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
Signal Technology
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

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
+ HIGHER MAX OFFS
# FUTURE EXPANDED NORTH/SOUTH BUS SERVICE
Contextual Response – Staying Within the ROW
Contextual Response – Platform Flexibility

Typical station approach

Flexible amenity zone approach

Typical Station Footprint

Boarding and Alighting Zone

Amenity Zone

Reduced impact area

Preferred Amenity Zone location near front door of bus

Boarding and Alighting Zone

Amenity Zone

Flexible Amenity Zone can be located and sized as needed for each station location

6'-0" - 8'-0" (7'-6" min. at pass-through stations)
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
Solution Example – Inner Division
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