MODAL CONFLICTS

Port Activity and Bicycle Commuting Between West Seattle and Downtown

Partial Report for Public Presentation

Brian Wood (woodlink@uw.edu)
Bon Provenzano (bonpro@uw.edu)
CEE 563 A
Transportation Choices and Technology
University of Washington
Department of Civil and Environmental Engineering
Master of Sustainable Transportation Program
Full Report Contents

- Part I: The Port Corridor
- Part II: East West Connections
- Part III: The Duwamish Loop
- Part IV: Options Analysis
- Appendix

- This presentation only covers Part 1
Part I: The Port Corridor

- Context
- Current Issues
- Recommendations
• System approach
• 16 intersections of interest, 7 critical
• Current configuration
The Port Corridor: Context

- Bicycle Master Plan objectives
- Freight Master Plan objectives
- Who gets priority?
The Port Corridor: Current Issues

Close truck-cyclist proximities throughout the corridor
The Port Corridor: Current Issues

Unpredictable intersection crossings by cyclists
The Port Corridor: Current Issues

Cyclists cross against signals
Cyclists accessing northbound bike lane cross at several locations

Looking North, between Hinds and Horton

Looking North, near T30 North Entrance

Looking South, between Hinds and Horton (Spokane in the distance)
The Port Corridor: Current Issues

Questionable cyclist safety in Hanford mixing zone
The Port Corridor: Current Issues

Bicycle collision on Port Corridor

Site of 2013 fatality

Collisions Involving Bicycles: 2007-2011

① Alaskan Way & Atlantic
② Alaskan Way & Massachusetts
③ Alaskan Way & Massachusetts
④ E Marginal Way, between Stacy & Hanford
⑤ E Marginal Way, between Hanford & Horton
⑥ E Marginal Way, between Hinds & Spokane
The Port Corridor: Recommendations

Options Considered

• Shared Facility Improvements
  – Recommended and described in this section
• Do Nothing
• Ban Bikes from near the Port
• Absolute Separation (bike ferries, elevated bikeways)
• Move the Port
  – All described in Part IV: Options Analysis
Shared Facility Improvements

Based on the objectives of the BMP and photo evidence of cyclists’ movements, improvements should include:

• A Two-way cycletrack on the west side of Port Corridor

• Control of all modes through context specific devices
The Port Corridor: Recommendations

Precedent for a 2-Way Cycletrack

- Seattle has begun installing two-way cycletracks
- Many cyclists were observed using the West side of the Port Corridor for two way travel.
The Port Corridor: Recommendations

“Typical” Port Entrance
The Port Corridor: Recommendations

Cycletrack Barriers?
Basic Logic to Optimize Signalizations:
• During peak commute times, operates at regular intervals, assuming greater duration for port entrances
• Other times, cyclists activate signals with switches:
  o Default green light for trucks,
  o Cycle per time limited to prevent tampering
  o Input from inductive loop detector used to regulate unsafe signal cycles
Cycletrack Configuration Option

GAUSSIAN CURB:
- Provides physical separation
- Smooth edges prevent wheel damage in incidental contact
- Allows crossover for emergency vehicles, plows, etc.

SIDEWALK

10'
The Port Corridor: Recommendations

Cycletrack Configuration Option

GAUSSIAN CURB

PHYSICAL SEPARATION

2"

12"
Enclosure can Prevent Midblock Crossings
East-West Connections: Context

- System approach
- North-South route completed with local alternative
- Many cyclists will choose 1st Avenue
  - Perceptions of safety
  - Noise and exhaust
  - SODO destinations
East-West Connections: Recommendations

Spokane Connection to 1st Avenue
East-West Connections: Spokane Facility

Excellent Rail Crossings
(north side facing east)
The Duwamish Loop: Context
The Duwamish Loop: Context

Cranes, Trains, and Ferries
Questions

- Fragen, вопросы, preguntas, 質問, pertanyaan-pertanyaan, otázky, 问题, תโรงแรม, cwestiynau…