

Barbur Crossroads Safety Project

Presentation to: Crestwood Neighborhood
Association

January 9, 2019
Portland, Oregon



Meeting Outline



- Barbur Crossroads Safety Project priorities
- Nearby ongoing transportation projects
- Preliminary analysis completed to date
 - Safety
 - Operations
- Barbur Crossroads Safety Project elements
- Schedule and Q/A Discussion

Barbur Crossroads Safety Project Priorities



ODOT “Programmatic” Priorities

1. Pedestrian and bicyclist safety
2. Vehicle safety
3. Vehicle operations

Important constraints and considerations

1. Minimize “tear-out” with SW Corridor Project
2. Financial constraints of available project funding
3. Provide high benefit-cost rate of return

Related Projects



- SW Corridor (TriMet, Metro)
- PBOT projects
 - Capitol Hwy Project (north of Crossroads) @ 60% Plans
 - Capitol Hwy Road Diet (south of Alfred St. and Crossroads)
- Previous planning work
 - Barbur Road Safety Audit (2016)
 - Barbur Concept Plan (2013)
 - Barbur High Crash Corridor (2012)
 - Barbur Streetscape Study (1999)

Project Development



- Incorporated neighborhood feedback from multiple projects in SW Portland over several years
- Close coordination and multiple meetings with SW Corridor and PBOT staff over the past year
- Safety analysis
- Multimodal (pedestrian/bicycle/transit/vehicle) operations analysis
- Reviewed alternatives through a combination of conceptual design and analytical modeling methods

Existing Conditions Analysis



- Safety analysis
- Field visits (AM and PM time periods) when schools (PPS, PCC) were in session
- Traffic analysis
 - Multiple days of traffic counts/observations
 - Calibration to actual conditions
- Application of several analytical tools and contextual design “best practices”

SW Taylors Ferry

2016 Top 10% SPIS

64 crashes (2 severe injuries)

- 25% occurred during dark or low light conditions

SW Barbur Blvd (99W)

33 crashes

- 20 of 33 (61%) SB left-turn
- 12 of 33 (36%) in dark or low-light conditions
- 3 crashes where a pedestrian was struck (minor injuries)

2016 Top 10% SPIS

161 crashes

- 2 fatal crashes, 3 severe injuries
- 26 of 161 (16%) related to NB left-turn
- 51% rear-end or side-swipe crashes
- 3 crashes where a pedestrian was struck
- No bike crashes

SW Capitol Hwy

SW Huber

2007 - 2016 (10 years)

SW Taylors Ferry

Intersection

12 crashes
(1 severe injury,
5 minor injuries)

I-5 SB Exit

50 crashes (11 minor injuries)

- 64% Turning related
- 24% Left turn related
- 1 bike crash (minor injury)

I-5 SB Entrance

Exit Ramp

4 crashes (1 minor injury)

SW Barbur Blvd (99W)

SW Huber

SW Capitol Hwy

2007 - 2016 (10 years)

Traffic Results – Existing Conditions

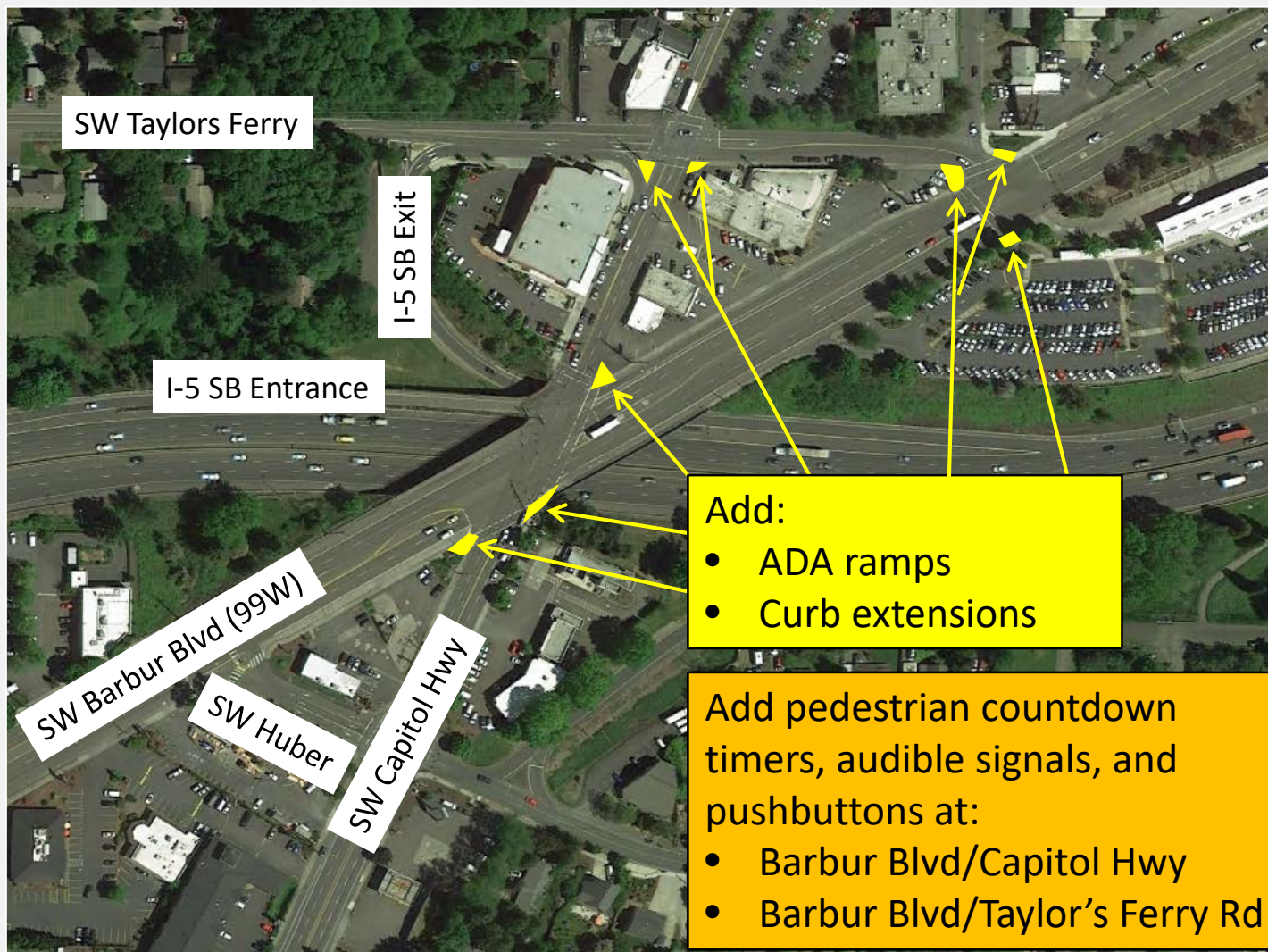


- Barbur Blvd/Capitol Hwy
 - At/near capacity in the AM and PM peak hours
 - Long vehicle queues affect adjacent intersections
- Capitol Hwy/Taylor’s Ferry Rd
 - At/near capacity in the AM and PM peak hours
 - Long vehicle queues on Taylor’s Ferry and SB Capitol Hwy
- Taylor’s Ferry Rd/Barbur Blvd
 - At/near capacity northbound through movement (AM) and northbound left movement (PM)
 - Long vehicle queues on eastbound Taylor’s Ferry Rd and the northbound left turn from Barbur



Planned Improvements

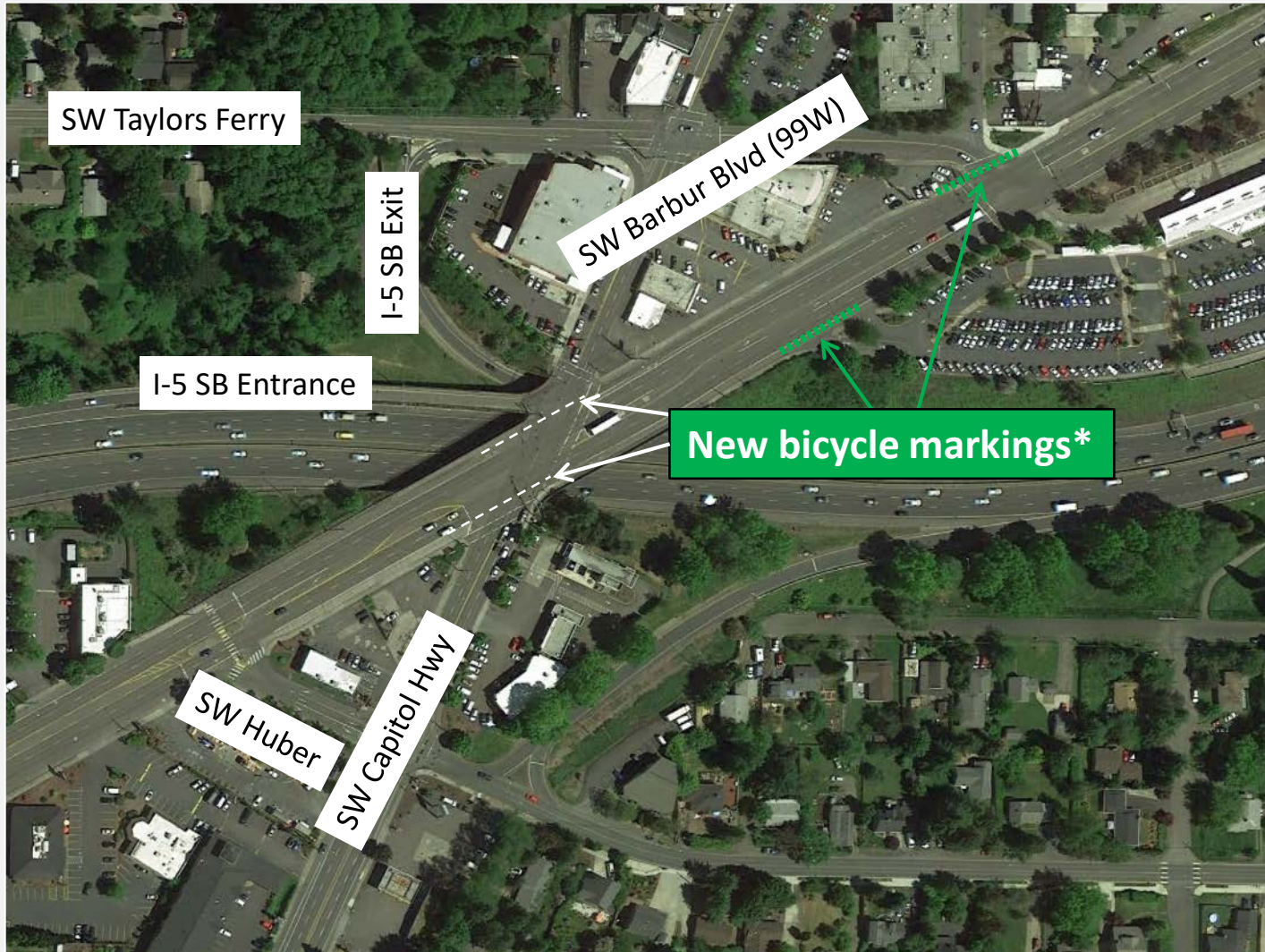
Pedestrian Safety – ADA Improvements



Pedestrian/Bicyclist Safety – Sidewalk



Bicycle Safety – Green Bicycle Markings



*Proposed locations

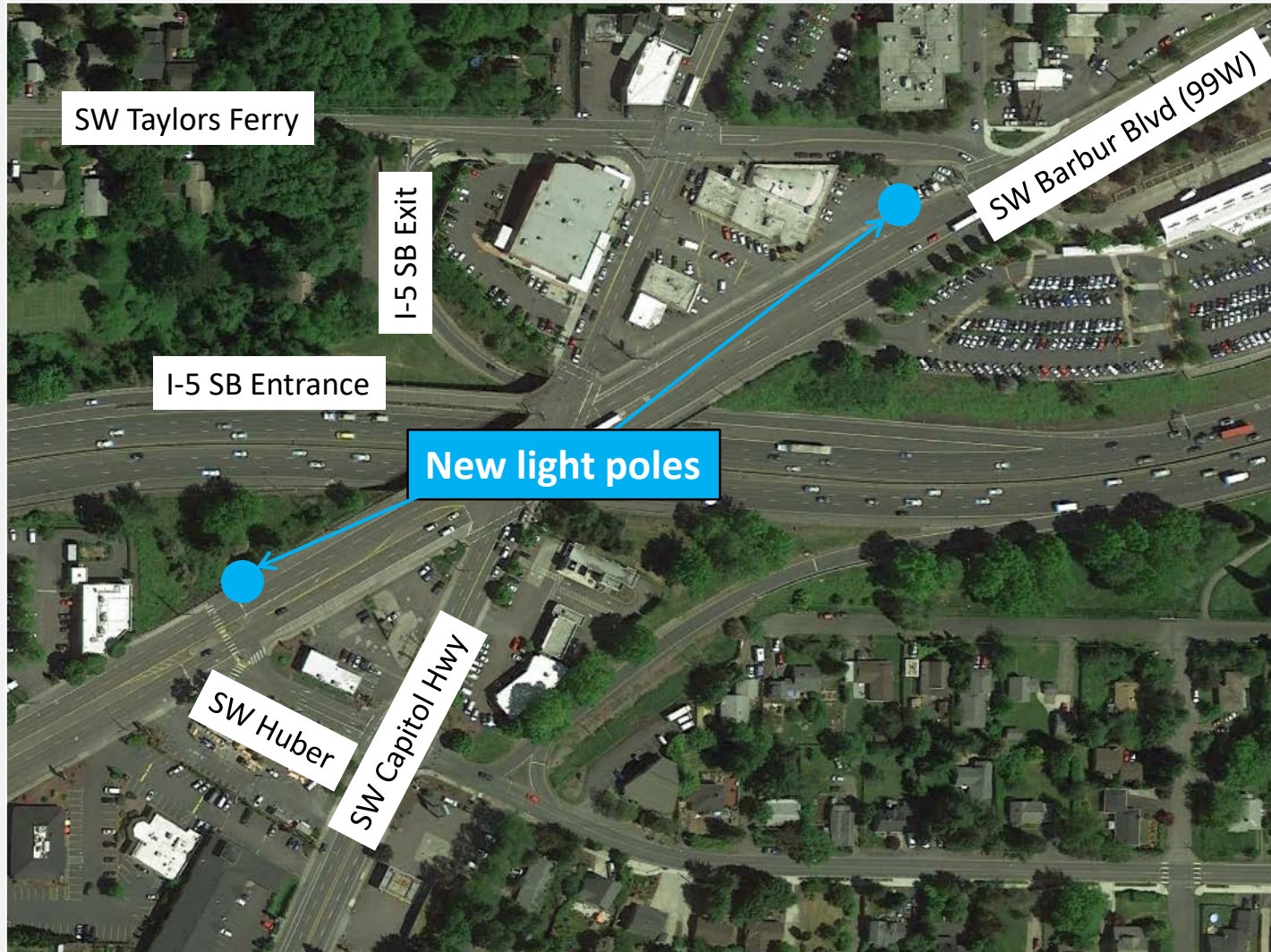
Pedestrian/Bicycle/Transit Wayfinding



- Low stress route
- Safe Route to School

- Complete sidewalk network

Safety Improvements – Illumination

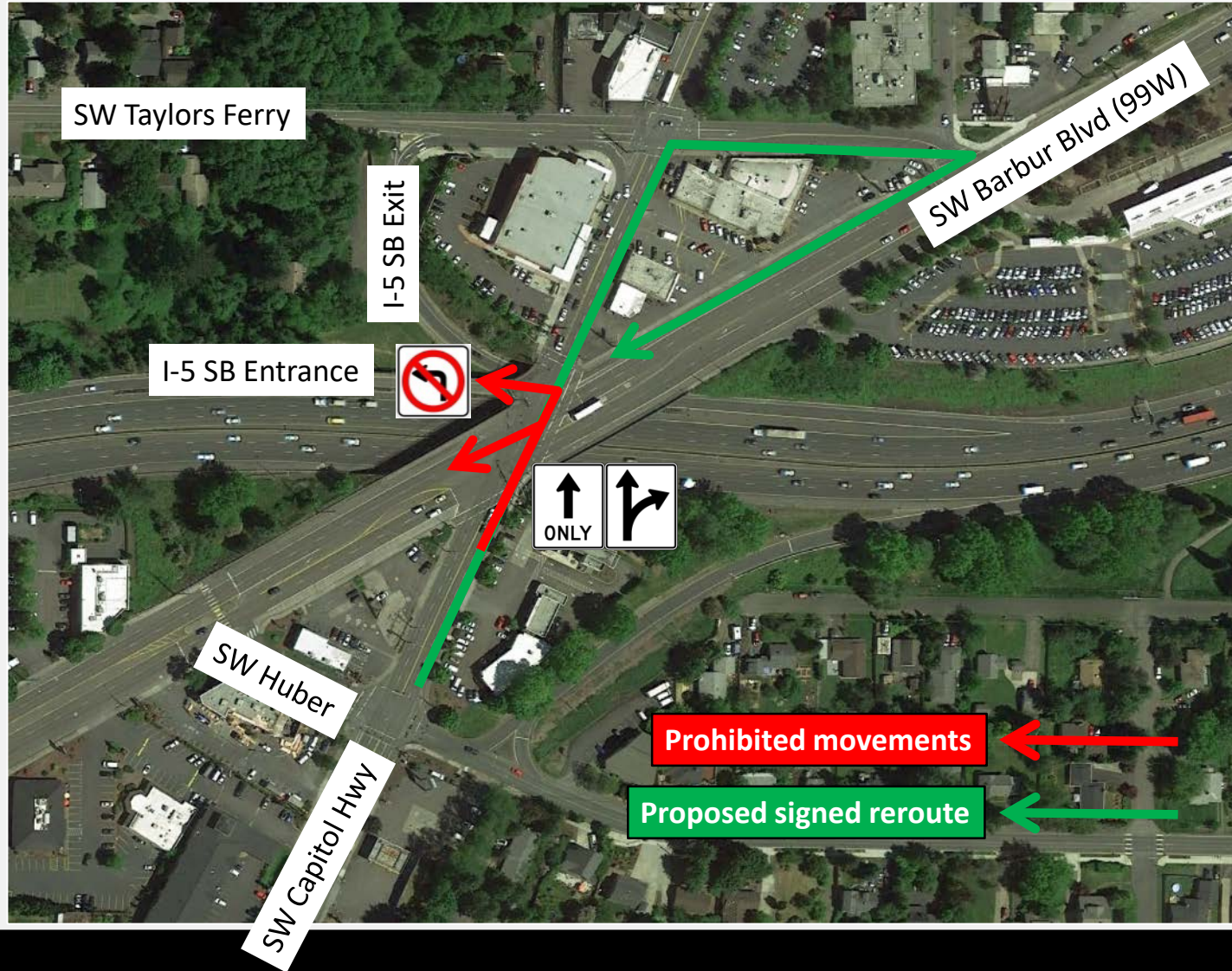


Vehicle Safety Improvements



Prohibit northbound left turns from Capitol Hwy to:

- SB I-5
- SB Barbur Blvd



Traffic Results – Left Turn Prohibition



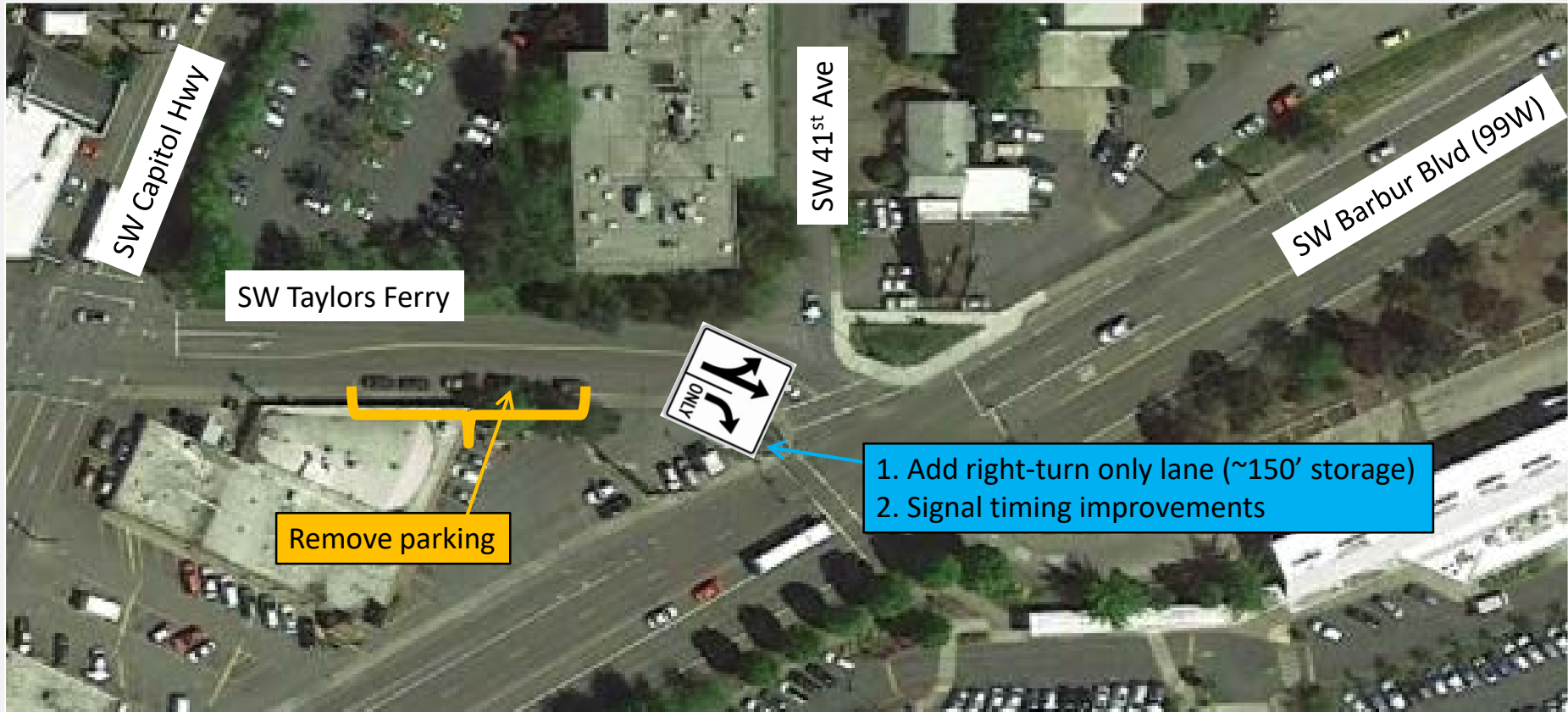
- Barbur Blvd/Capitol Hwy
 - Prohibiting NB left turns would improve overall intersection performance
 - Greatly improves traffic flow on NB Capitol Hwy
- Capitol Hwy/Taylor’s Ferry Rd
 - Rerouted traffic (northbound right-turn) would not conflict with eastbound right-turn and southbound through traffic
- Taylor’s Ferry Rd/Barbur Blvd
 - New eastbound right-turn lane improves overall intersection operations and eastbound queuing
- Why not a “protected” left-turn arrow?

Why Not a “Protected” Left-Turn Arrow?

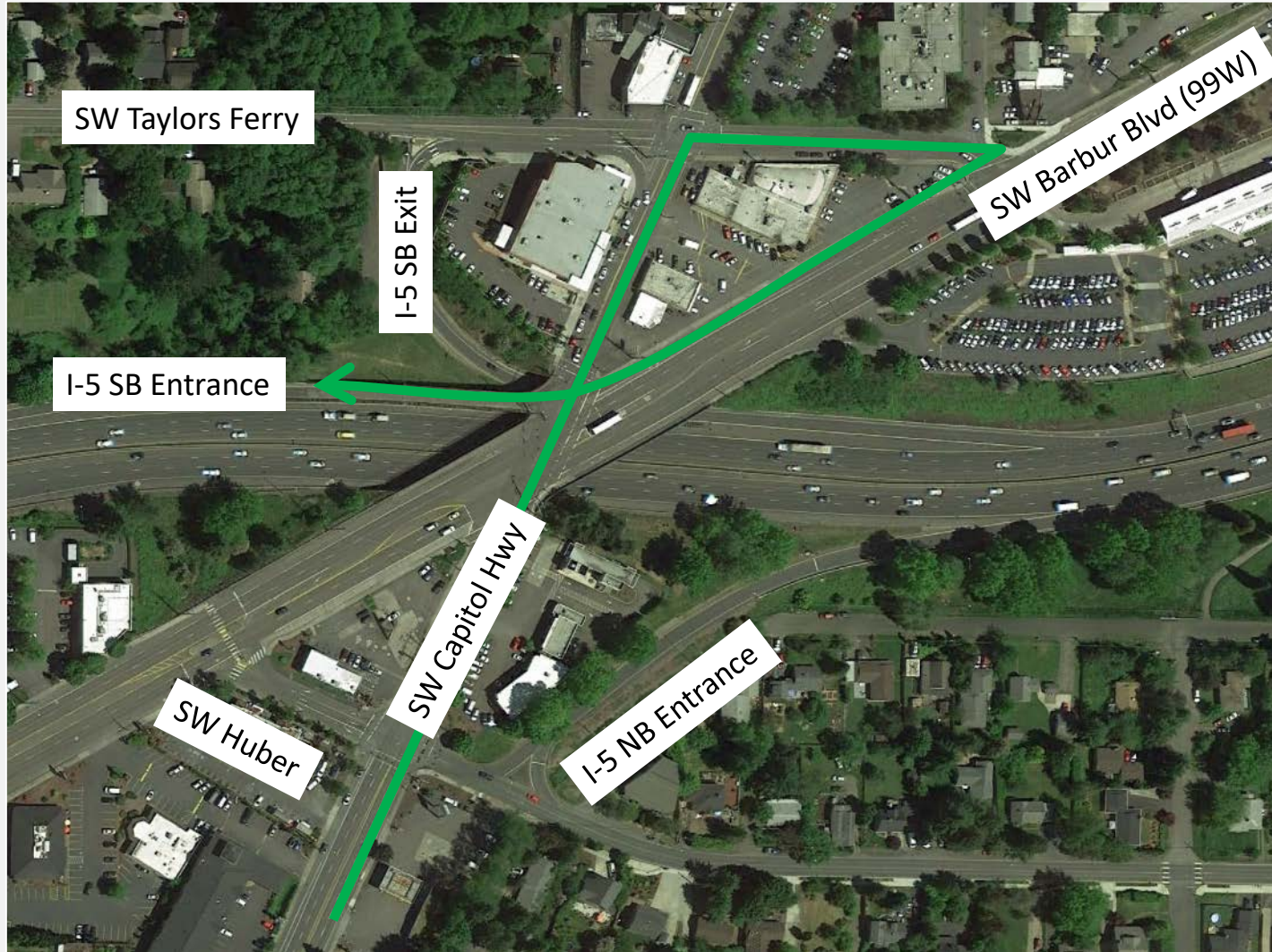


- This option was studied and was not selected because:
 - Intersection geometry
 - Would need dedicated lane on northbound Capitol Hwy that would function as a “trap” lane
 - Northbound through and right-turning Capitol Hwy traffic would need to share a single lane
 - Operational and queuing impacts
 - Barbur Blvd/Capitol Hwy, I-5 exit ramp/Taylor’s Ferry Rd, and Barbur Blvd/Huber St intersections
 - Reduced capacity for southbound Capitol Hwy
 - Would likely create more traffic demand at Barbur Blvd/Capitol Hwy intersection

Vehicle Operations Improvements



Improve Vehicle Wayfinding Signs



Schedule and Q/A Discussion



- Project delivery schedule
 - Spring 2019: Preliminary design
 - Winter/Spring 2020: Final design
 - Spring/Summer 2021: Project construction
- Community outreach
 - Crestwood NA (today)
 - SWNI Transportation Committee (TBD)
 - Open house: Spring 2019
- Discussion/questions/comments



Taylor's Ferry

I-5 SB Exit

I-5 SB Entrance

Interstate 5

Barbur Blvd (99W)

I-5 NB Entrance

Capitol Hwy

Huber