



CITY OF KELSO ALLEN ST (SR 4) CORRIDOR STUDY

City Council
December 5, 2023



AGENDA

- Project Overview/Approach/Goals
- Community Outreach
- Screening Process & Development of Alternatives
- Alternatives Evaluation Results
- Feedback/Questions





PROJECT OVERVIEW

TEAM OVERVIEW



STUDY PURPOSE

To identify 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.

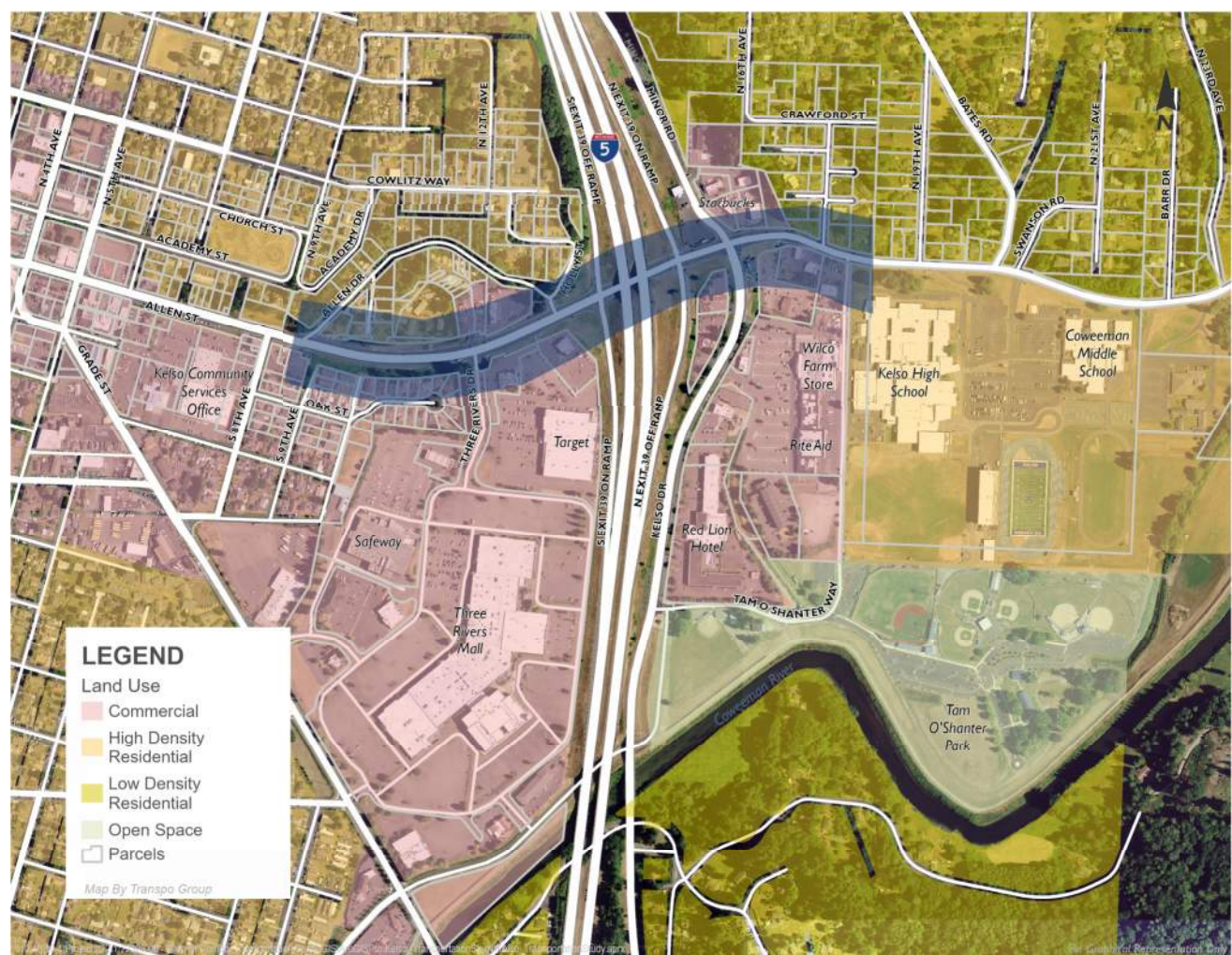
These all contribute to issues such as:

- 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

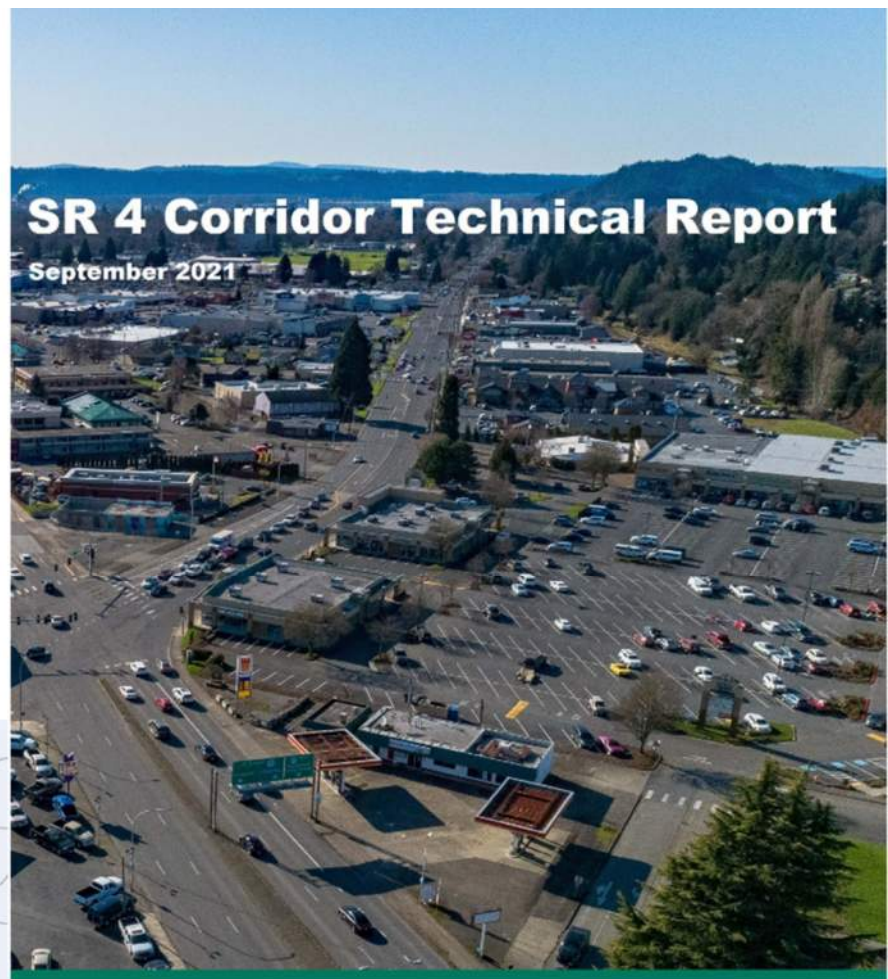


PREVIOUS SR 4 PLANNING

- WSDOT Study Goals
 - Improve overall connectivity and mobility in the corridor
 - Improve safety by reducing potential conflicts between modes
 - Enhance economic vitality



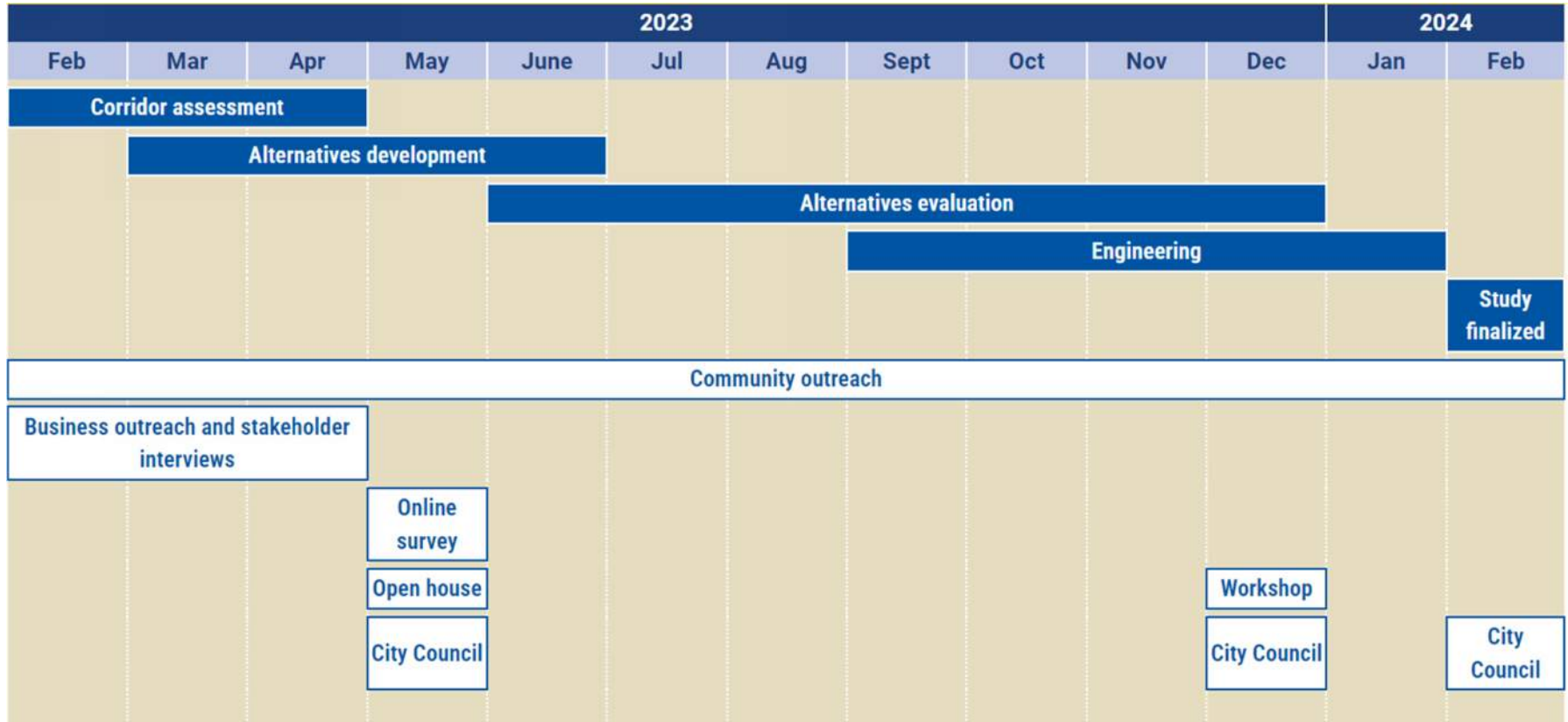
Map Source: WSDOT Communications





PROJECT APPROACH

SCHEDULE



INCORPORATING COMPLETE STREETS APPROACH

- RCW 47.20.060 requiring all WSDOT projects to incorporate principals of Complete Streets
- An approach to planning, designing, building, operating and maintaining the transportation system that enables safe and convenient access to destinations for all people, including pedestrians, bicyclists, motorists and transit riders.





PROJECT GOALS & OBJECTIVES

STUDY GOALS



Improve Local and
Regional Mobility



Improve Safety for
Motorists, Pedestrians
and Bicyclists



Collaborate with
the Community



COMMUNITY OUTREACH

ENGAGEMENT STRATEGIES

Community Engagement Plan

Project Objectives and Evaluation
Criteria Development

Stakeholder Interviews

Corridor Business Outreach

Online Surveys

Open Houses and Workshops

City Council Meetings

Allen Street Corridor Transportation Study



WINTER/SPRING 2023

Why are we doing this study?

Allen Street is a key east-west route across Kelso that businesses, schools, residents, and visitors rely on. Vehicle volumes, proximity to I-5, short distances between intersections, and presence of nearby schools and businesses contribute to frequent back ups that result in delays and unsafe conditions. As a result of the traffic conditions, people driving, walking, and biking face delays and safety challenges throughout the corridor. We will be studying potential solutions to address these challenges.

What are we studying?

The City of Kelso is working closely with WSDOT to study potential improvements to Allen Street that will improve safety and mobility. Our goals are to understand what contributes to traffic and congestion in the area, what challenges users of the corridor face, and identify potential solutions to improve conditions and safety for all users. The study area includes the segment of Allen Street between South 8th Avenue to North 17th Avenue, portions of Minor Road and South Kelso Drive, and the I-5 freeway ramps associated with these segments.



Have Questions? Contact Us
Michael Kardas, Project Manager
mkardas@kelso.gov | 360-747-8434
Visit our project website to learn more



How will the community be involved in this study?

Throughout the study process, we will ask people who live, work and travel through the area for input to inform our understanding of what contributes to traffic and congestion in the area and help us identify potential solutions. The City of Kelso encourages everyone to participate in this process. We want to hear from you! Your collective experiences, challenges and goals will be considered alongside a technical analysis. Together, they will be used to understand existing conditions, develop alternatives that address the challenges, and identify a preferred alternative that meets the needs of the City of Kelso, WSDOT, and the community. There will be a number of ways you can provide input throughout this process, including an online survey, in house, and workshops. Learn more about when you can get involved below.



Schedule



The City of Kelso fully complies with Title VI of the Civil Rights Act of 1964 and Americans with Disabilities Act of 1990, and related statutes and regulations. In all programs and activities, for project information in an alternate format, please contact the City Clerk's Office at (360) 423-0900.

PUBLIC SURVEY RESULTS (MAY/JUNE 2023)

- Respondents feel Allen Street does not fulfill core functions well
- Respondents regularly experience traffic congestion, accessibility and visibility issues, and safety concerns as drivers and pedestrians.
- Reducing congestion was the #1 priority, followed by improving safety

96 RESPONSES

Allen Street Corridor Transportation Survey

Overview

The City of Kelso is studying potential improvements to Allen Street that will improve safety and mobility. **To understand what challenges users in the corridor face and identify potential ways to improve conditions, we invite you to participate in this five minute survey.**

The study area includes Allen Street between South 8th Avenue and North 17th Avenue, portions of Minor Road and South Kelso Drive, and the I-5 freeway ramps associated with these segments. Vehicle volumes, proximity to I-5, short distances between intersections, lack of multimodal connectivity, and access to nearby schools and businesses contribute to frequent backups that result in delays and safety concerns.



If you have questions about this survey, please email mikardas@kelso.gov.

Title VI Notice to Public

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Hint

ONLINE OPEN HOUSE (NOV/DEC 2023)

**PRELIMINARY RESULTS*

- Concerned that people do not know how to properly navigate roundabouts and more education is needed
- Believe retiming of signals will be sufficient
- Concerned about construction impacts

**500+ RESPONSES
1,100+ VISITORS**

Allen Street Corridor Transportation Study



English

SHARE YOUR FEEDBACK BY MONDAY, DECEMBER 18!

[WELCOME](#) [PROJECT OVERVIEW](#) [REVIEW DESIGN ALTERNATIVES](#) [SHARE YOUR FEEDBACK](#) [NEXT STEPS](#)

Welcome to the online open house for the Allen Street Corridor Transportation Study.

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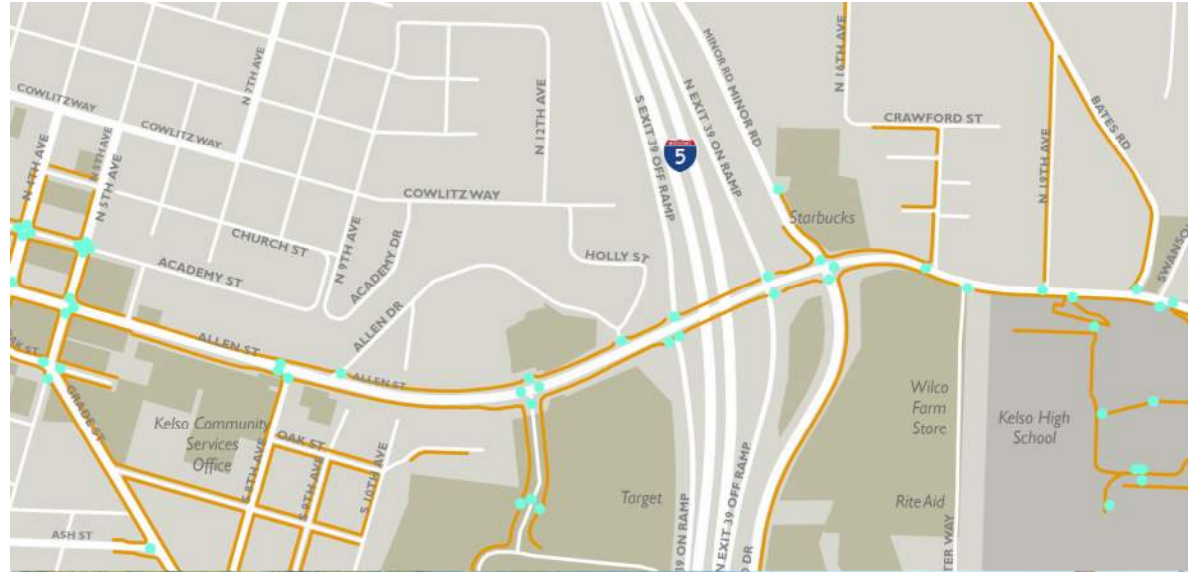
Aerial view of Allen Street near South Kelso Drive.



ASSESS CONDITIONS

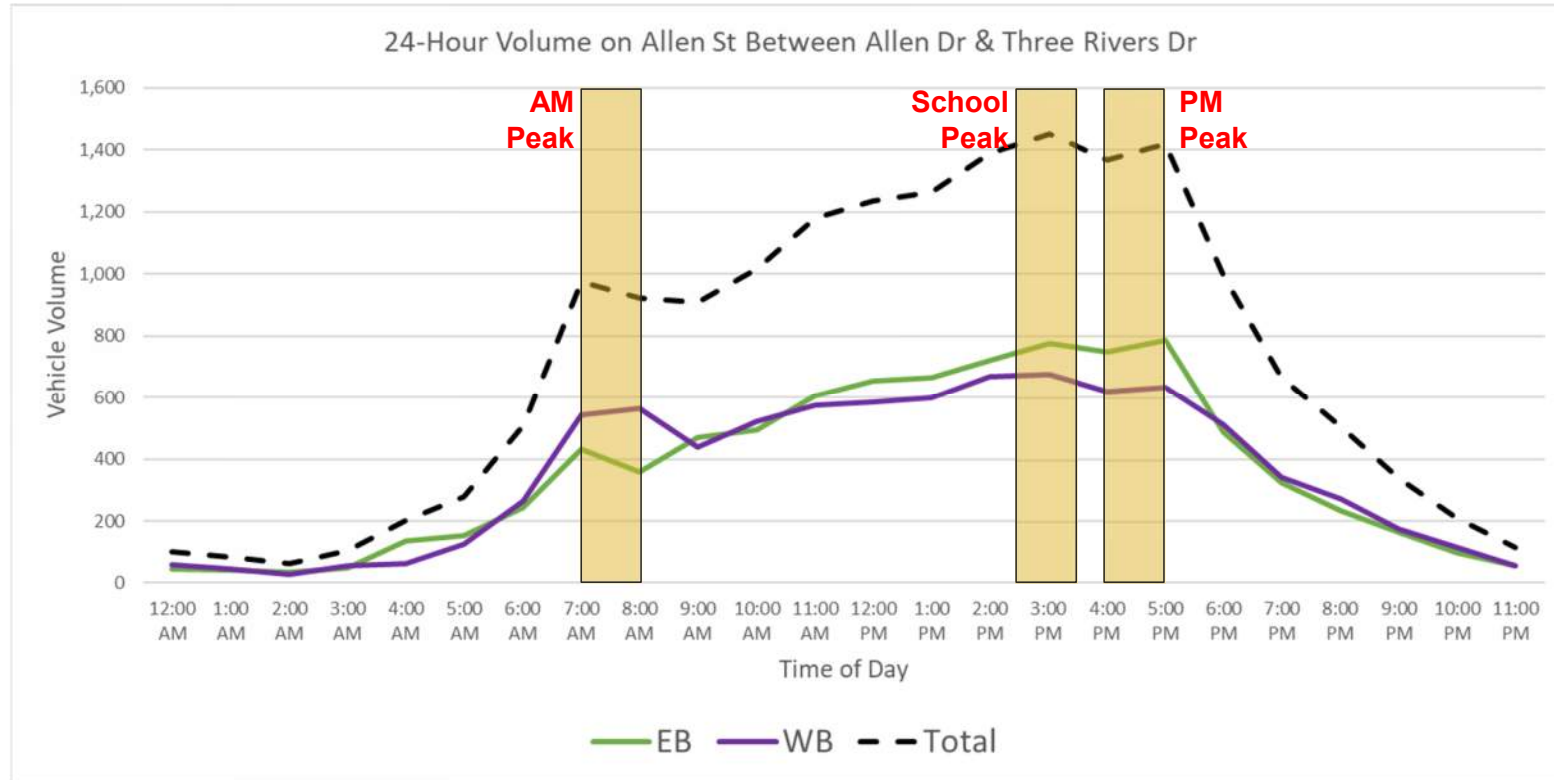
PEDESTRIAN FACILITIES

- Crossing Allen Street
 - Kelso and Mall signals
 - Not at ramp signals
 - At unsignalized intersections
- Trail along Minor Rd
- Stakeholders noted need for improved safety/visibility



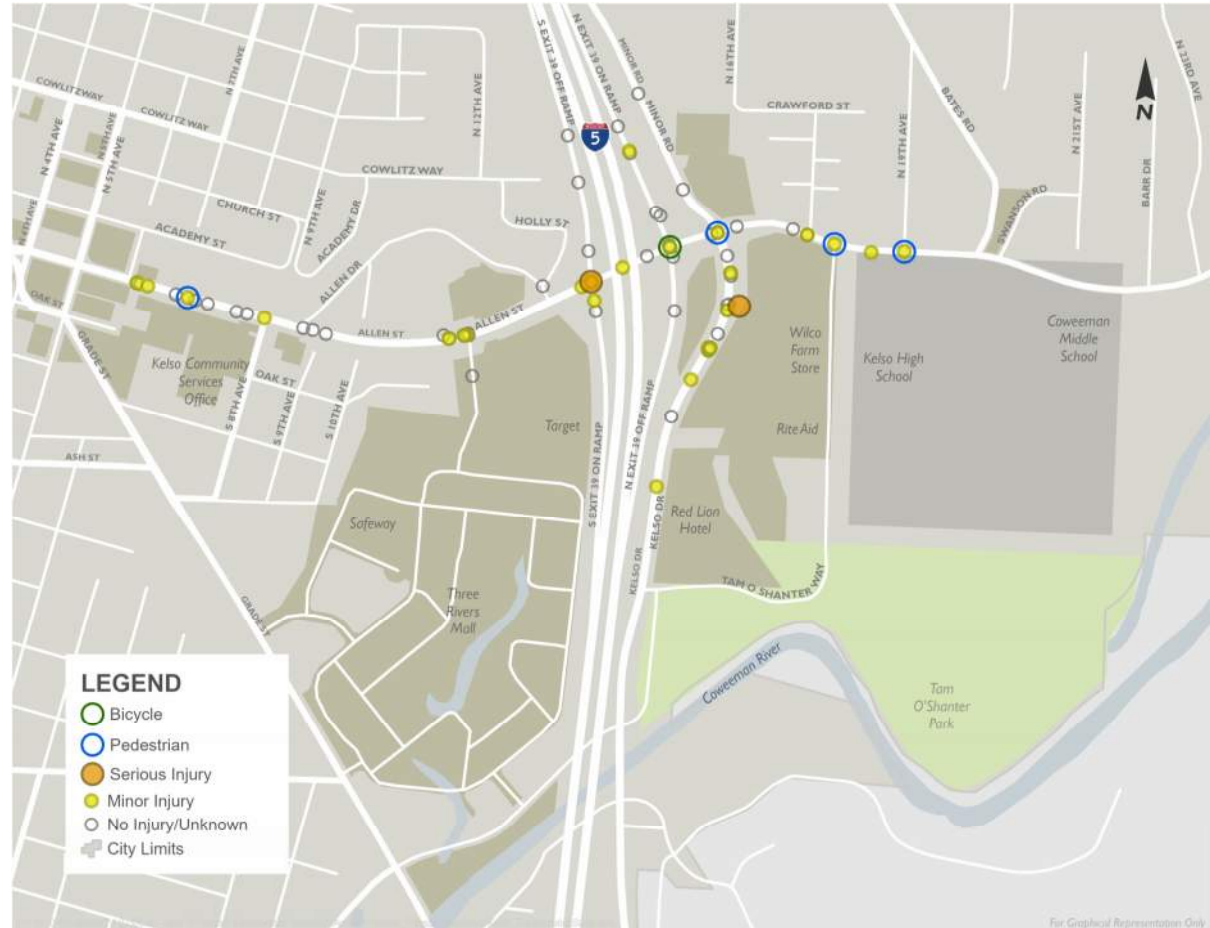
TRAFFIC VOLUMES: HOURLY PATTERNS

West end of corridor



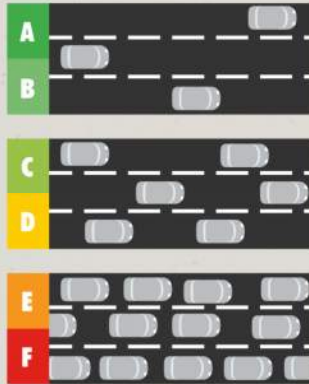
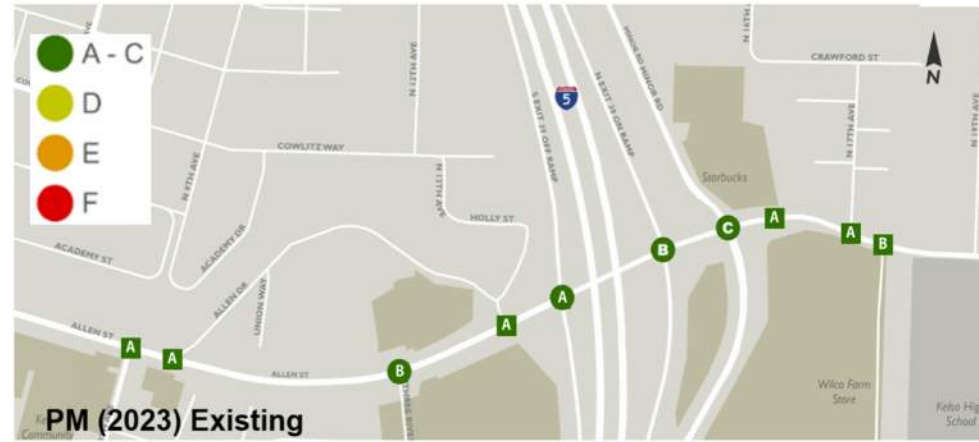
SAFETY ANALYSIS – CRASH SEVERITY

- Pedestrian and bicycle crashes along Allen St (mostly east of I-5)
- Kelso Drive has injury crashes along corridor, usually near access points



PM PEAK HOUR LOS RESULTS – EXISTING VS FUTURE

- LOS degradation at all intersections
- Minor approaches experience more conflict due to increased east-west traffic volumes
- More congestion near I-5





POTENTIAL SOLUTIONS

STREET & INTERSECTION IMPROVEMENTS



NEW TURN LANES

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.



ROUNDABOUT

A circular intersection without traffic signals or stop signs in which traffic is permitted to flow counterclockwise around a central island.



ACCESS MANAGEMENT/ DRIVEWAY CONSOLIDATION

Access management controls how vehicles may access adjacent properties to and from the roadway.



SMART SIGNALS/ EMERGENCY PREEMPTION

Smart traffic signals adjust their timing based on real-time traffic conditions.



INNOVATIVE INTERSECTION

Numerous options are available to implement an innovative intersection, each having their own benefits and challenges.

PEDESTRIAN & BICYCLE IMPROVEMENTS



PROTECTED BIKE LANES

On street bike lanes that are separated from the adjacent motor vehicle travel lane.



ENHANCED CROSSWALK: RRFB

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



WIDE SEPARATED SIDEWALK

A sidewalk separated from the road, typically between 8ft and 10ft wide



ADA CURB RAMP IMPROVEMENTS

Curb ramps provide access between the sidewalk and roadway.



SHARED USE PATHWAY

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

OTHER IMPROVEMENTS



BUS STOPS WITH AMENITIES

Bus stops with amenities such as shelters, benches, bus schedules, and travel time information.



BUS QUEUE JUMPS

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.



STREET LIGHTING

Street and/or pedestrian lighting added to one or both sides of the road to improve nighttime visibility and to promote a safer environment for pedestrians.



LANDSCAPING

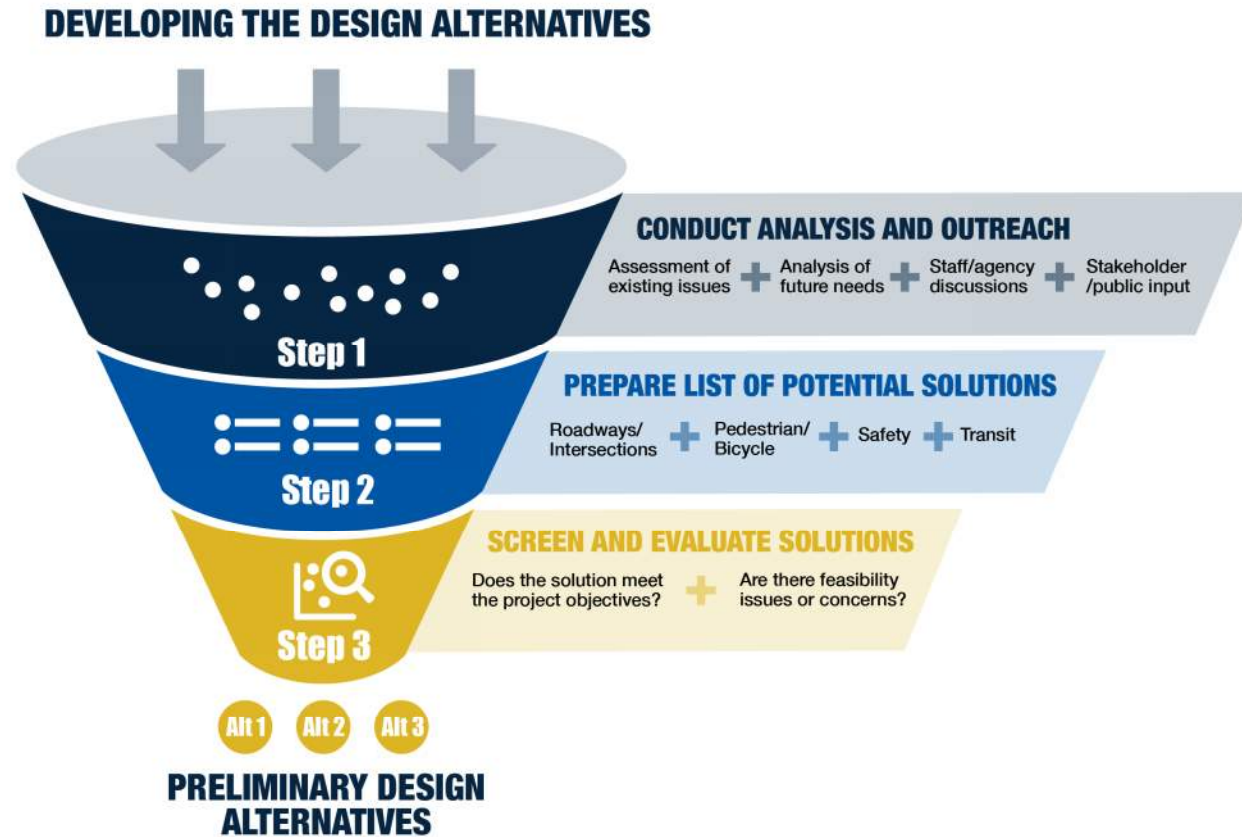
Trees planted within a planter strip located between the roadway and sidewalk provide additional separation between the street and pedestrian areas within the corridor.



SCREENING PROCESS

PROCESS TO DEVELOP THE ALTERNATIVES

- Three step process to:
 - Identify the needs
 - Develop a list of potential solutions
 - Screen and evaluate the long-list of solutions to 3 major alternative designs



MANY INITIAL SOLUTIONS CONSIDERED (STEP 2)

Corridor Improvements

- Signal Timing/Phasing, Interconnect, and Channelization
- Roundabouts: I-5 Ramps and Kelso Drive Intersections
- Diverging Diamond Interchange (DDI)
- Single-Point Urban Interchange (SPUI)
- Widen Allen Street

Multimodal Project Improvements

- Allen Street Multi-Use Path/Sidewalk Widening
- Allen Street Protected Bike Lanes
- Minor Road Multi-Use Path

Supplemental Project Improvements

- S Kelso Drive TWLTL
- I-5 Off-Ramp Storage
- N Minor Road to I-5 NB On-Ramp Connection
- I-5 NB Off-Ramp to S Kelso Drive Connection
- Roundabout: Three Rivers Mall
- Curb Ramp Improvements
- APS Improvements
- Streetlighting
- Allen Street Access Management
- Kelso Drive Access Management
- Transit Improvements
- School Bus Route Management
- Adaptive Signals

SIGNAL ENHANCEMENTS & CHANNELIZATION

- Modifies channelization and upgrades signal equipment
- Enhances pedestrian facilities and crossings
- Incorporates access management



SINGLE POINT URBAN INTERCHANGE

- Reduces number of intersections from 3 to 2
- Increases number of crossings for pedestrians
- Reduces vehicle queuing and delay



ROUNDBABOUTS

- Improves mobility by reducing vehicle delay
- Improves safety by reducing vehicle speeds and conflict points
- Enhances pedestrian facilities and crossings

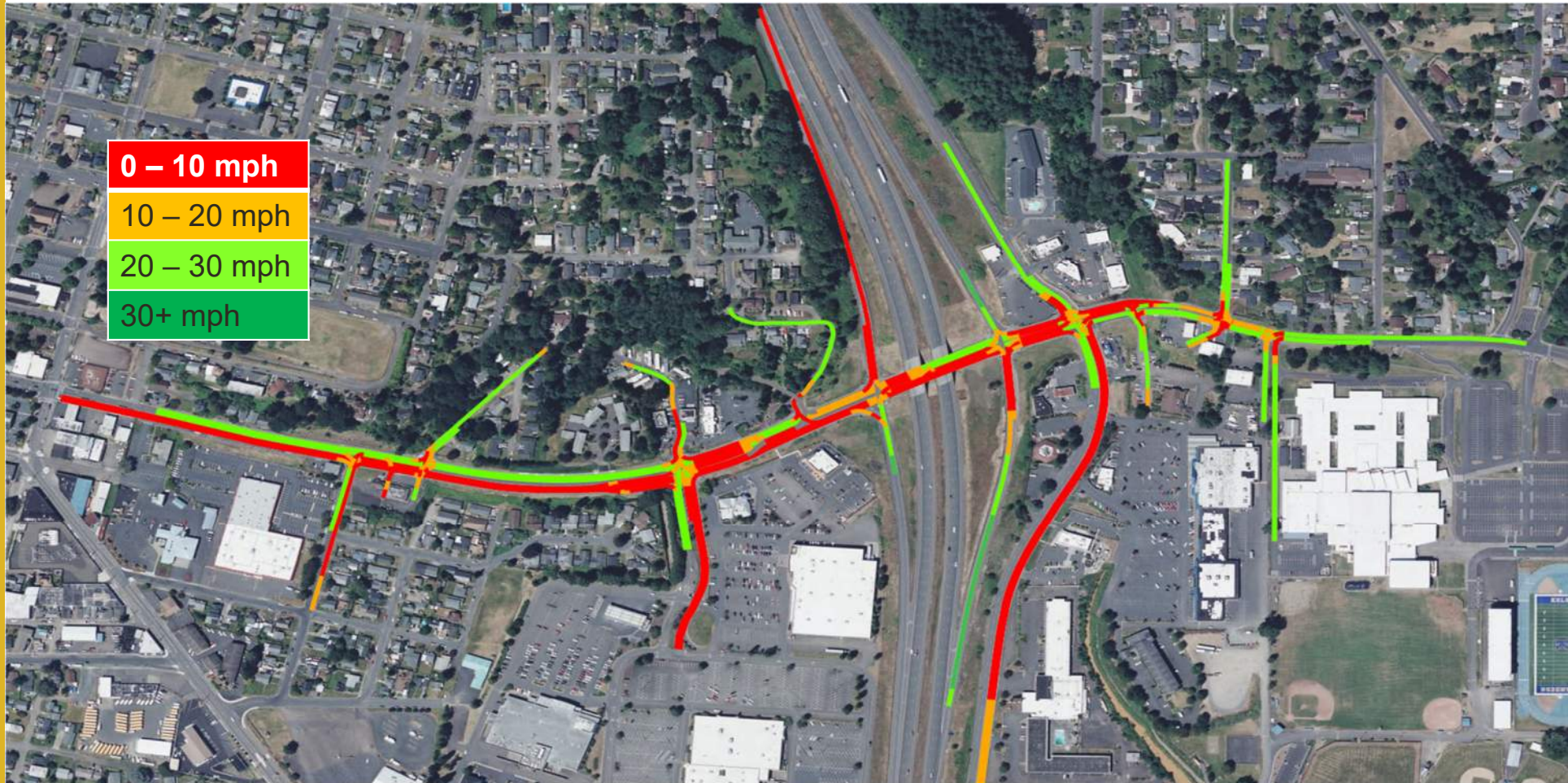


TRAFFIC SIMULATION MODEL OVERVIEW

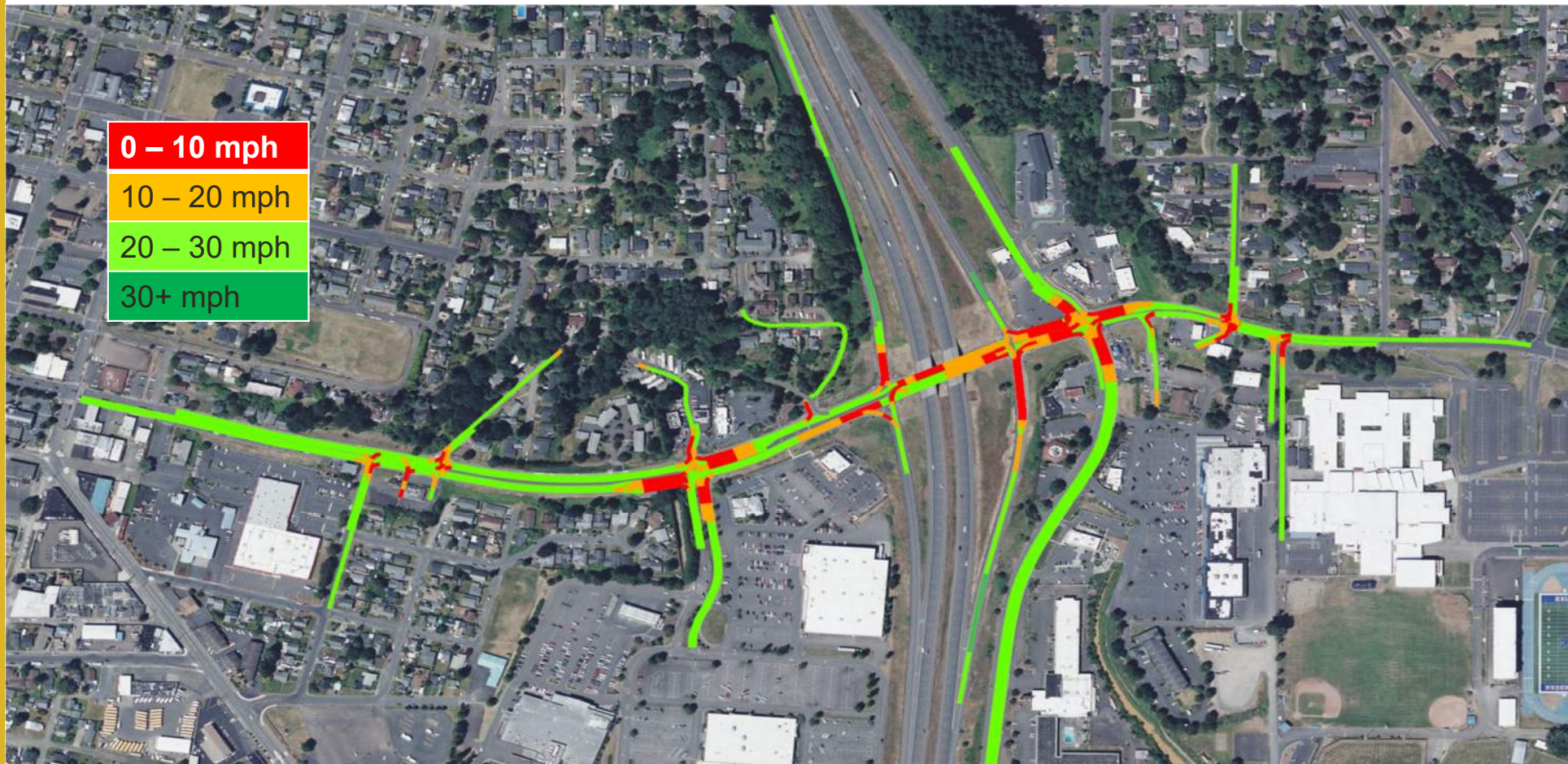
- Microsimulation tool used to take a deeper dive into traffic operations
- Provides visual representation of traffic operations
- Ability to include vehicle routing, speed decisions, driver behaviors
- Includes effects of severe queuing and congestion in traffic operations
- Primary outputs are vehicular delay, queuing, reliability and travel times



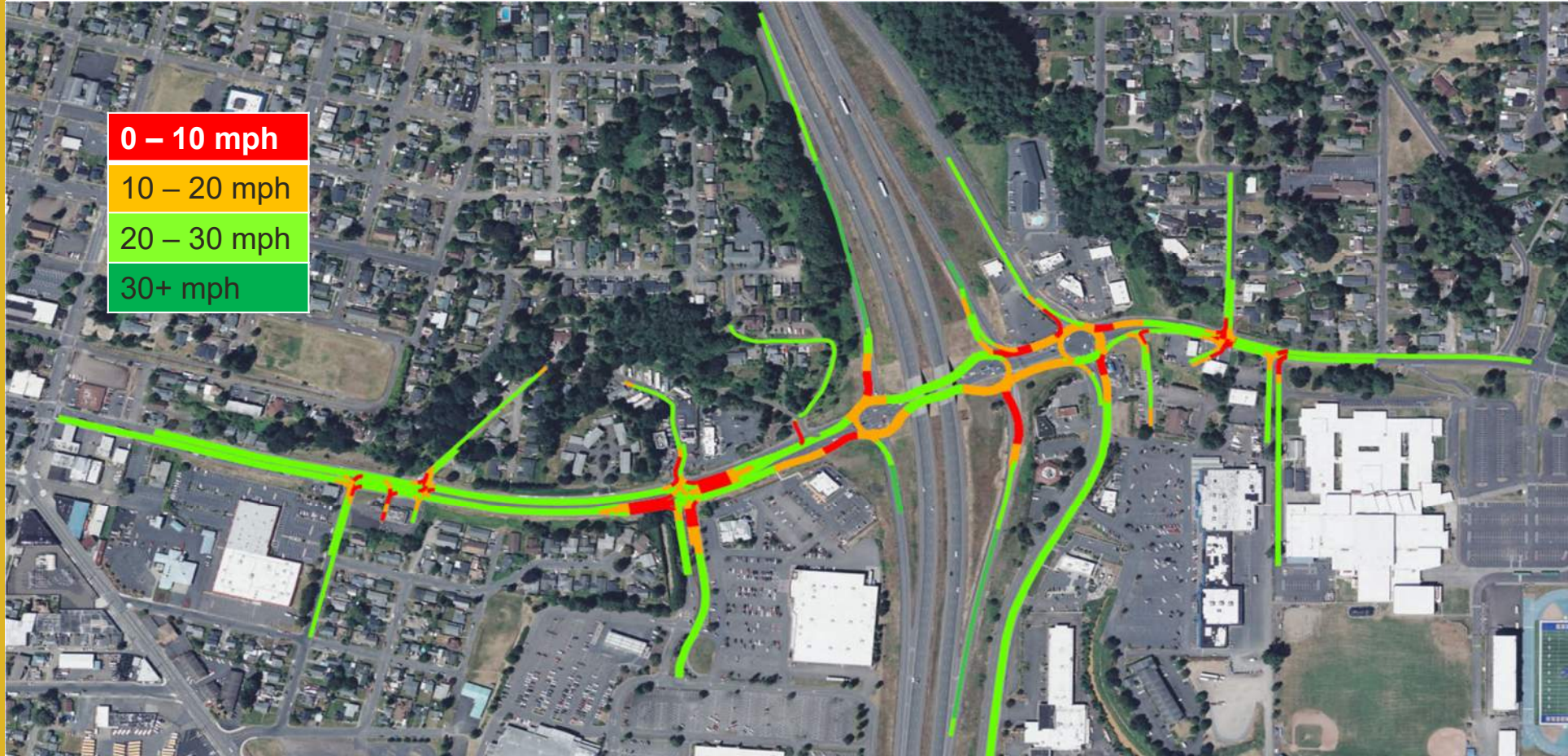
NO BUILD (2045) PM PEAK HOUR AVERAGE TRAVEL SPEEDS



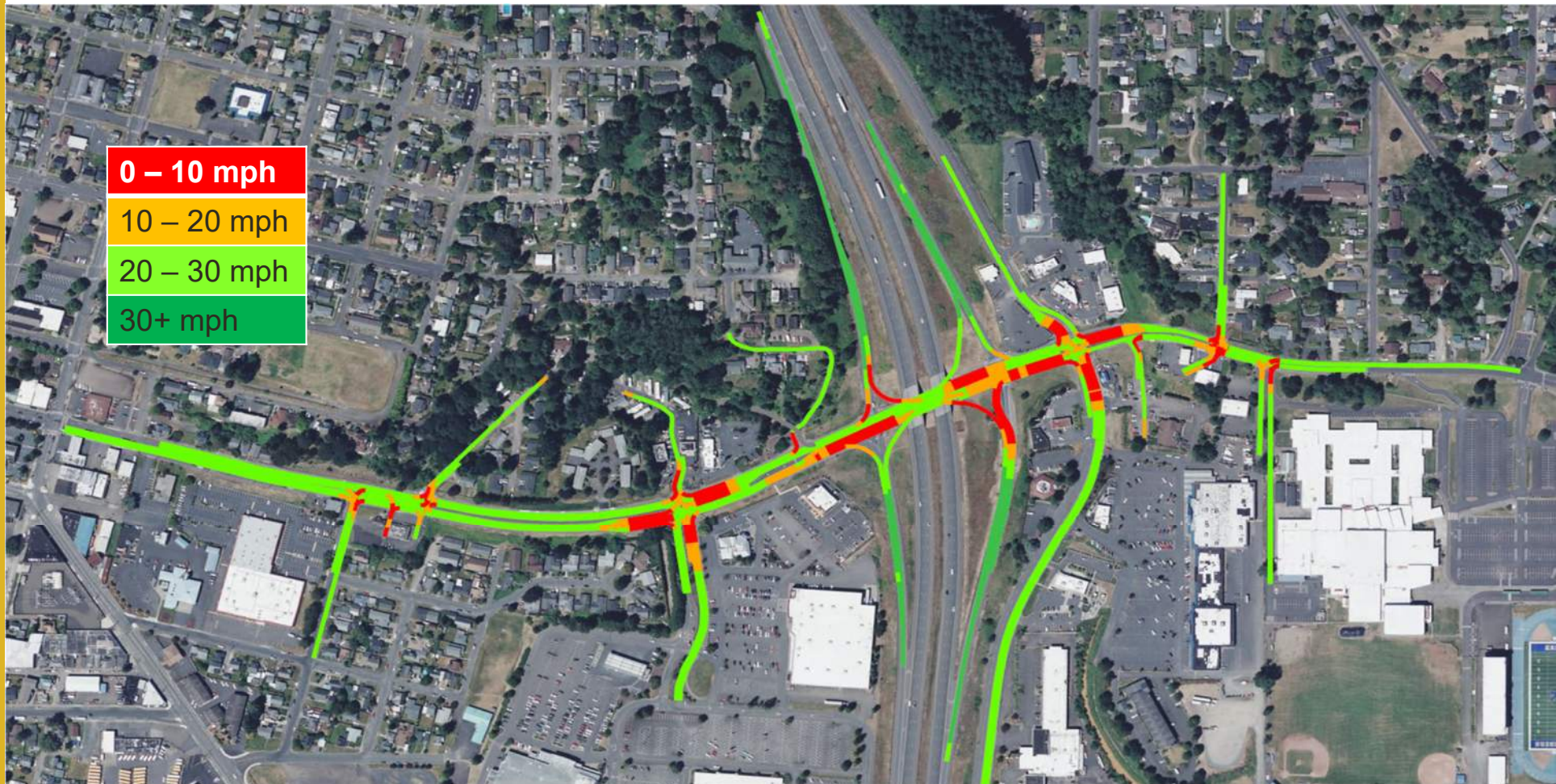
SIGNAL IMPROVEMENTS (2045) PM PEAK HOUR AVERAGE TRAVEL SPEEDS



ROUNDBABOUTS (2045) PM PEAK HOUR AVERAGE TRAVEL SPEEDS













SPUI (2045) PM PEAK HOUR AVERAGE TRAVEL SPEEDS



SCORING RESULTS

- Evaluation criteria based on goals and objectives of the study
- Utilizes quantitative measures to compare alternatives
- Roundabout alternative scored highest

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

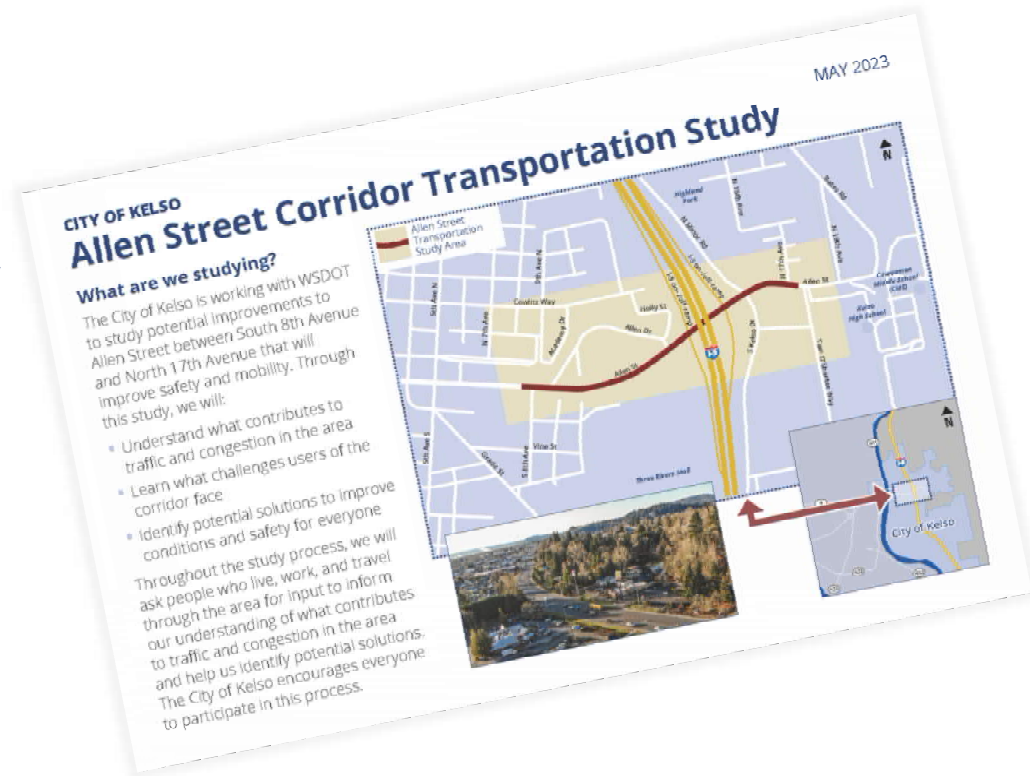




NEXT STEPS

NEXT STEPS

- Obtain Feedback from the Community
 - Online Open House / Survey
 - Public Workshop
 - City Council Meeting
- Identify Alternative
- Complete Preliminary Design and Costing
- Prepare Report





CONTACT

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QUESTIONS

- Questions or comments on the alternatives?
- Other questions about the study?

