHAT IS IT? A paved facility, typically between 10ft and 12ft wide, that is shared by pedestrians, cyclists, and other active mode users.

COST $$$$$

POTENTIAL SOLUTIONS

Street & Intersection Improvements

NEW TURN LANE

WHAT IS IT? A dedicated traffic lane for vehicle to turn left or right can improve traffic operations by separating turning vehicles and through vehicles into their own lanes. Turn lanes may also minimize rear end collisions by providing a place for turning traffic to safely decelerate, yield to oncoming traffic, pedestrians, or cyclists, and turn safely.

COST **$$$$$**

ROUNDABOUT

WHAT IS IT? A circular intersection without traffic signals or stop signs in which traffic is permitted to flow counterclockwise around a central island. Drivers approaching the roundabout yield to traffic circulating within the roundabout prior to entering. Roundabouts promote lower vehicle speeds and reduce conflict points as compared to typical signalized intersections.

COST **$$$$$**

ACCESS MANAGEMENT/ DRIVEWAY CONSOLIDATION

WHAT IS IT? Access management controls how vehicles may access adjacent properties to and from the roadway. The primary goal of access management is to minimize the number of potential conflict points along a corridor. Common techniques may include implementing two way left turn lanes, median treatments, consolidating driveways, and providing safe opportunities for vehicles to make turns and/or U-turns.

COST **$$$$$**

SMART SIGNALS/ EMERGENCY PREEMPTION

WHAT IS IT? Smart traffic signals adjust their timing based on real-time traffic conditions. Traffic directions with higher volumes will be assigned longer green times than traffic directions with lower volumes. Emergency preemption improve response times for ambulances and fire trucks by allowing them to call for a green light indication as they approach a traffic signal.

COST **$$$$$**

INNOVATIVE INTERSECTION

WHAT IS IT? Numerous options are available to implement an innovative intersection, each having their own benefits and challenges. Options may include, but are not necessarily limited to implementing roundabouts, displaced left turns, diverging diamond interchange, and restricted crossing U-turns. Innovative intersections often improve both safety and operations, but may be expensive to implement.

COST **$$$$$**

POTENTIAL SOLUTIONS

Other Improvements

BUS STOPS WITH AMENITIES

WHAT IS IT? Bus stops with amenities such as shelters, benches, bus schedules, and travel time information provide comfort and convenience to riders and promote additional transit use.

COST **$$**$$$

BUS QUEUE JUMPS

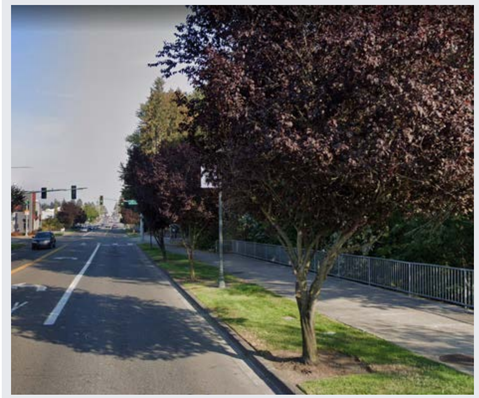
WHAT IS IT? A dedicated transit lane or right turn lane at a signalized intersection, controlled by its own signal, to allow transit to proceed through the intersection ahead of general purpose traffic. Traffic signs and pavement markings are also typically implemented to supplement the signal improvements.

COST **$$$**$$

STREET LIGHTING

WHAT IS IT? Street and/or pedestrian lighting added to one or both sides of the road to improve night time visibly and to promote a safer environment for pedestrians.

COST **$$$**$$



STREET TREES

WHAT IS IT? Trees planted within a planter strip located between the roadway and sidewalk provide additional separation between the street and pedestrian areas within the corridor. Street trees also promote city sustainability and environmental goals.

COST **$$**$$$