



Compact Roundabouts

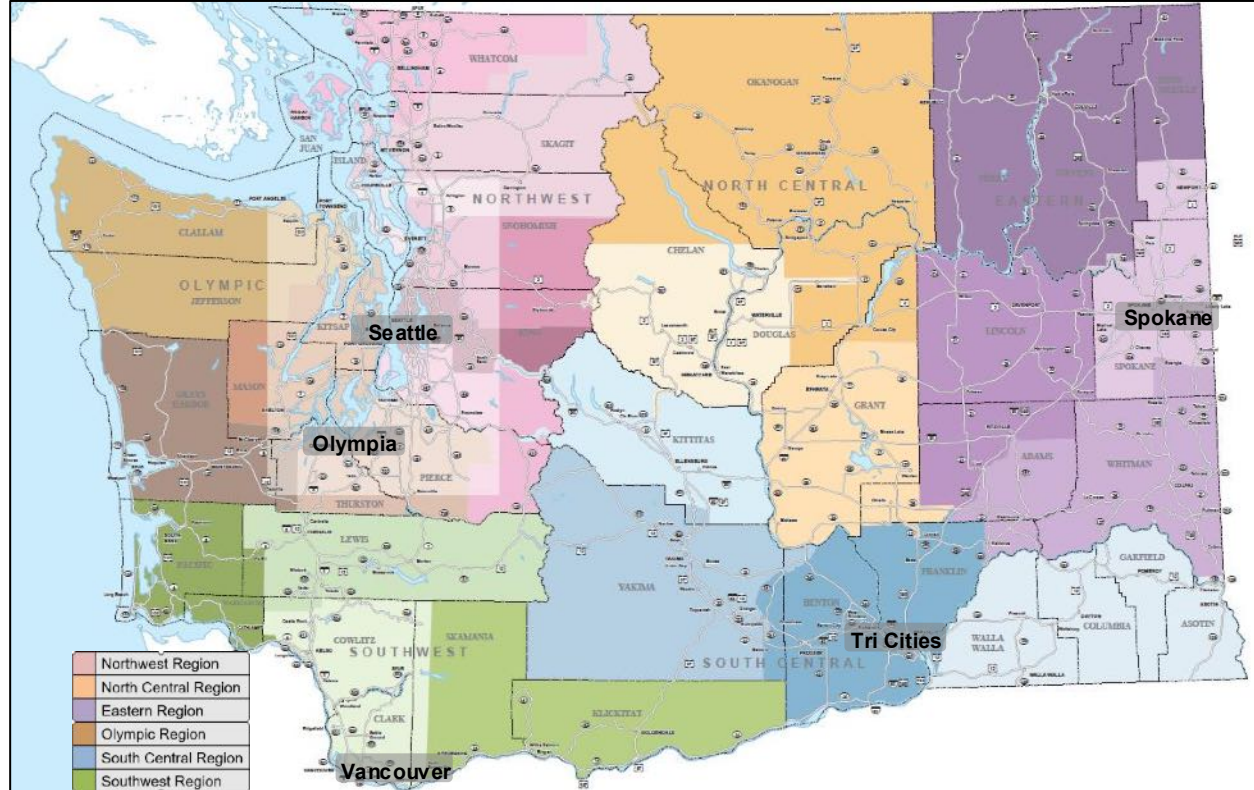
Washington State Highways

Scott Davis, Acting State Traffic Design Engineer

April 2026

WSDOT Regions

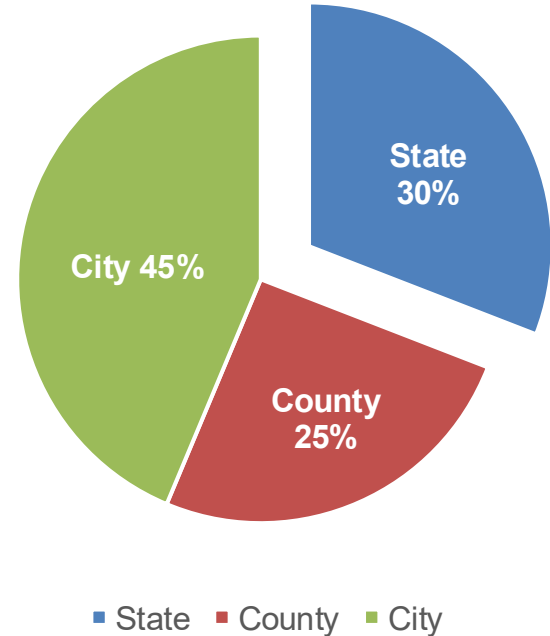
- Six Regions
- Three west of cascades
- Three east of cascades



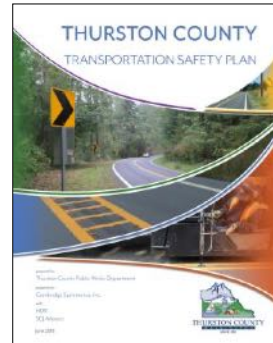
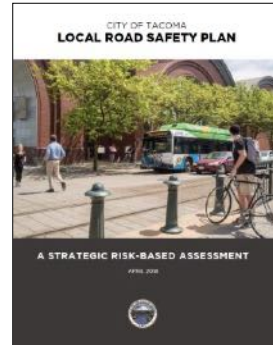
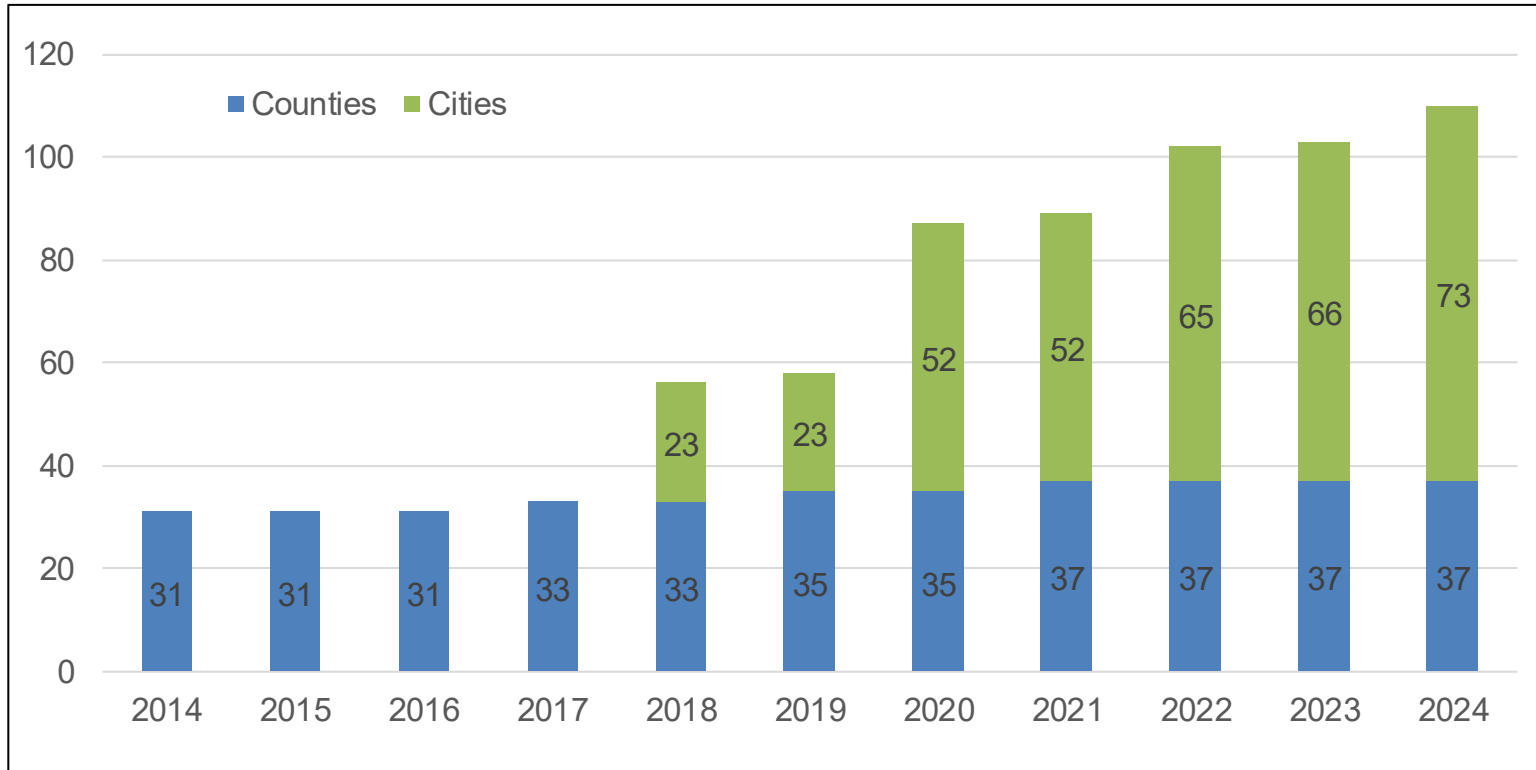
Local Road Safety Program

About Local Road Safety Program

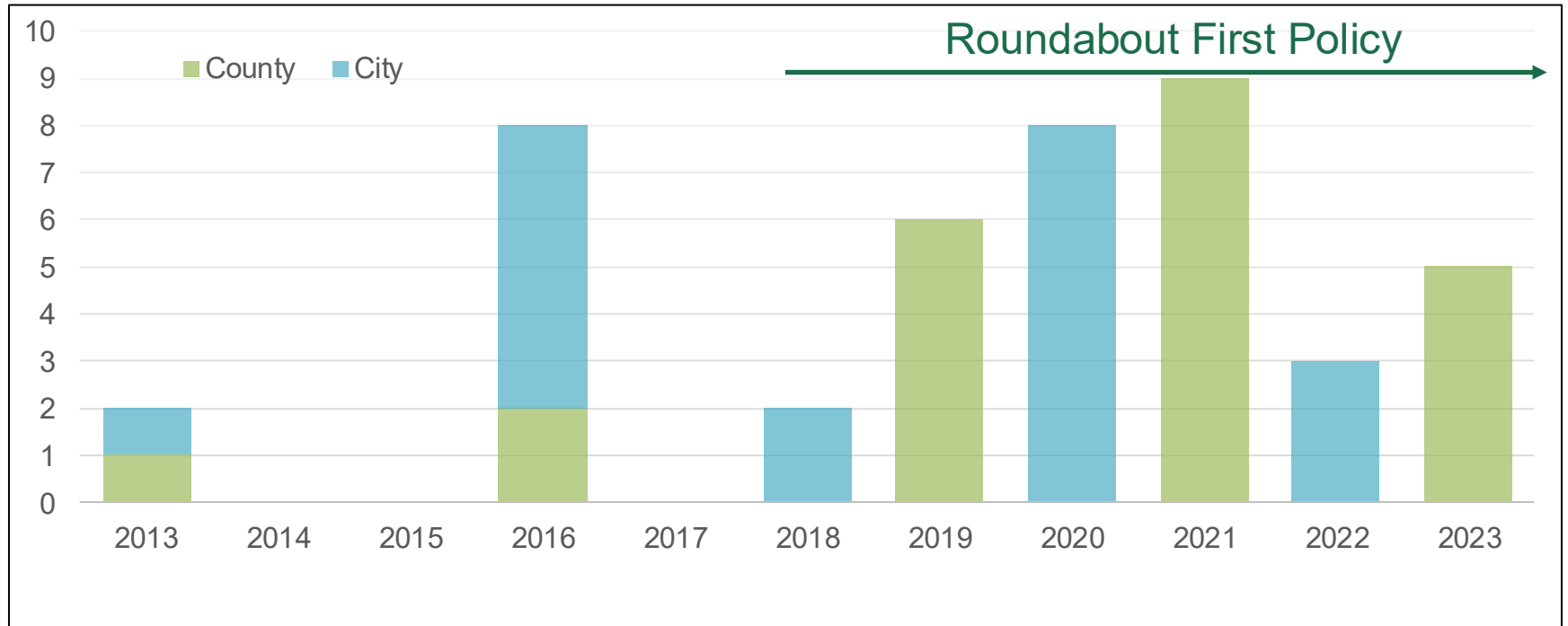
- Federal HSIP Funding Split: State/Local
 - Data driven, using fatal & suspected serious injury crashes
 - Based on priority 1 infrastructure emphasis areas in SHSP (lane departure, intersections)
 - 70% local, 30% state
- Local funding split
 - City Safety Program
 - County Safety Program



Local Safety Plans (Required)



HSIP Funded Roundabouts



WSDOT Compact Roundabouts

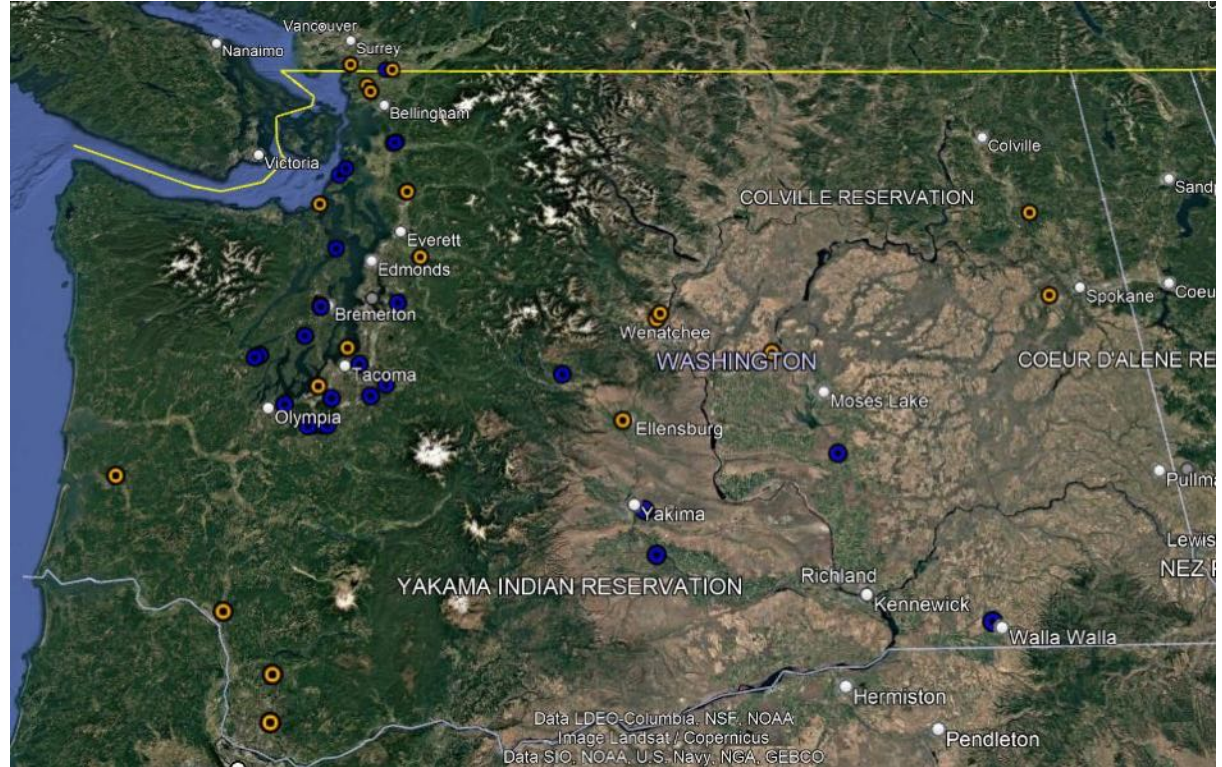
Compact Roundabout History

- 2010 interchange ramp compact installed
- 2020 1st HSIP Compact Program initiated
- 2026 2nd HSIP Compact Program (Planned)
- Almost 50 constructed/planned on state highways

Compact Roundabout Mapping

- Constructed
- Planned

As of Fall 2024



Compact

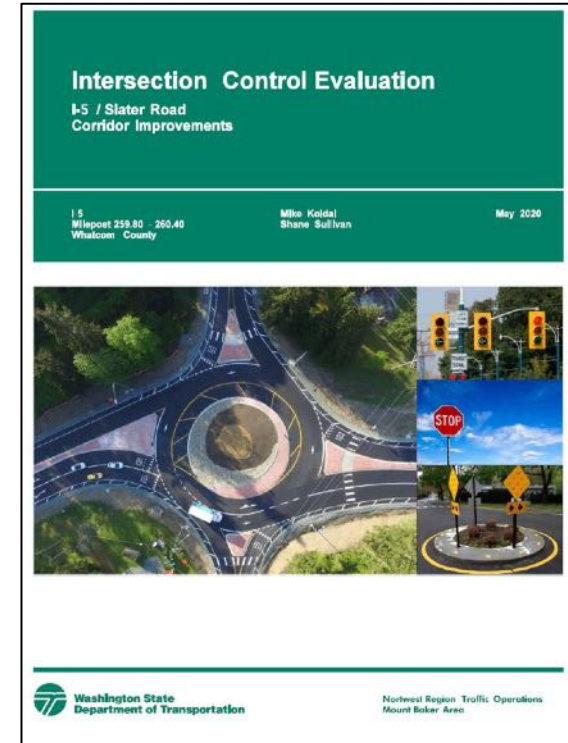
- Fits within the right-of-way
- Traversable central island
- Mountable curbing
- Roughly 70' to 110'



Intersection Decisions

Intersection Control Evaluations

- [Intersection Control Evaluations](#) are required in most circumstances
- Requires consideration of roundabouts
- Requires HQ concurrence
- Six Step Process
 - Background
 - Feasibility
 - Performance Metrics
 - Analysis
 - Evaluation
 - Selection



WSDOT Compact Roundabout Examples

Legend

Project Objective

SAFETY

This icon will be included for project where the primary purpose or funding was safety related. The I2 funding program is the primary funding source

PRESERVATION

This icon will be included for project where the primary purpose or funding was preservation related. The P2 program is primary funding source.

MOBILITY

This icon will be included for project where the primary purpose or funding was mobility or vehicle convenience related.

Project Design/Construction Type

Quick Build

This icon will be included for project that used ultra low-cost techniques and were rapid builds (sometimes over night). These designs often included triangular splitter islands and no shoulder or edge treatments.

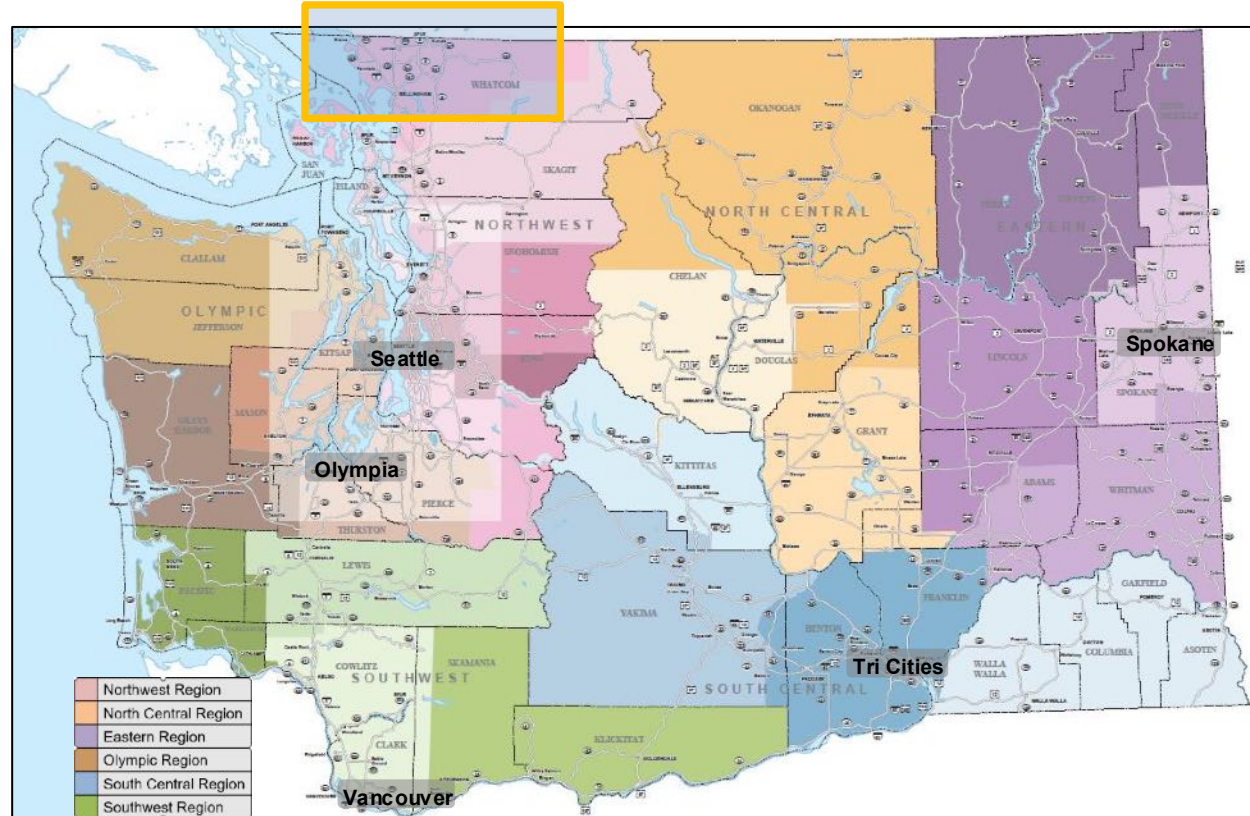
Conventional Build

This icon will be included for project that used conventional roundabout techniques such as inclusion of chicanes and cast in place colored concrete. Delivery is via conventional design-bid-build process.

In the beginning...

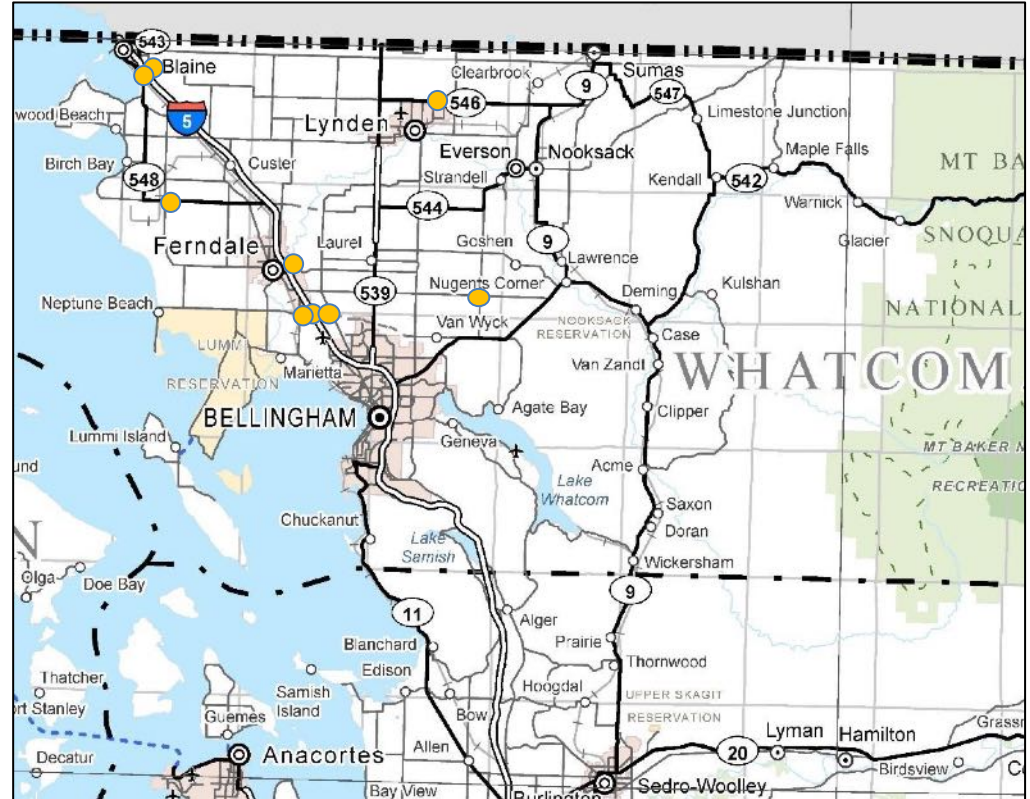
Whatcom County
in the upper
Northwest
Region

Six compact
roundabout
locations

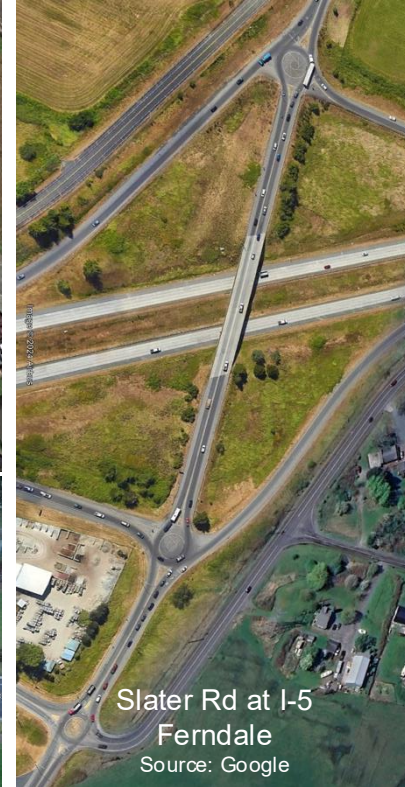
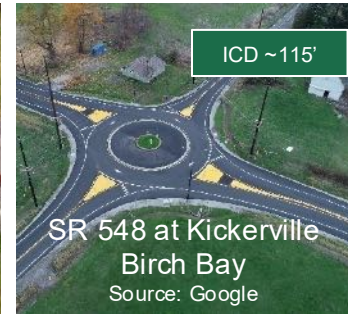


In the beginning...

- 2010 Blaine
- 2014 Slater Rd
- 2016 SR 546 at Northwood
- 2015 E Smith Road at Everson Goshen Rd
- 2018 Portal Way
- 2018 SR548 at Kickerville

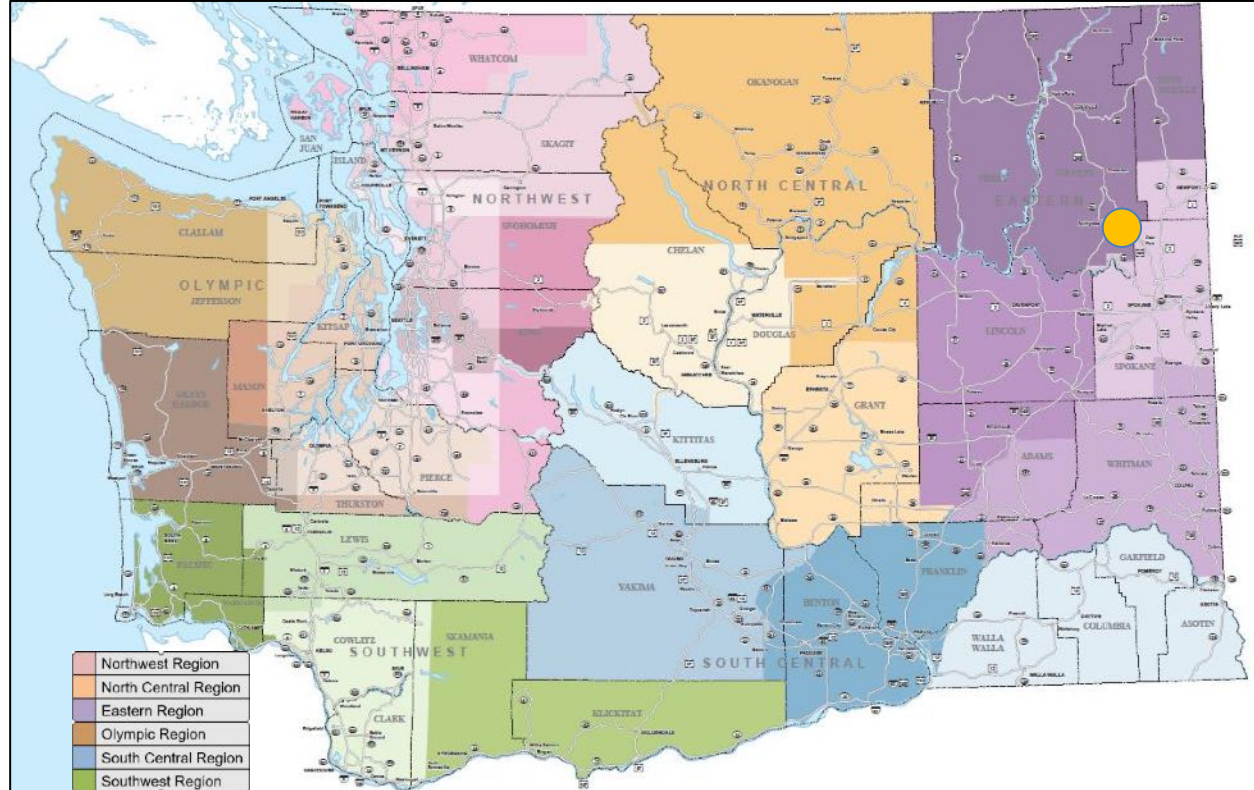


Looking closer



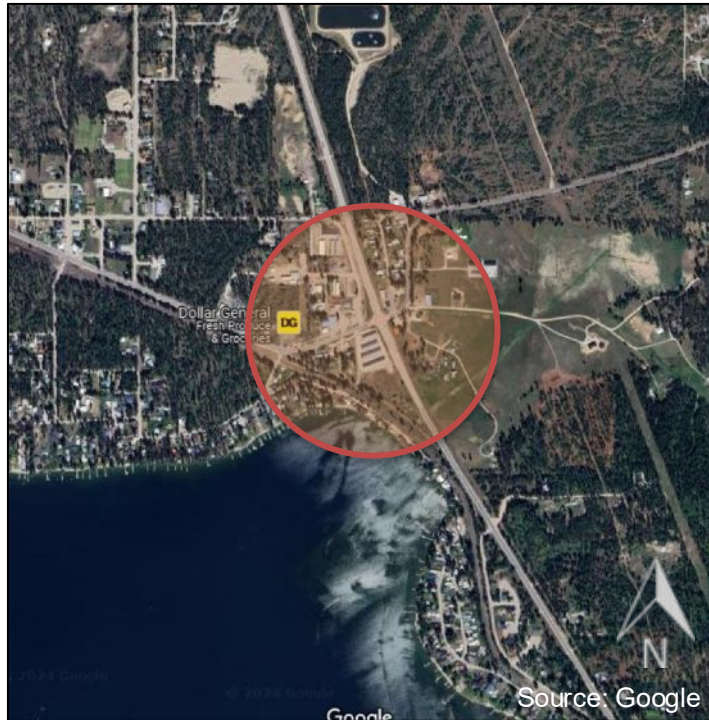
Eastern Region

US395 at Loon Lake



US 395 at Loon Lake

- Over 3.5 million tons of freight
- ~ 17,000 ADT (TEV)
- 60 mph posted speed limit



US 395 at Loon Lake



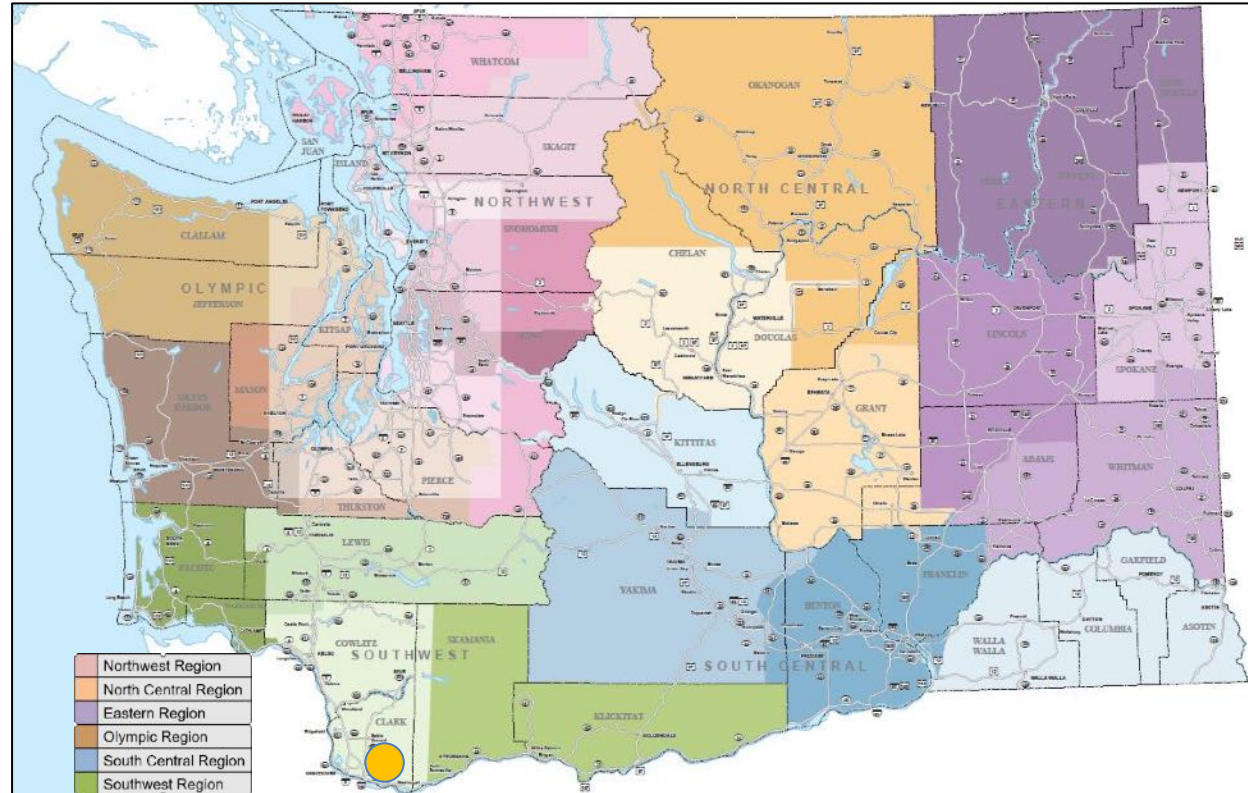
Cost ~ \$700,000 but was incorporated into a larger pavement rehabilitation project

US 395 at Loon Lake



Southwest Region

SR500 at 182nd
Ave



SR 500 at 182nd Ave

- Constructed 2022
- Rural Intersection
- ~ 12k ADT (TEV)
- Closed for construction
- ~ \$1.4M for Construction



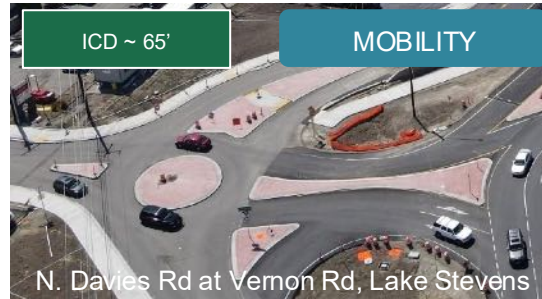
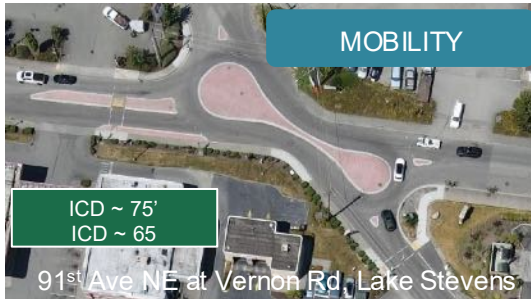
SR 500 at 182nd Ave



SR 500 at 182nd Ave



Examples form Northwest Region



Northwest Region has
six more compact
roundabouts planned

Examples from Olympic Region



Local Agency Compact Roundabout Examples



Yakima, WA



Cashmere, WA
Source: Google



S. Palouse St, Walla Walla
Source: City of Walla Walla



Richland, WA



Tumwater, WA
Source: City of Tumwater



3rd Ave & Tietan St, Walla Walla

WSDOT Experience

Rounding it all up

Challenges

- Experience
 - 90% staff are new or new to the position in the last 5 years
- Ultra Low Cost
 - Hard to replicate & trade-offs
- Money
 - Inflation
- Guidance
 - Requirements vs. guidance
 - HQ depth

Positives

- Intersection Control Eval.
 - Dept Wide Support
- Right sizing roundabouts
 - Dept Wide Support
- Training
 - 3rd year of statewide Design Academy
 - 5th year of modernized intersection design class
 - AutoTurn Training in 2023

What is working for WSDOT



Use of speed cushions
SR20, City of Port Townsend



Scupperped Curbing
SR500 at 182nd Ave
Clark County



Rolled Curbing
SR 9 at Francis Rd
Skagit County

Intersection Control Evaluation
I-5 / Slater Road
Corridor Improvements

I-5
Milepost 259.80 - 260.40
Whatcom County

Mike Koldal
Shane Sullivan

May 2020

Washington State
Department of Transportation

Northwest Region - Traffic Operations
Mount Baker Area


Questions

SAGITTARIUS
SR 520 Overlake Access Ramp




Forward-thinking: The arrival of the light rail meant new visitors to the already congested area. These roundabouts and new ramp mitigate that congestion.
Always trying to find a job: Before the roundabout, drivers would access 148th Ave NE to reach NE 24th St.
Non-committal: I could exit here, or here...OR here...

PISCES
SR 539 at Wiser Lake



Natural healer: After installing this roundabout, rates of severe injury crashes plummeted.
Escape artists: SR 539 takes you right to the Canadian border - now, quicker and more efficiently than ever!
Near a lake: We like water, right? Because fish!

ARIES
SR 902 in Medical Lake




Bold: Four roundabouts in a row? Ok, hot shot.
Impatient: One of these roundabouts was built in 10 days.
Energetic: DO YOU LIKE OUR FOUR NEW ROUNDABOUTS? ALSO HERE'S A NEW BRIDGE.

TAURUS
SR 520 lid near Medina




Steady: A calm, consistent, practical flow of traffic.
An eye for beauty: A charming green space atop the SR 520 lid, which mutes the highway's presence.
Stubborn: Traffic lights? You mean the things that CHANGE! Ew, take them away.

GEMINI
SR 9 in Lake Stevens



Restless: Double the roundabouts mean things are ALWAYS moving. No rest. Only movement.
Chatterboxes: Multiple roads come together in the spirit of connection (and the hot spots, sorry).
Indecisive: Now I have options! Which way do I want to go? No, seriously, choose for me.

CANCER
SR 510 at Reservation Rd & Yelm Hwy



Protective: Has your back. Improved safety in this area by reducing collisions that result in injuries.
Dumb: They're always there for you. Literally. Because they can't move. They're roundabouts.
Claustrophobic: They kinda look like little crab eyes?

LEO
SR 14 in Bingen




Center of attention: A flashy pond boat will be in the center of the roundabout.
Action-oriented: Currently, travelers must wait for passing trains. This roundabout means NEVER WAITING AGAIN.
Scenic looks: Building a pretty new road with a bike lane & naming it Juniper. Will probably be the best road ever.

VIRGO
SR 28 and White Trail Rd



Perfection: A simple, one-lane roundabout in the middle of a clean-lined, well-organized crop field.
No nonsense, intersection control: No lights, no fuss. Just a practical way to travel through a busy intersection.
Problem solver: Turning left here was hard. It no longer is.

LIBRA
US 2 in North Spokane



Diplomatic: We're just slowing down, yielding, entering, and exiting in peaceful cooperation.
Aesthetic: Observed with the cow print & grassy medians.
Conflict averse: What better way to avoid confrontation than a literal roundabout on your way to a \$1.50 hot dog?

SCORPIO
SR 243 in Mattawa



Hidden depths: At first glance, this roundabout might look simple. But it's a careful piece of engineering that controls the traffic flow without being obvious or flashy.
V. mysterious: This one is in a very rural, low-density area... wait, why do you want to know???

CAPRICORN
SR 503 near Battle Ground



Long-term goals: Data found a high rate of severe collisions here. This roundabout aims to reduce those crashes.
Scare me the superficiality: Compact roundabouts are some of the easiest to build and require little additional pavement.
Queasy/critical: It's literally under construction. Trying to improve itself and everyone around it.

AQUARIUS
SR 203 & High Rock Road



Innovative: Built to fit within the existing intersection footprint, saving costs while providing safety.
Imaginative: What better way to describe a new idea than "???"
Impossible to describe: It might be hard to imagine negotiating the difficulty of a roundabout, but road signs make it clear!
Note: This does not work on an Aquarius.

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