

West Marginal Way SW

Seattle Bike Advisory Board

sw Alaska st

W Marginal Way

ANNEHEDL LINDHOLME & CULTURAL CENTER

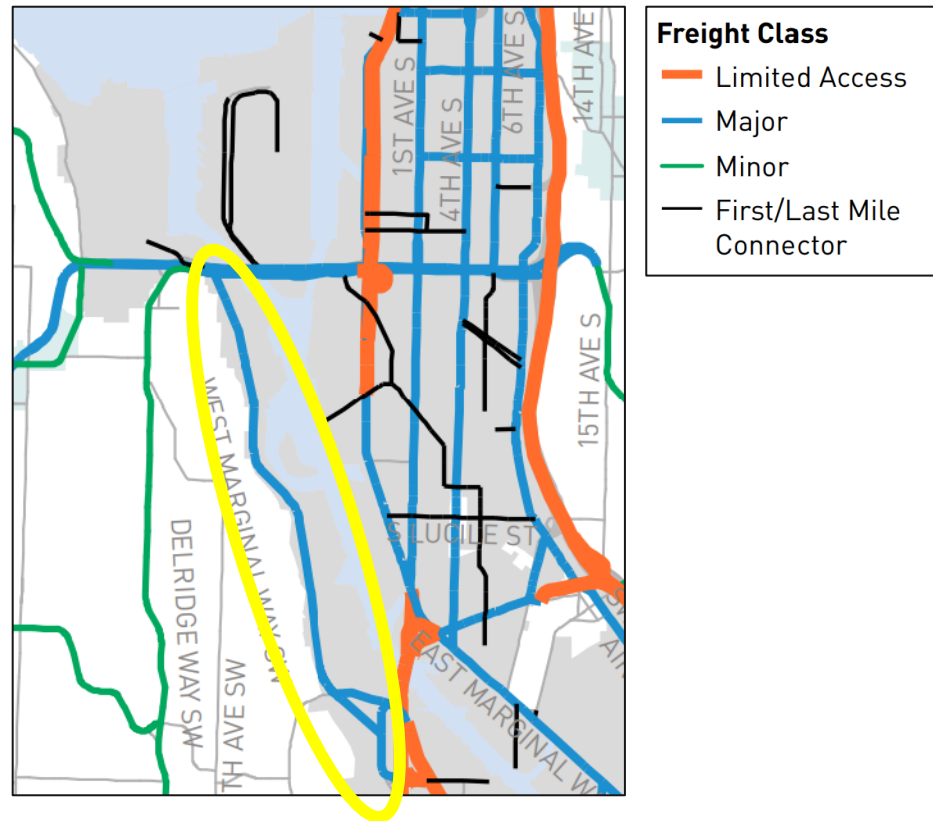


Agenda

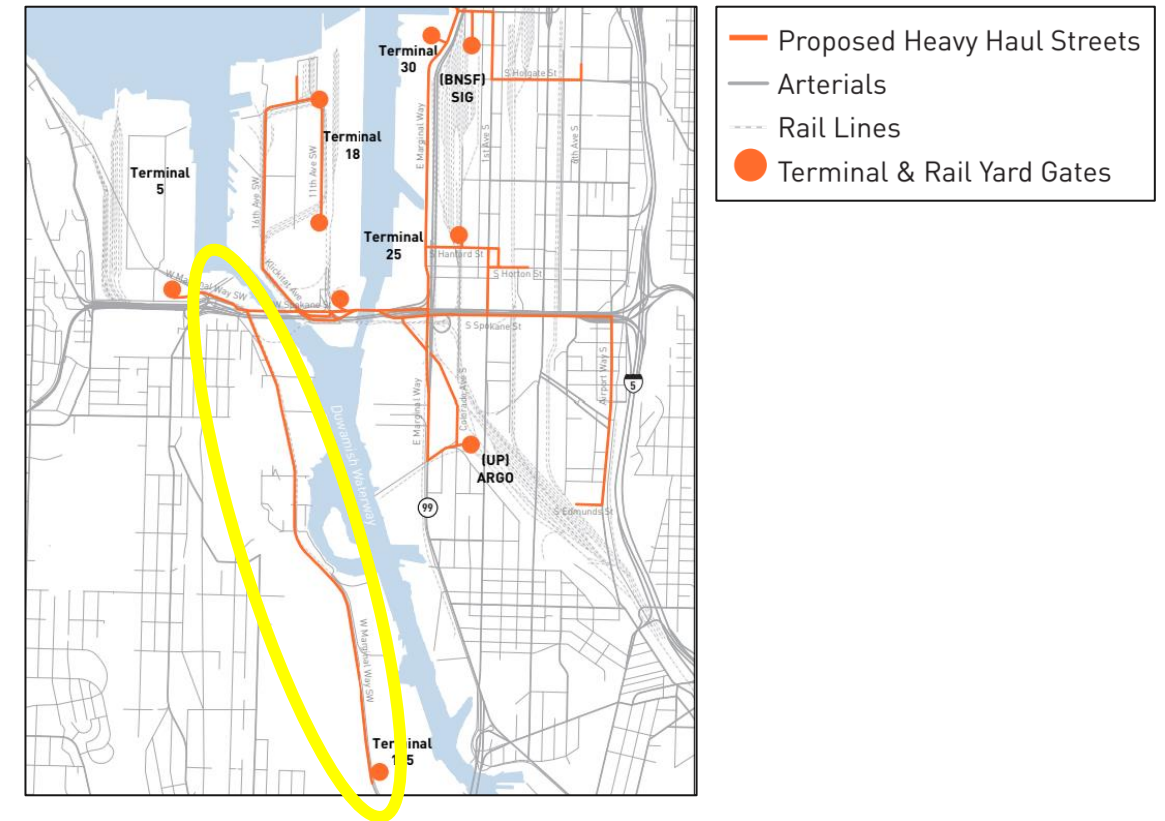
- W Marginal Way SW (WMW) context and background
- 2021 construction projects
- 2019/2020 installed projects
- Proposed designs for the southbound curb lane
- Analysis of data and constraints
- SDOT preferred design options and assessment
- Public/stakeholder engagement and final decision timeline

WMW Context - Freight Master Plan

Major truck street

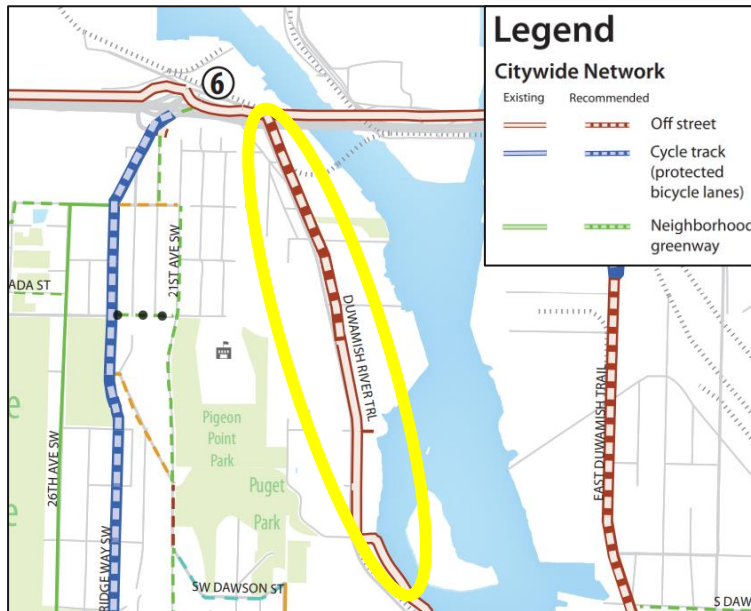


Heavy haul street

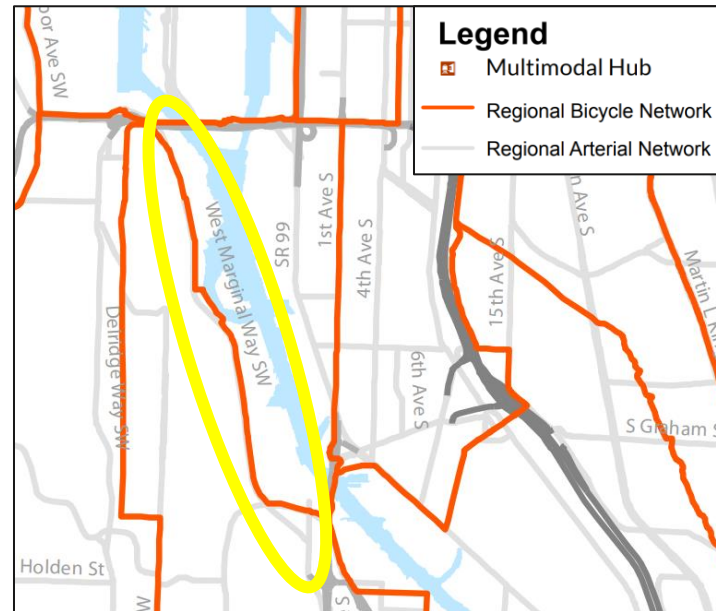


WMW Context - Bike Master Plan and Reconnect West Seattle survey and goals

Recommended off street facility



Regional bicycle network



Reconnect West Seattle survey

- W Marginal Way bike-related improvements ranked as the #4 most popular bike project
- Bike mode share goal for 2021 is 10%

WMW context - Seattle complete streets ordinance

- Section 1. SDOT will plan for, design and construct all new projects to provide safe and appropriate accommodation for pedestrians, bicyclists, transit riders, and persons of all abilities
- Section 3. Because freight is important to the basic economy of the City and has unique right-of-way needs to support that role, freight will be the major priority on streets classified as Major Truck Streets. Complete Street improvements that are consistent with freight mobility but also support other modes may be considered on these streets



Context - Area of focus: SW Marginal Pl to SW Alaska St

- SDOT is proposing designs in Sections 1 and 2 for multimodal travel and safety
- Most design elements are within the southbound curb lane so the data presented will focus primarily on southbound movements
- No changes are proposed at this time for northbound movements and continue to work with adjacent businesses





2021 Construction projects

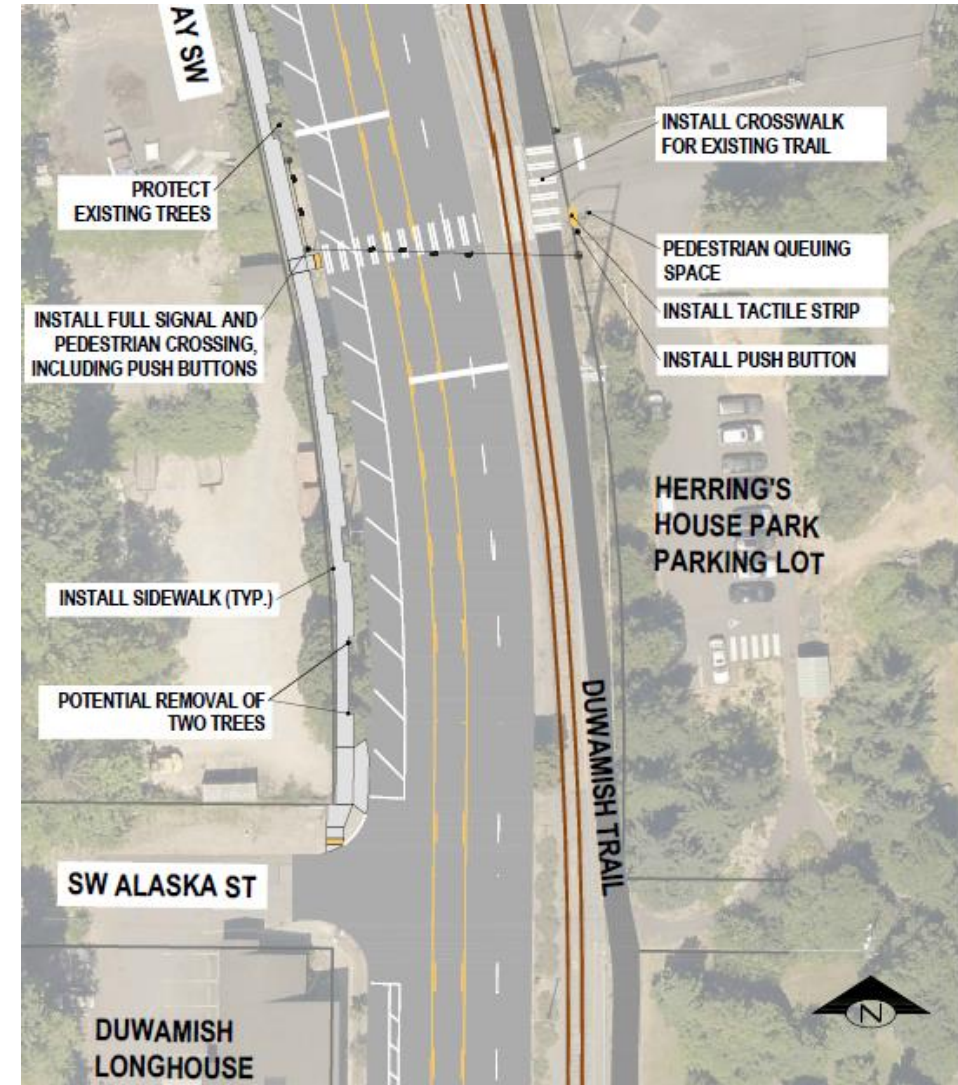
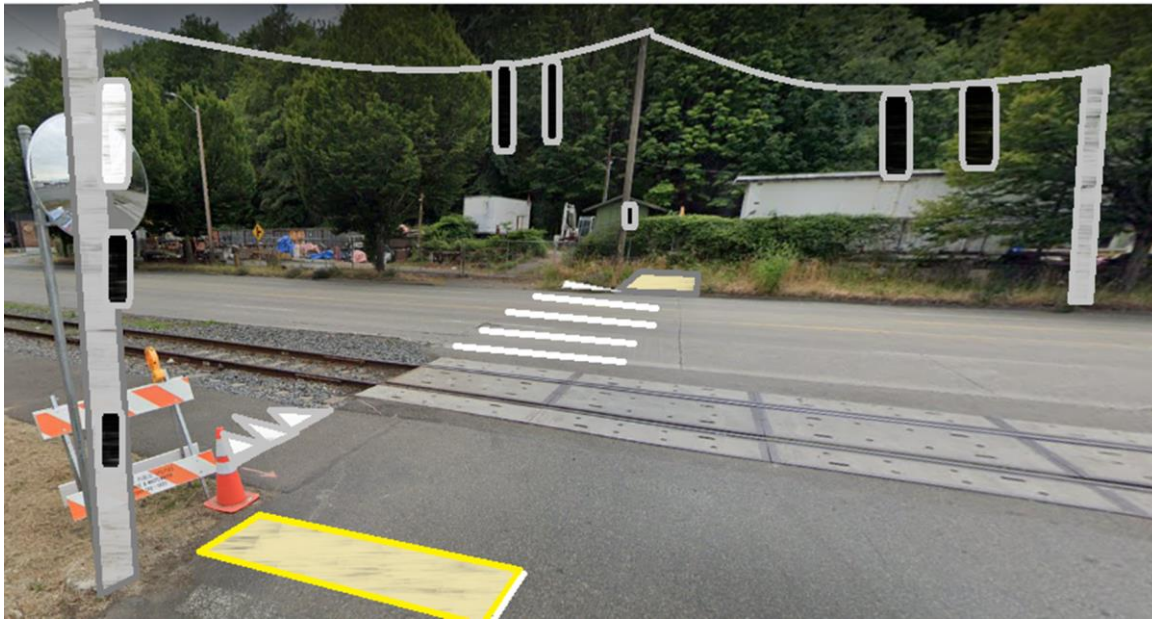
2021 construction

- Longhouse interim crossing signal 2021 installation
 - Permanent installation in 2022 and beyond pending BNSF coordination
- West side sidewalk connection Spring 2021 installation
 - Placed between trees and property line (replaces dirt path)



Longhouse signal

- Interim design



Sidewalk connection

- Extends existing west side sidewalk south of Duwamish Trail signal
- Placed between trees and property line (replaces dirt path)
- We may need to one to two trees to meet ADA width standards
- Spring 2021 installation





2019/2020 installed projects

Traffic calming measures

The issues

- High speeds and volumes make it difficult to access the Longhouse
- April 2020: 50% of people driving are traveling above 42 mph

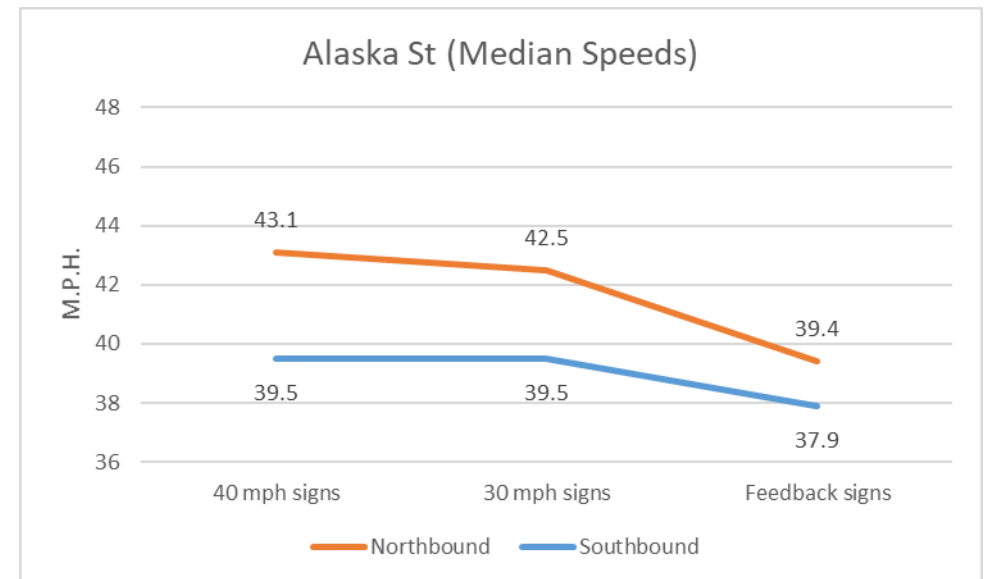
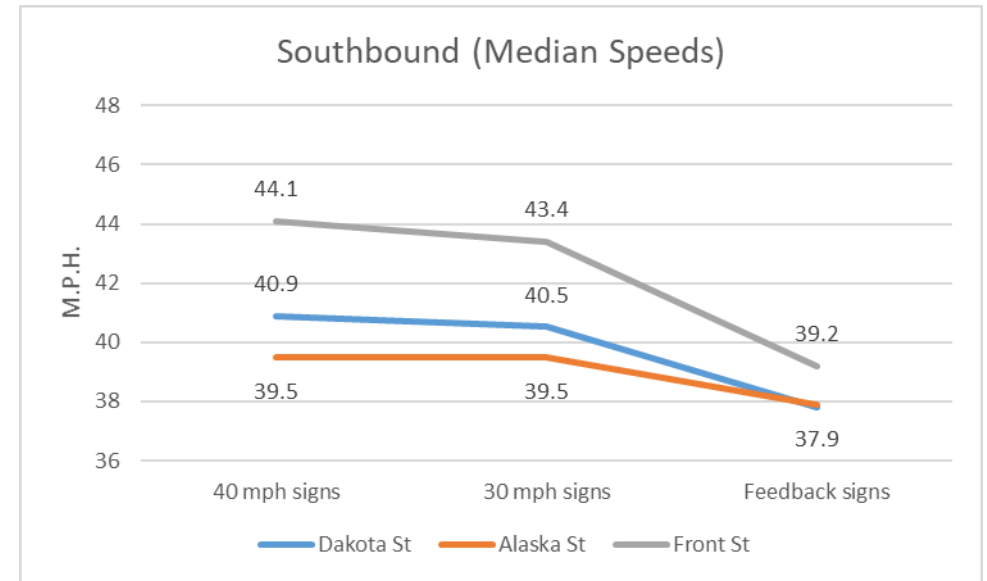
What we did

- May 2020: Speed limit signs changed from 40 mph to 30 mph
- September 2020: 6 radar feedback signs installed



Traffic calming results

- Lowered speed limit signs to 30 mph
 - Reduced speeds by 1-2%
- Installed radar feedback signs
 - Reduced speeds by 4-11%
- Slower southbound speeds observed where most people driving travel single file



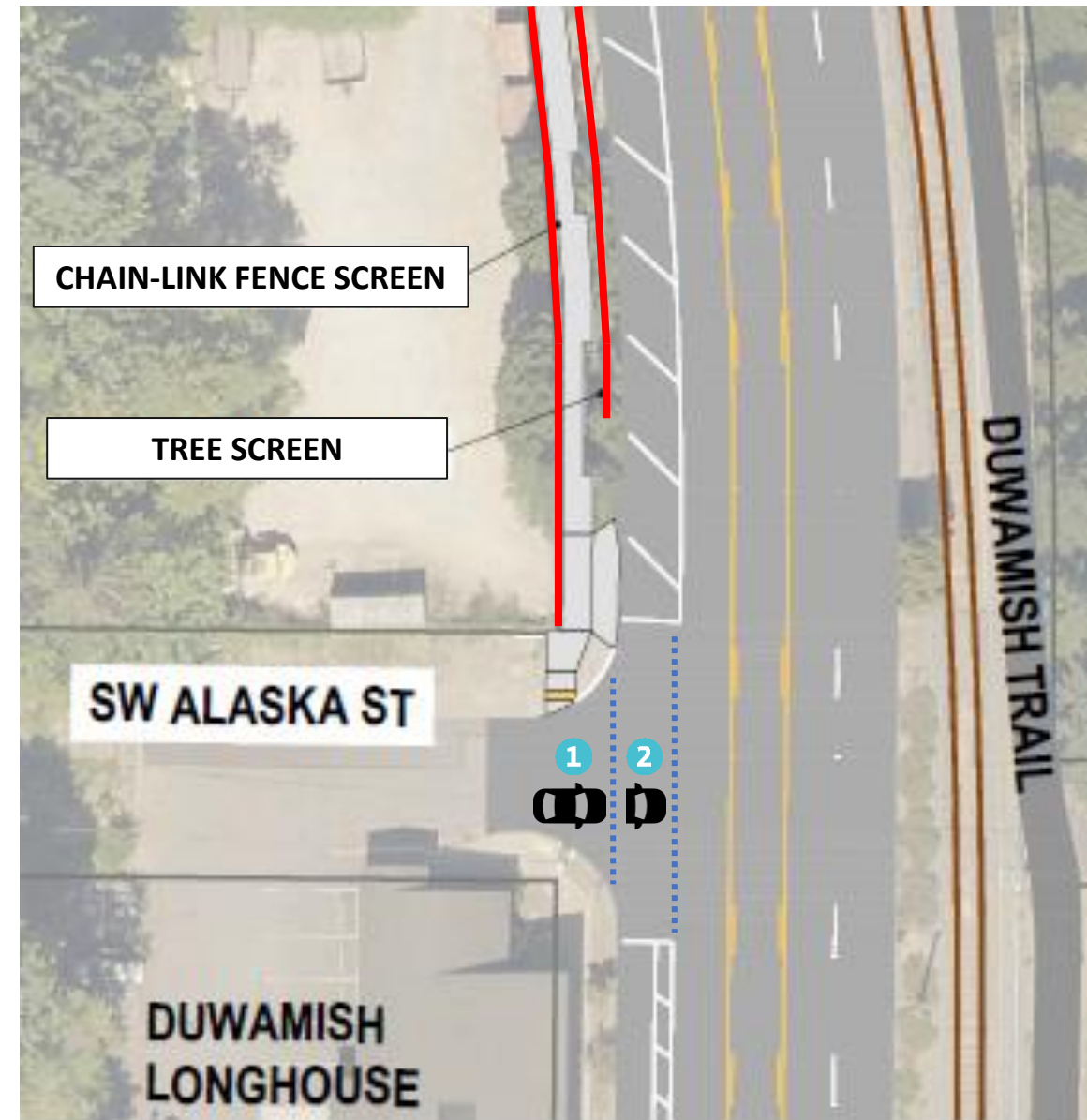
Longhouse lane drop

- October 2019: lane drop installed
- Improved sightlines for people entering West Marginal Way from Alaska St
- On-street parking allows for safe and direct curbside access for people driving to Duwamish Longhouse



Longhouse lane drop - Alaska St sight lines

- Two screen lines (fence and trees) make it difficult to see approaching southbound drivers
- Position 1 – Stopped at curb edge
 - Assumes two southbound lanes open and lane drop removed
- Position 2 – Stopped at lane drop edge
 - Assumes lane drop is in place



Longhouse lane drop - Alaska St sight lines



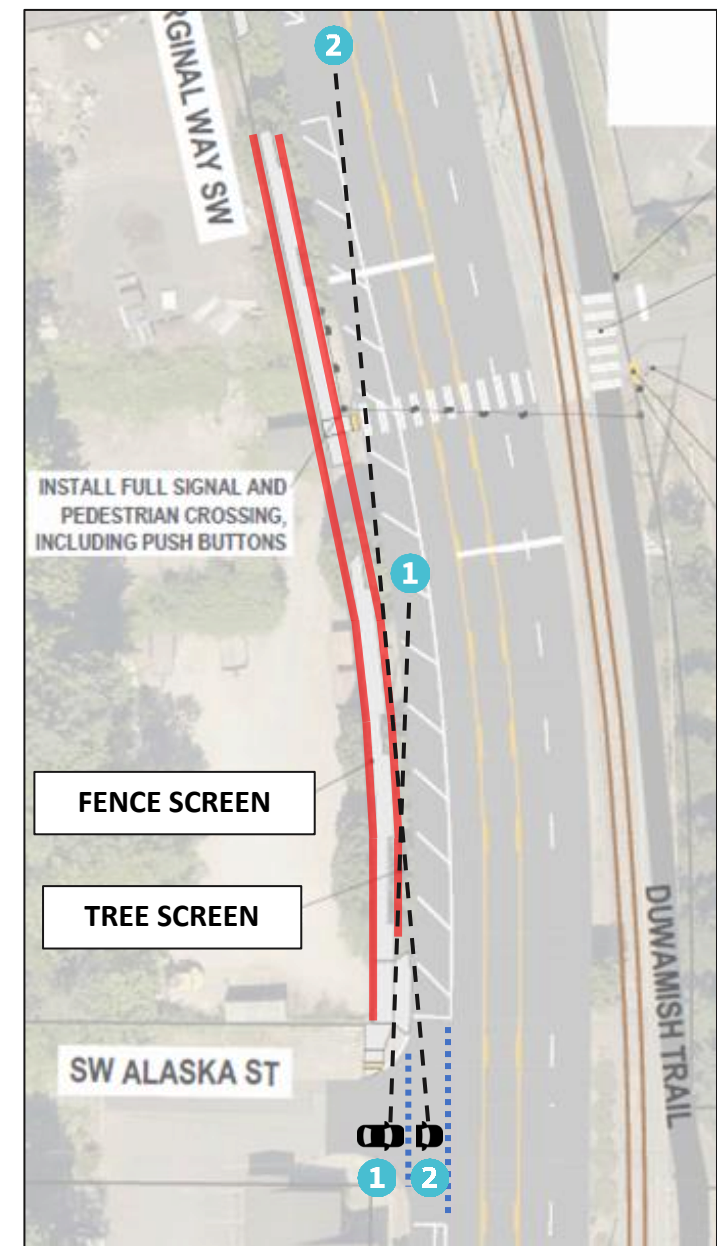
Position 1 (two SB lanes)



Position 2 (one SB lane)

Longhouse lane drop - Alaska St sight lines

- Position 1
 - 170' sight distance
 - Southbound drivers must travel at 27 mph to safely stop
 - 3% of people drive 27 mph or slower
- Position 2
 - 340' sight distance
 - Southbound drivers must travel at 43 mph to safely stop
 - 85% of people drive 43 mph or slower



Longhouse lane drop - Alaska St sight lines





Proposed designs for southbound curb lane

Section 1: Duwamish Trail connection

- Option 1: No build option
 - Maintain existing conditions
- Option 2: Convert southbound curb lane into a two-way protected bike lane
 - We analyzed 4 alternatives to fill the Duwamish River Trail gap and increase multimodal travel options as a part of Reconnect West Seattle



Section 1: Duwamish Trail alternatives



A – Shared space	B – Protected Bike Lane (PBL) [preferred]	C – Protected Bike Lane (PBL)	D – Off-street trail
<ul style="list-style-type: none"> • Would require removal of all trees • Narrow buffer 	<ul style="list-style-type: none"> • Can fit with desired widths • Improved driveway sightlines 	<ul style="list-style-type: none"> • North end point has no space to cross • Current curb lane queueing during peak periods 	<ul style="list-style-type: none"> • Requires railroad acquisition • Prohibitively expensive

Section 1: Duwamish Trail connection

Preferred alternative (B – Protected Bike Lane):

- Provides comfortable facility for people biking that provides adequate space for passing
- Improves driveway sight lines for people driving and biking
- Existing signed bike route has narrow section that does not allow people driving and people biking to pass each other



Section 2: Curb lane design options

- If Duwamish Trail connection is installed there are several design options for the curb lane south of the Duwamish Trail signal
- Potential to maintain or remove the existing lane drop



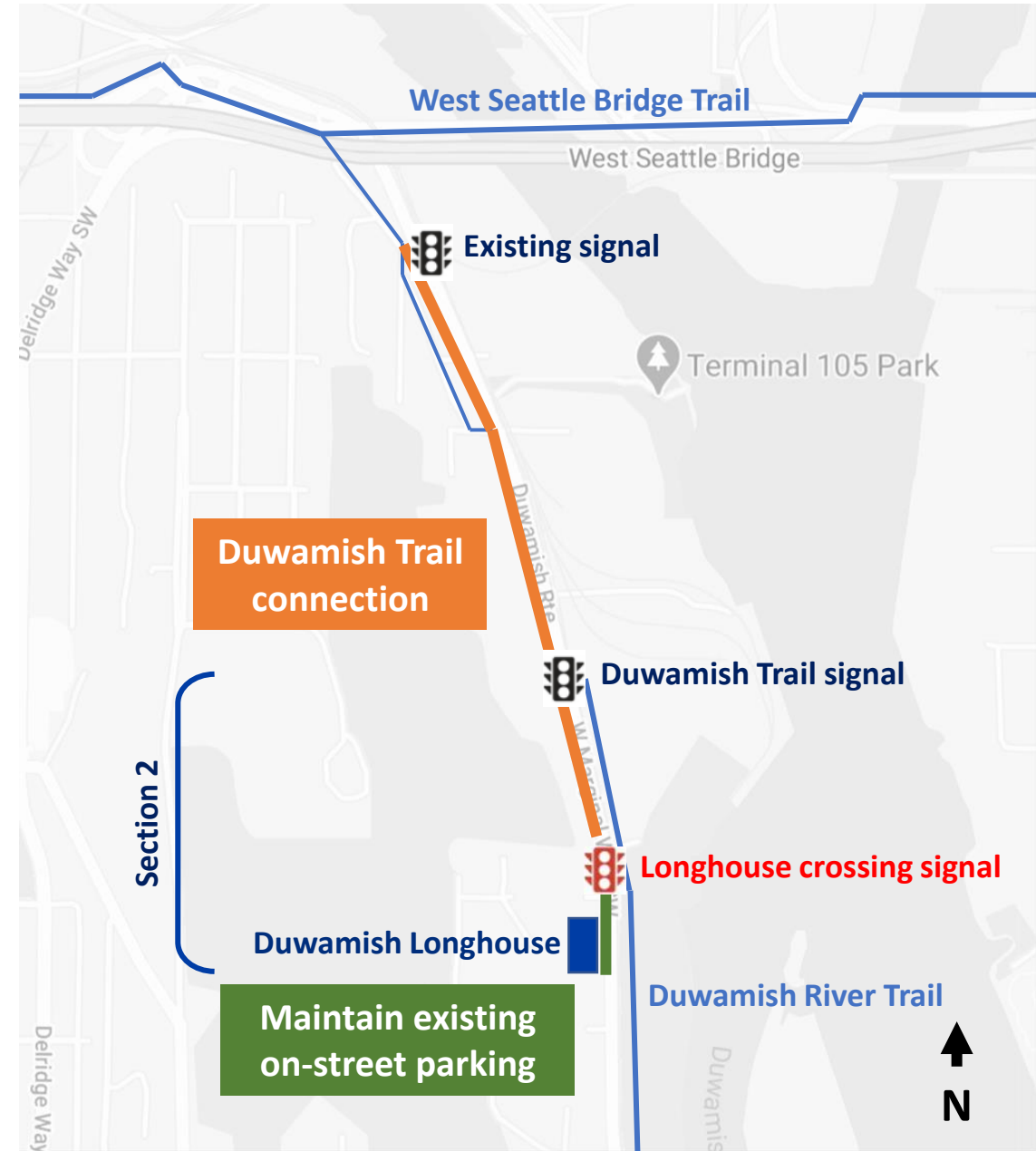
Section 2: Curb lane design options

- Option 1: Extend Duwamish Trail connection south to Longhouse crossing signal
- Option 2: Extend existing on-street parking north to Duwamish Trail signal
- Option 3: Remove lane drop, remove on-street parking in front of Longhouse



Section 2: Option 1 - Extend Duwamish Trail connection

- Provides direct access for people biking to the Longhouse
- Maintains on-street parking in front of Longhouse
- Duplicative of east side Duwamish River Trail



Section 2: Option 2 - Extend parking

- Extend existing on-street parking north to Duwamish Trail signal
- Provides 30 additional on-street parking spaces
- Complements new west side sidewalk
- Use for Longhouse access, freight parking, and Herring's House Park overflow
- Potentially underutilized if low demand for parking



Section 2: Option 3 - Remove lane drop

- Reintroduces Alaska St sightline issue
- Removes on-street parking in front of Longhouse
- Likely to increase vehicle speeds adjacent to Longhouse
- Negligible change to southbound travel times





Analysis of data and constraints

Average daily traffic

- Volumes have increased on West Marginal Way by 113%
- Carries 7th highest traffic out of 12 corridors being monitored

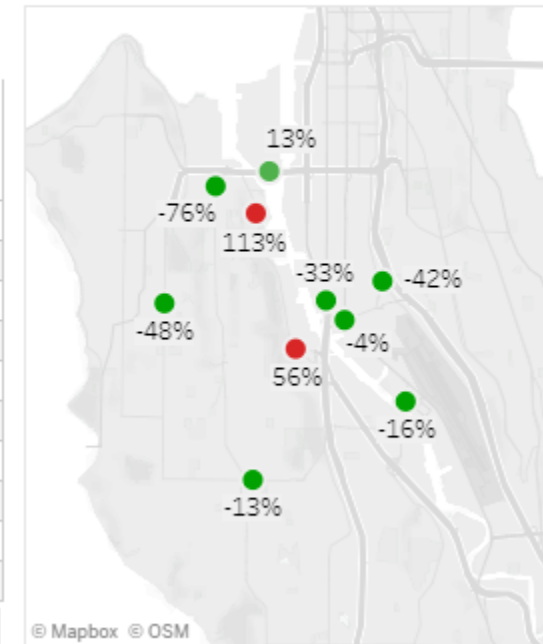
Weekly Bridge Traffic Monitoring Report

Week ending on

1/1/2021

Vehicle Volumes

Location		Average Weekday Volume	Baseline Volume (Feb 2020)	Change
Spokane St Low Bridge	●	9,450	8,340	13%
E Marginal Way at 1st Ave S	●	37,950	56,950	-33%
35th Ave SW at SW Raymond St	●	13,040	25,260	-48%
West Marginal Way SW at Duwamish River Trail	●	20,610	9,680	113%
Delridge Way SW at SW Andover St	●	5,520	23,400	-76%
South Park Bridge	●	13,120	15,640	-16%
Highland Park Way SW at West Marginal Way SW	●	29,570	18,920	56%
SW Roxbury St at 15th Ave SW	●	21,960	25,360	-13%
Airport Way S & Corson Ave S	●	10,260	17,720	-42%
S Michigan St at 4th Ave S	●	34,980	36,410	-4%
1st Ave S Br	●	83,600	96,370	-13%
SR 99 at S Lander St	●	30,150	70,940	-58%



Lane utilization (PM peak hours)



By direction:

64%	36%		80%	20%
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All lanes:

28%	15%		45%	12%
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*Data collected 7/23/20 (3pm-6pm) at SW Dakota St

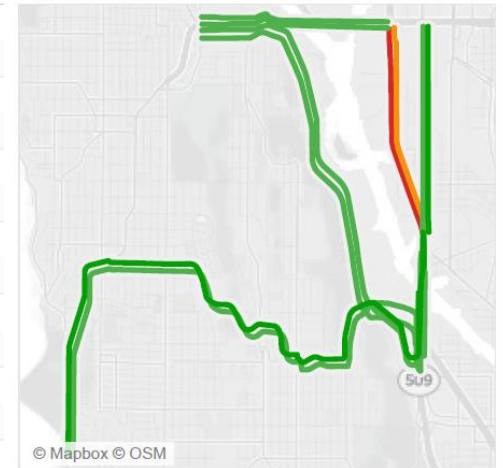
Travel times

- Southbound travel time change from high bridge closure
 - Increased 25% in the AM (2 min)
 - Increased 10% in the PM (1 min)
- Duwamish Trail connection expected to increase southbound travel times by 10 seconds at peak periods

Vehicle Travel Times (in min)

Route	Time Period	Typical Time Current	Typical Time Baseline (Feb 2020)
Spokane St - EB - Harbor Ave to East Marginal Way S	6-9 AM	3.7	4.1
	4-7 PM	4.1	4.0
Spokane St - WB - East Marginal Way S to Harbor ..	6-9 AM	3.6	3.5
	4-7 PM	4.2	3.7
Fauntleroy Way SW - EB - Ferry to 1 Ave Br	6-9 AM	15.4	14.6
	4-7 PM	17.3	16.1
Fauntleroy Way SW - WB - 1 Ave Br to Ferry	6-9 AM	13.4	18.9
	4-7 PM	16.9	19.9
1 Ave S - NB - 1 Ave Br to S Spokane S	6-9 AM	2.8	3.1
	4-7 PM	3.0	3.0
1 Ave S - SB - S Spokane St to 1 Ave Br	6-9 AM	3.2	3.3
	4-7 PM	3.3	3.6
E Marginal Way S - NB - 1 Ave Br to S Spokane S	6-9 AM	3.6	3.1
	4-7 PM	3.6	3.1
E Marginal Way S - SB - S Spokane St to 1 Ave Br	6-9 AM	3.1	2.9
	4-7 PM	3.6	2.9
W Marginal Way SW - SEB - Harbor Ave SW to 1 Ave Br	6-9 AM	10.8	7.8
	4-7 PM	10.7	9.6
W Marginal Way SW - NWB - 1 Ave Br to Harbor Ave SW	6-9 AM	8.4	7.2
	4-7 PM	10.5	7.9

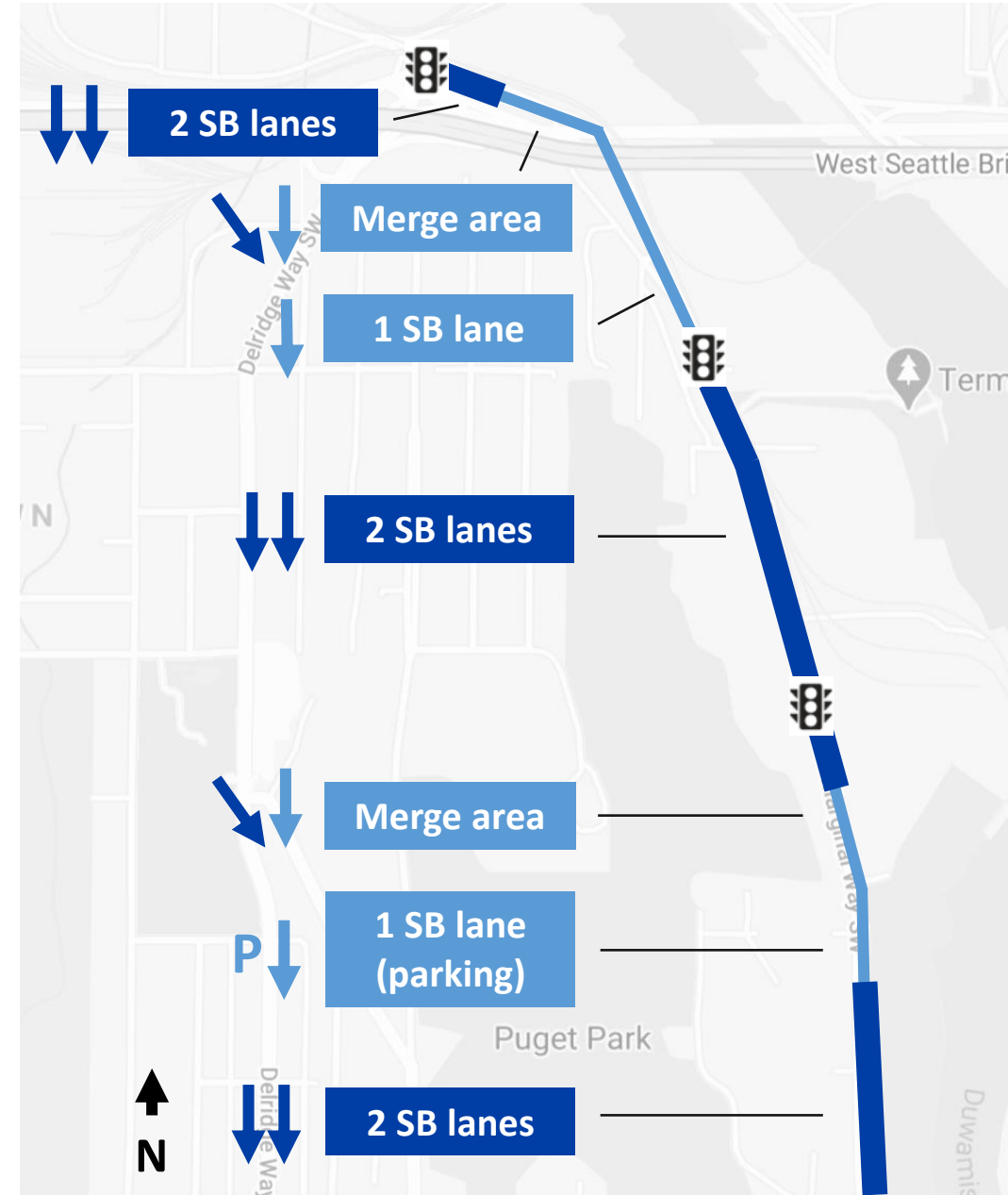
4 - 7 PM Planning Time



Color Legend
 Solid Green <= 0%
 0% > Light Green <= 25%
 25% > Amber <= 50%
 50% > Red

Travel times: Existing capacity constraints

- Chelan 5-way intersection to SW Marginal PI
- Highland Park Way SW / W Marginal Way intersection



SW Marginal Pl southbound



Looking east from Chelan 5-way



Looking north at SW Marginal Pl

SW Marginal Pl southbound



Looking north at SW Marginal Pl



SDOT preferred design options and assessment

SDOT preferred designs

- Section 1: Option 2, Duwamish Trail connection
- Section 2: Option 1 or 2
 - 1: Extend Duwamish Trail connection south to Longhouse signal or
 - 2: Extend parking north to Duwamish Trail signal



Assessment of preferred designs

- Improves safety by reducing risk factors
 - Lowers speeds closer to speed limit
 - Eliminate potential for high-speed passing
 - Improved sightlines at driveways
 - Maintain sightlines at Alaska St
- Improves mobility for people biking
 - More comfortable facility with adequate space to pass
 - Closes network gap

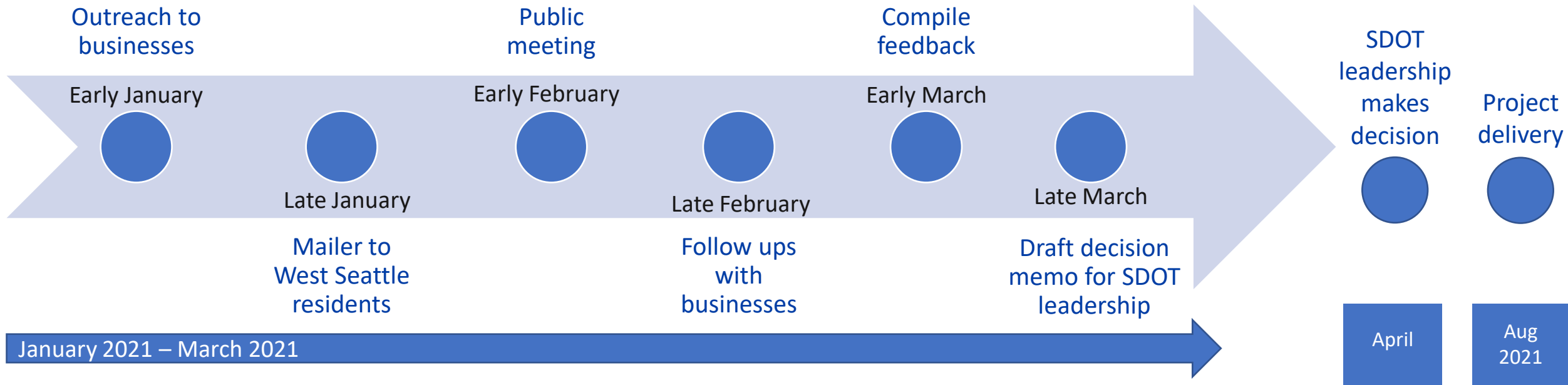


Assessment of preferred designs

- Negligible or no change to travel times and delay
 - Existing Marginal PI bottleneck is the limiting factor for SB travel times
 - Speeds in existing single lane section are still above speed limit
 - SB curb lane is underutilized
- Negligible or no change to freight mobility
 - Very minimal or no impact to traffic gaps and future Terminal-5 operations



Engagement and final decision timeline



Public meeting

- Virtual open house:
February 18, 6-7:30pm
- <http://www.seattle.gov/transportation/West-Marginal-Way-SW-Improvements>





Follow up questions and feedback
WestSeattleBridge@seattle.gov