

# S Lander St Bridge Project



Seattle Bicycle Advisory Board  
Jessica Murphy, Project Manager  
October 5, 2016



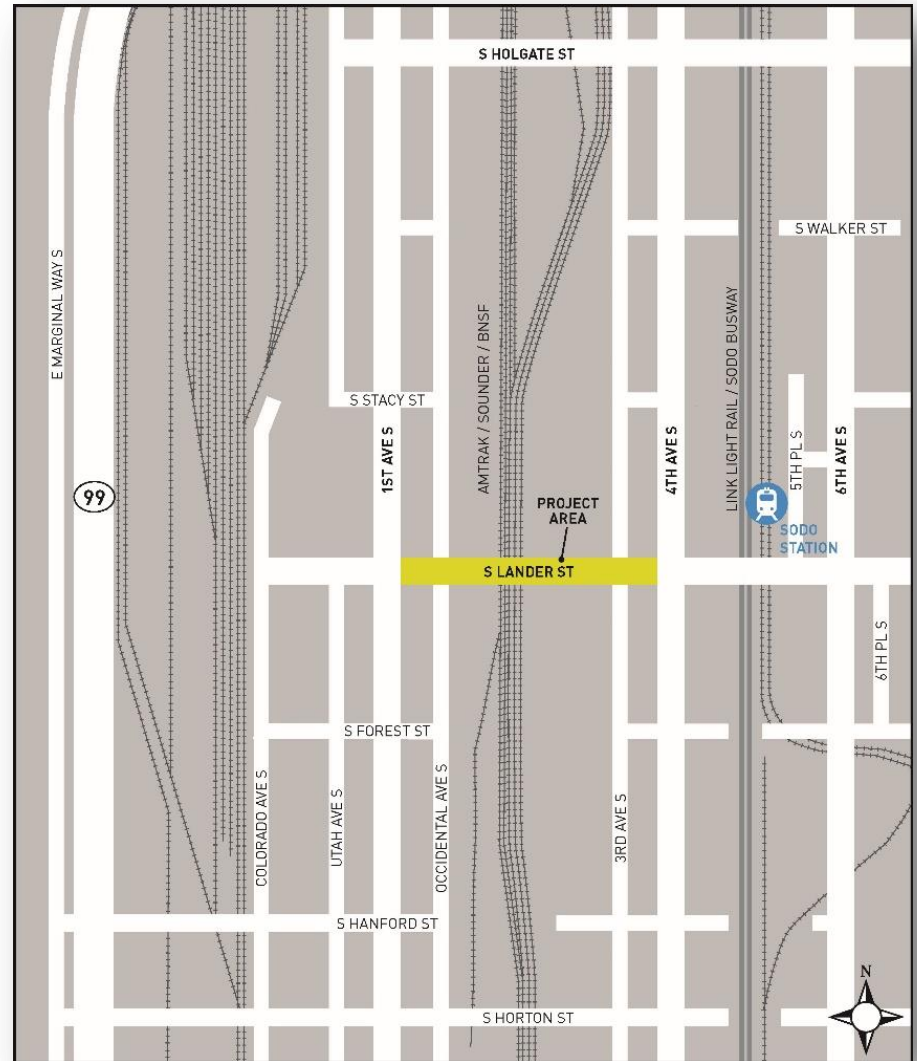
# Presentation overview

- Background
- Funding
- Timeline
- Reevaluating the 2007 design
- Next steps



# Background

- New bridge over the railroad tracks on S Lander St between 1st Ave S and 4th Ave S
- Project benefits:
  - Relieve traffic
  - Improve safety
  - Increase freight mobility
- High priority project for city, region, and state





# Why Lander, why now?

- 20 years of need identified by
  - WSDOT
  - Port of Seattle
  - Duwamish Manufacturing Industrial Council
  - Local and regional stakeholders
- New funding opportunities
  - Federal FAST Act
  - Move Seattle Levy
  - WSDOT



# S Lander St - by the numbers

Daily use:



**100+**  
Trains



**13,000+**  
Vehicles



**1,400**  
Pedestrians



**100**  
Bicycles



**75,000**  
Jobs supported  
(100,000 by 2040)

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Daily closures: **100+**

Average traffic delay per closure: **2 minutes, 40 seconds**

Average closure time per day: **4 hours, 50 minutes**

Crossing violations per day: **485**

Collisions over the past five years: **85**

Fatalities over the past five years: **3**

# At the crossing



**8 seconds** after a train is out of frame:

**9 pedestrians** are already in the crossing

Notice the gates are still down and the lights are still flashing

**Is another train coming?**

2016-01-27 5:12:56 PM

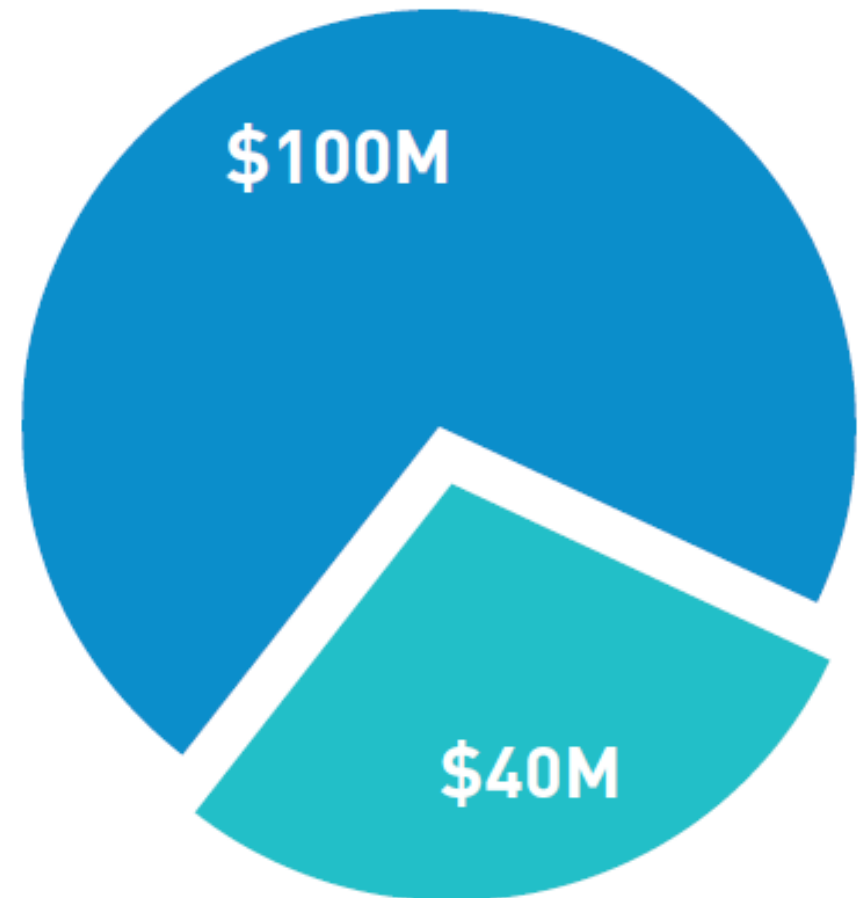
# Funding

## ■ \$100M Secured funding

- \$45M: Federal FASTLANE Grant
- \$20M: Levy to Move Seattle
- \$10M: Puget Sound Regional Council
- \$8M: Freight Mobility Strategic Investment Board
- \$7M: WSDOT - Connecting Washington
- \$5M: BNSF  
BNSF is committing at least 5% (approximately \$5 million) pursuant to 23 CRF 666.210
- \$5M: Port of Seattle

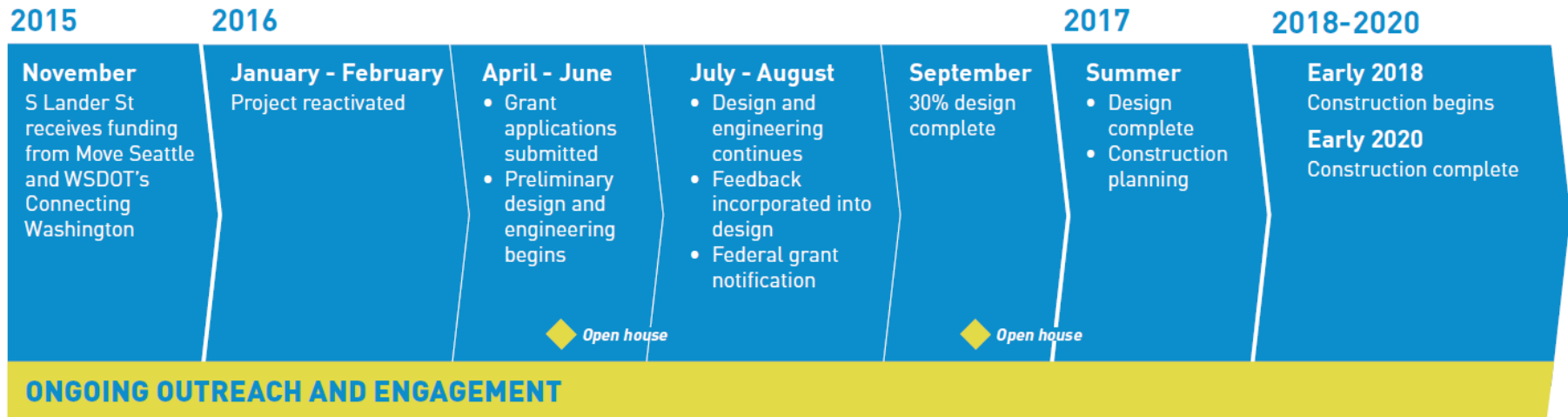
## ■ \$40M Unsecured funding

New funds proposed in Mayor's budget last week!

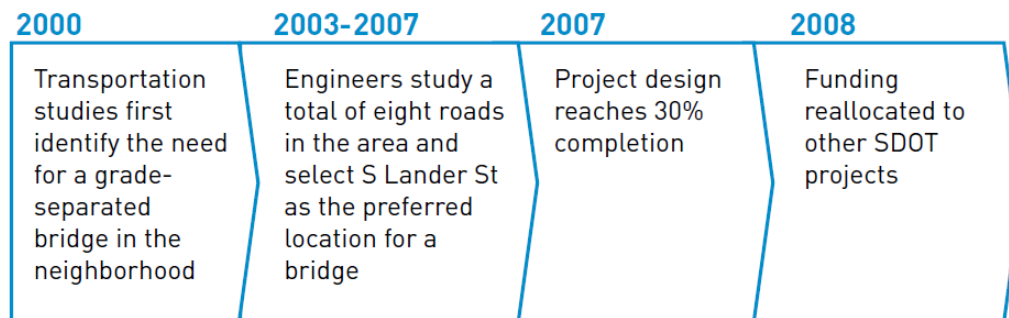


**TOTAL: \$140M**

# Timeline



## Project previous history





# Reevaluating design

## Current project goals:

- Eliminate the at-grade crossing
- Fit the bridge in the right-of-way
- Avoid property takes
- Prioritize modal uses
- Reflect changes transportation system since 2007



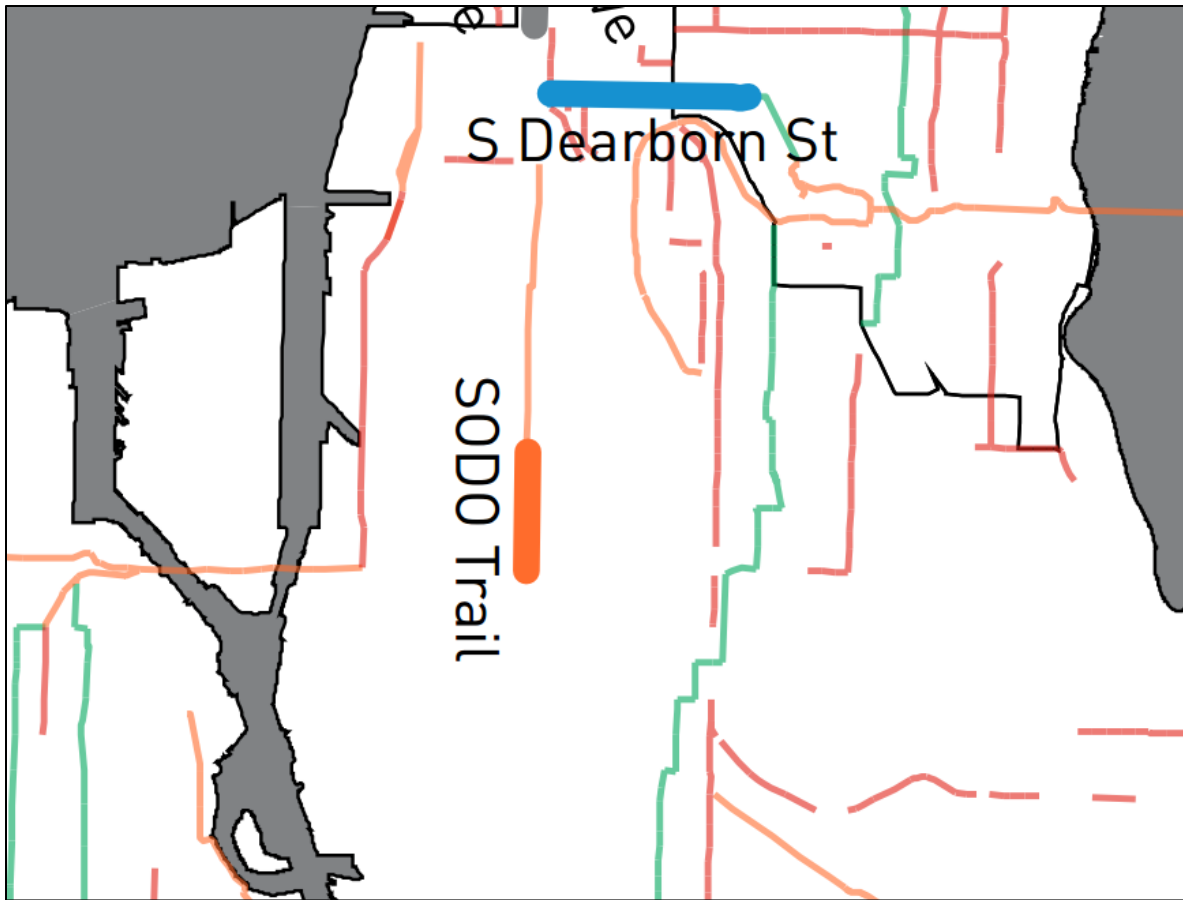
## Our mission:

- Safest and effective solution
- Efficient use of funding

# Modal plan review

Modal Classification	Description
Arterial	Minor Arterial
Transit	Transit Way
Freight	Major Truck Street/Heavy Haul Network
Bicycle	Not designated in 2015 BMP
Pedestrian	Not located in a pedestrian-designated zone

# BMP plan recommendations



## Existing Bike Facilities

- Neighborhood greenway
- Protected bike lane
- Multi use trail
- In street, minor separation

## 2016 Projects

- Neighborhood greenway
- Protected bike lane
- Multi use trail
- In street, minor separation
- Shared-use lane

*2016 Bicycle Master Plan Improvements identified in SODO*

# Traffic analysis – non-motorized

	Pedestrians/Hour		Bicycles/Hour	
	Eastbound	Westbound	Eastbound	Westbound
Existing				
North side	8	162	1	10
South Side	<u>3</u>	<u>16</u>	<u>5</u>	<u>0</u>
Total	11	178	6	10
2040				
North Side	10	290	5	35
South Side	<u>10</u>	<u>30</u>	<u>20</u>	<u>0</u>
Total	20	320	25	35

Note: AM peak hour May 2016; PM peak volumes slightly lower overall

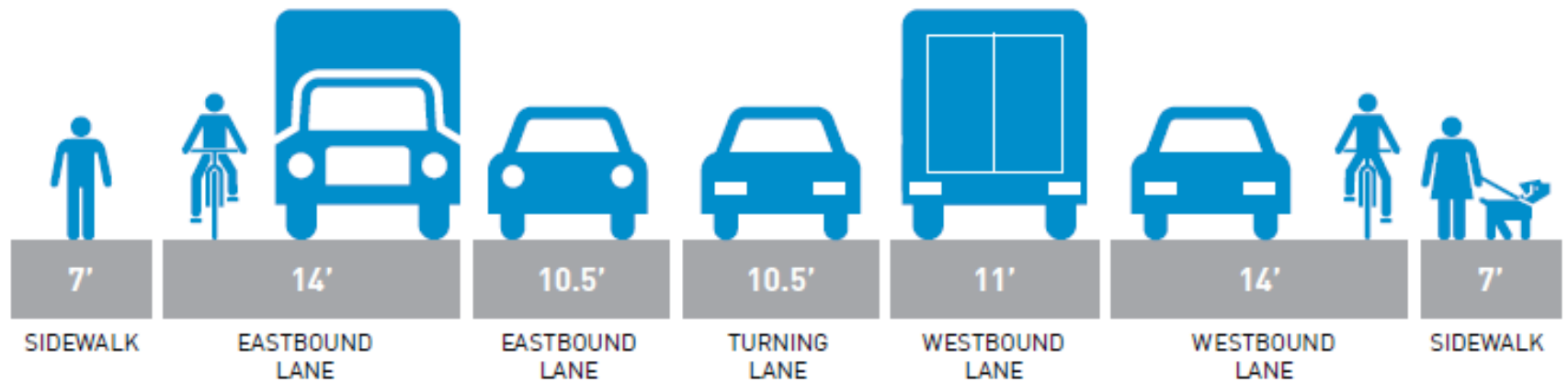


# Traffic analysis – vehicles

Intersection	Queue Length (ft)	Level of Service
1st Ave S		
Westbound left	408	D
Westbound thru	370	D
Westbound right	357	D
4th Ave S		
Eastbound left	187	D
Eastbound thru	193	D
Eastbound right	162	D

Note: PM peak hour shown; AM peak slightly worse at LOS E (2040)

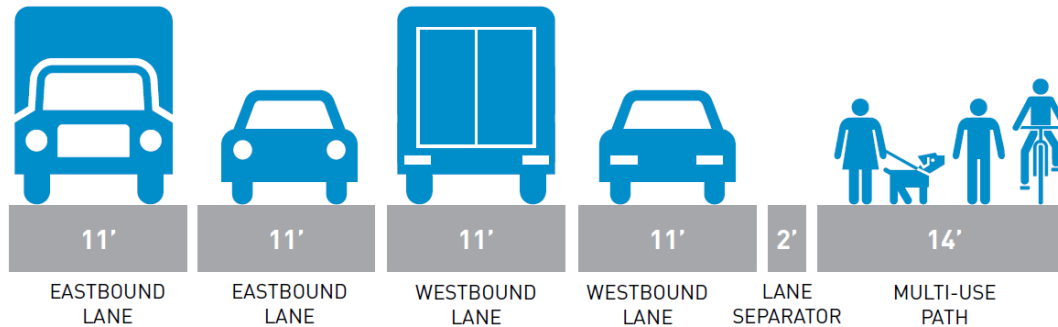
# Current roadway



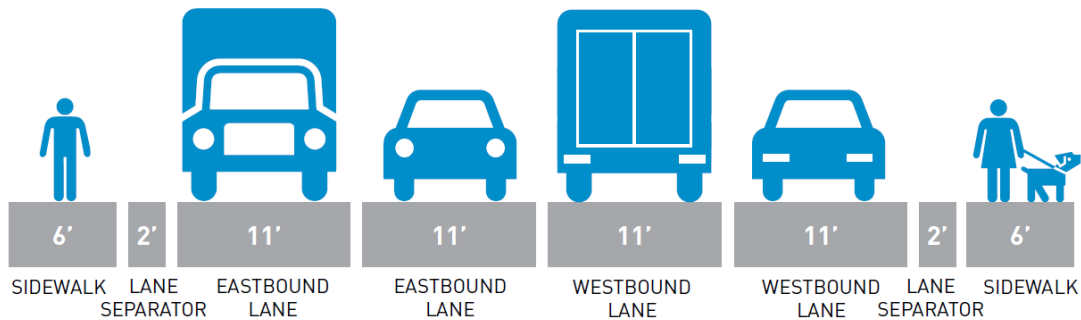
# Bridge cross-sections

## Preliminary options

### Design option 1: Multi-use path on north side



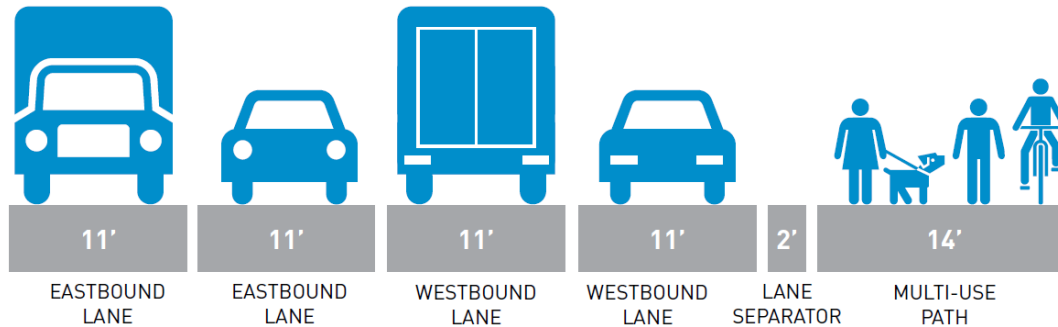
### Design option 2: Sidewalks on both sides



# Bridge cross-sections

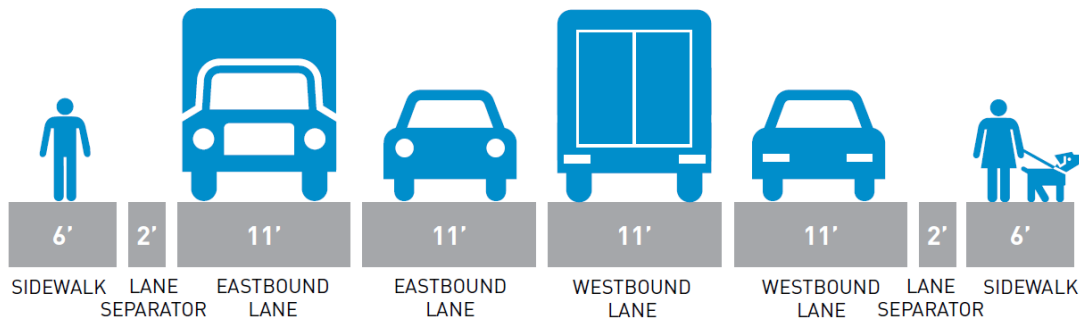
## What we heard

### Design option 1: Multi-use path on north side



54% preferred this option

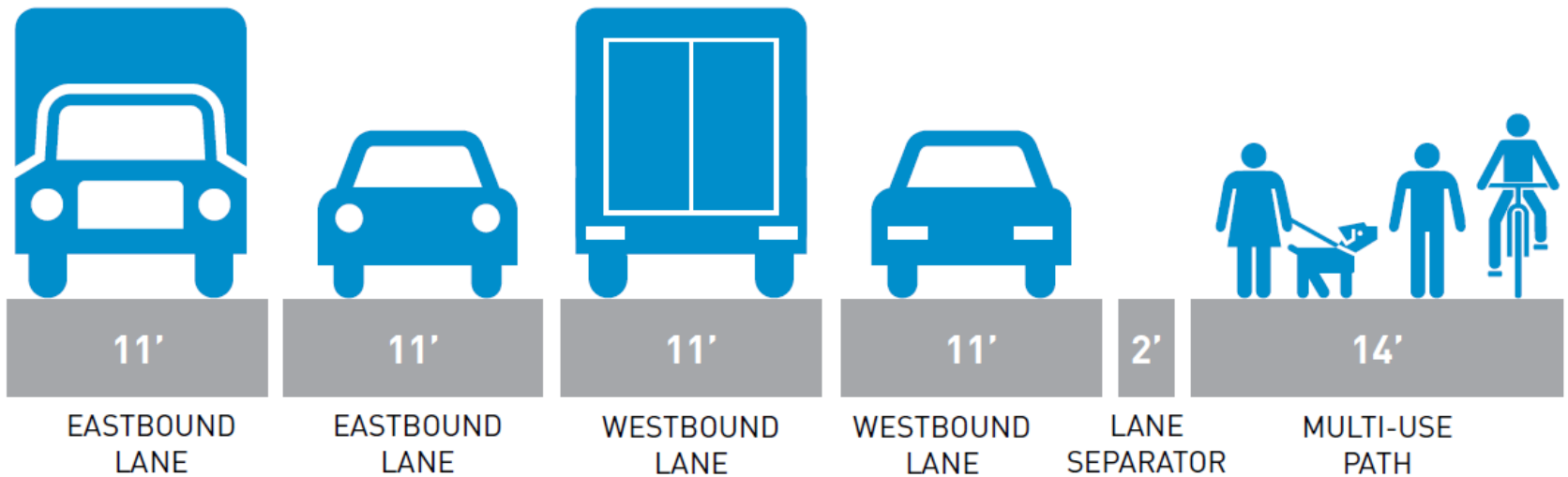
### Design option 2: Sidewalks on both sides



41% preferred this option



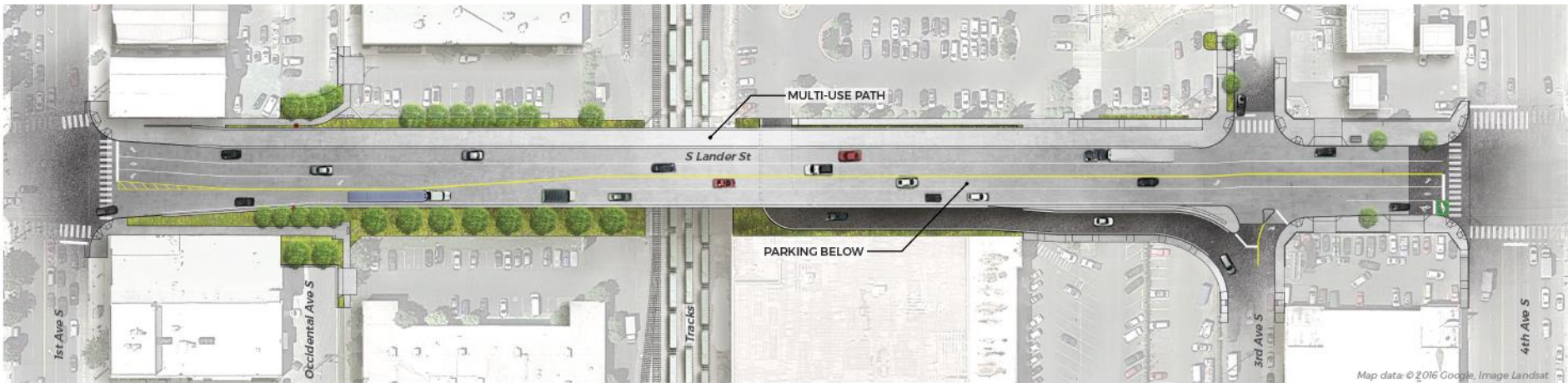
# Proposed roadway



# Proposed visualization



# Proposed corridor rendering





# Ongoing design



Proposed visualization: Bird's-eye view  
Looking northwest

Several design features still under development:

- Green space, landscaping and urban design treatments
- Parking
- Driveways and street ends
- Connectivity (through BMP)



# Next steps

## Through 2016

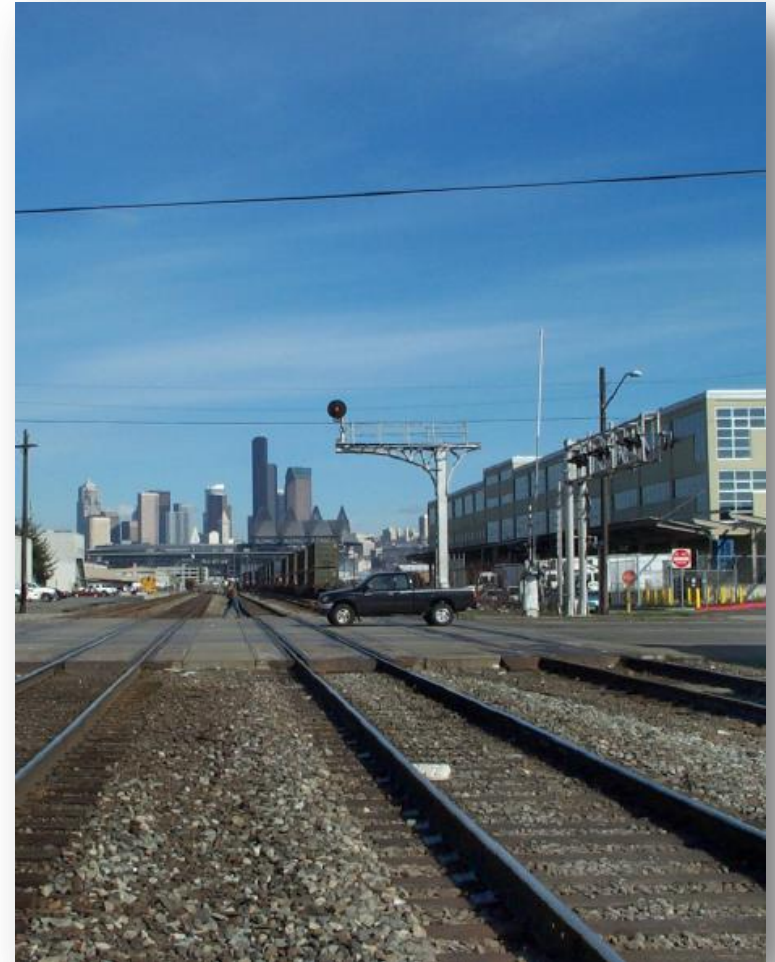
- Review feedback and continue to incorporate, especially urban design
- Provide updates as design progresses
- Begin the environmental permitting process

## Spring 2017

- Begin construction planning

## Summer 2017

- Complete final design
- Solicit for construction



# Stay connected

- Visit: [www.seattle.gov/lander\\_bridge.htm](http://www.seattle.gov/lander_bridge.htm)
- Call Jessica Murphy: 206-684-0178
- Email: [lander\\_bridge@seattle.gov](mailto:lander_bridge@seattle.gov)

[www.seattle.gov/transportation](http://www.seattle.gov/transportation)



# Backpocket slides

# Urban design

## What we heard

Feedback from the June open house indicated preferences for:

- Architectural elements reflecting neighborhood's character
- Artistic features
- Wall details with texture and patterns
- Landscaping and plantings

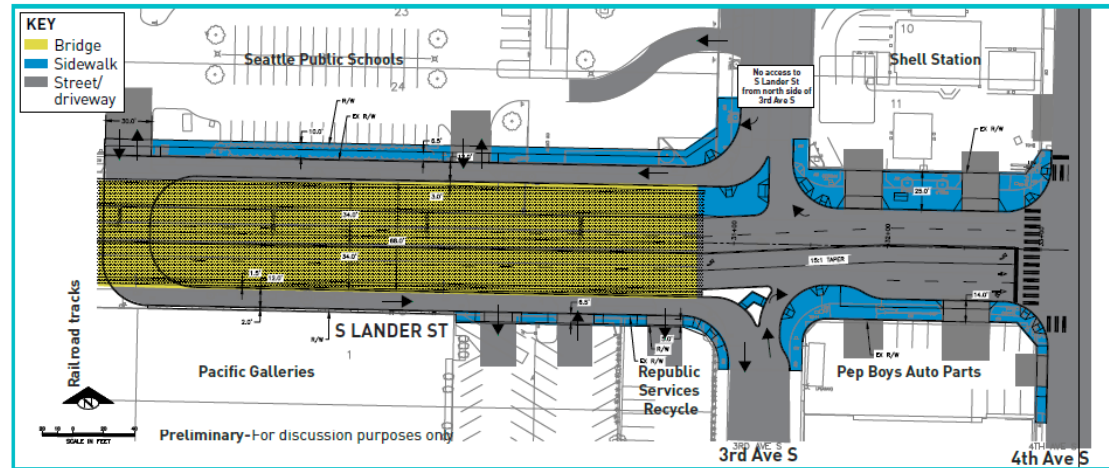




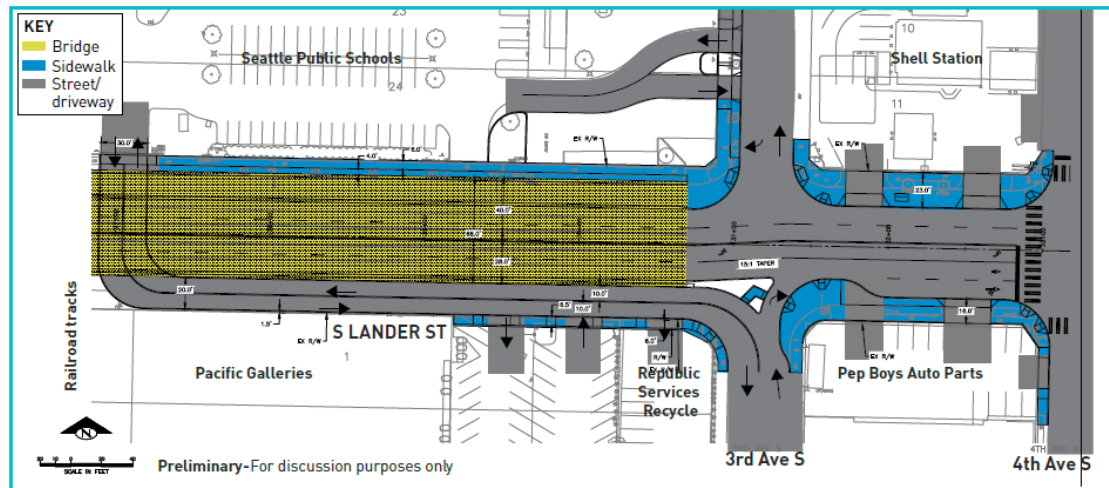
# Roadway design – EAST of tracks

## Preliminary options presented

### Option 1



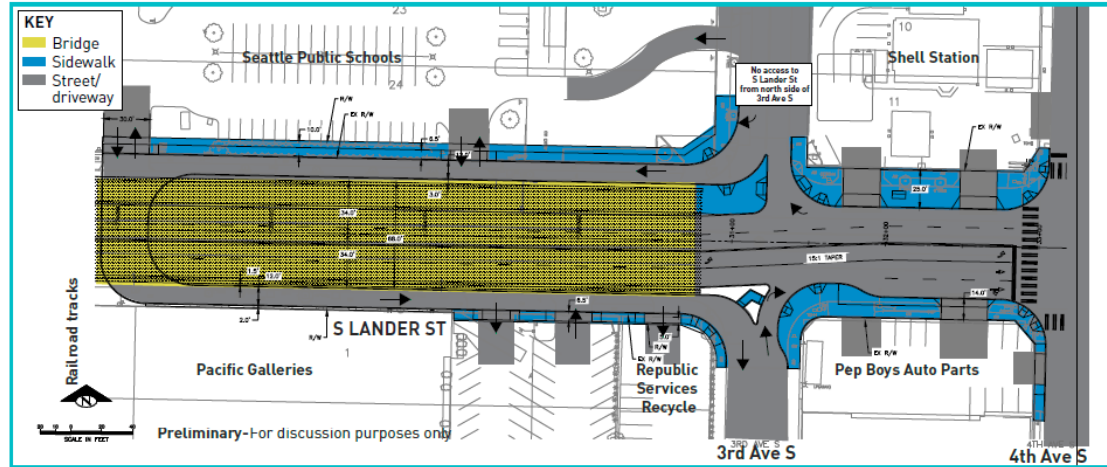
### Option 2



# Roadway design – EAST of tracks

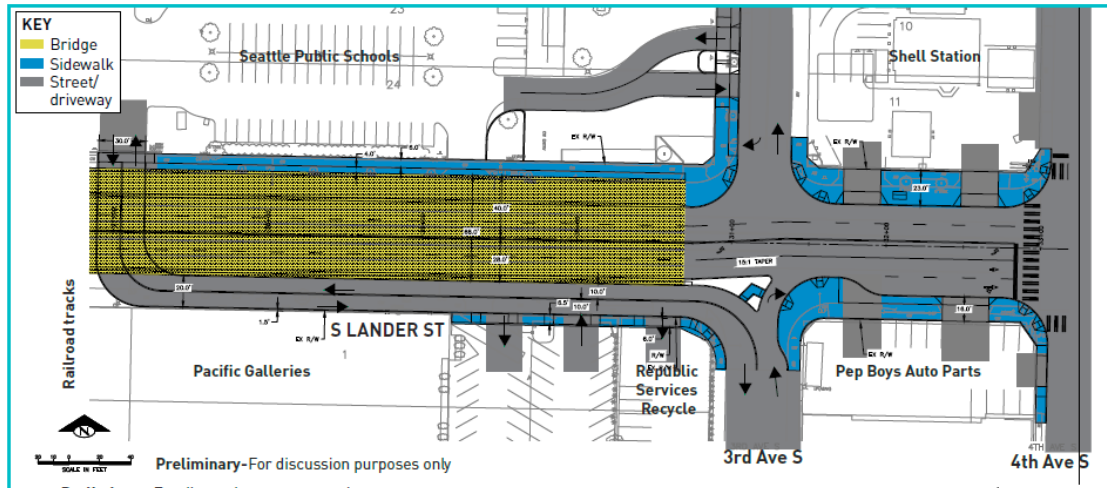
## What we heard

### Option 1



25% preferred this option

### Option 2



57% preferred this option

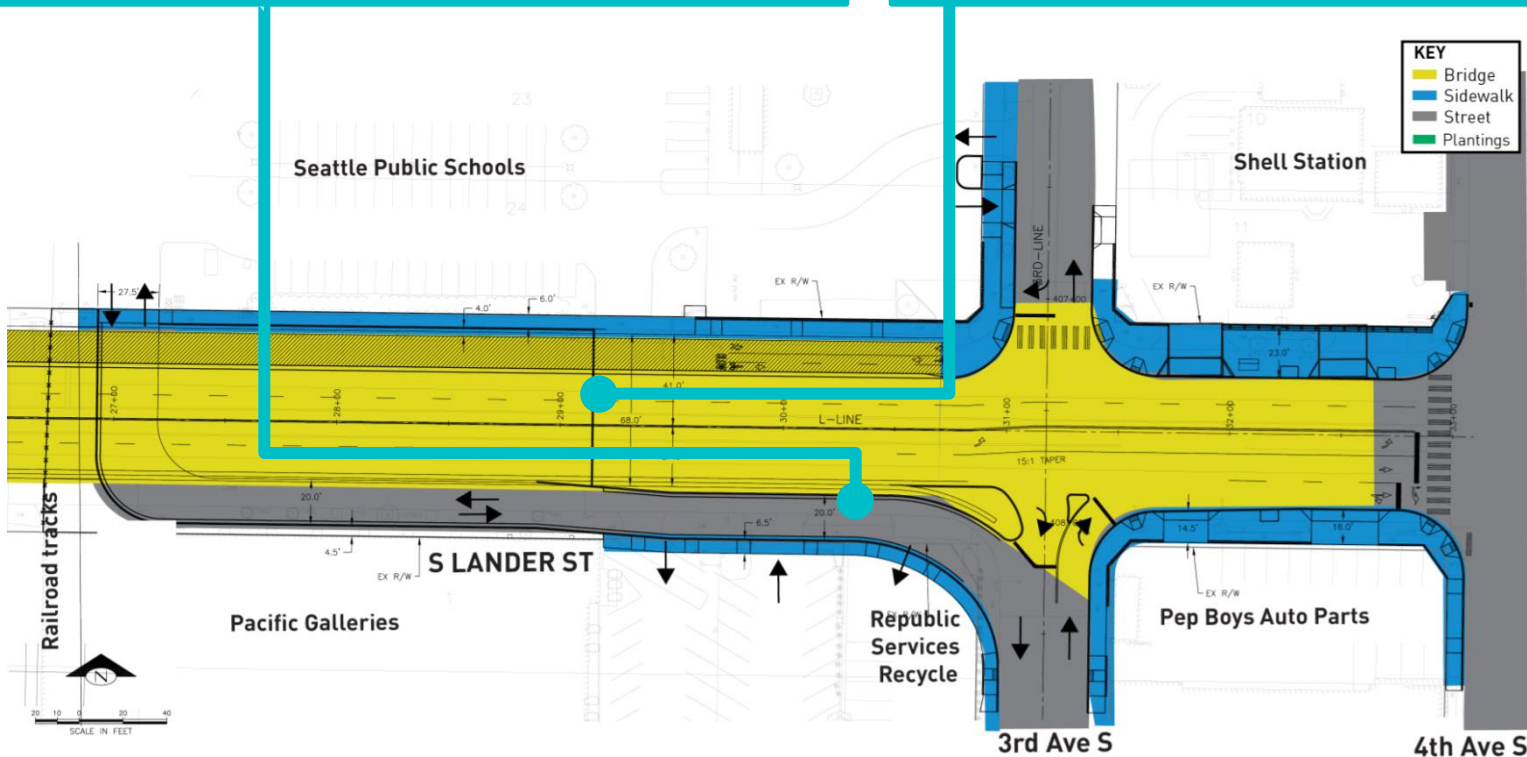
# Proposed design – EAST of tracks

## 3rd Ave S:

- Two-way access drive on south side of bridge
- Based on feedback from nearby properties and stakeholders

## Parking:

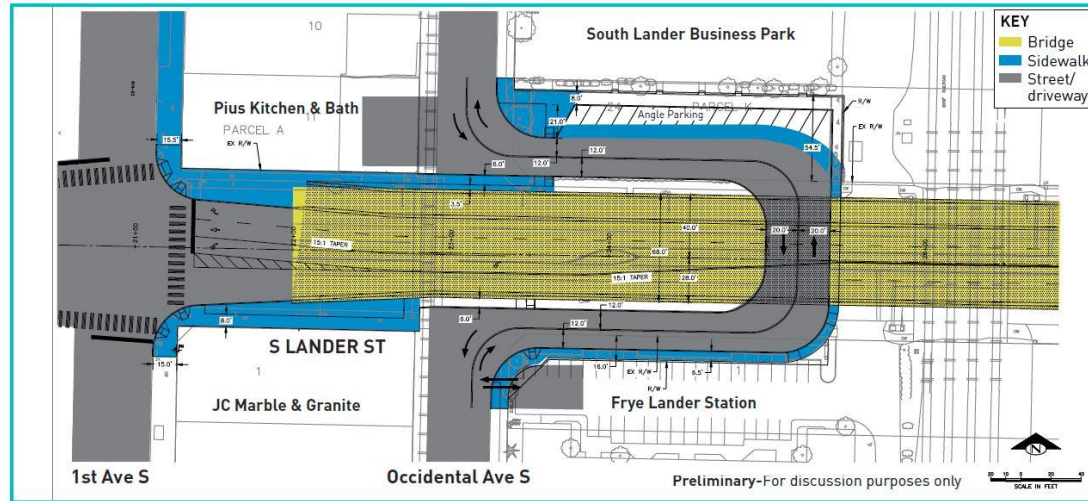
- New parking spaces under the bridge
- Concerns remain about utilization and management



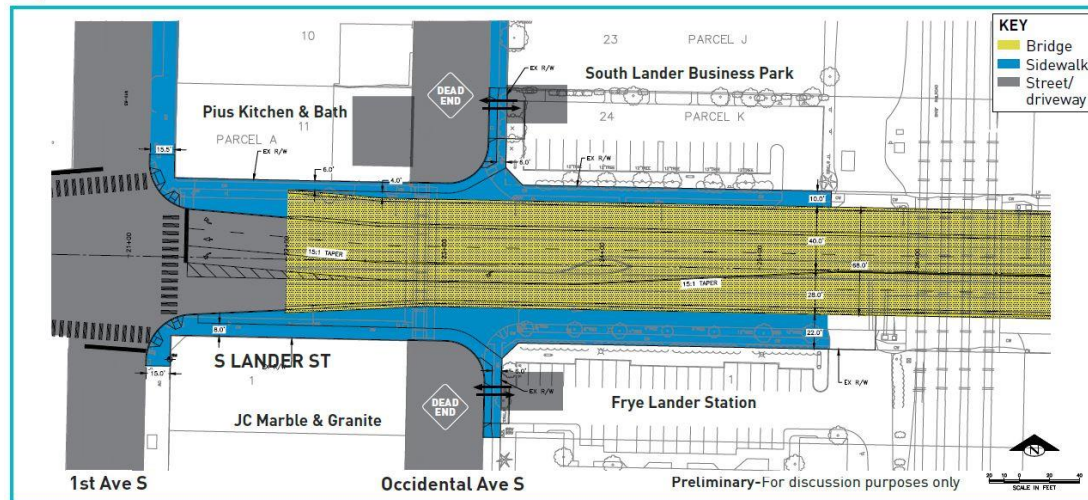
# Roadway design – WEST of tracks

## Preliminary options presented

**Option 1**



**Option 2**

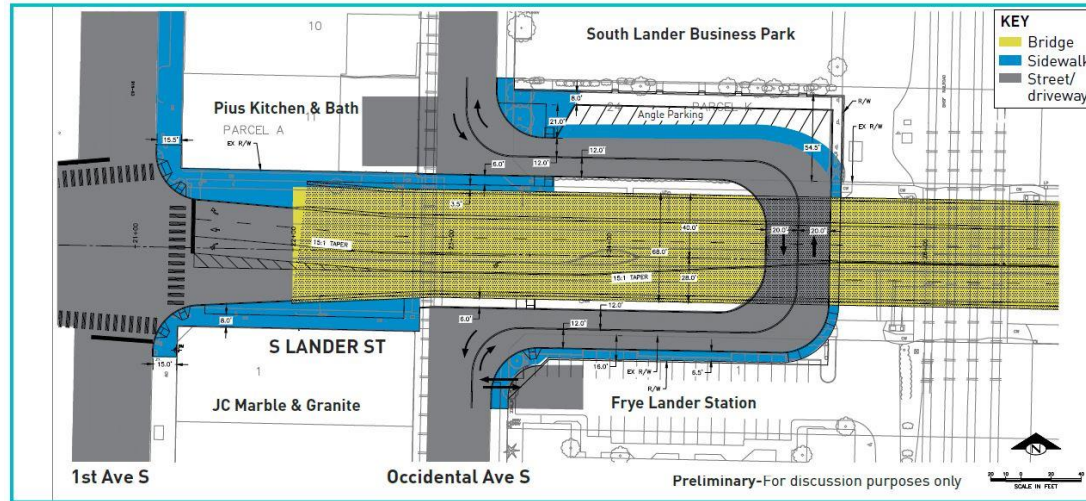




# Roadway design – WEST of tracks

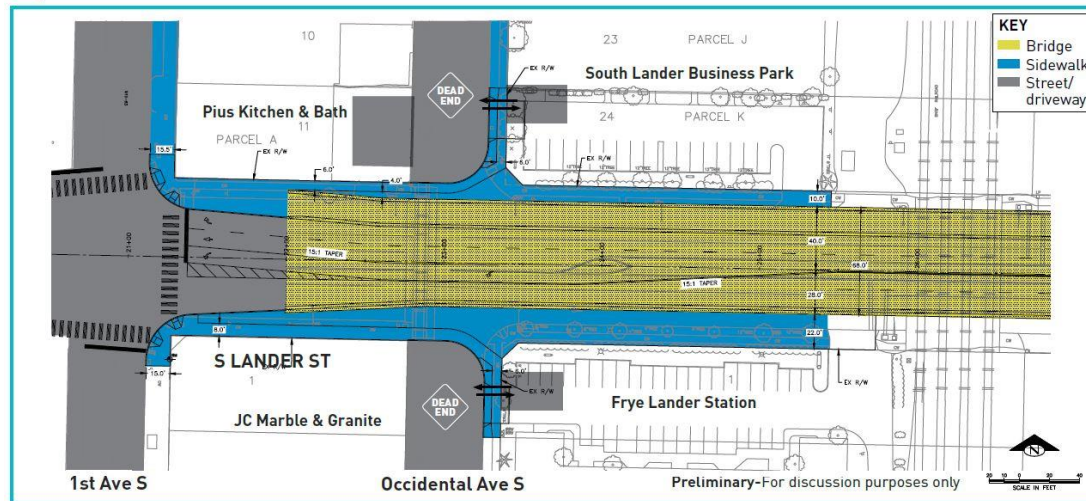
## What we heard

### Option 1



53% preferred this option

### Option 2

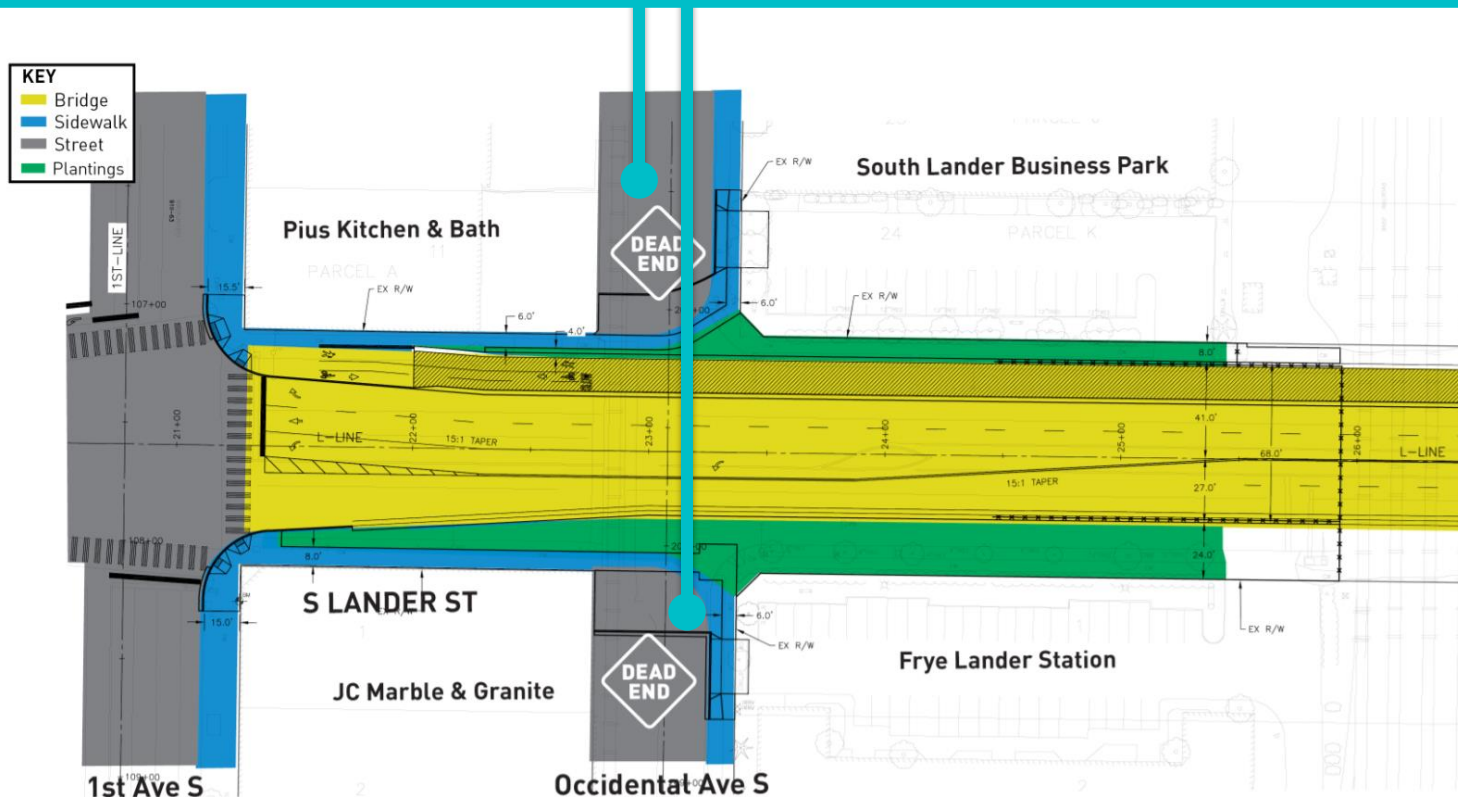


41% preferred this option

# Proposed design – WEST of tracks

## Occidental Ave S:

- Proposed dead-ends
- Based on community feedback, stakeholder input, and recent traffic analysis (limited use of north/south through traffic)





# Proposed visualization S Lander St looking southwest



Map data: © 2016 Google  
Image Landsat

# Proposed visualization

## 3rd Ave S at S Lander St looking east

DRAFT





# Proposed visualization

## Occidental Ave S at S Lander St looking south



# Proposed visualization

## 1<sup>st</sup> Ave S and S Lander St looking east



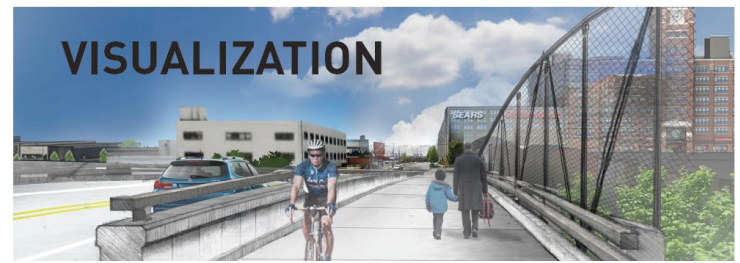
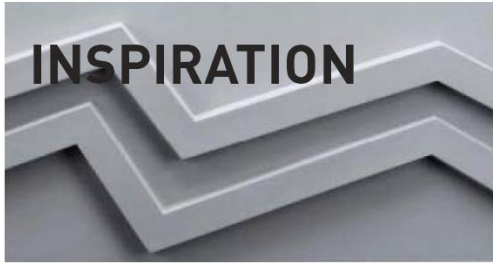




[Time-lapse video](#)

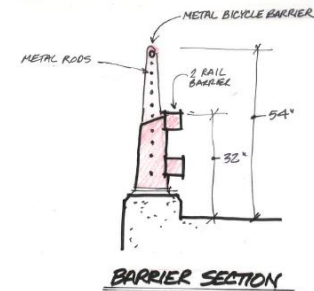
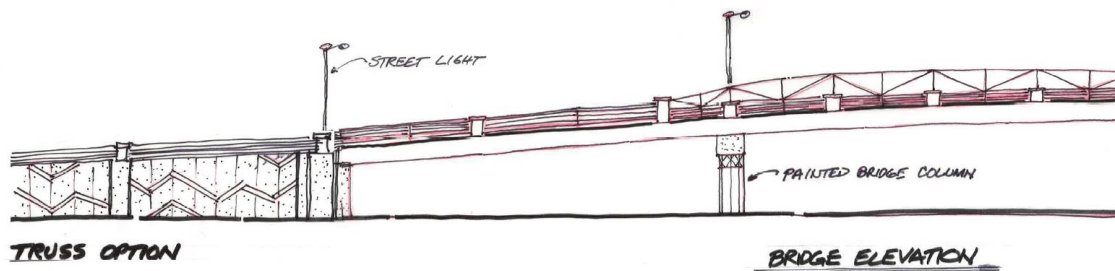
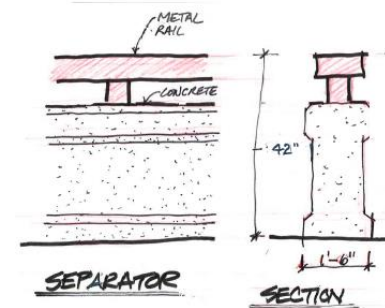
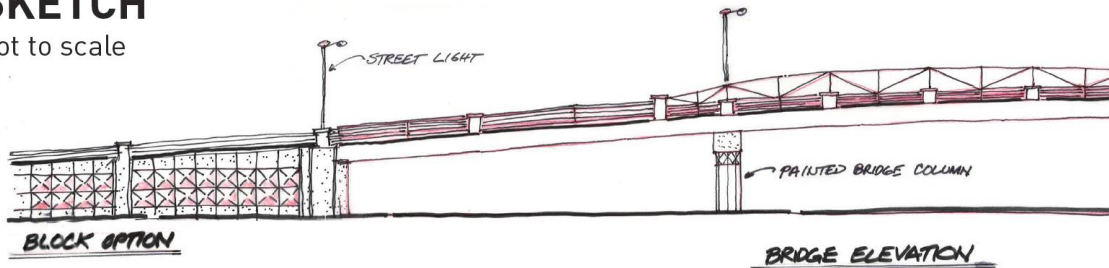
# Urban design options

## Industry theme



### SKETCH

not to scale





# Urban design options

## Deco theme

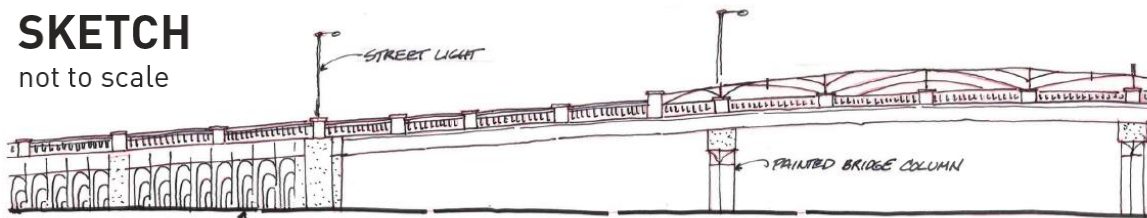


INSPIRATION



VISUALIZATION

SKETCH  
not to scale

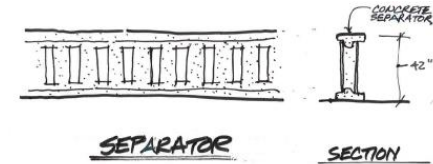


STREET LIGHT

PAINTED BRIDGE COLUMN

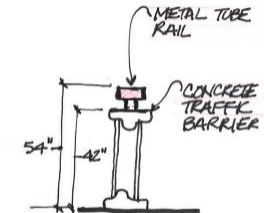
PRECAST CONCRETE PANELS

BRIDGE ELEVATION

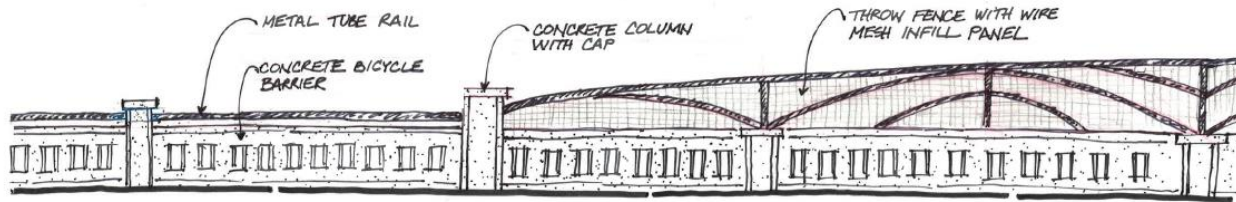


SEPARATOR

SECTION



BARRIER SECTION



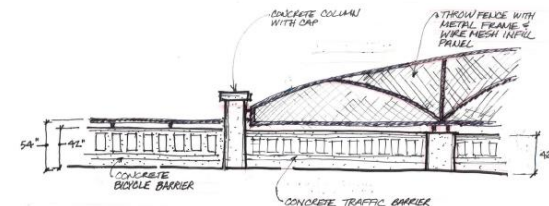
METAL TUBE RAIL

CONCRETE BICYCLE BARRIER

CONCRETE COLUMN WITH CAP

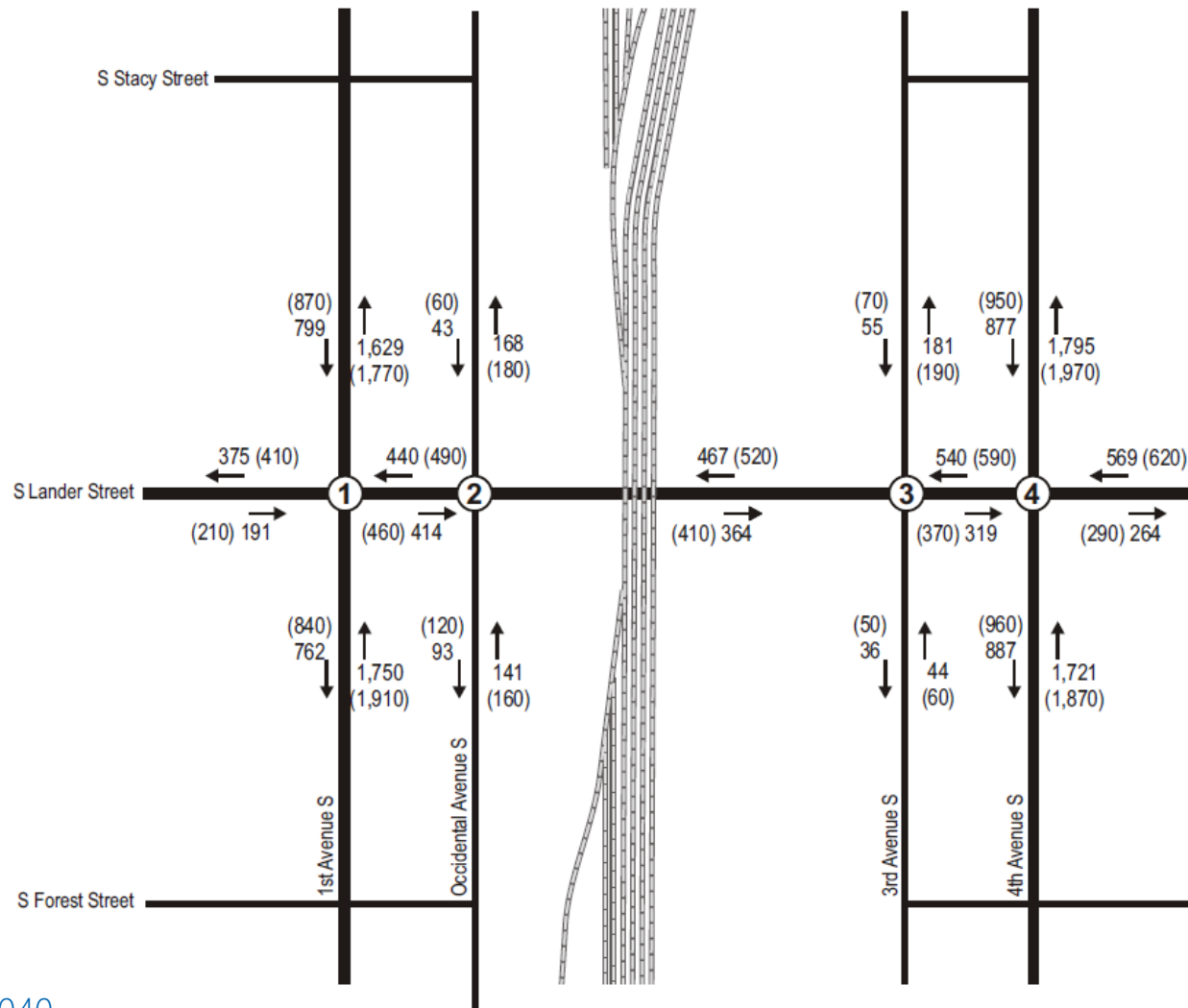
THROW FENCE WITH WIRE MESH INFILL PANEL

BARRIER & THROW FENCE ELEVATION



BARRIER ELEVATION

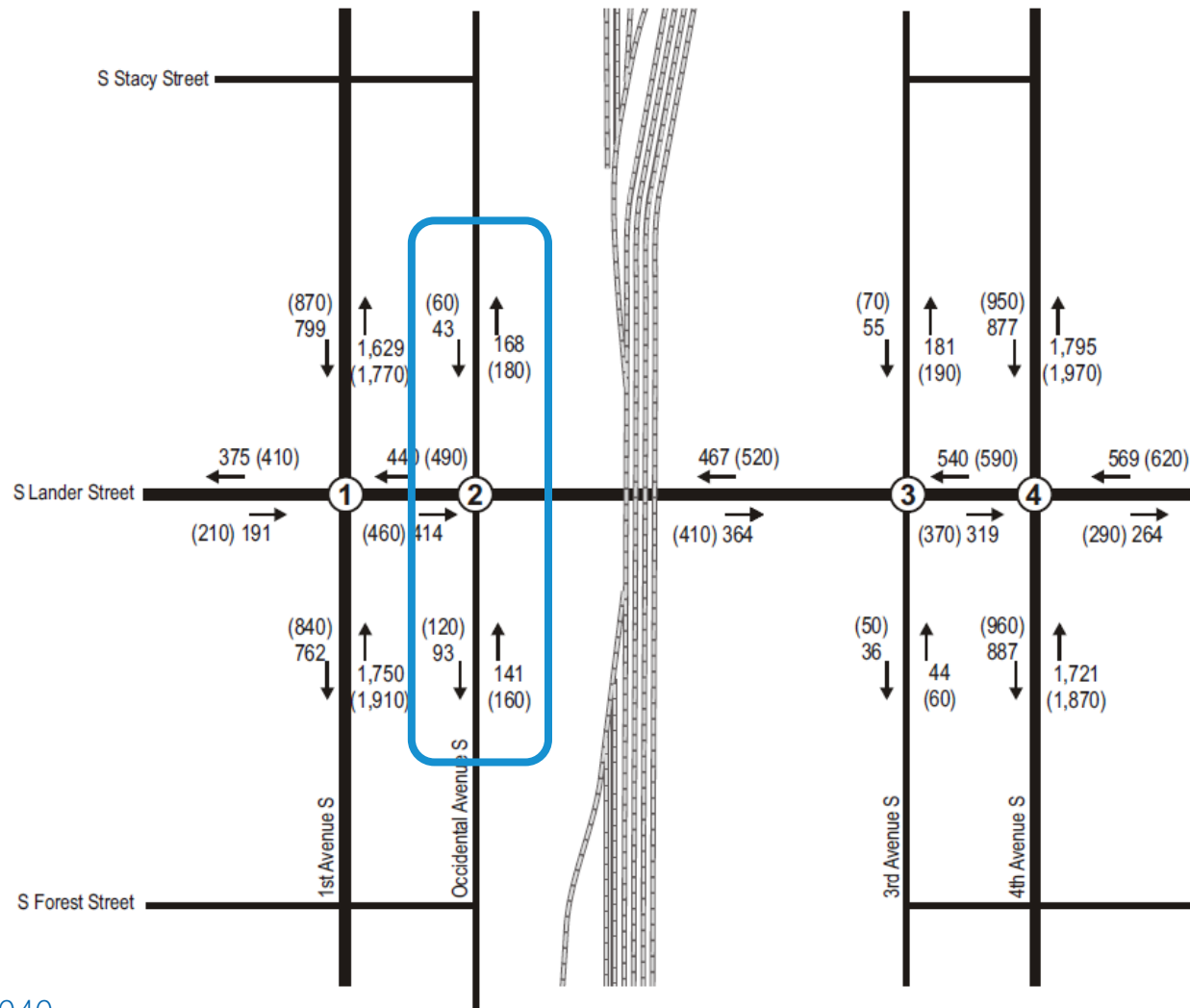
# Traffic analysis



KEY:  
 XX = Existing  
 (XX) = Future, 2040

Volumes shown are AM Peak

# Traffic analysis – Occidental Ave S

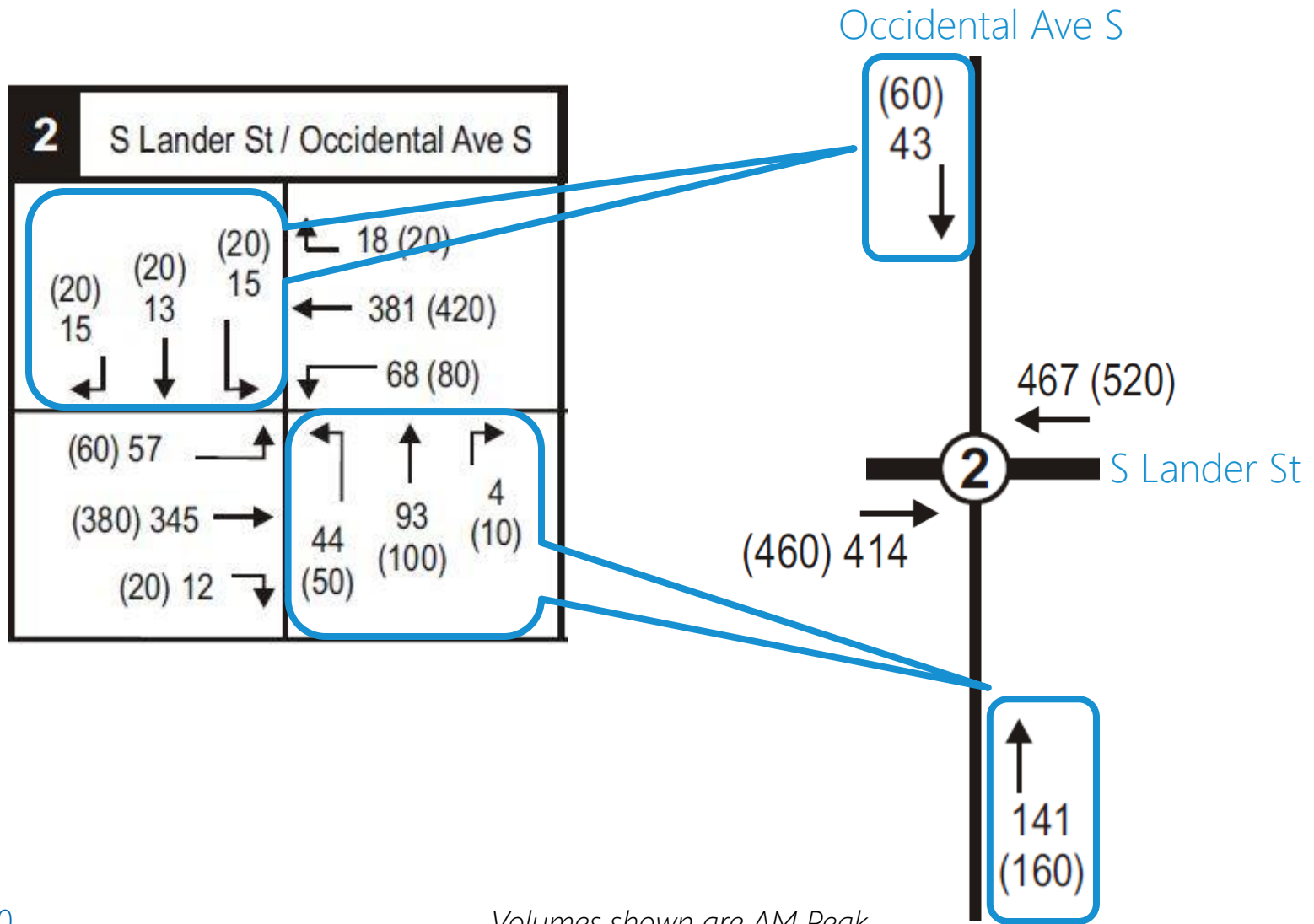


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# Traffic analysis – Occidental Ave S

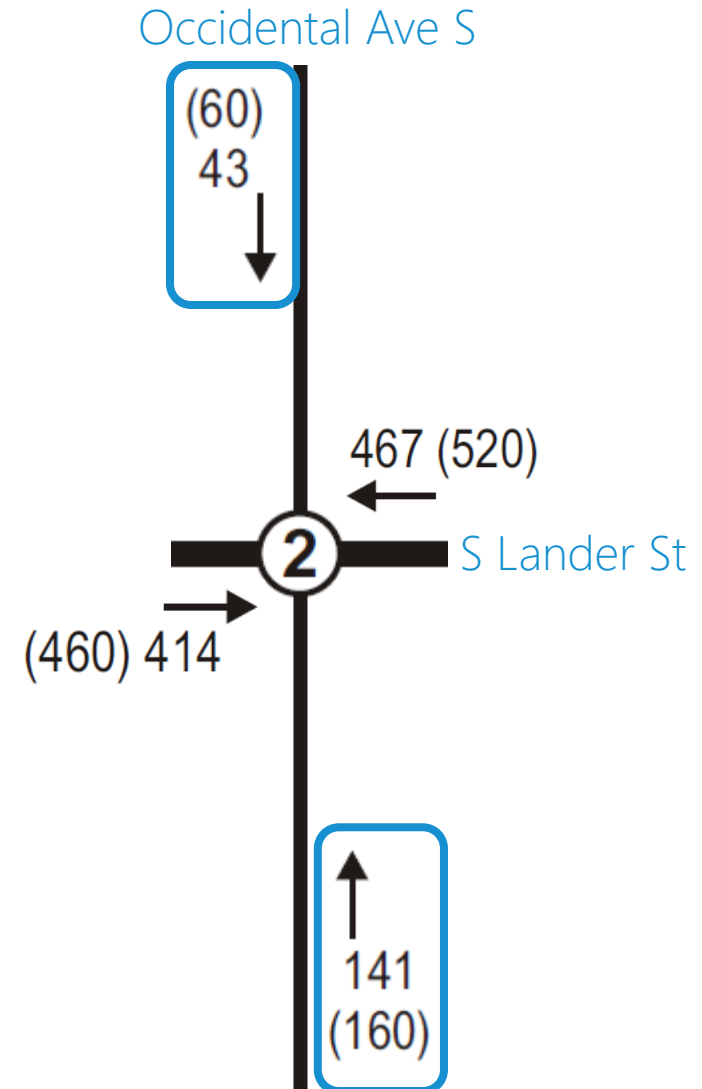
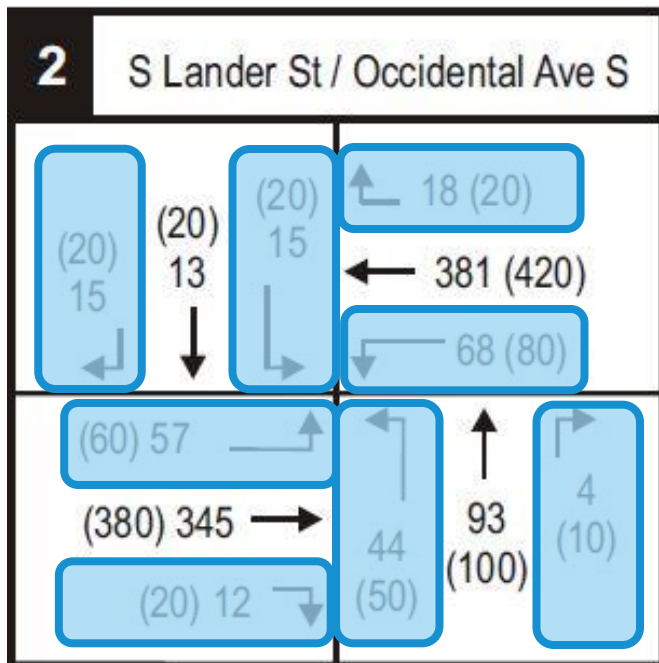
## Turning movements



KEY:  
 XX = Existing  
 (XX) = Future, 2040

# Traffic analysis – Occidental Ave S

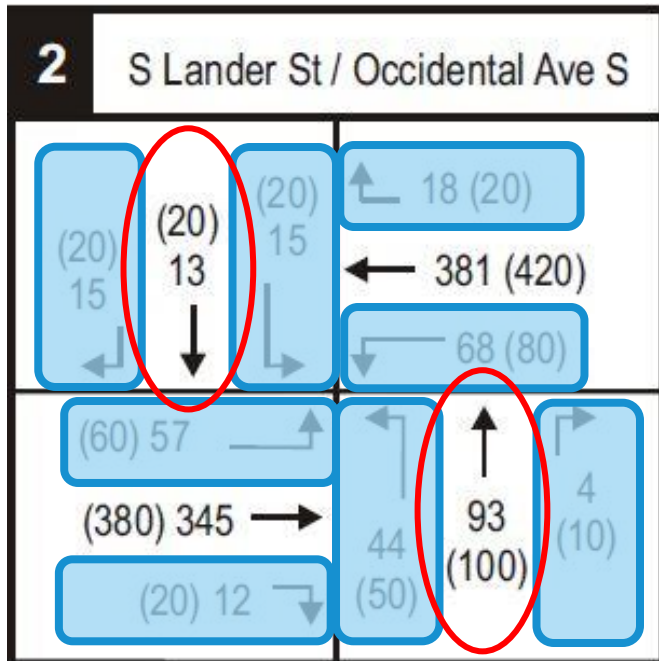
## Future movements



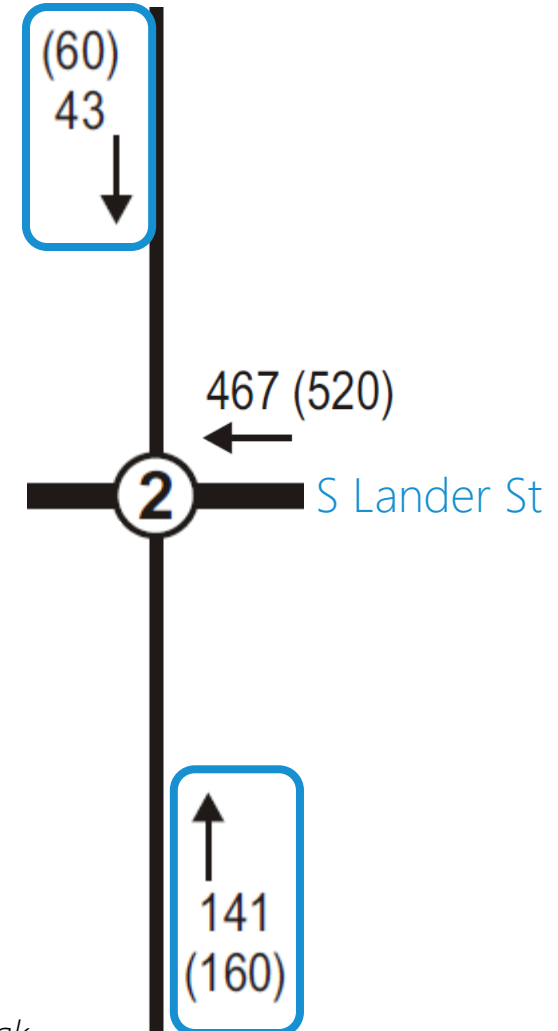
KEY:  
 XX = Existing  
 (XX) = Future, 2040



# Traffic analysis – Occidental Ave S



Occidental Ave S



KEY:  
 XX = Existing  
 (XX) = Future, 2040

Volumes shown are AM Peak

# Traffic analysis results – Occidental

- Number of vehicles crossing S Lander St at Occidental Ave S is low
  - Midday peak:
    - Southbound: 10 (10)
    - Northbound: 10 (10)
  - PM peak:
    - Southbound: 60 (55)
    - Northbound: 5 (10)
- Data indicate high cut-through traffic at AM/PM peak periods (avoiding 1<sup>st</sup> Ave S), rather than local access