

# CAMAS 2022 CITY SAFETY PLAN

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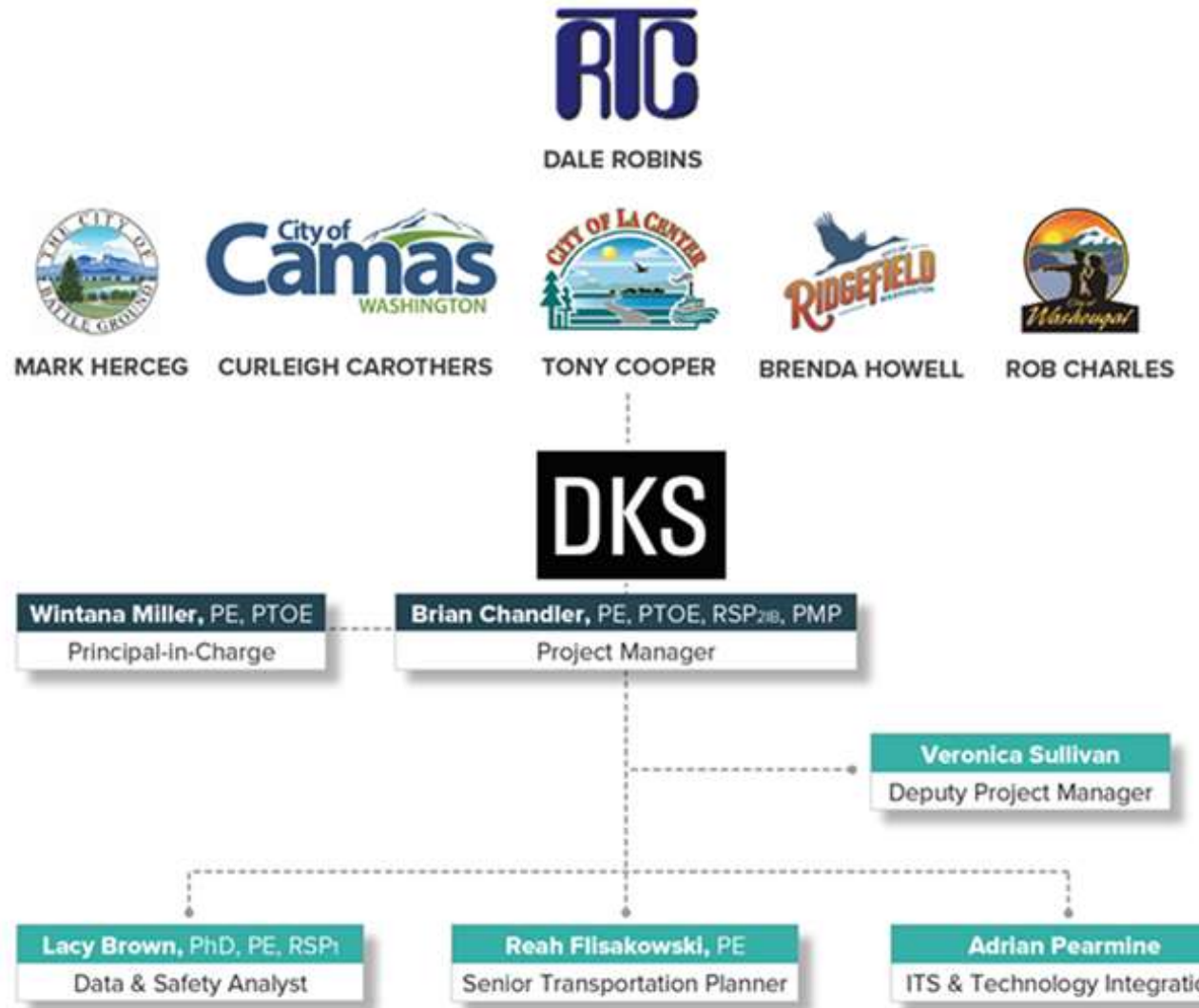
AN EMPLOYEE-OWNED COMPANY



# ACKNOWLEDGEMENTS

- City Safety Plan funded & managed through RTC with participation from each city
- Special thanks to Curleigh Carothers as Camas' primary point of contact\*

\* Also Justin Monsrud, Jim Hodges, & Chris Lopez



# AGENDA

## 1 / PURPOSE & NEED

## 2 / PLAN DEVELOPMENT PROCESS

1. Analyze Summary Data
2. Select Most Common Risk Factors
3. Identify Locations of Need
4. Select and Prioritize Safety Treatments

## 3 / SAFETY GRANT APPLICATIONS

## 4 / CURRENT STATUS & NEXT STEPS



1

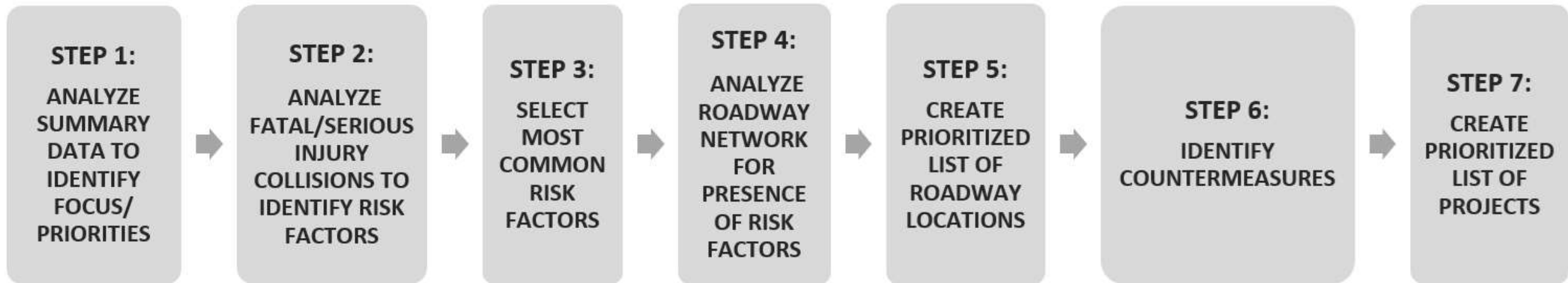
**PURPOSE & NEED:  
LOCAL ROAD SAFETY PLAN**

# WHY DEVELOP A SAFETY PLAN?

- 1. From 2016 to 2020, 8 people died and 7 were seriously injured in traffic collisions in Camas**
- 2. A safety plan identifies safety needs and potential solutions**
- 3. The WSDOT City Safety Program requires a Local Road Safety Plan to apply for grant funding.**



# WHAT IS THE PROCESS?



WSDOT Local Road Safety Plan Process



2

**LOCAL ROAD SAFETY PLAN  
DEVELOPMENT**

# ANALYZE SUMMARY DATA

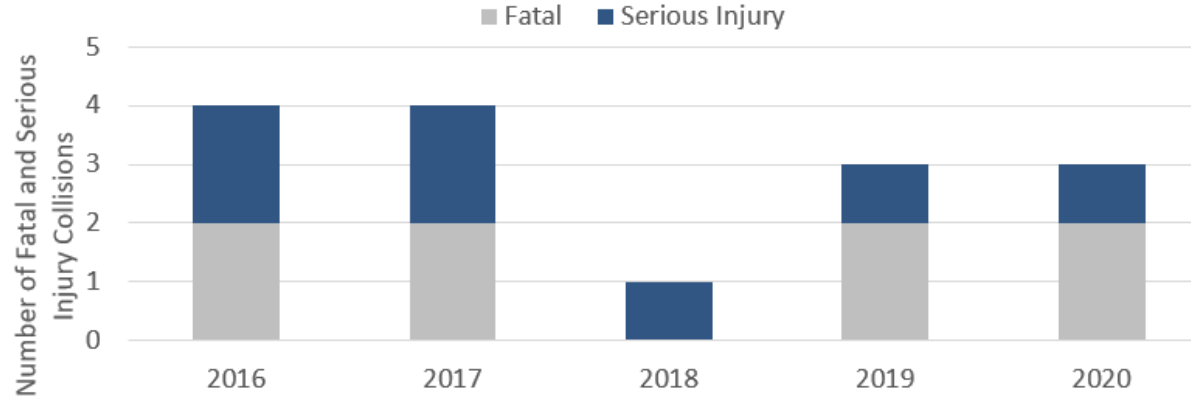


Figure 1. Fatal and Serious Injury Collisions in Camas, 2016-2020.

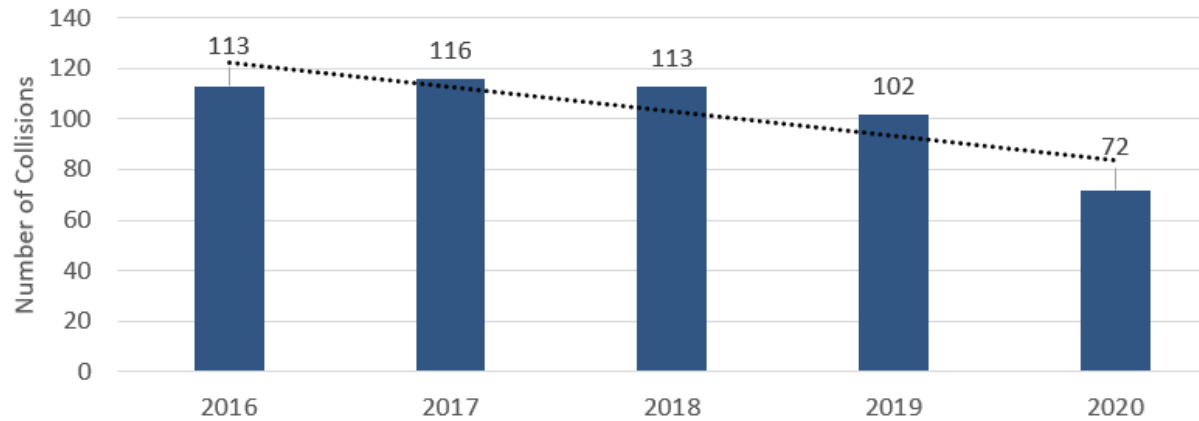
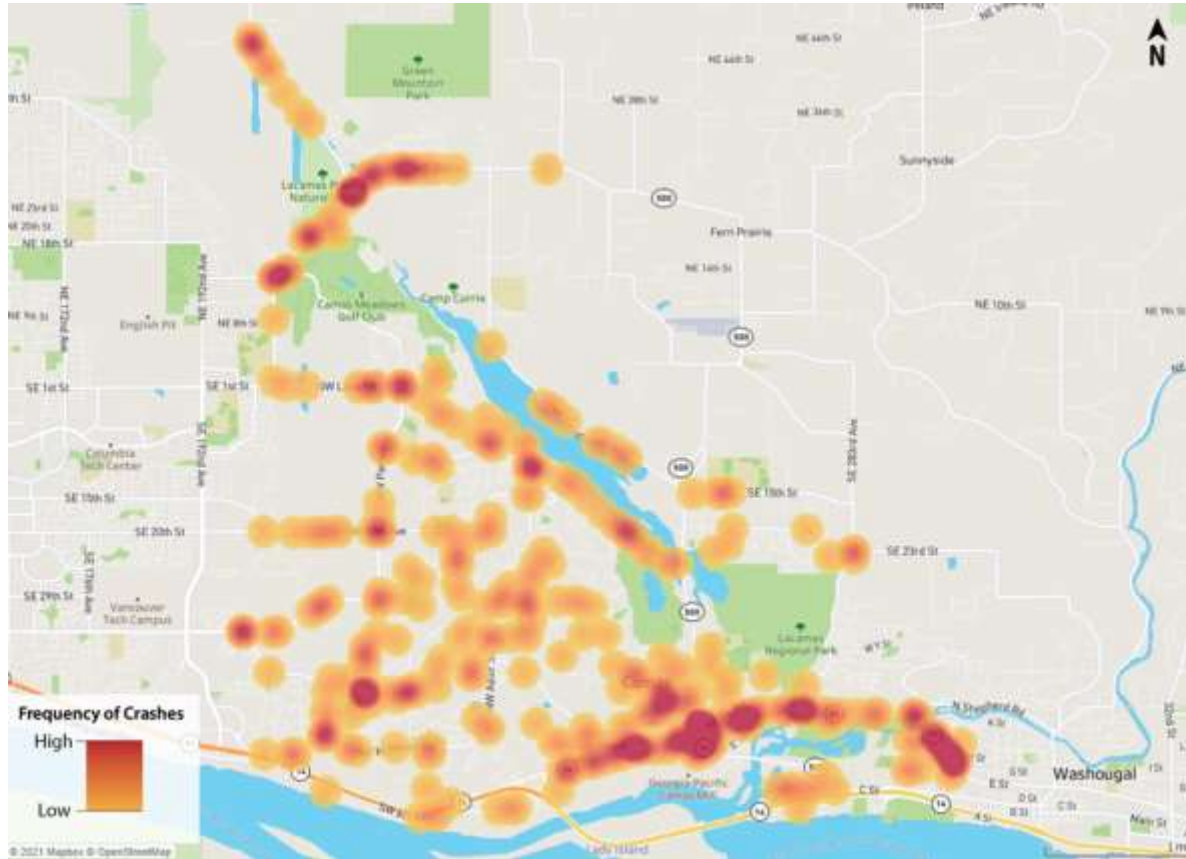


Figure 2. Total Collisions in Camas, 2016-2020.

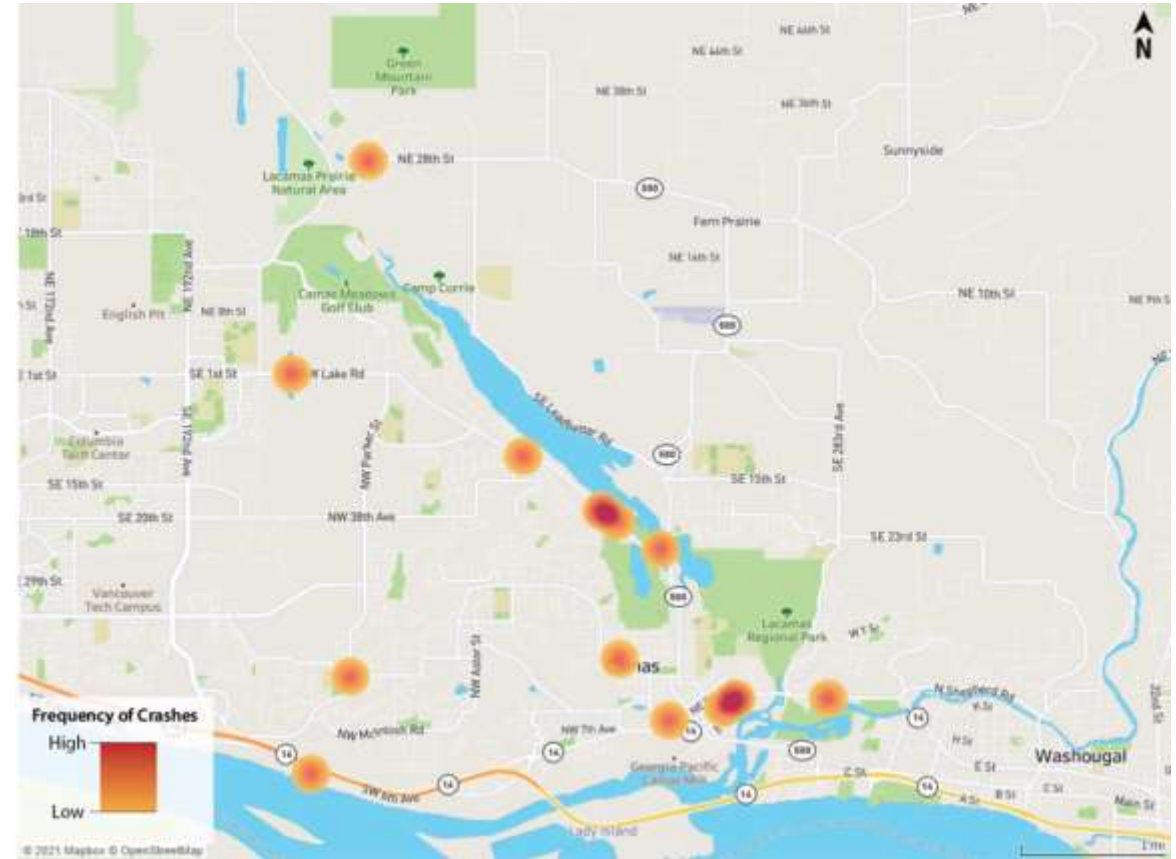


# ANALYZE SUMMARY DATA

All Reported Collisions



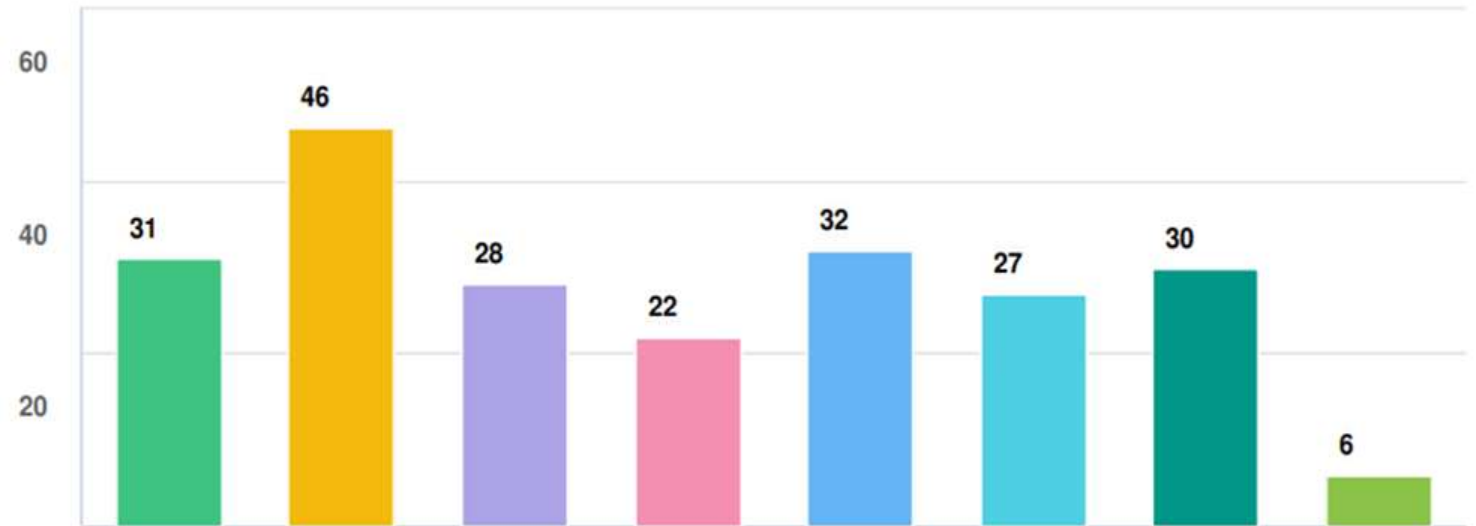
Fatal & Serious Injury Collisions



# CITIZEN FEEDBACK

- 72 Survey Responses
- Topics of Focus
  - Pedestrian Safety
  - Vehicle Speeds
  - Sight Distance

What are the main roadway safety issues within Camas, Washington (Check all that apply):



## Question options

- Intersections
- Vehicle Speed
- Distracted Drivers
- Vision Clearance
- Pedestrian Safety
- Bicycle Safety
- Lack of infrastructure (lighting, sidewalks, curbs, shoulders, etc.)
- Other (please specify)

Camas Road Safety Survey Results, 2021

# SELECT MOST COMMON CONTRIBUTORS

## *Fatal and Serious Injury Collisions*

- Roadway Departure
- Intersections
- Wet Road Surface Conditions
- Young Driver
- Motorcyclist Involved



# IDENTIFY LOCATIONS OF NEED

## *Intersections*

TABLE 2. PRIORITIZED INTERSECTION SAFETY NEEDS BY NUMBER OF RISK FACTORS

| Intersection                      | Roadway Departure | Speeding | Unsignalized Intersection | Motorcycle Involved | Wet Road Surface | At Least 1 Fatal or Serious Injury Crash | Citizen Request | Total |
|-----------------------------------|-------------------|----------|---------------------------|---------------------|------------------|--|-----------------|-------|
| NW 16th Ave and NW Brady Rd       | -                 | ✓        | -                         | ✓                   | ✓                | ✓  | ✓               | 5     |
| NE 6th Ave and NE Adams St        | ✓                 | ✓        | ✓                         | -                   | -                | ✓  | ✓               | 5     |
| NE Ingle Rd and NW Goodwin Rd     | ✓                 | -        | ✓                         | -                   | ✓                | -  | ✓               | 4     |
| SE 23rd St and SE 283rd Ave       | ✓                 | ✓        | ✓                         | -                   | ✓                | -  | -               | 4     |
| NW Leadbetter Dr and NW Howard St | ✓                 | ✓        | ✓                         | -                   | ✓                | -  | -               | 4     |
| NW Parker St & NW 38th Ave        | ✓                 | ✓        | -                         | -                   | ✓                | -  | -               | 3     |
| NE 6th Ave and NW 7th Ave         | ✓                 | -        | ✓                         | -                   | -                | -  | -               | 3     |
| NE 3rd Ave and NE Hayes St        | ✓                 | -        | ✓                         | -                   | -                | -  | -               | 3     |

# IDENTIFY LOCATIONS OF NEED

## Segments

TABLE 3: PRIORITIZED CORRIDOR SAFETY NEEDS BY NUMBER OF RISK FACTORS

| Segment   | Roadway Departure | Speeding | Motorcycle Involved | Wet Road Surface | At Least 1 Fatal or Serious Injury Crash | Citizen Request | Total |
|---|-------------------|----------|---------------------|------------------|--|-----------------|-------|
| NE Goodwin Rd from NW Friberg-Strunk St to NE 222nd Ave | ✓                 | ✓        | ✓                   | ✓                | ✓  | ✓               | 6     |
| NW Lake Rd from NW Leadbetter Dr to NE Everett St       | ✓                 | ✓        | ✓                   | ✓                | ✓  | ✓               | 6     |
| NE 3rd Ave from NE Garfield St to SE Crown Dr           | ✓                 | ✓        | ✓                   | ✓                | ✓  | ✓               | 6     |
| SE Leadbetter Road from SE Everett St to NE 9th St      | ✓                 | ✓        | ✓                   | ✓                | -  | -               | 4     |

# SELECT AND PRIORITIZE TREATMENTS

| Prioritized Location or Systemic Collision Type               | Safety Project   | Next Step  |
|---|--|--|
| 1. NW Lake Road from NW Leadbetter Drive to NE Everett Street | Horizontal Curve Signing, Profiled Pavement Marking, Shoulder Widening                                   | Apply for 2022 WSDOT City Safety Program grant funding           |
| 2. Intersection: NE 6th Avenue and NE Adams Street            | Intersection Improvement   | Apply for 2022 WSDOT City Safety Program or future grant funding |
| 3. Systemic Stop-controlled Intersections                     | Signing, Pavement Marking  | Apply for 2022 WSDOT City Safety Program grant funding           |
| 4. Systemic Roadway Departure                                 | 4.1 Citywide MUTCD Curve Signing<br>4.2 Enhanced Curve Signing, Rumble Strips, Profiled Pavement Marking | Apply for 2022 WSDOT City Safety Program grant funding           |



## **SAFETY GRANT APPLICATIONS**



# NW LAKE ROAD

## NW Leadbetter Drive to NE Everett Street

- 3 fatal collisions
- Head-on
- Run-off-road
- Speeding
- Dark Conditions



### Project Description

Provide horizontal curve signing, no passing zone signs, profiled pavement markings, and improved shoulders for the length of the segment.



### Cost Estimate

\$3,039,498



### Benefit / Cost Ratio

4.00



### Time Frame

Long-term



### Crash Reduction

**~25%**

Combined reduction for all treatments along the segment

**History:** 19 crashes observed from 2016-2020, including 3 fatal and 2 serious injury collisions.

**Expected Benefit:** 0.96 fewer crashes per year



# NE 6TH AVE AND NE ADAMS ST

- Atypical traffic control
- Angle crashes
- Citizen concerns



## Project Description

Install a roundabout at the intersection with associated lighting and pedestrian facilities.



## Cost Estimate

\$3 million (approx)



## Benefit / Cost Ratio

2.18



## Time Frame

Long-term



## Crash Reduction

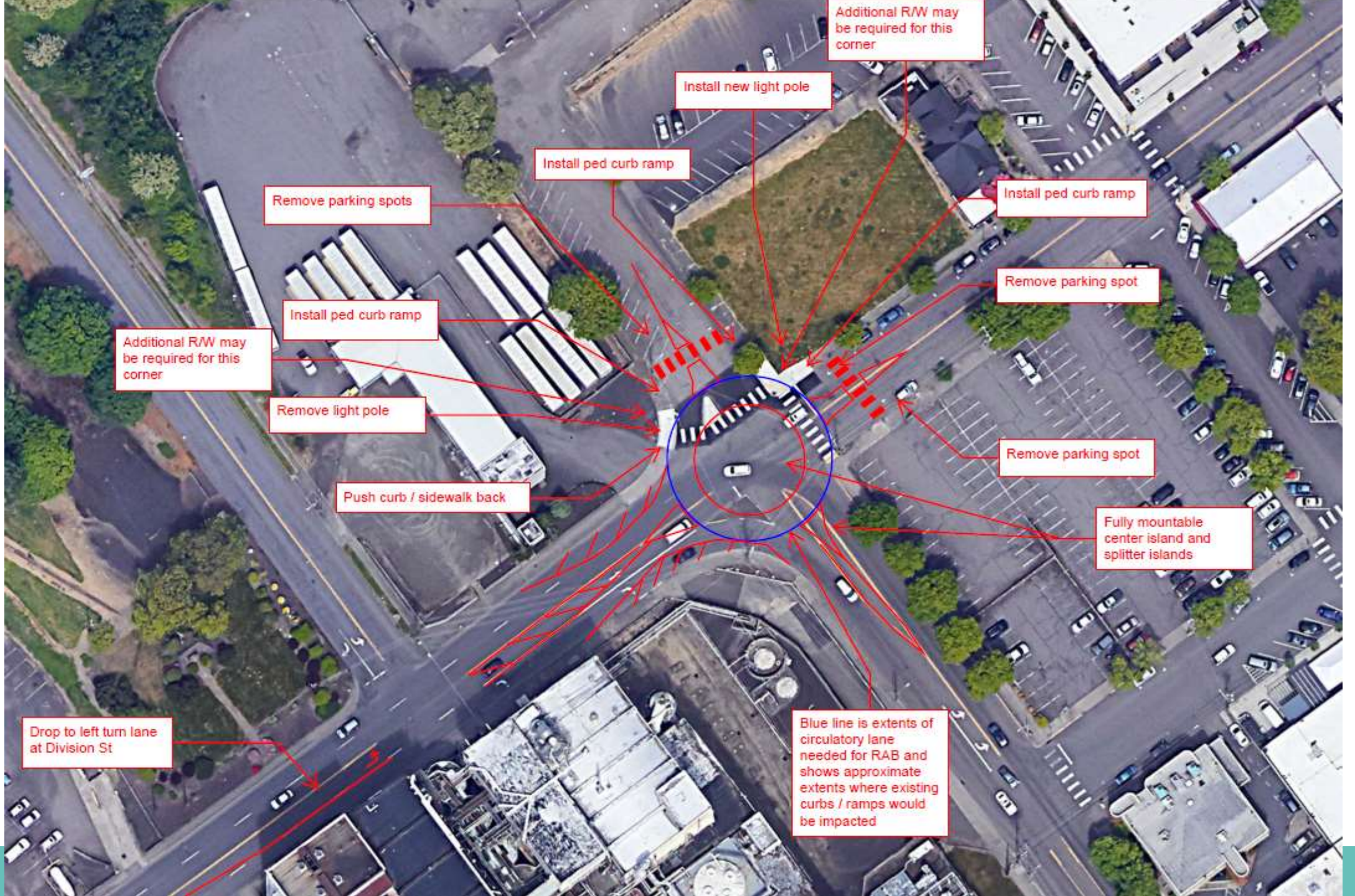
**~76%**

Combined reduction for all treatments at the intersection.

**History:** 3 crashes observed from 2016-2020, including 1 serious injury collision.

**Expected Benefit:** 0.45 fewer crashes per year





Additional R/W may be required for this corner

Additional R/W may be required for this corner

Install new light pole

Install ped curb ramp

Remove parking spots

Install ped curb ramp

Install ped curb ramp

Remove parking spot

Remove light pole

Remove parking spot

Push curb / sidewalk back

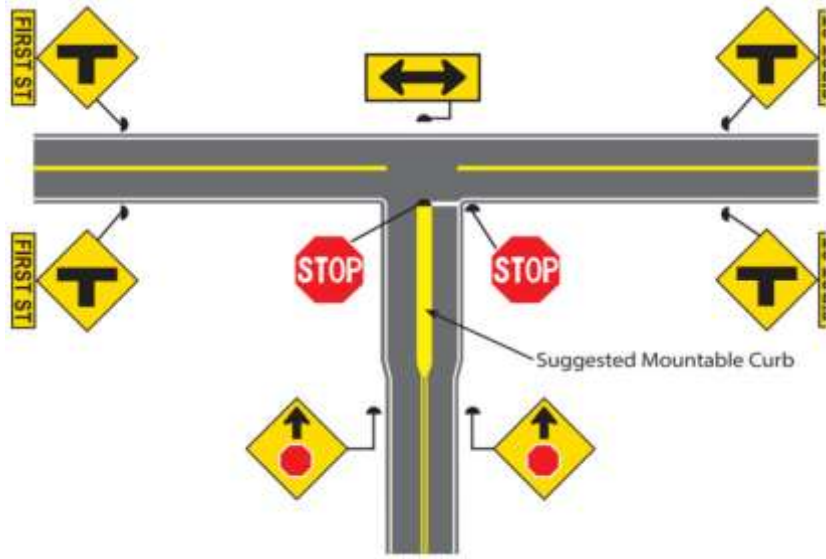
Fully mountable center island and splitter islands

Drop to left turn lane at Division St

Blue line is extents of circulatory lane needed for RAB and shows approximate extents where existing curbs / ramps would be impacted



# STOP-CONTROLLED INTERSECTIONS



- **13 Intersections**
- 37% of all crashes at unsignalized intersections
- 20% of fatal/serious injury crashes at unsignalized intersections
- Treatments: Signing, Pavement Marking



## Project Description

Install upgraded signing and pavement marking. Improve intersection lighting.



## Cost Estimate

\$130,000



## Benefit / Cost Ratio

91.34



## Time Frame

Medium-term



## Crash Reduction

**~38%**

**Combined reduction for the treatments described.**

**History:** 45 intersection collisions at the selected intersections from 2016-2020, including one fatal and one serious injury collision.

**Expected Benefit:** 3.39 fewer crashes per year

# ROADWAY DEPARTURE PROJECTS

- **40%** of fatal or serious injury collisions involve roadway departure
- **35%** of all collisions involve roadway departure

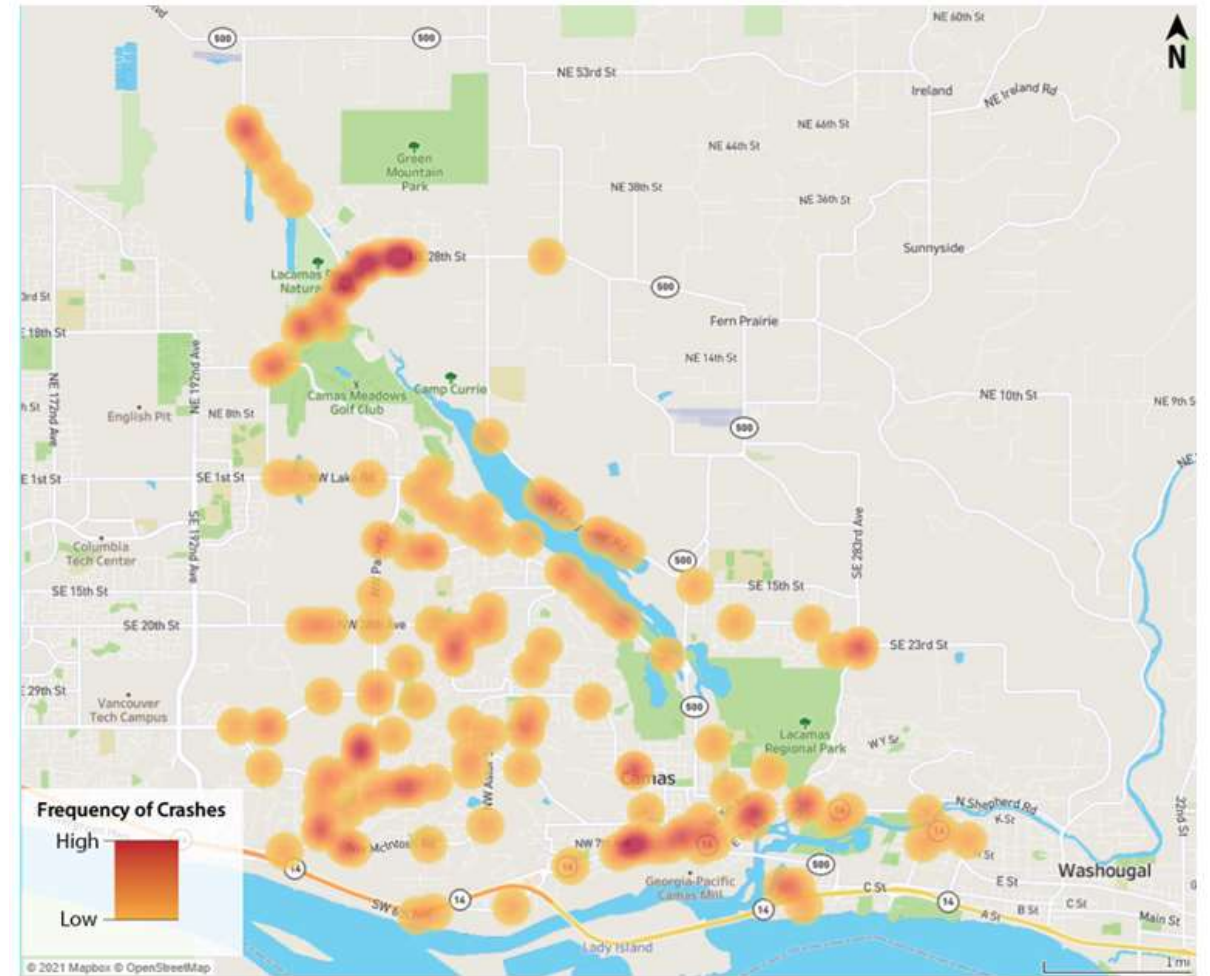
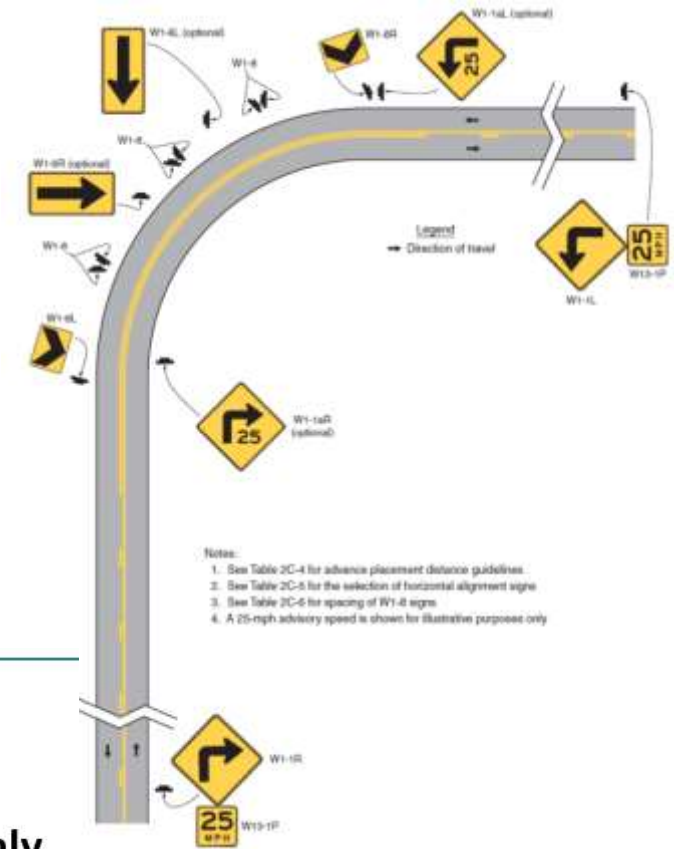


Figure C1. Roadway Departure Collisions, Camas, 2016-2020.

# CITYWIDE CURVE SAFETY IMPROVEMENTS

- Curve Inventory Study
- Design Sign Treatments, Modifications
- Install Signs



## Project Description

Provide current MUTCD standard curve warning signs or enhanced warning treatments at all horizontal curves and turns on arterials and major collectors



## Cost Estimate

\$160,000



## Benefit / Cost Ratio

66.74



## Time Frame

Short-term



## Crash Reduction

**15% Injury**

**7% Property Damage Only**

**History:** 108 curve crashes observed from 2016-2020.

**Expected Benefit:** 2.06 fewer crashes per year

# SYSTEMIC ROADWAY DEPARTURE TREATMENTS

## *9 Priority Corridors*

- 3rd Ave from Franklin to Crown Road & from Adams Street to Dallas Street
- NE Goodwin Rd from NW Friberg-Strunk St to NE 232nd Ave
- NW Lake Road
- NE Ingle Road
- Leadbetter Road from SE Everett Street to NE 9th Street
- Lewis and Clark Highway (SW 6th Avenue)
- NW Parker Street/NW Brady Road
- NW 6th Avenue
- NW McIntosh Road

# SYSTEMIC ROADWAY DEPARTURE TREATMENTS



Fixed Objects



Profiled Markings



Nighttime Delineation



Enhanced Signing



## Project Description

Install enhanced safety treatments, profiled pavement markings, nighttime delineation, and/or fixed object treatments along these corridors.



## Cost Estimate

\$2,148,109



## Benefit / Cost Ratio

15.53



## Time Frame

Medium-term



## Crash Reduction

**~43%**

**Combined reduction for the treatments described.**

**History:** 135 roadway departure collisions along the select corridors from 2016-2020, including five fatal and 3 serious injury collisions.

**Expected Benefit:** 11.57 fewer crashes per year



## **CURRENT STATUS & NEXT STEPS**



# CURRENT STATUS & NEXT STEPS

- **February 2022: Prepare WSDOT City Safety Program Grant Application**
- **March 4, 2022: Submit Grant Application**
- **Summer/Fall 2022: Applications Reviewed by WSDOT**
- **Fall 2022 and Beyond**
  - Identify other needs
  - Seek out other grants: Safe Routes to School, Ped/Bike, TIB, etc.
  - Summer 2023: Update Safety Plan for 2024 City Safety Program

# THANK YOU

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