

# Amisigger Road at Hwy 224 Intersection Improvements



Eagle Creek-Barton CPO

April 13, 2023

# Timeline



- Design: June 2022 - Spring 2024
  - 30%, 60%, 90%
  - Work to minimize impacts to adjacent properties
- Right of way (ROW): August 2023 - Spring 2024
  - Process
    - ROW staff contacts property owners
    - Staff will follow the ROW acquisition process
- Construction: Spring 2024 - Summer 2025



# What we'll be doing



## Reducing delays

- The Estacada, Gresham and Sandy areas are growing
- Increased commuter traffic
- Anticipating future traffic needs now

## Improving safety

- Control conflicts in intersection
- Safer to turn onto Hwy 224
- Easier to turn on Hwy 224





# Traffic Signal vs Roundabout



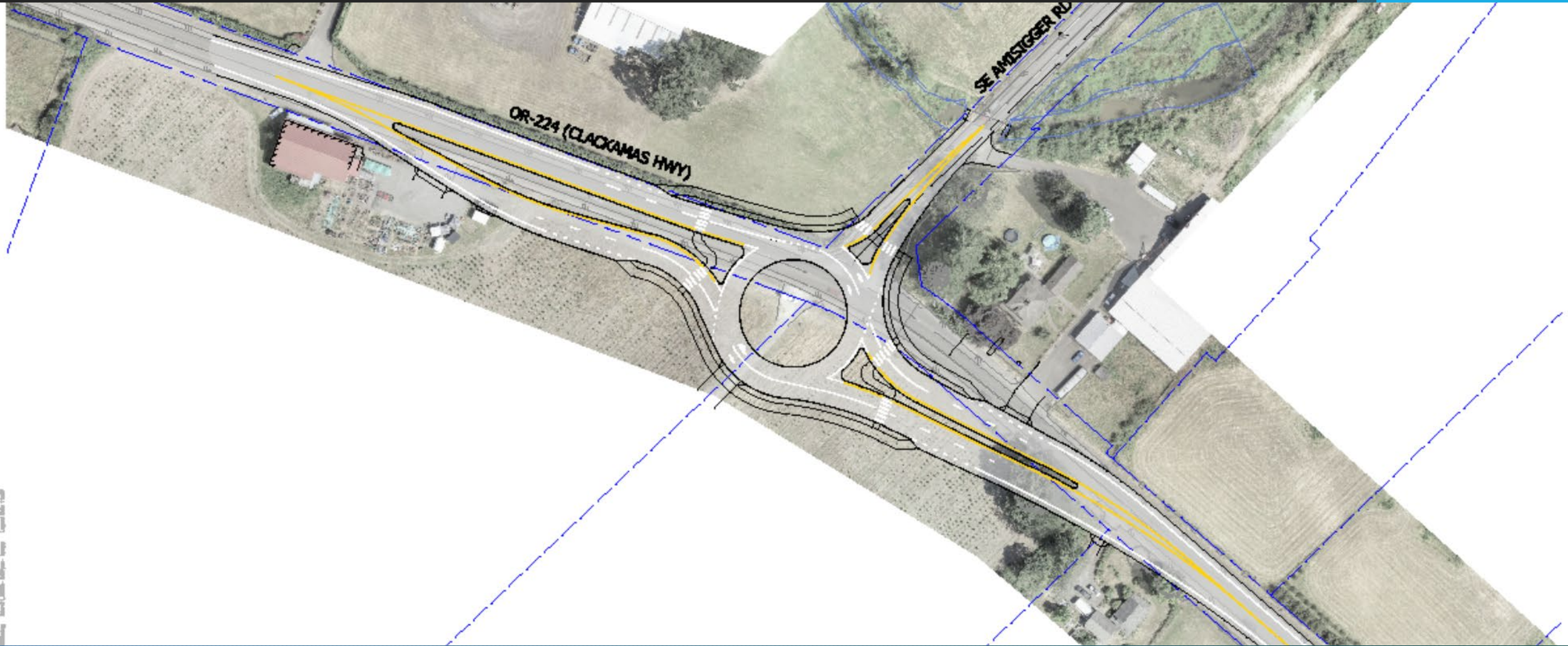
## Traffic signal

- + Lower construction costs
- + Allows dedicated time for vehicles turning onto Hwy 224
- + Greater capacity for future growth if growth surpasses roundabout capacity
- Crashes tend to be more severe
- Creates delays at off-peak travel times
- Potential for higher speed crashes if a driver runs light
- More long-term maintenance costs
- + Smaller project area

## Roundabout

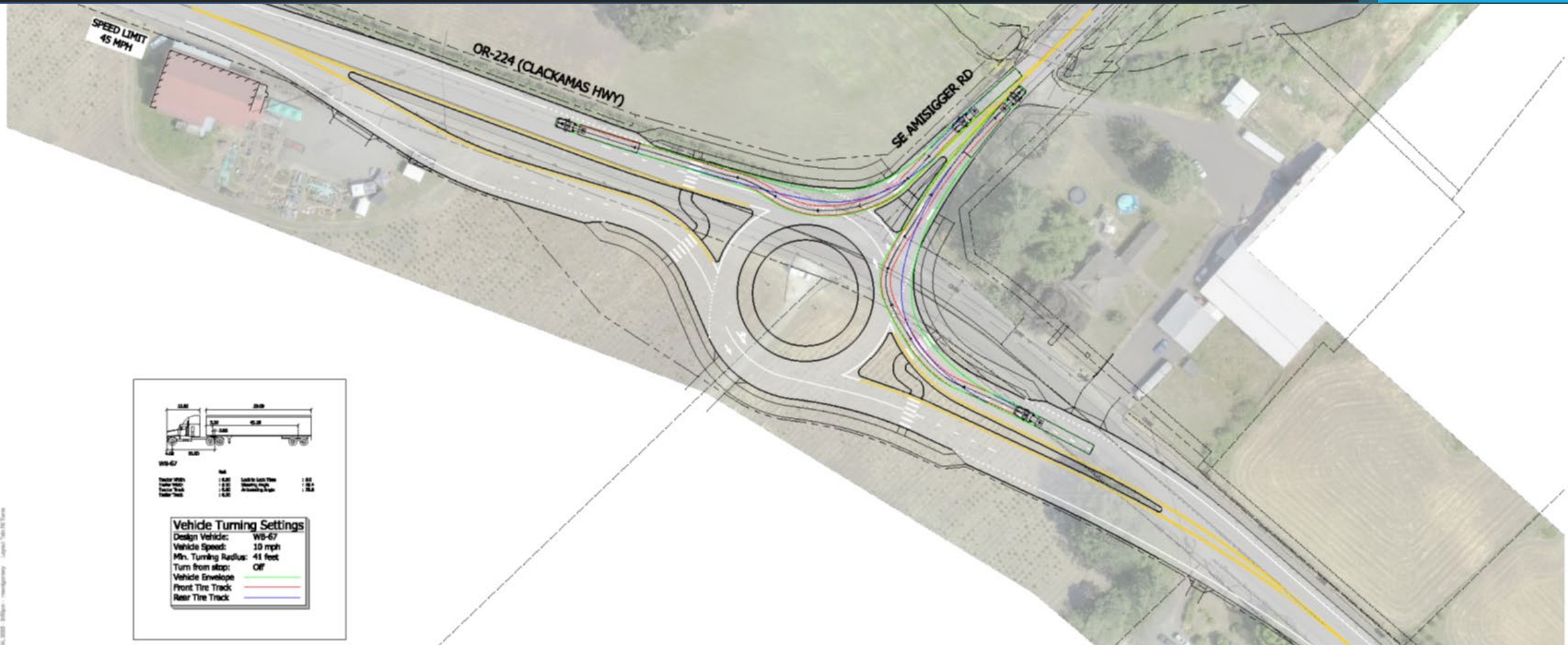
- Higher construction costs
- + Traffic flows 30% faster at peak times compared to traffic signal intersection; no delays at off-peak travel times
- + Fewer conflict points, slower speeds, easier decision-making (lower crash severity i.e. less injuries)
- + Eliminates severe crash types - most head-on, left-turning across oncoming traffic, and right angle crashes
- + Less long-term maintenance costs
- Larger project area

# Multi-lane roundabout concept drawing

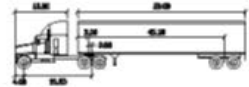
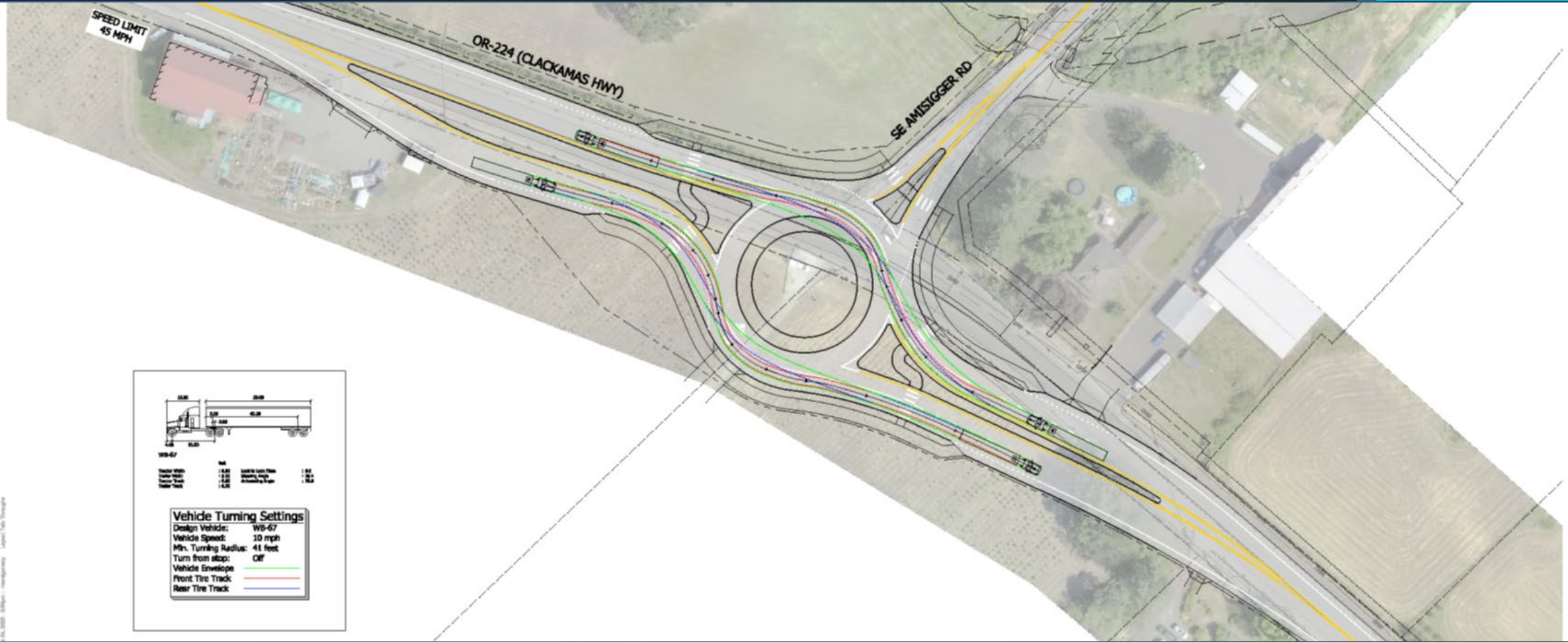




# Design checks: Right turn travel



# Design checks: Eastbound/westbound travel



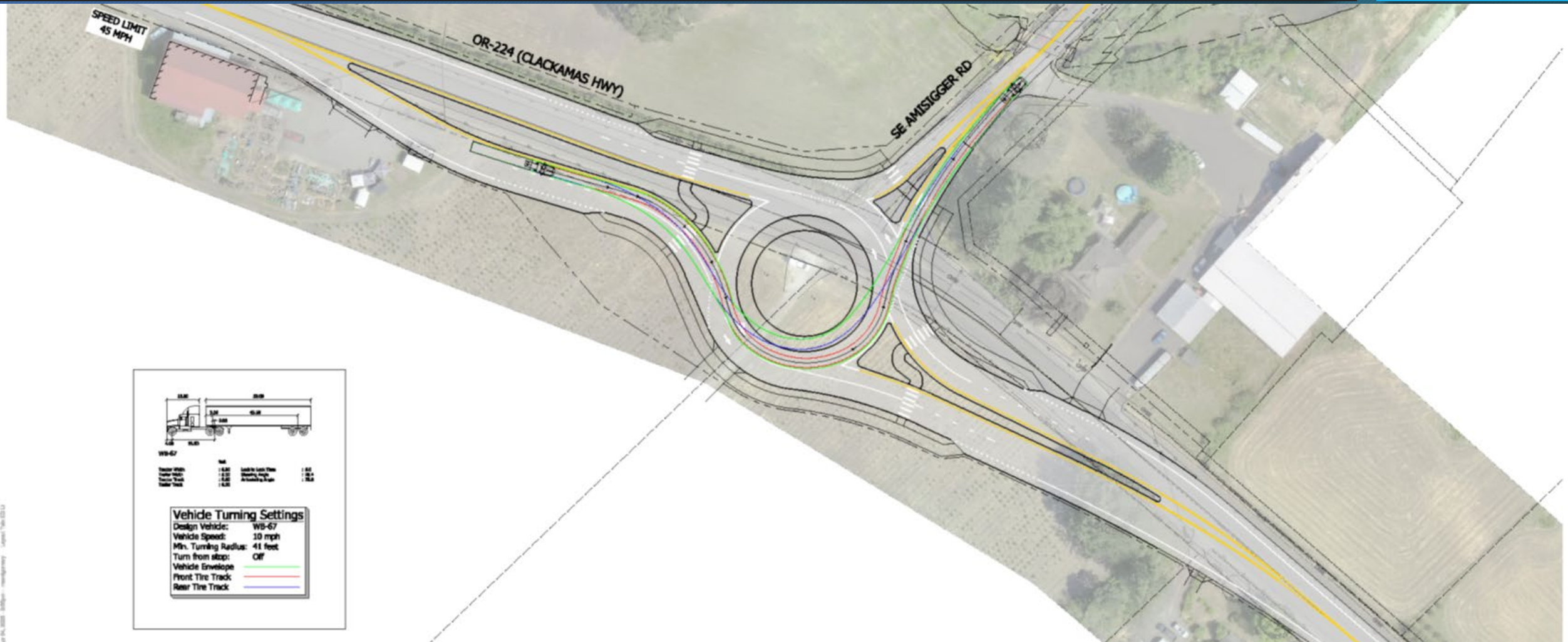
WB-67	ft	ft	ft
Trailer Wheel	1.00	10.00	1.00
Trailer Wheel	1.00	10.00	1.00
Trailer Wheel	1.00	10.00	1.00

### Vehicle Turning Settings

- Design Vehicle: WB-67
- Vehicle Speed: 30 mph
- Min. Turning Radius: 41 feet
- Turn from stop: Off
- Vehicle Envelope: —
- Front Tire Track: —
- Rear Tire Track: —



# Design checks: Eastbound left turn travel

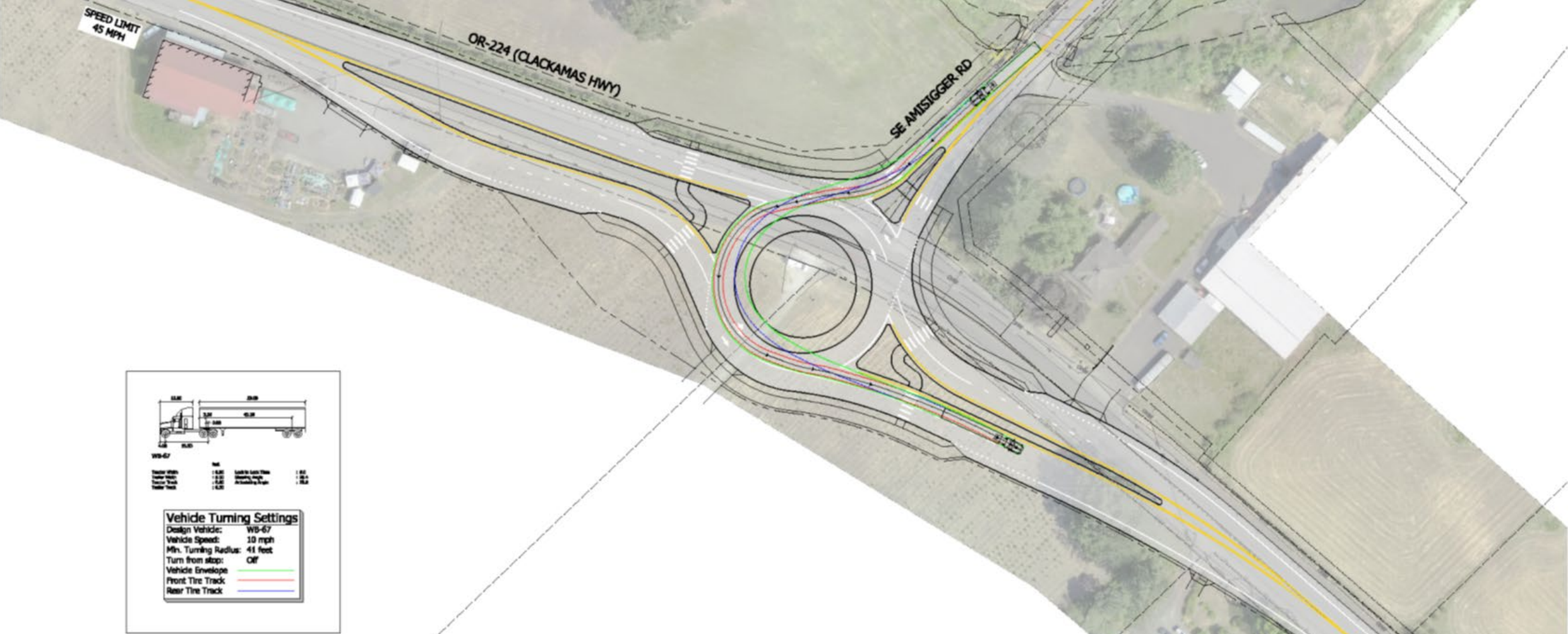


WB-67			
Parameter	Value	Parameter	Value
Wheelbase	10.00	Overall Length	30.00
Front Overlap	10.00	Wheelbase	10.00
Rear Overlap	10.00	Overall Length	30.00

- Vehicle Turning Settings**
- Design Vehicle: WB-67
  - Vehicle Speed: 10 mph
  - Min. Turning Radius: 41 feet
  - Turn from stop: Off
  - Vehicle Envelope: Green line
  - Front Tire Track: Red line
  - Rear Tire Track: Blue line



# Design checks: Southbound left-turn travel

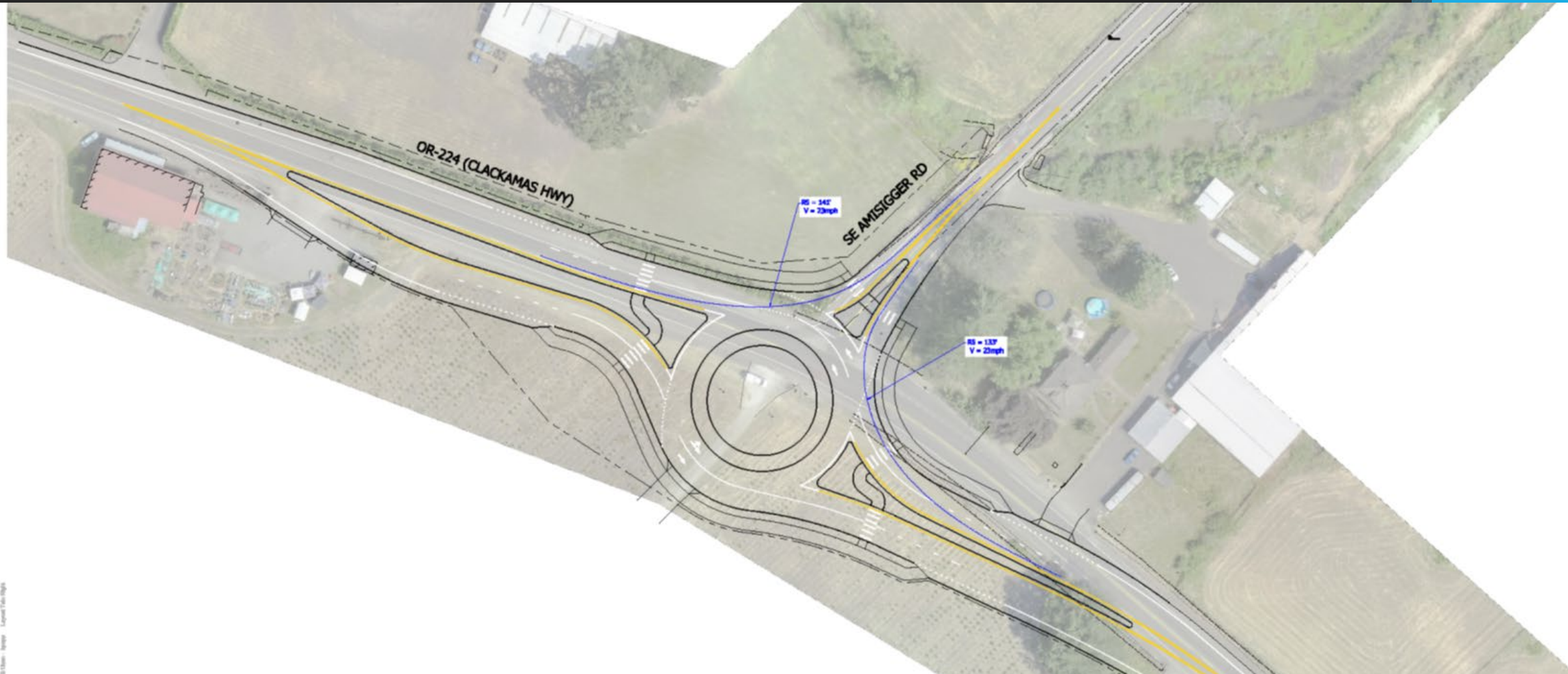


WB-67	Int.	Ext.	Int.	Ext.
Wheel Spc	10.00	Wheel Spc	10.00	
Wheel Spc	10.00	Wheel Spc	10.00	
Wheel Spc	10.00	Wheel Spc	10.00	

### Vehicle Turning Settings

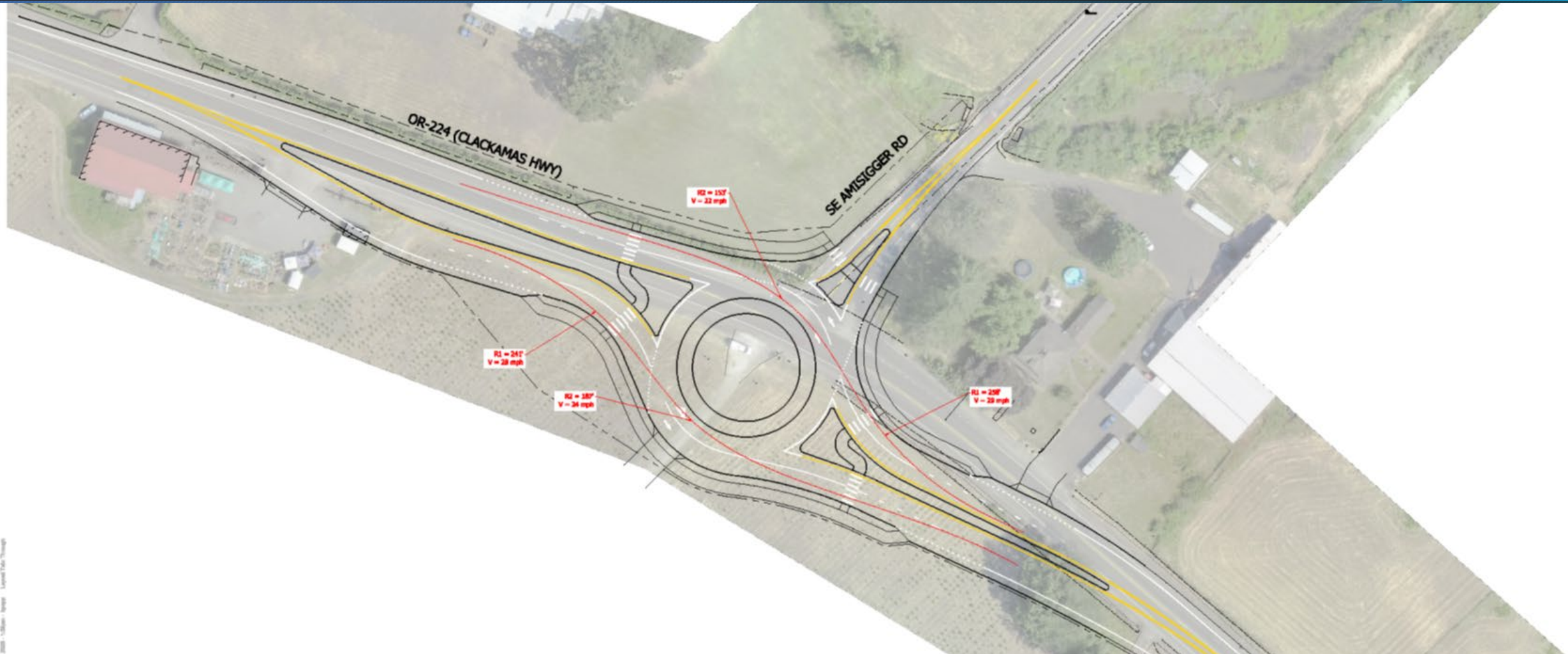
- Design Vehicle: WB-67
- Vehicle Speed: 10 mph
- Min. Turning Radius: 41 feet
- Turn from stop: Off
- Vehicle Envelope: —
- Front Tire Track: —
- Rear Tire Track: —

# Design checks: Right turn fastest path

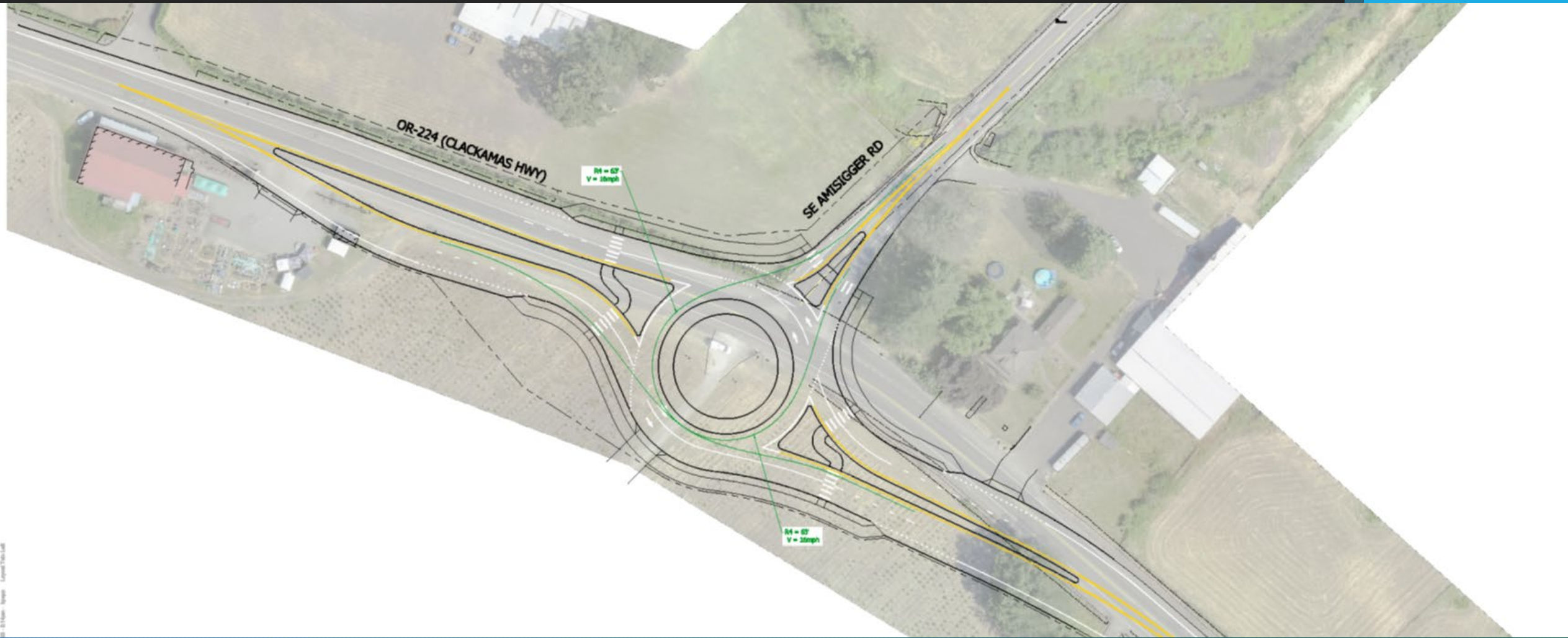




# Design checks: Through fastest path

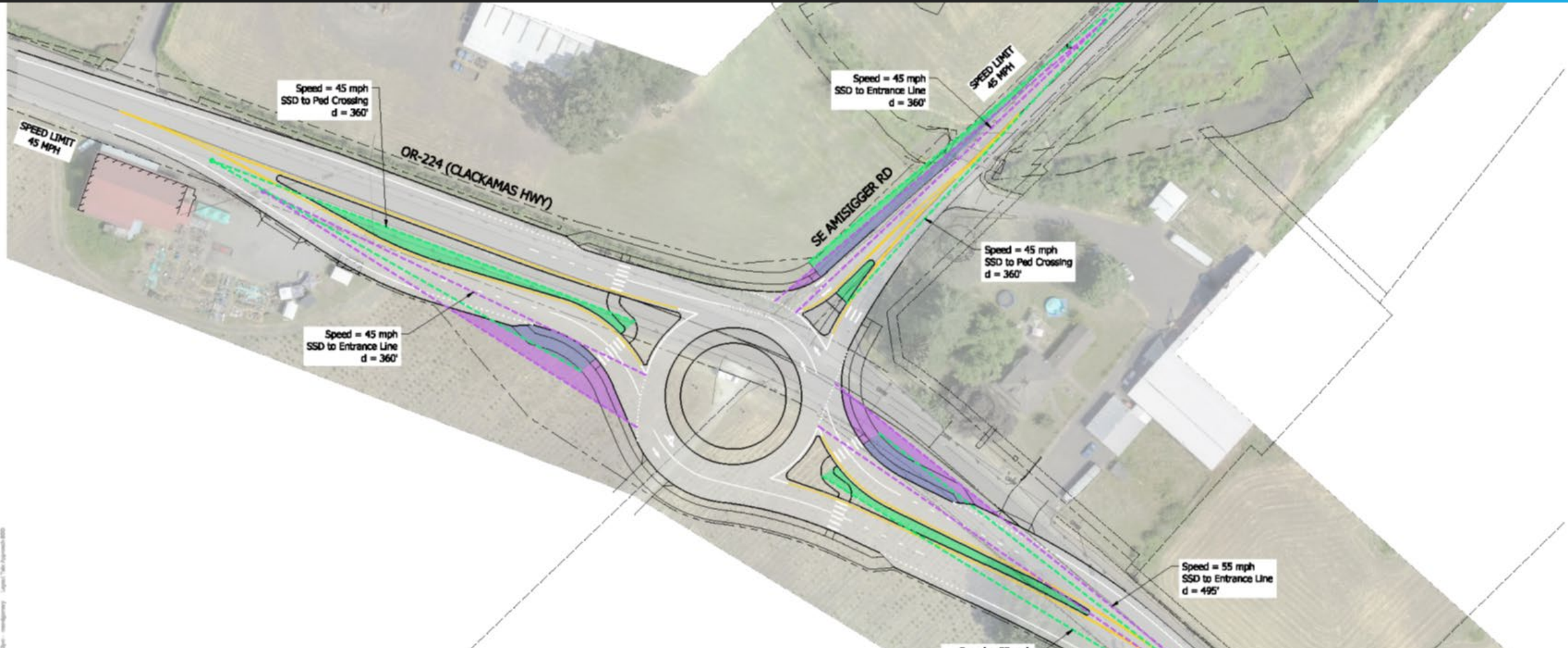


# Design checks: Left turn fastest path

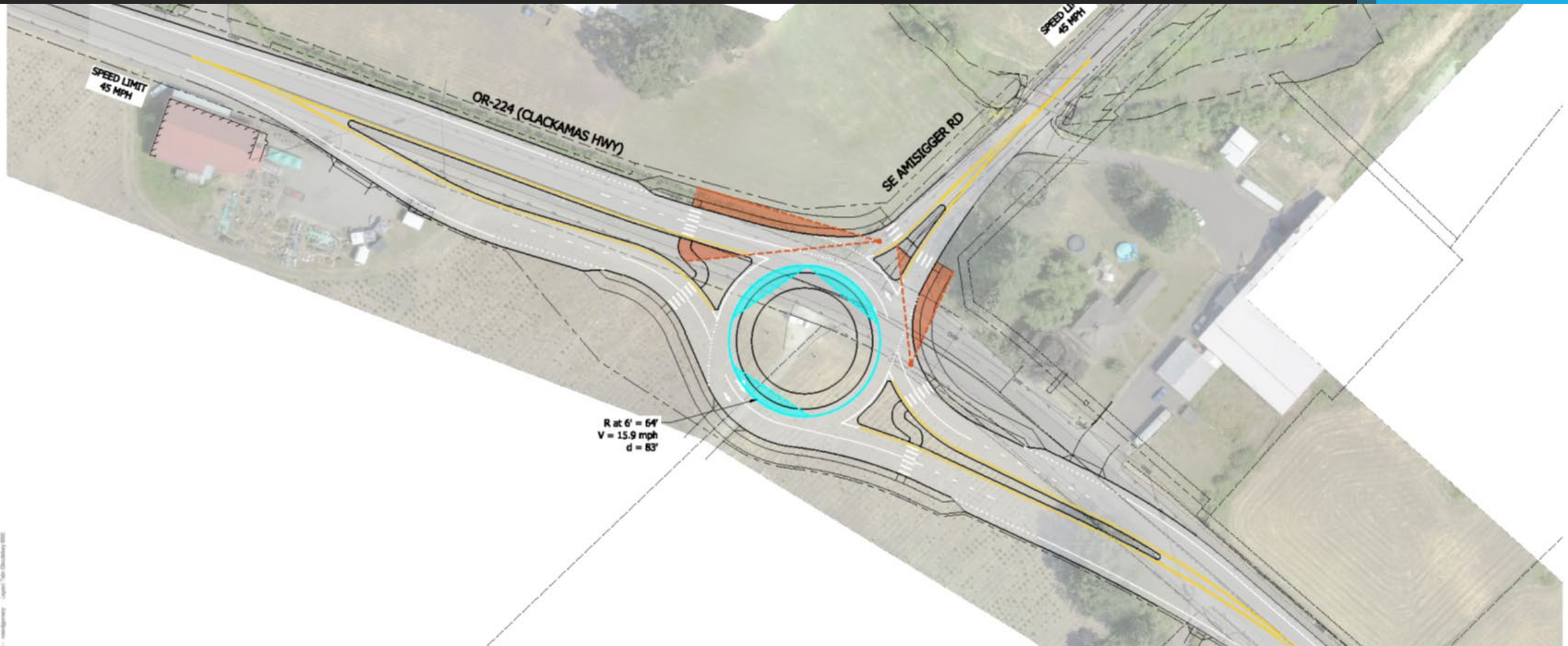




# Design checks: Stopping sight distance

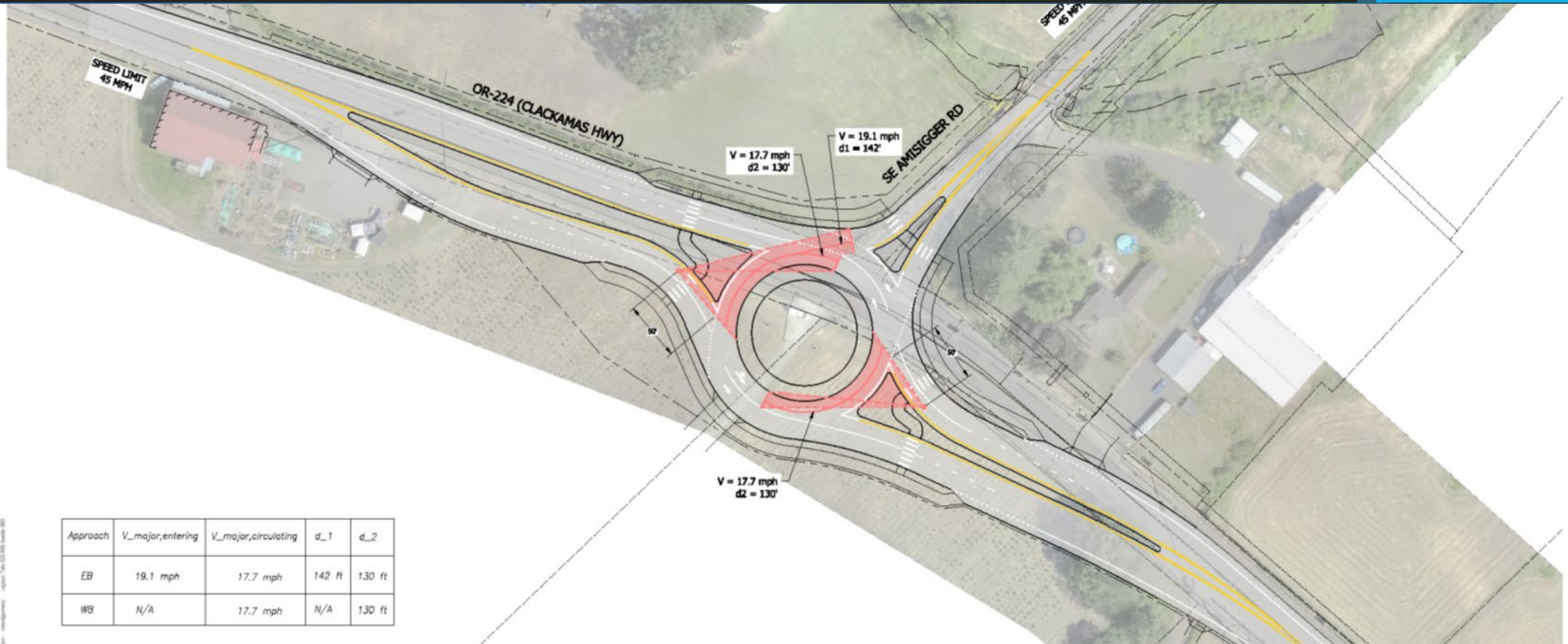


# Design checks: Cross walk sight distance

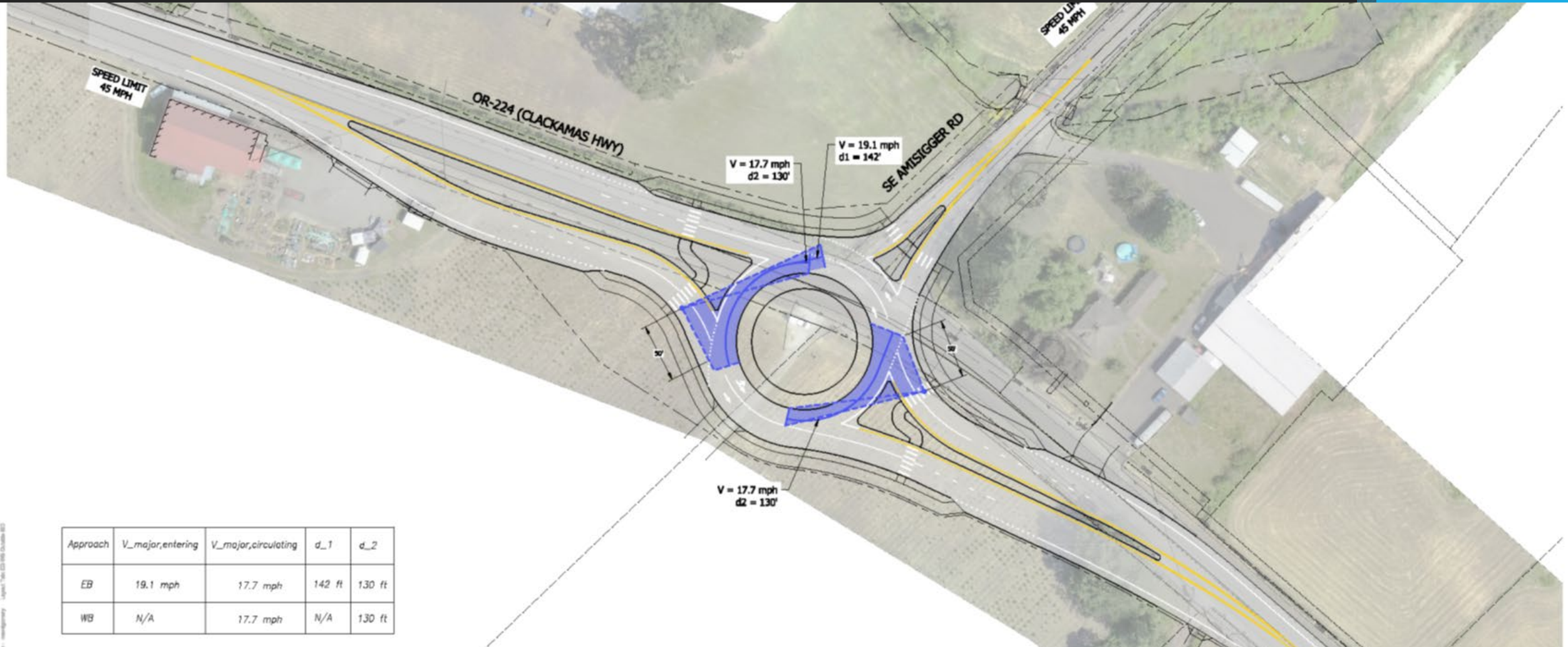




# Design checks: Inside lane sight distance



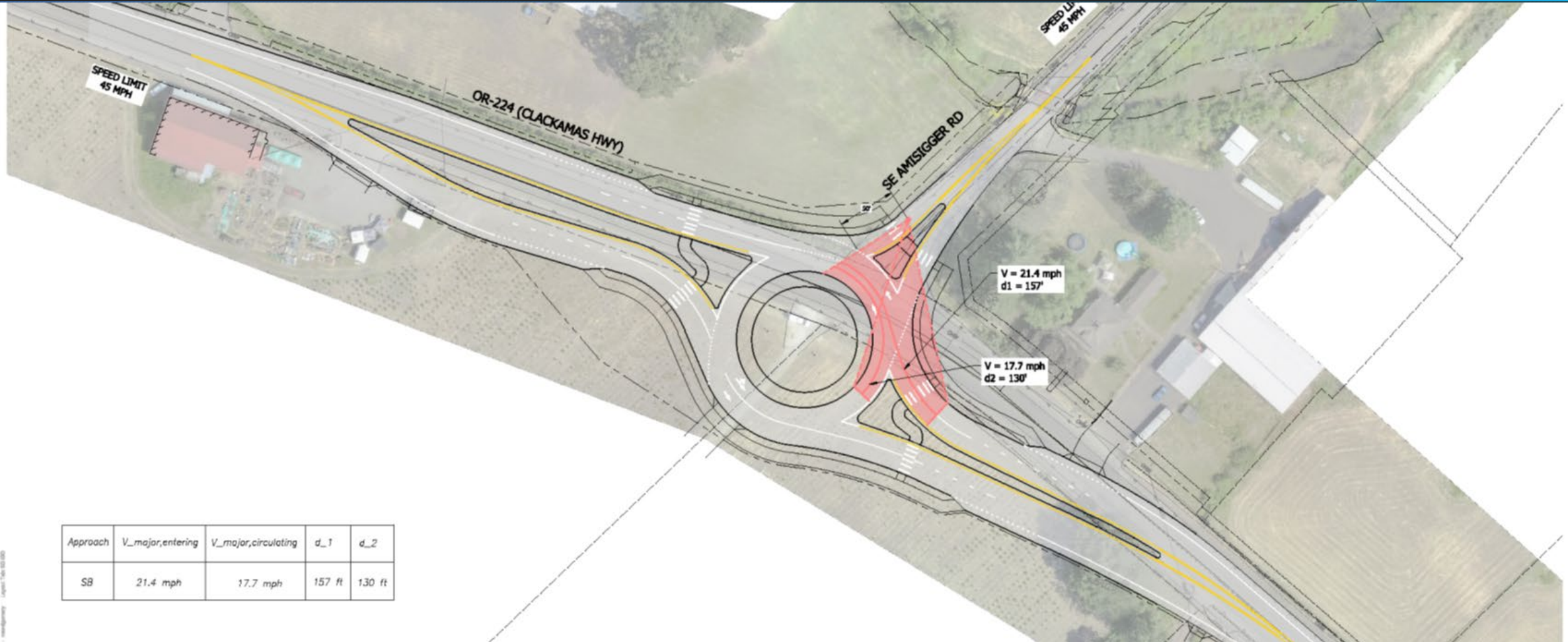
# Design checks: Outside lane sight distance



Approach	$V_{major,entering}$	$V_{major,circulating}$	$d_1$	$d_2$
EB	19.1 mph	17.7 mph	142 ft	130 ft
WB	N/A	17.7 mph	N/A	130 ft

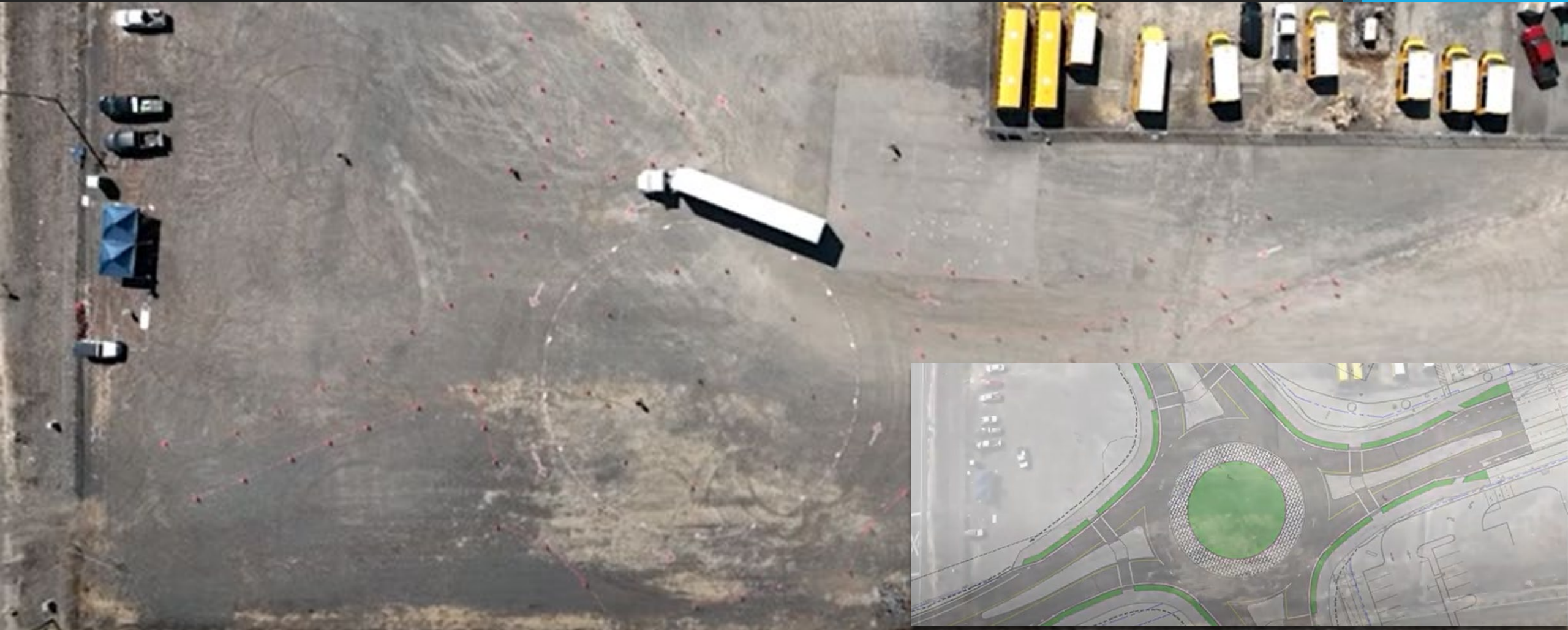


# Design checks: Southbound sight distance



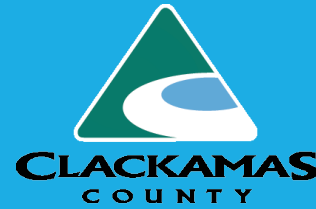
Approach	V <sub>major,entering</sub>	V <sub>major,circulating</sub>	d <sub>1</sub>	d <sub>2</sub>
SB	21.4 mph	17.7 mph	157 ft	130 ft

# Design checks: In the field proof of concept





# Funding: \$5.4 million



## Community Road Fund

Projects to increase safety, relieve congestion and maintain local roads

- \$30/year vehicle registration fee
- Consistent source of local, countywide revenue to complete projects most important to our residents and businesses
- Can only be used for road projects in Clackamas County

## Nearby CRF projects

- Safety:
  - Duus Road / Eagle Creek Road Intersection Improvements
  - 282nd/Haley Road Intersection Safety Improvements
  - Bluff Road / 327th Ave. Intersection Enhancements
- Paving:
  - 312th Dr
  - Church Road

[www.clackamas.us/transportation/crf](http://www.clackamas.us/transportation/crf)





## Amisigger Road at Hwy 224 Intersection Improvements

[www.clackamas.us/engineering/amisigger-hwy-224](http://www.clackamas.us/engineering/amisigger-hwy-224)

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