

Fehr & Peers

TRPC Emergency Detour Routes

ITE Western District

June 30, 2026



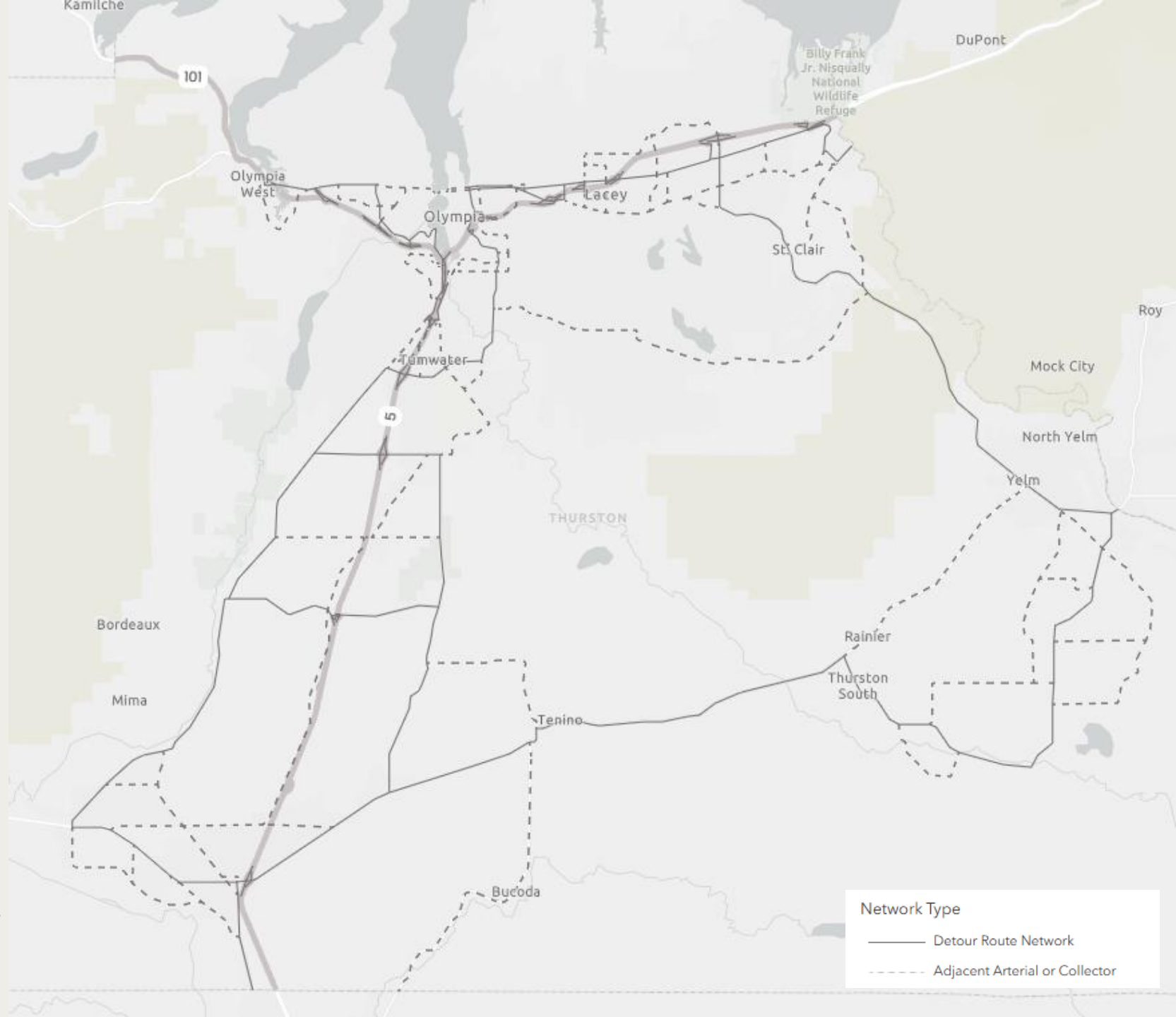
Agenda

- 01** Project Background
- 02** Integrating Safety and Community Impact
- 03** Operational Analysis
- 04** Implementation

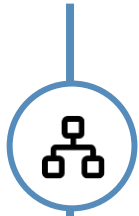
SECTION 01

Project Background

Study Area & Detour Routes



Key Insights from Partner and Stakeholder Interviews



Need for Better Communication

Consistently identified as a priority during the interviews, especially with the effects of these closures often spanning across county lines



Emergency Responder Access

Importance of providing routes for emergency responder access during closure events to ensure quick and efficient response times



Impacts on Yelm Area

Significant impacts of closures on the Yelm area, emphasizing the need for effective traffic management strategies

The Challenge



Priority Shift

How to balance funding needs with critical transportation improvements?



Mode Shift

How to optimize shifting modes on a day-to-day basis with a need for evacuation?



Collaboration Shift

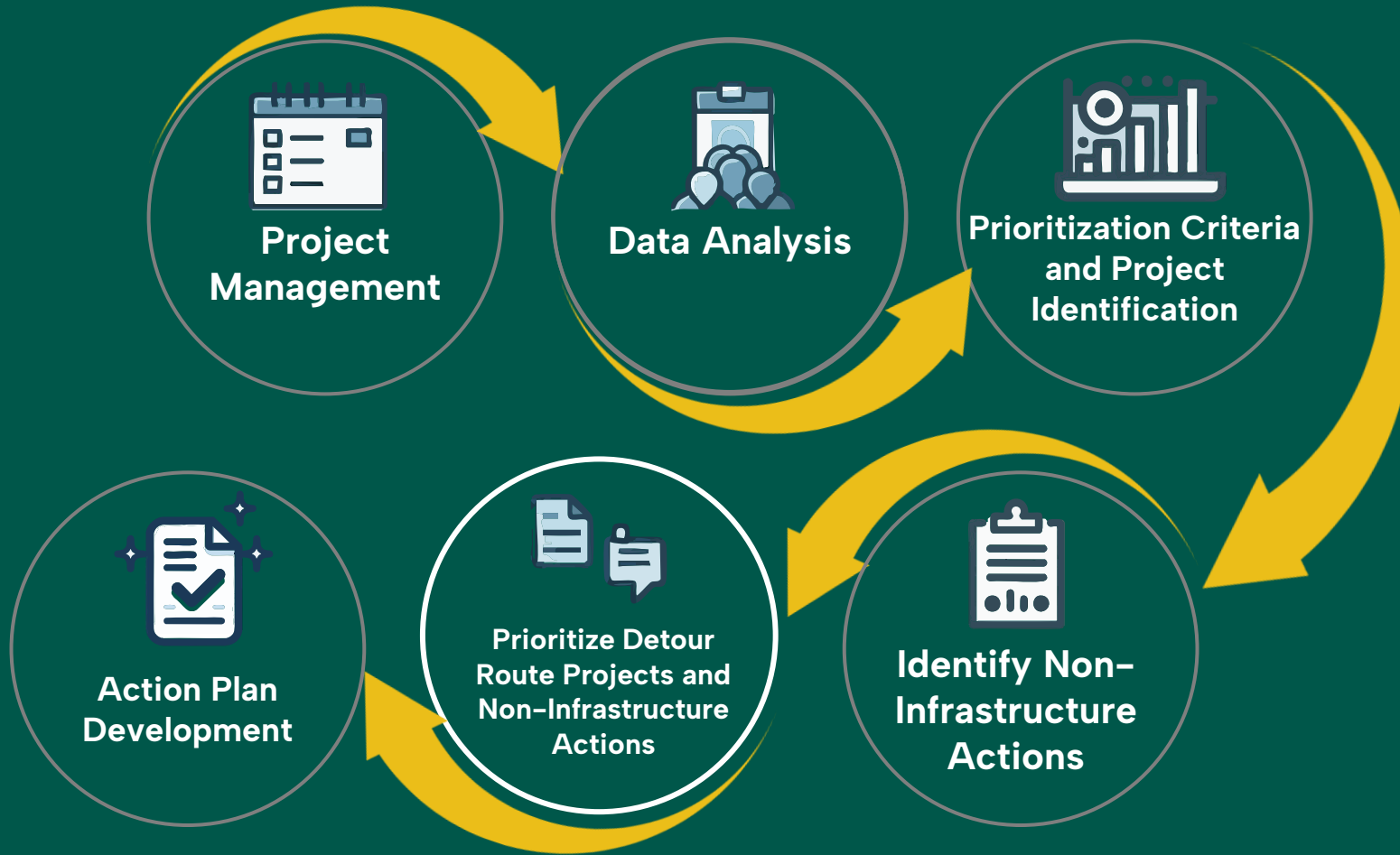
How to find the right level of collaboration between agencies?

Image credits: Vision Zero Network, Getty Images

SECTION 02

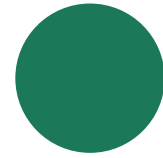
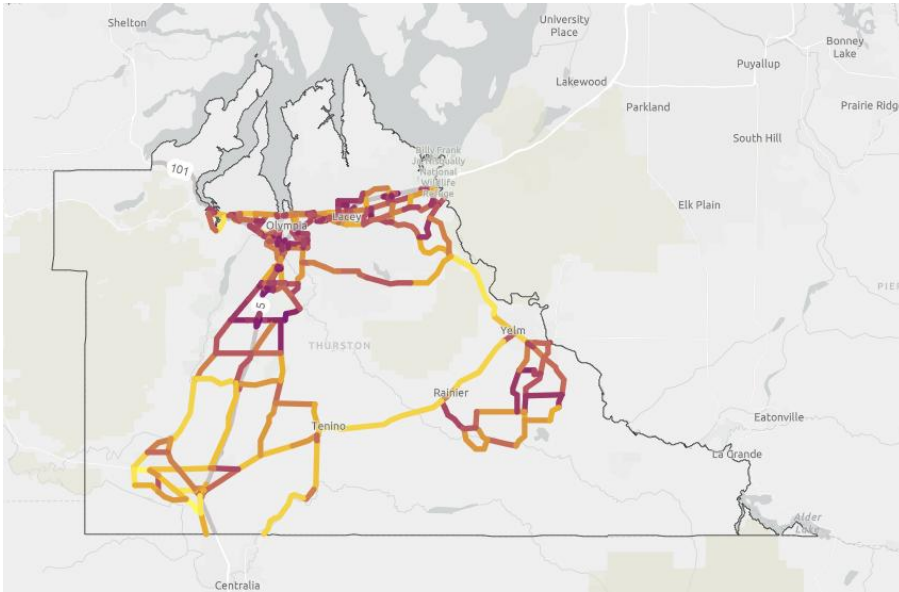
Integrating Safety and Community Impact

Our Approach



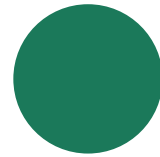
Prioritization Approach

Preliminary Score



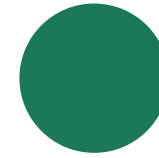
Safety

Historic Crash Patterns
Systemic Vulnerable Road User Generators
Emergency Response



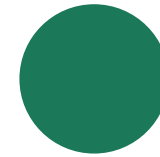
Friction

Stop Signs
Lane Drops



Barriers

Bridges
At Grade Crossings



Utilization

Closest Routes to I-5



Hazard Risk

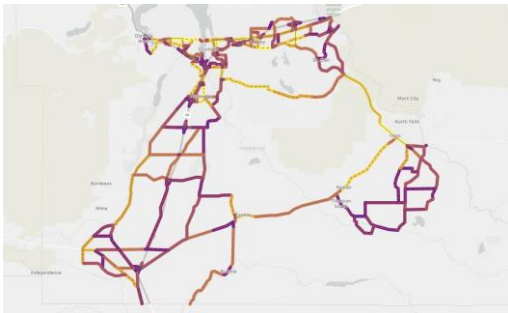
Flood
Fire
Seismic

Prioritization Approach

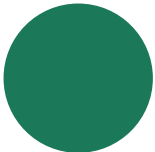
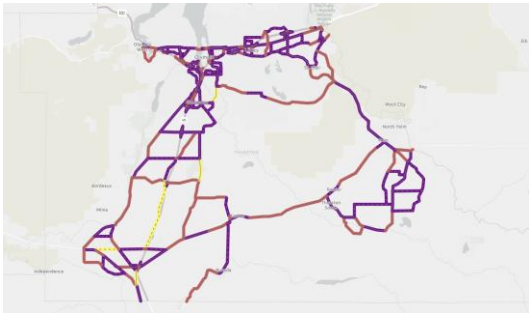
Preliminary Score



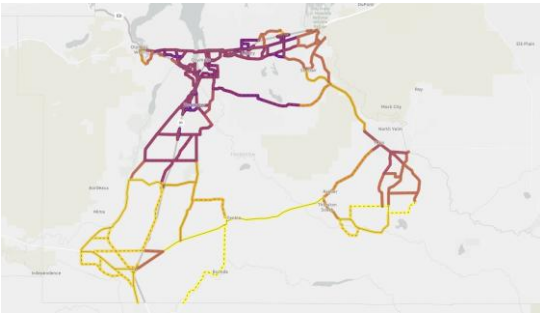
Safety



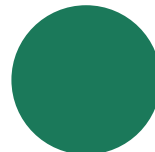
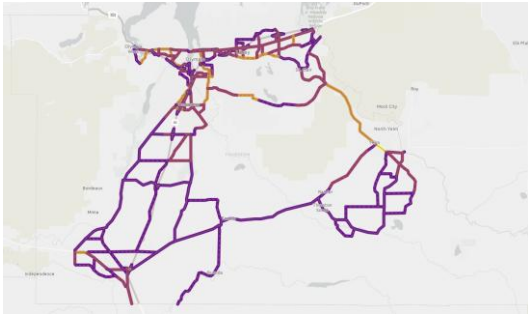
Barriers



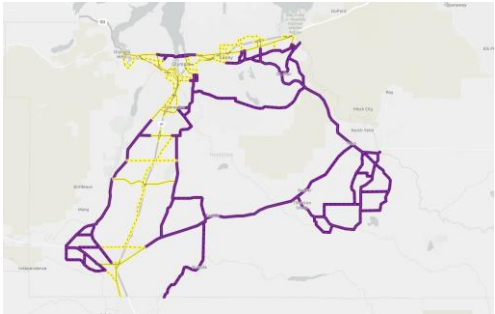
Hazard Risk



Friction



Utilization

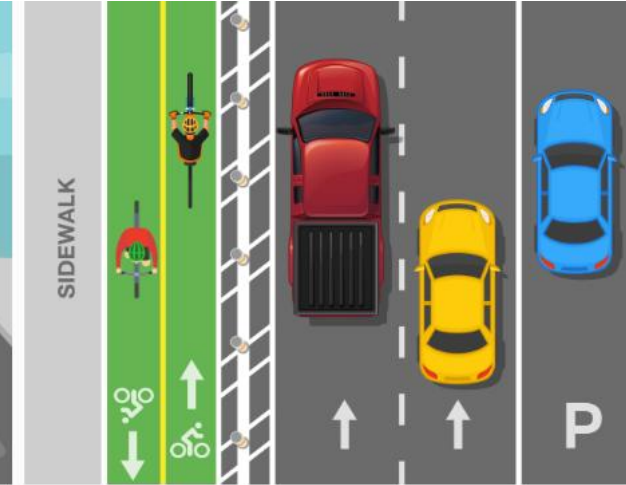


SECTION 03

Operations Analysis

The Challenge for Operations

Kenai Spur Highway



<https://anchoragepbl.com/>

Widening Roadways

Worsens crash severity
May induce emissions

VS

Right-of-way Reallocation

Concerns about shifting where/how operational bottlenecks occur

Dynamic Traffic Assignment (DTA)

Evacuation / Emergency Detour Module

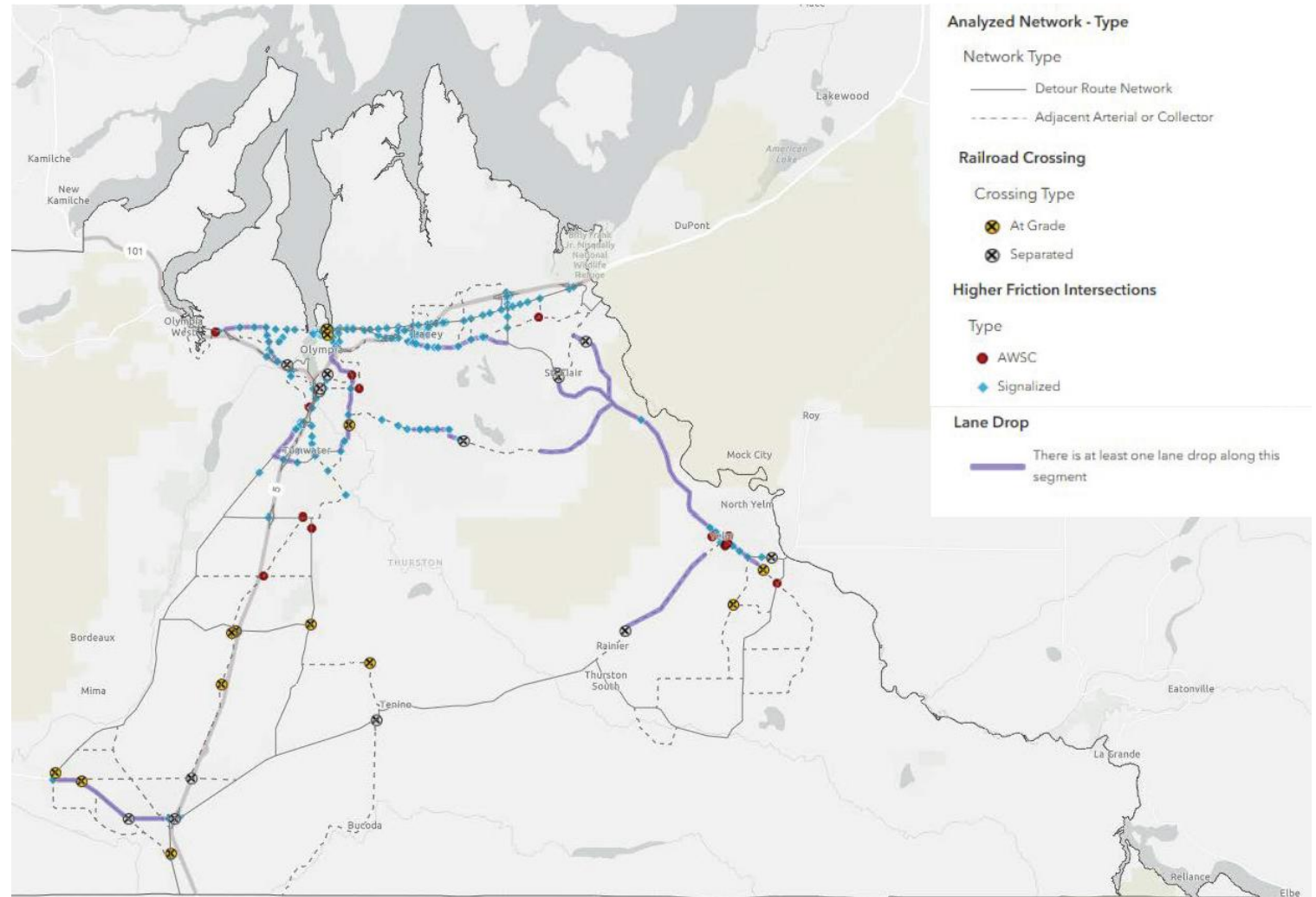


- ✓ Simulates real-world driver behavior and congested route choice
- ✓ Evaluates detour route performance under various emergency scenarios
- ✓ Integrates with operations strategies evaluation (e.g., testing of infrastructure or signal timing improvements)

Operational Bottleneck Evaluation

Key Findings

1. A small number of constraints drive disproportionate network failure
2. Traffic diversion patterns can shift congestion into new communities
3. Some non-infrastructure strategies provide meaningful benefits quickly



SECTION 04

Implementation

Implementation

Key Takeaways

- Detour planning must be system-focused
- Operations + Safety + Resilience can align
- DTA provides critical insight
- Not all solutions require major capital investment

Next Steps

- Advance priority projects into design and funding pipelines
- Identify a toolbox of strategies for each category score
 - Non-Infrastructure
 - Infrastructure
- Strengthen interagency coordination for implementation

Questions?

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