

# DIVISION

TRANSIT PROJECT



## Community Advisory Committee

July 19, 2018

# DTP Constrained Corridor Toolbox

- **SIGNAL TECHNOLOGY**
- **PLATFORM HEIGHT**
- **CONTEXT-BASED DESIGN**
- **BICYCLE INFRASTRUCTURE**

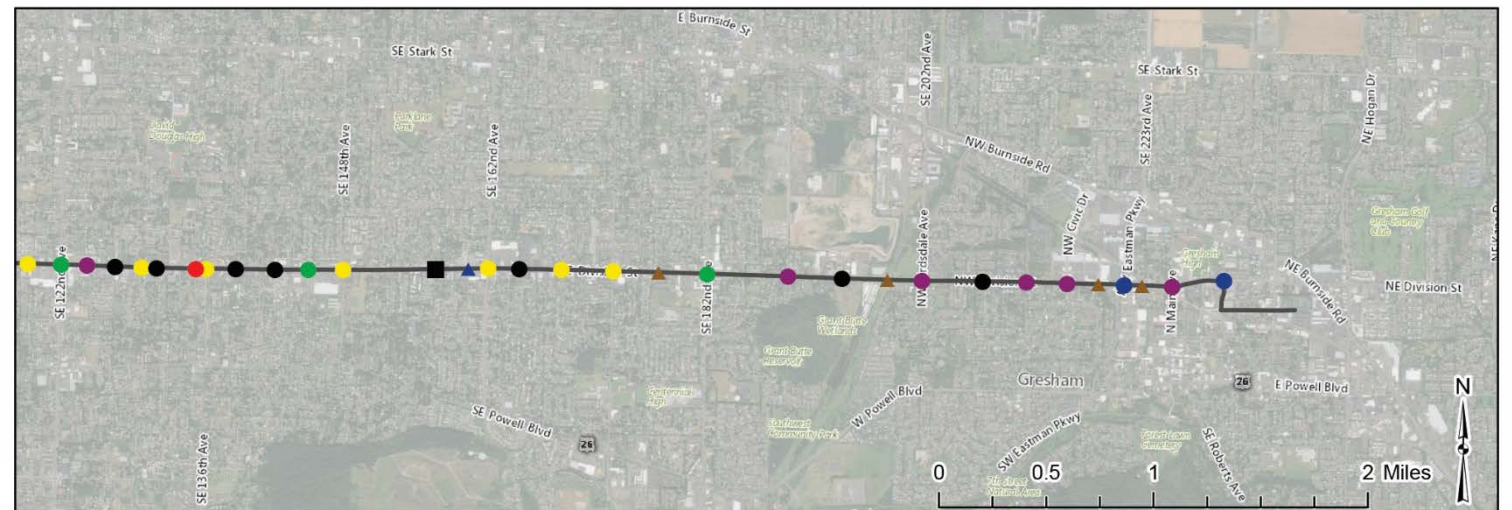
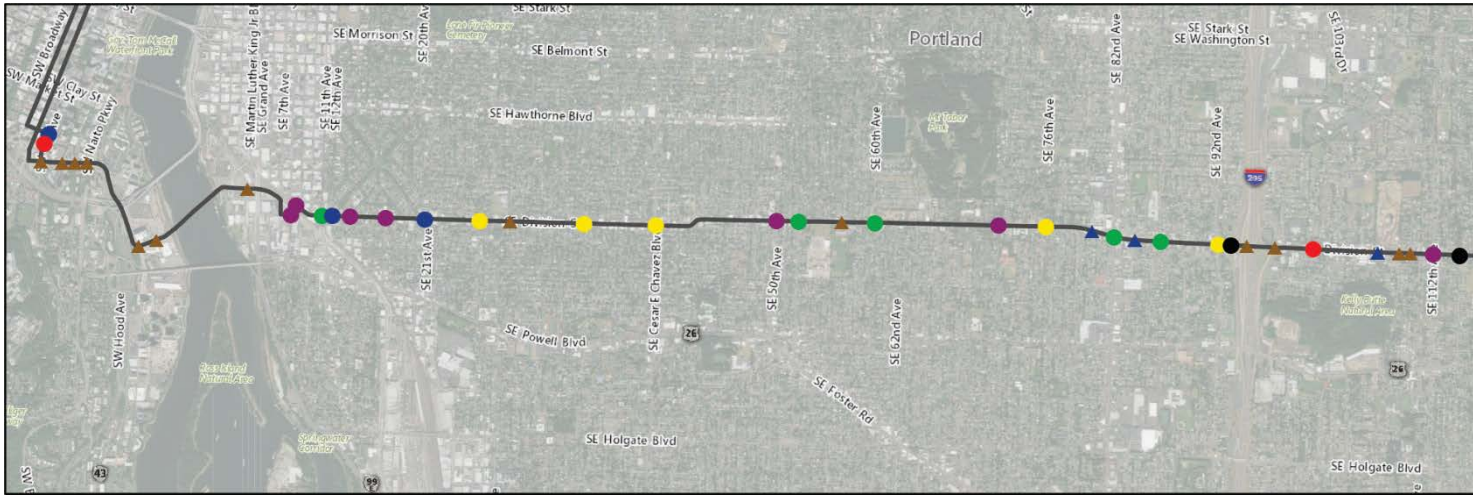


# Signal Technology

# Signal Technology

## Goals:

- Upgrading aging signals for Transit Signal Priority (TSP) and coordinated timing
- Ensure that the cost of signal improvements match the benefit for transit performance



- |                      |                                |
|----------------------|--------------------------------|
| ● Major Modification | ● New Signal                   |
| ● Minor Modification | ● TSP Only                     |
| ● Signal Rebuild     | ▲ No Work                      |
| ● New PHB            | ▲ No Work (ODMMSP Improvement) |
| ■ PHB Rebuild        |                                |

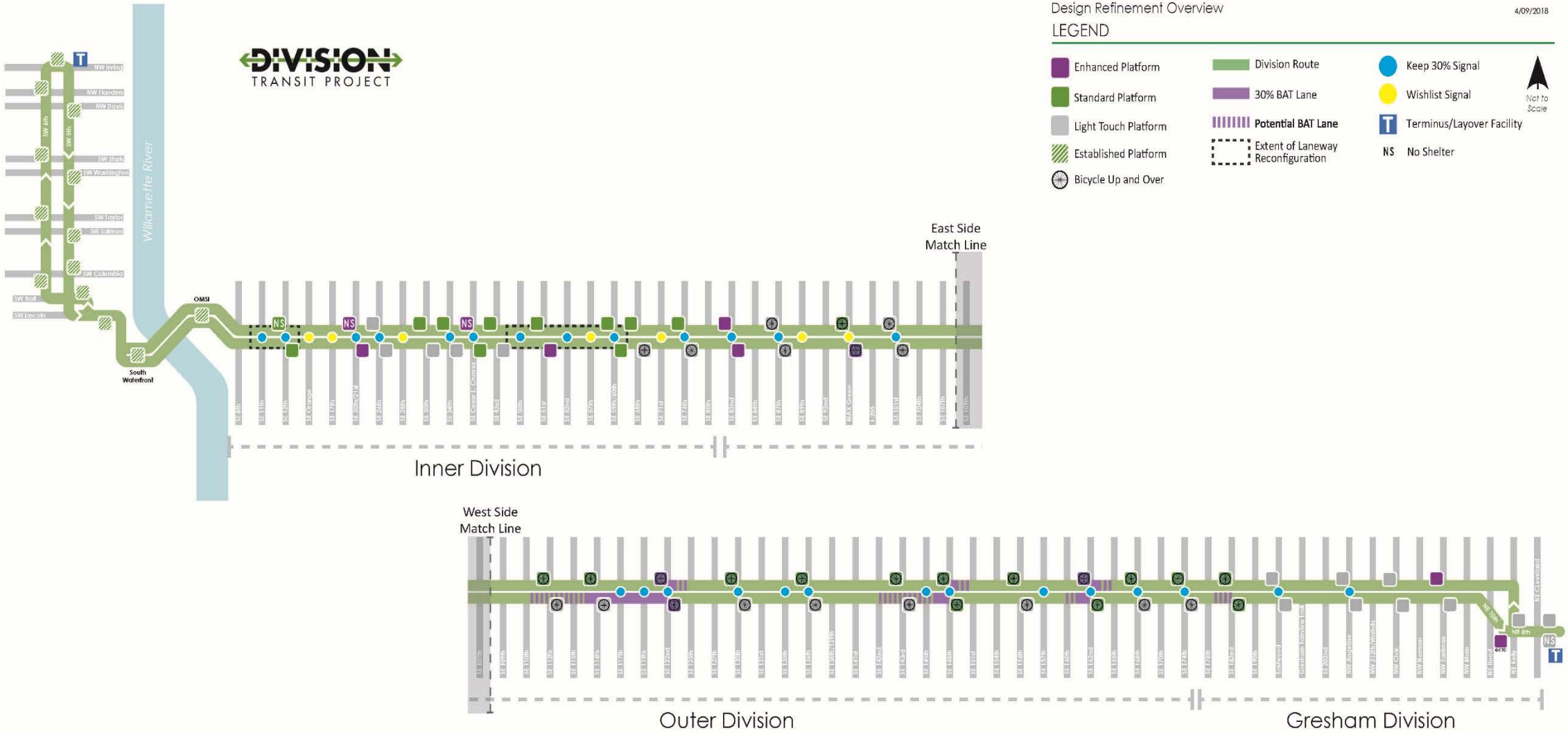
# Signal Technology

Design Refinement Overview

4/09/2018

## LEGEND

- Enhanced Platform
- Standard Platform
- Light Touch Platform
- Established Platform
- Bicycle Up and Over
- Division Route
- 30% BAT Lane
- Potential BAT Lane
- Extent of Laneway Reconfiguration
- Keep 30% Signal
- Wishlist Signal
- Terminus/Layover Facility
- No Shelter



# Signal Technology: Recommendation

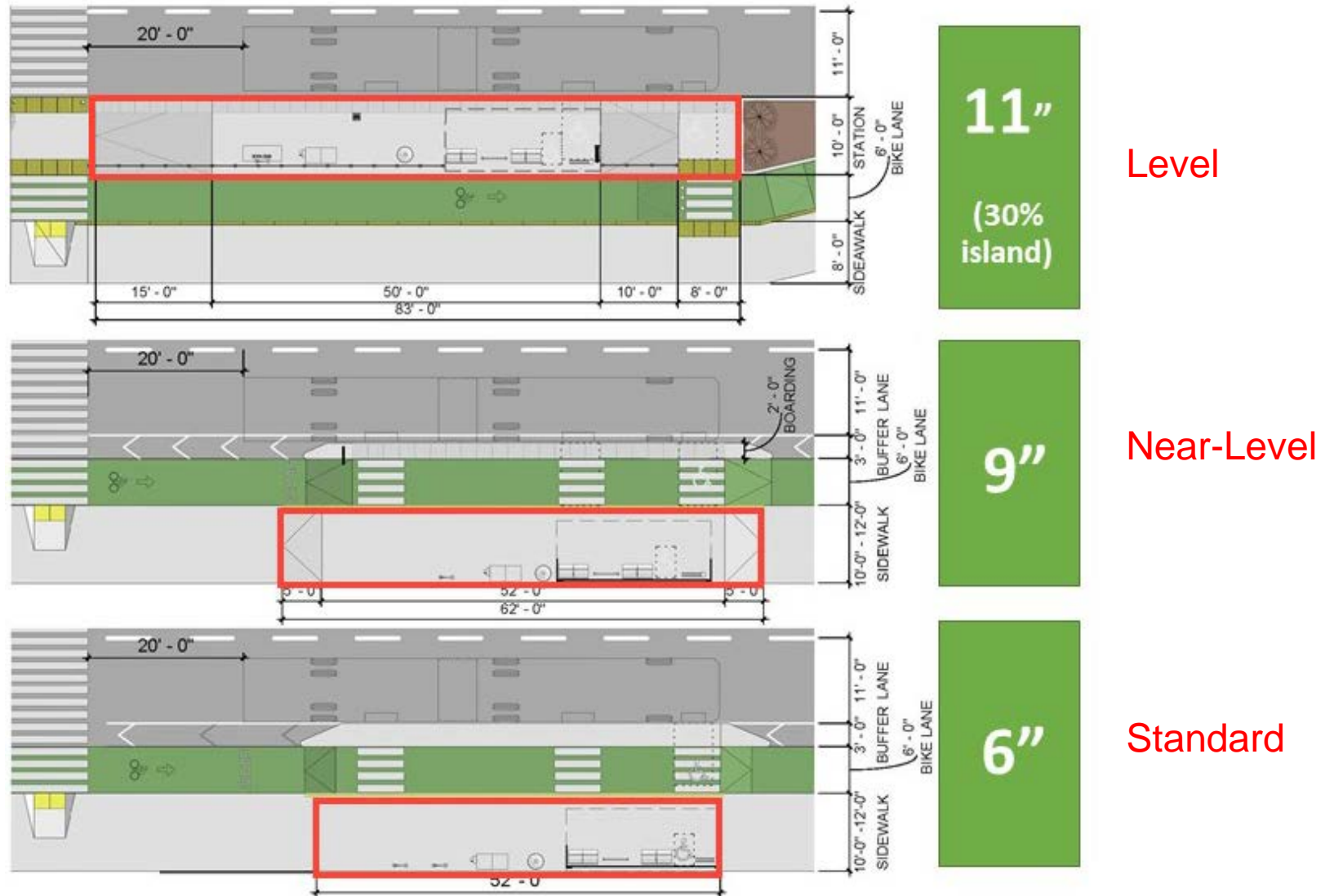
- Exclude the 25 items on the Eliminate list, saving the project close to \$3.5 million.
- Keep the items on the Wish List due to their reliability contributions and relatively low cost of approximately \$430,000.
- Retain all other 38 signals that are represented in the Final 30% Refined set.

# Platform Height

# Platform Height

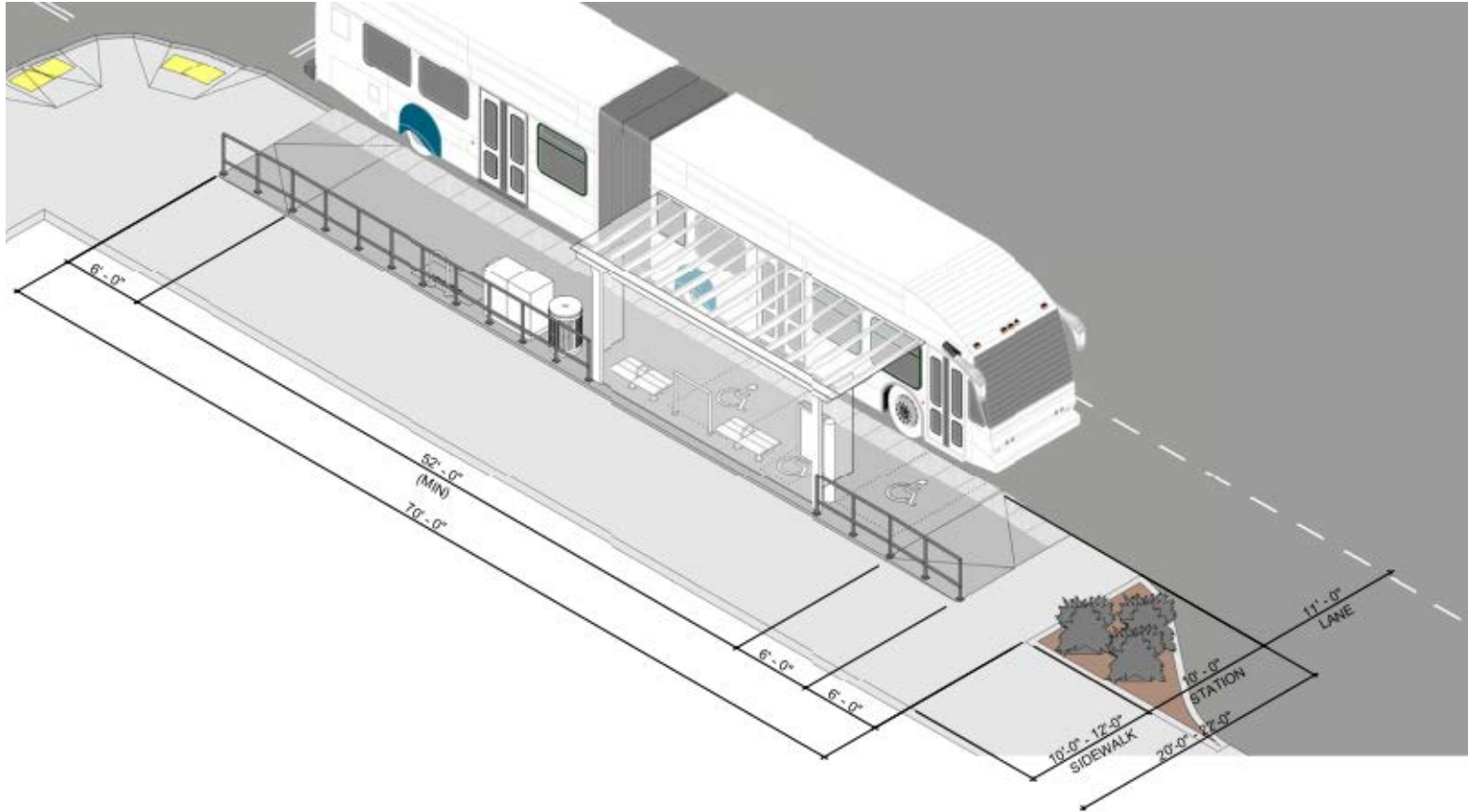
## Goals:

- All door boarding
- ADA boarding at front door
- Utilize near-level and standard platform heights better integration
- Near-level boarding to reduce ramp deployment at higher ridership / high-lift locations.





# Platform height: 9" versus 6"



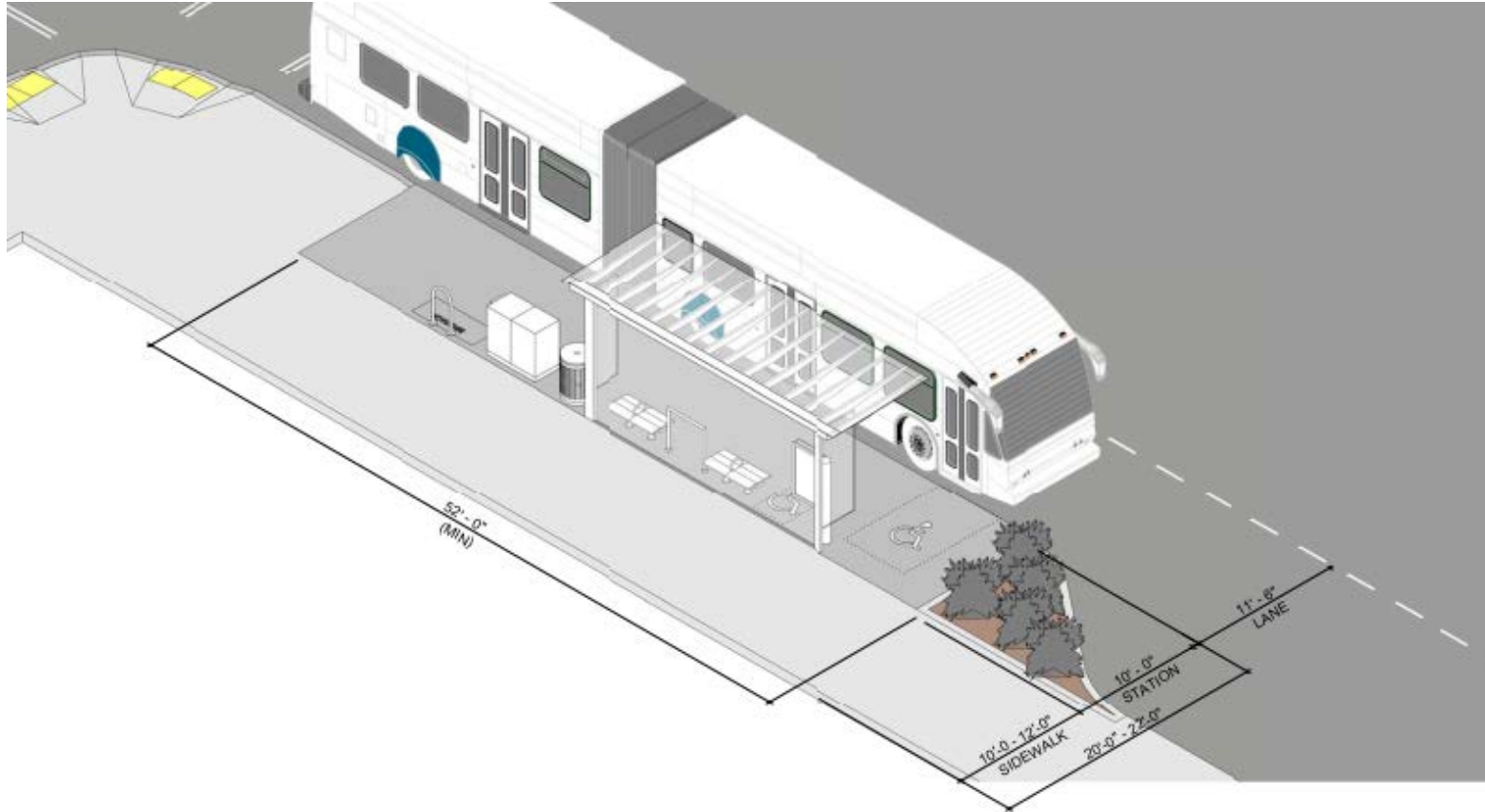
## 9" Benefits:

- Can reduce lift requests for partially impaired
- Near-level boarding = faster boarding
- Faster bus boarding = Enhanced performance

## Trade-offs:

- Slightly higher costs than 6"
- Division of space between station and sidewalk

# Platform height: 9" versus 6"



## 6" Benefits:

- May blend better with abutting properties
- Smallest overall footprint
- Least Cost
  - Eliminates tactile pavers
  - Eliminates railings
  - Eliminates curb bumper

## Trade-offs:

- Accessibility
- Boarding speed
- Sense of Permanence

# Platform Height: Recommendation

- Apply near-level boarding to all high and standard ridership stations when feasible
- Apply standard boarding only at places where near-level cannot be achieved due to contextual constraints or at low ridership stations
- Continue to evaluate cost and performance impacts to determine necessary adjustments in subsequent design milestones

# Context Sensitivity & Flexibility

# Contextual Response - Goals

**There is no “one size fits all” approach in a constrained corridor**

- Allow ridership to inform station capacity/design
- Work within the Right of Way (ROW) constraints
- Minimize impacts to property and utilities
- Create flexibility to integrate the project into the existing urban fabric.
- Manage the cost and feasibility of the project

# Station Design – Elements of Continuity

## **All stations currently have:**

Weather Protection

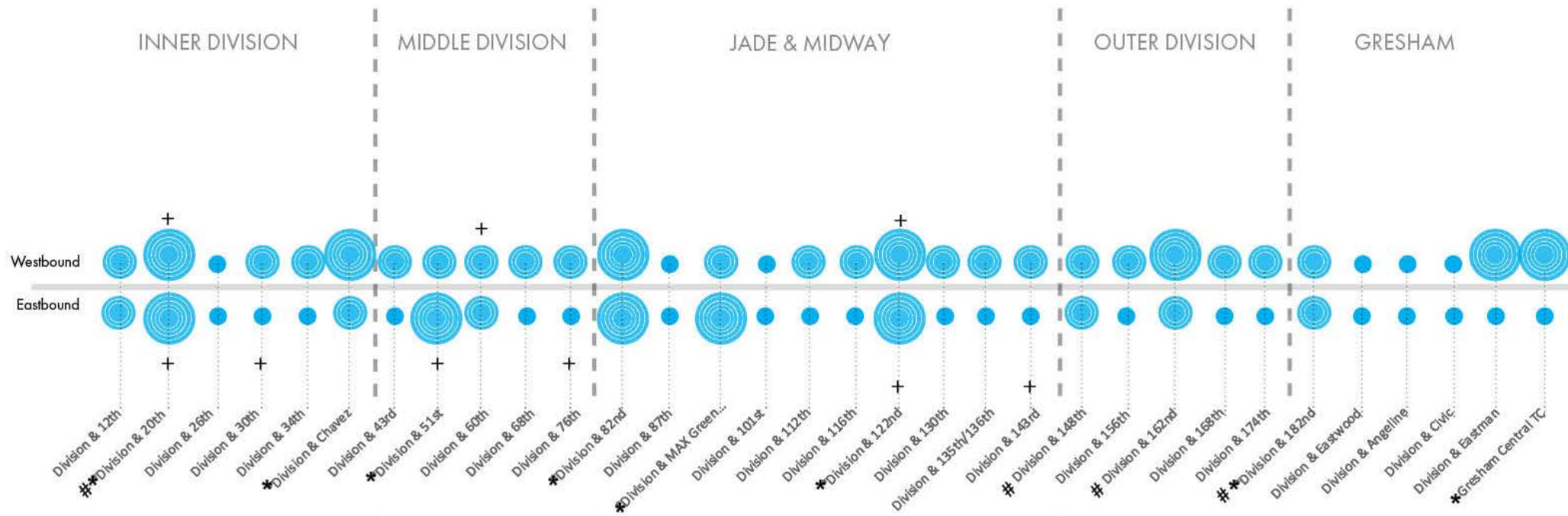
Lighting

Amenities

Branding

Real-Time Info (cellular based)

# Contextual Response – Ridership Demand



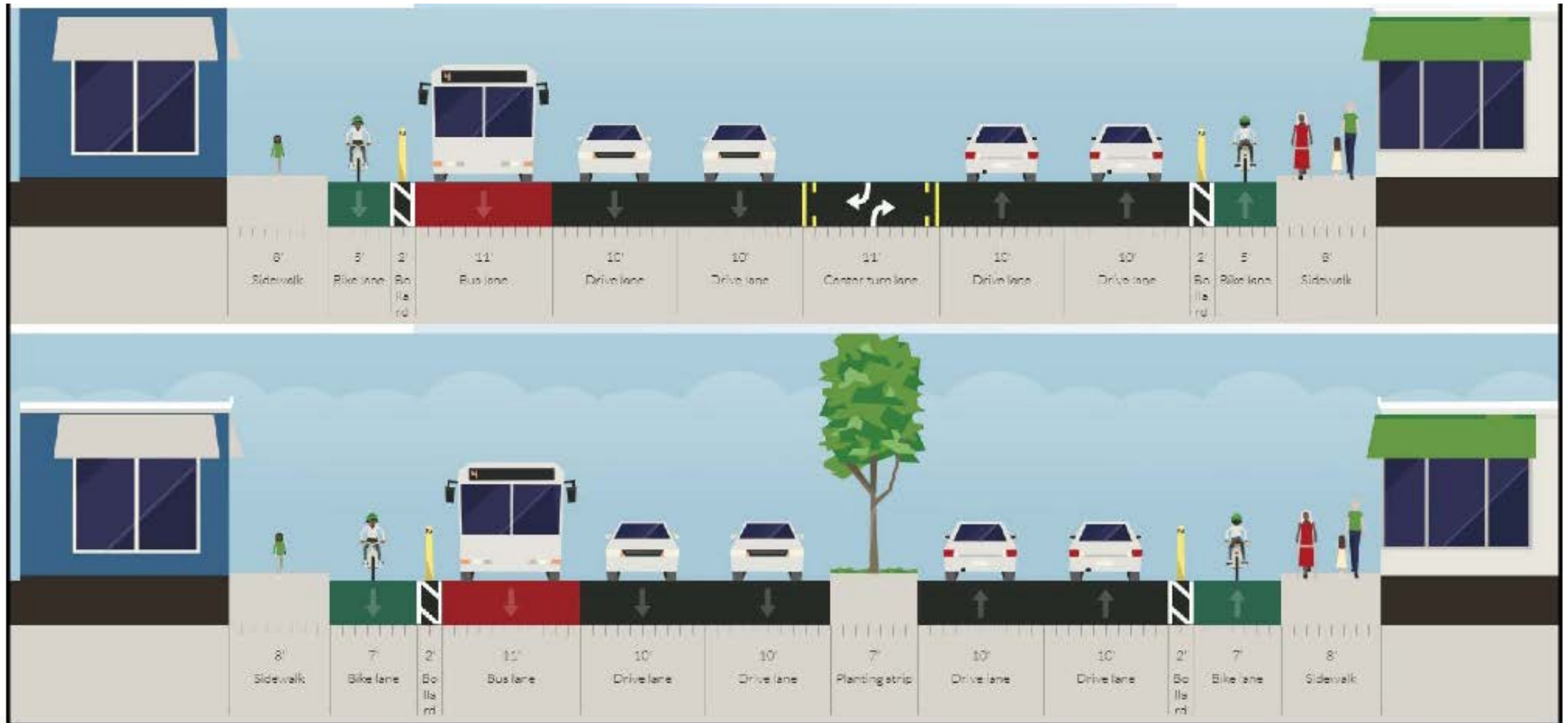
-  HIGH RIDERSHIP (Enhanced Platform)
-  MEDIUM RIDERSHIP (Standard Platform)
-  LOW RIDERSHIP (Light-Touch Platform)

\* BUS/TRAIN TRANSFER LOCATIONS

# FUTURE EXPANDED NORTH/SOUTH BUS SERVICE

+ HIGHER MAX OFFS

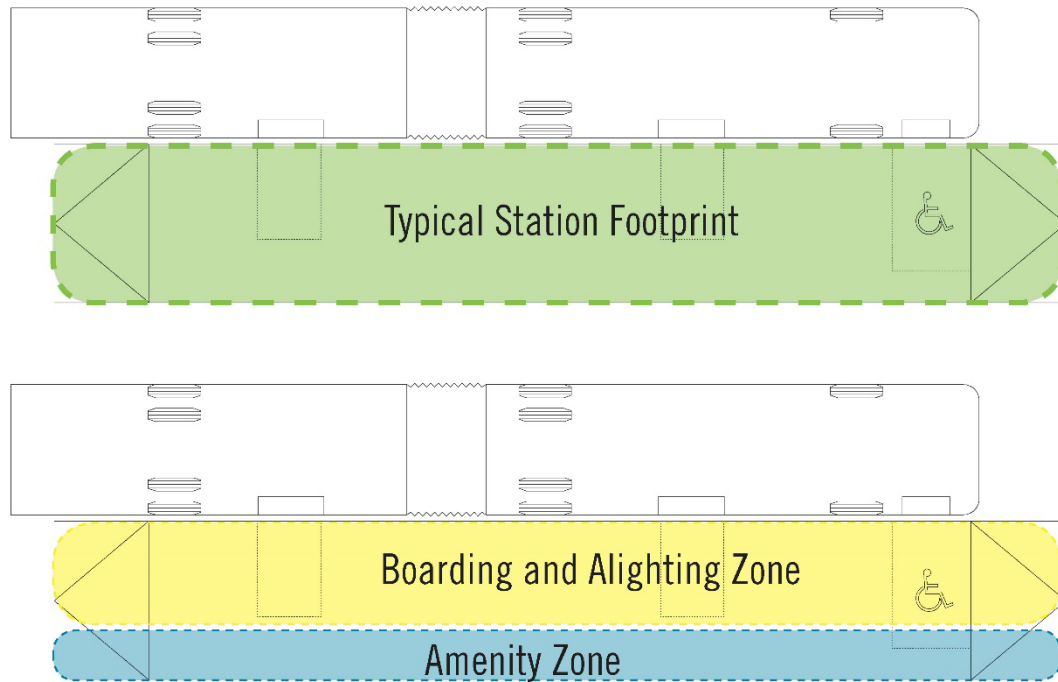
# Contextual Response – Staying Within the ROW



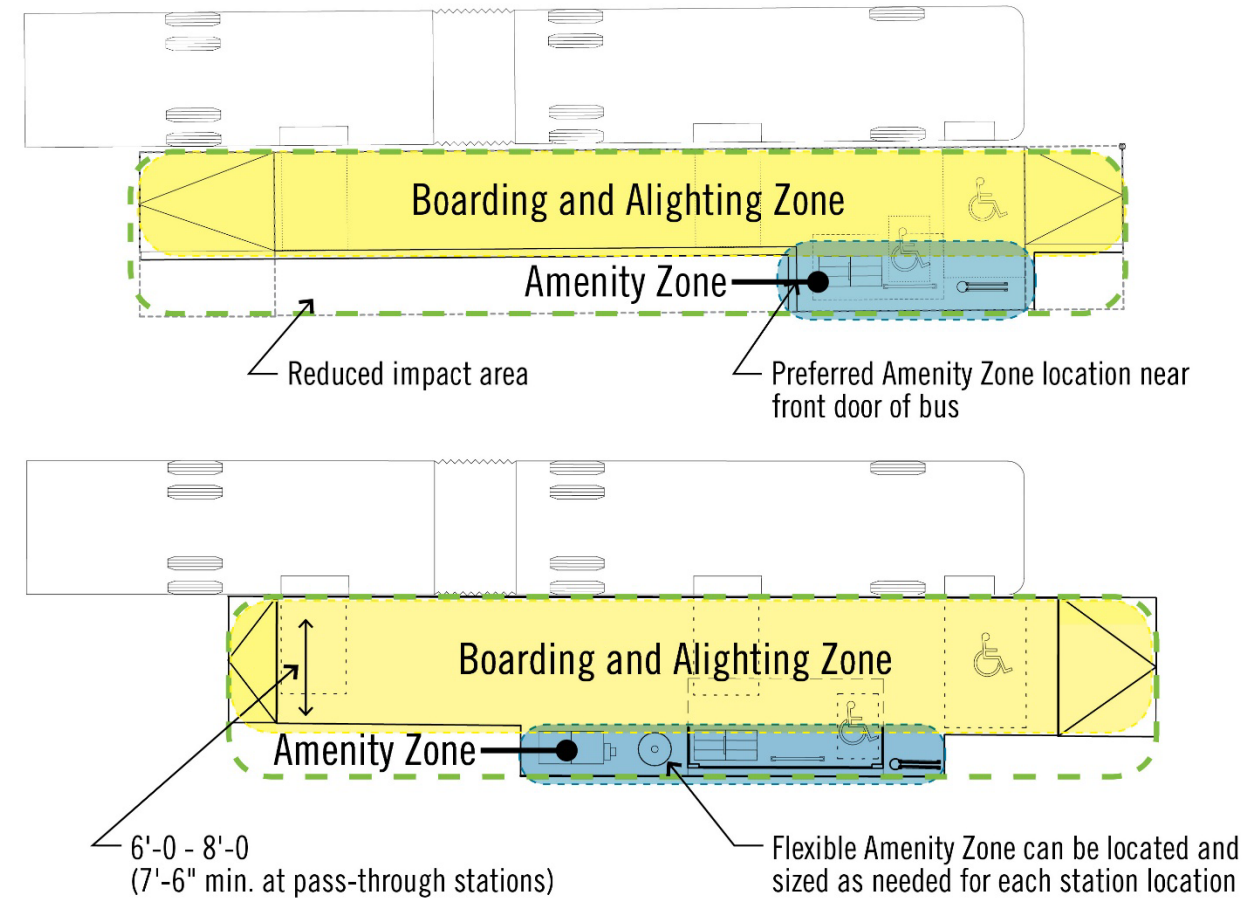


# Contextual Response – Platform Flexibility

## Typical station approach



## Flexible amenity zone approach



# Contextual Response – Spatial Design Criteria

Tight urban environment

Balance bike and pedestrian needs with transit needs

Seek flexibility in how we apply design intent

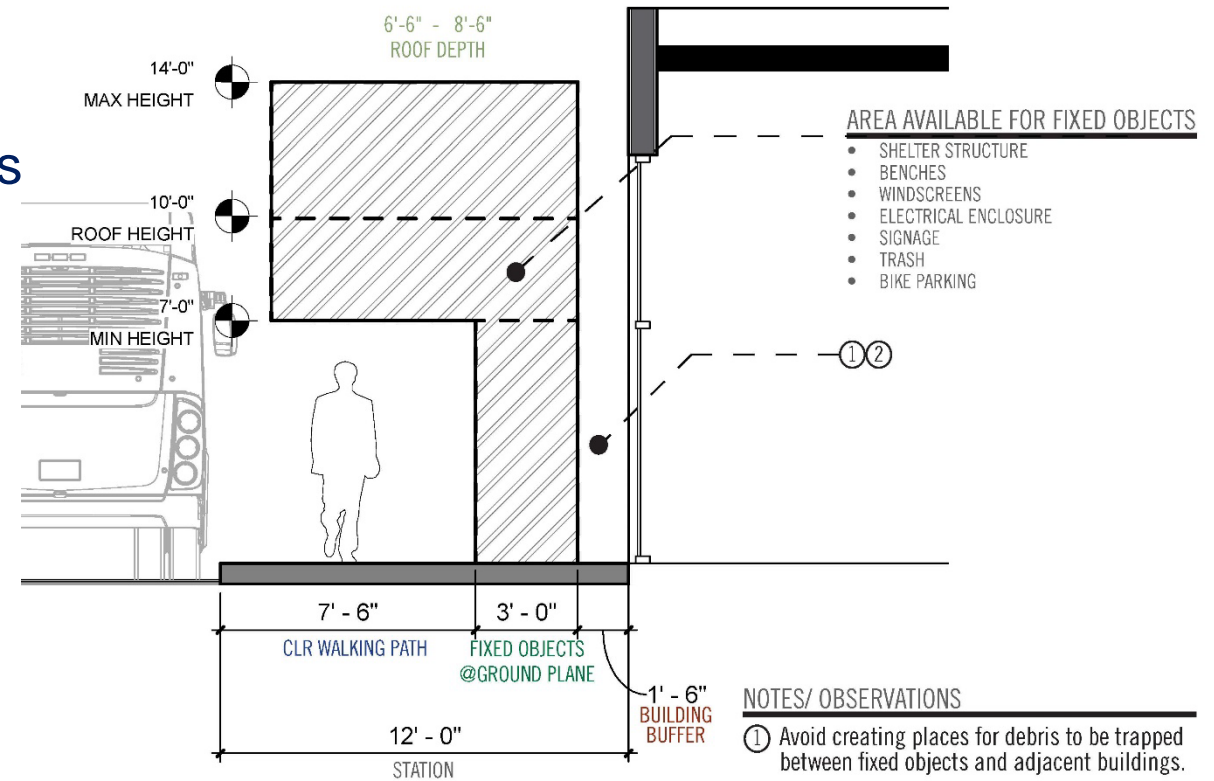
Space requirements defined by stakeholders

TriMet

City of Portland

City of Gresham

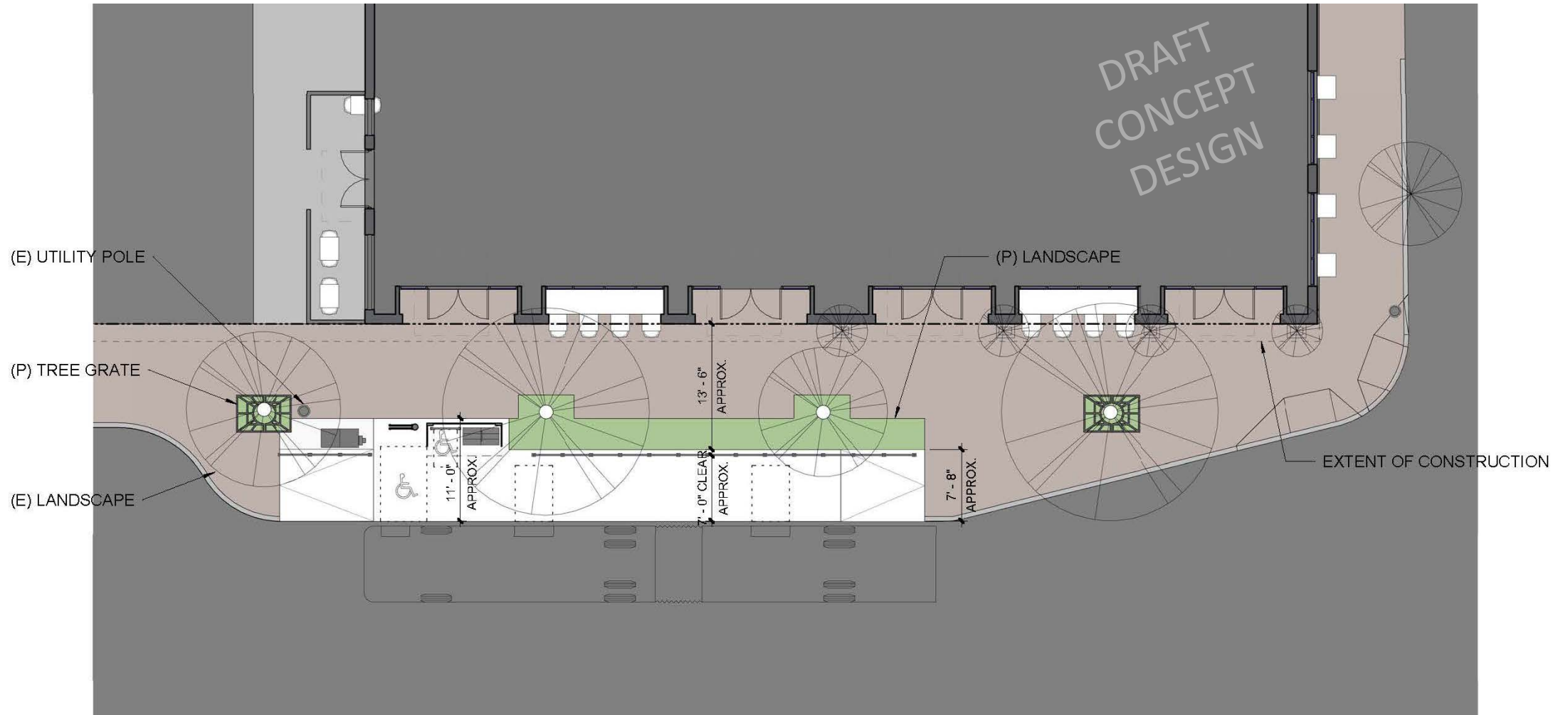
Sometimes conflicting, and ever-evolving



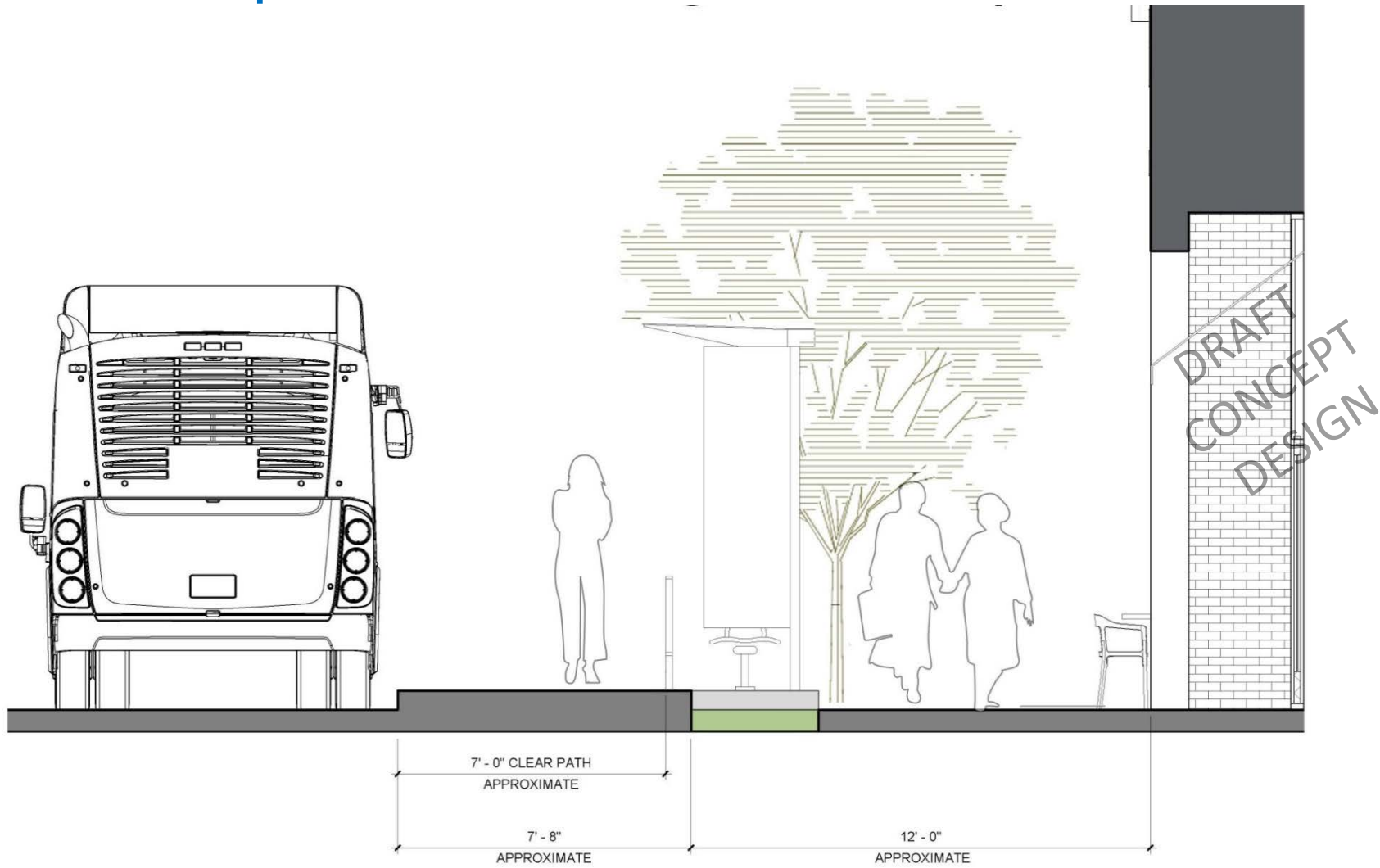
# Solution Example – Inner Division



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# Solution Example – Inner Division



# Contextual Response – Recommendation

- Implement a context-based approach to station platform environments that are responsive to the constraints of the corridor.
- Through design development work, determine an approach that allows for continuity across all stations, and maintains a brand image for the service
- Utilize ridership projections to help inform solutions

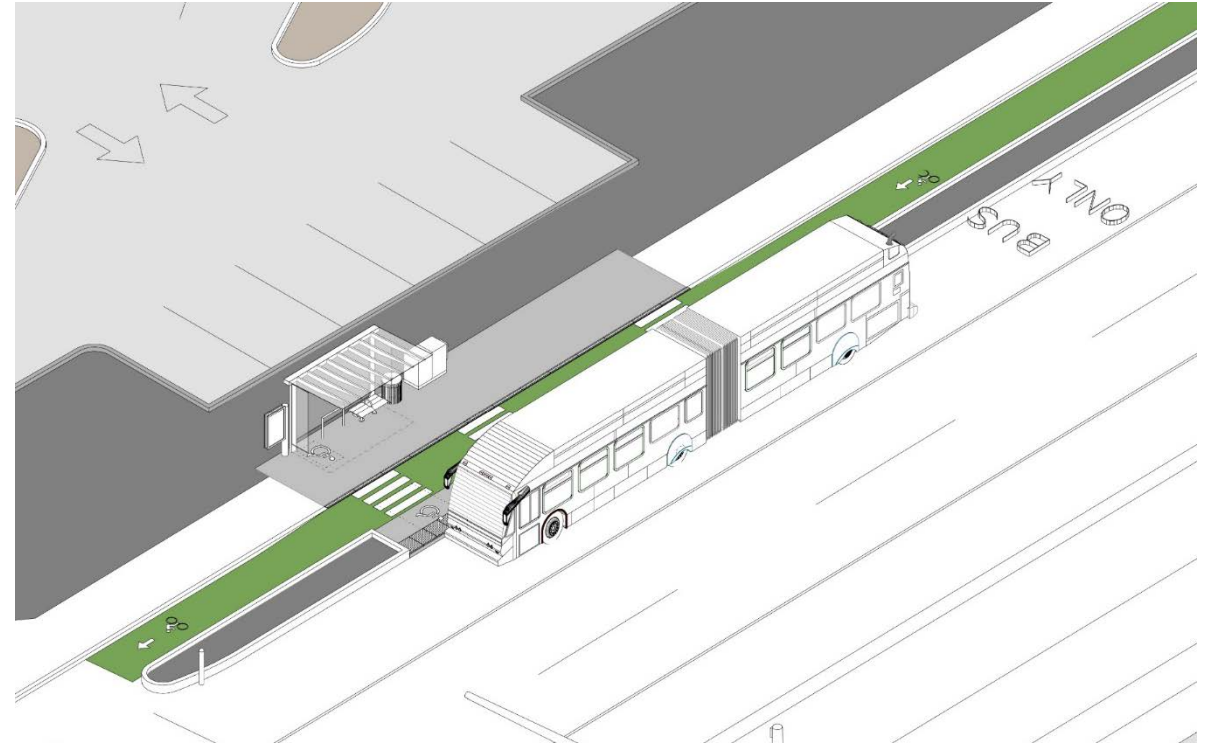
# Bicycle Infrastructure

# Interface with Bikes – Also Contextual

## Original Island station

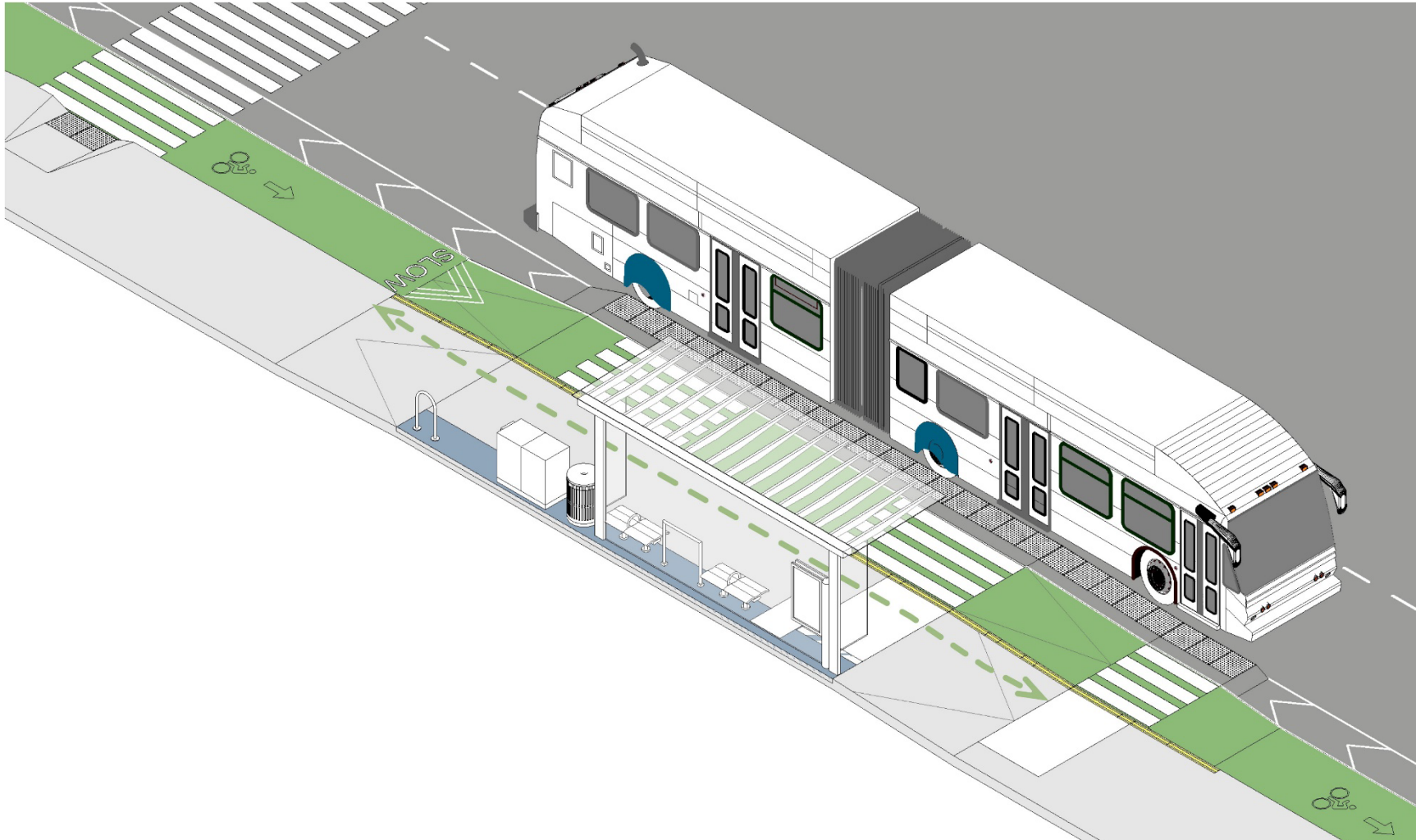


## “Bikes Behind Step-Out” station





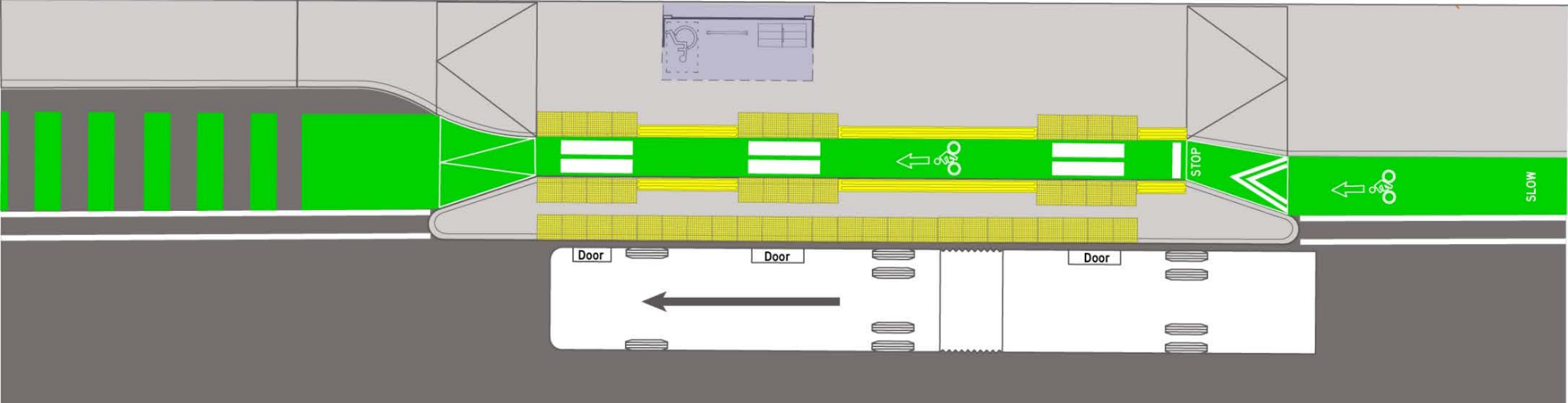
# Context Relationship – Interface with Bikes



## Goals:

- Provide safe bike, pedestrian, transit zones
- Integrate bike lane and station within existing ROW
- Reduce impacts to private property and utilities

# Bikes Behind Step-Out





QUESTIONS?

# June Refined 30% Open Houses Summary

- **Two in person open houses**
  - Promoted in seven community newspapers, postcards and project website
  - Over 30 comments collected
- **Online open house**
  - Active June 27 through July 13
  - Promoted on Facebook and email invitations to more than 32,000 subscribers
  - About 320 comments collected



# June Refined 30% Open Houses Summary



- **Provided opportunity for the public to review**
  - Proposed route and station locations
  - Bike up and over concept
  - Four station types