2017 Freight System Plan

Washington State Freight Advisory Committee (WAFAC) Meeting

April 21, 2017
Agenda

Background

Status update on the chapters in the plan

Discussion of the Marine Ports and Navigation Plan

Discussion of freight congestion analysis

Discussion of freight project validation

Next steps
Purpose of the Plan

Meet new requirements under FAST Act:
- Identification of multimodal freight corridors and facilities
- Description of how the plan meet the national multimodal freight policy goals and the national highway freight program goals
- Strategies to mitigate significant congestion or delay caused by freight movement
- Development of Freight Investment Plan, including a list of freight priority projects

Meet RCW requirement and other emerging needs:
- Integrate Marine Ports and Navigation Plan
- Refresh freight data from 2014 State Freight Plan
- Update emerging trends, needs, and issues
- Provide status update of 2014 Plan actions
- Update strategies and recommendations
WAFAC Roles and Responsibilities

Committee Action in 2013-16

- 2014 Freight Mobility Plan
- Advised on Critical Urban and Rural Freight Corridor Designation
- Provided guidance on freight project list prioritization

Committee Consultation in 2017

- Participate in the development of State Freight Plan
- Advise on freight-related issues and trends
- Advise on strategies and recommendations
- Review and comment on draft documents
Draft Status* of Chapters and Appendices

- Introduction: 90%
- Economic context: 70%
- System description: 80%
- Condition and performance: 30%
- Volumes and forecast: 20%
- Trends and issues: 80%
- Strategies: 5%
- Freight Investment Plan: 20%
- Marine Ports and Navigation Plan: 50%
- Requirements: 80%
- Roles and responsibilities: 70%

* = Approximates
New Data: Planning and Policy

Federal Freight Program
- Freight plan requirements
- National Multimodal Freight Policy
- National Highway Freight Program

Other Plans and Studies
- Marine Cargo Forecast
- JTC Road/Rail Study
- Washington Transportation Plan
- Washington Aviation Plan
- Target Zero/Strategic Highway Safety Plan

Other Requirements and Policies
- RCW requirements for state freight plan and marine ports and navigation plan
- Results Washington
- Results WSDOT
- Transportation system policy goals in RCW
WA Transportation System Policy Goals
RCW 47.04.280

- **Economic Vitality**: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.

- **Preservation**: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services.

- **Safety**: To provide for and improve the safety and security of transportation customers and the transportation system.

- **Mobility**: To improve the predictable movement of goods and people throughout Washington state, including congestion relief and improved freight mobility.

- **Environment**: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment.

- **Stewardship**: To continuously improve the quality, effectiveness, and efficiency of the transportation system.
Update: Institutions, Roles and Responsibilities (includes funding)

Freight industry and associations
- Trucking
- Railroads
- Marine
- Air Cargo
- Pipelines
- Ports
- Labor Unions

Federal agencies
- USDOT
  - Funds $4.5 billion FASTLANE grant program
  - Apportions $108 million NHFP fund to WA
- FHWA
- FRA

Washington State
- State legislature
- WSDOT
- FMSIB
- TIB
- WSP
- UTC
- CRAB

Regional and local governments
- MPOs and RTPOs
- Tribal governments
- Cities and Counties
New Data: Economic Context

- Washington is the most trade-dependent state in the nation on a per capita basis, with total foreign imports and exports valued at $137.5 billion in 2015.

- Freight within Washington State supported:
  - 1.36 million jobs in freight-dependent industries, accounting for 44% of state’s total jobs
  - $550 billion in gross business income from freight-dependent industries

- The freight transportation system in Washington has three components:
  - Global Gateways: provide access to national and international markets
  - Made in Washington: freight that is manufactured or produced in Washington, statewide
  - Delivering Goods to You: representing local delivery
New Data: System Description

An integrated, multimodal system of freight transportation assets:

- National Multimodal Freight Network (new)
- National Highway Freight Network (new)
- Truck Freight Economic Corridors
- Rail Freight Economic Corridors
- Marine Freight Economic Corridors
- Air cargo system (expanded)
- Pipeline system (expanded)
New Data: Condition and Performance

Condition of Pavement on State Highways

- WSDOT manages almost 18,500 lane miles of state highway pavement
- 93% of WSDOT managed pavement lane miles were in fair, good or very good condition and considered adequate
- Washington state is facing the problem of aging concrete roadways- over 50% of WSDOT concrete pavement has been in use over 40 years
- WSDOT focuses on lowest life cycle cost to manage its pavement assets

Source: WSDOT Materials Lab, WSDOT Gray Notebook
Condition of State-Owned Bridges

- WSDOT manages over 3,800 bridges and structures statewide
- 91% of WSDOT-owned bridges by deck area were in very good, good, or fair (minor deterioration) structural condition
- 223 of WSDOT owned bridges are 80 years or older
- A total of 126 WSDOT-owned bridges have weight restrictions
- A total of 866 WSDOT bridges are rated as functionally obsolete
- One risk faced is over-height truck impact

Source: WSDOT Bridge Office, WSDOT Gray Notebook
Washington State freight network moved 436.6 million tons of freight in 2015, with a total of 194.9 billion ton-miles traveled. Freight demand by weight is projected to grow 29% in next 20 years, while the total ton-miles traveled is projected to increase 60%. (Source: FAF 4)
**Discussion: Congestion Caused by Freight**

**WSDOT Approach**
- Mobility screening to identify locations experiencing congestion
- Bridges
- Rail congestion/crossings
Congestion Analysis

Mobility Screening Process

• Developed to support WSDOT Corridor Sketch Initiative
• Identify segments experiencing congestion
• Provide focus areas to multi-agency, multidisciplinary, and multimodal teams for developing strategies to address root causes of congestion
• Congestion caused by freight will be considered in strategy development

Mobility Screening Methodology

1) Consider volume/capacity ratio to identify locations with high traffic volume
2) Determine peak hour speed for comparison with congestion threshold
3) Calculate duration of congestion
4) Analyze severity of congestion
5) Analyze travel time reliability

Status: Step 1 to 3 have been completed and results are under review by WSDOT regions
Initial Congestion Screening Results for High Volume Truck Corridors

DRAFT for discussion purposes only

Next steps:
- Validate congested locations
- Conduct root cause analysis
New: Marine Ports and Navigation Plan

Foundation setting

- Accounting of issues, trends, challenges, and needs
- Develop as a stand alone document
- Findings integrated into Freight System Plan and Statewide Multimodal Transportation Plan

RCW 47.06.070
Marine ports and navigation plan

The state-interest component of the statewide multimodal transportation plan shall include a state marine ports and navigation plan, which shall assess the transportation needs of Washington's marine ports, including navigation, and identify transportation system improvements needed to support the international trade and economic development role of Washington's marine ports.
Discussion: Marine Ports and Navigation Plan

Key Trends and Issues

- Last mile connections
  - Highway and rail access
  - At grade crossings
- MARAD/Corps of Engineers
  - Inland Waterways and Harbor Tax
  - Dredging, sediment disposal, channel, locks, jetties, groins
- Competitive threats and opportunities
- Environmental
  - Endangered species

Other Topics

- Port agencies and associations
- Port funding
- Investments/Strategies
Discussion: Preliminary Survey Results

TRENDS

- Consolidation of port operations: 2
- Port automation: 3
- Consolidation of shipping lines: 3
- Larger vessels: 8
- Other (please specify): 9
- Global economic competition: 10
- Safety and security: 13
- Regulations: 20
Discussion: Preliminary Survey Results

- Limited nearby parking for port-related trucks: 5
- Congestion on the roadway/railway network: 6
- Limited or inadequate road/rail connections: 11
- Other (please specify): 14
## Discussion: Preliminary Survey Results

### NEEDS

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Legend:
- **Green** represents the number of respondents for each category.
Discussion: Marine Ports Survey

OPPORTUNITIES

- Consolidation of port operations: 2
- Port automation: 3
- Consolidation of shipping lines: 3
- Larger vessels: 9
- Other (please specify): 10
- Global economic competition: 13
- Safety and security: 13
- Regulations: 20
Discussion: Marine Ports Survey

CHALLENGES

- Consolidation of port operations: 2
- Port automation: 3
- Consolidation of shipping lines: 3
- Larger vessels: 8
- Other (please specify): 9
- Global economic competition: 10
- Safety and security: 13
- Regulations: 20

Challenges in marine ports survey, with the highest being regulations and the lowest being consolidation of port operations.
Freight Investment Plan

Critical Urban and Rural Freight Corridors
- Corridors certified with FHWA September 2016

Freight Project List
- 2016 Freight Project List sent to state legislature November 2016
  - National Highway Freight Program
  - FASTLANE Program

Description of how NHFP funds would be invested and matched
**Discussion: Freight Investment Plan**

**Freight Project Validation Concept**

- **Purpose:** Enhance screening process that informs prioritization and selection of projects based on statewide benefits to the freight system.

- Both House and Senate 2017-2019 Transportation Budget Proposals are calling for project validation:
  
  - SHB 1147: “Before programming federal national highway freight program funds designated for the national highway freight network under this subsection, the department shall validate projects on the prioritized freight project list... The department shall continue to work with the Washington state freight advisory committee to improve project screening and validation to support project prioritization and selection, including during the freight mobility plan update in 2017”
  
  - SSB 5096: “The department shall validate the projects on the list. Only projects that are validated by the department may receive funding under this subsection. The department shall continue to work with the Washington state freight advisory committee to improve project screening and validation to support project prioritization and selection, including during the freight mobility plan update in 2017”
For discussion purposes: Freight Project Validation

**Process:**

1. Develop a new methodology to evaluate freight system benefits of freight projects. WSDOT considers using a scoring approach for this purpose:
   - Develop a number of project evaluation criteria consistent with the goals of the national highway freight program
   - Develop a set questions for each criteria
   - Assign scoring points to each question

2. Consult with WAFAC, MPOs and RTPOs on the draft evaluation approach

3. Contact project submitters directly requesting them to:
   - Validate the accuracy of project information submitted in 2016
   - Answer all the questions under project evaluation criteria for each project

4. Compile the responses received and send the project information to scoring committee

5. Independent scoring committee reviews submitter’s response and scores each project

6. Calculate the average score for each project for incorporation in the list
Establish an independent scoring committee consisting of:

- Railroad representative (Class I or II)
- Trucking representative (WTA or Company Executive)
- Air Cargo representative (Executive Director from a cargo airport)
- Port representative (Executive Director of a port authority)
- Chair of Washington State Freight Advisory Committee
- WSDOT representative (Development Division)
- MPO/RTPO representative (Chair of MPO/RTPO/WSDOT Coordinating Committee)

Evaluation Framework criteria are aligned with:

- Washington state’s Transportation System Policy Goals
  - Economic vitality
  - Preservation
  - Safety
  - Mobility
  - Environment
  - Stewardship
- Goals of the National Highway Freight Program specified under FAST Act
- Merit criteria used by FHWA for evaluating FASTLANE freight project application
Updated: Trends and Issues

Economic Competitiveness
• New logistics and distribution models (new)
• Efficient flow of freight through gateways: border crossings, airports, seaports (new)
• Competition facing ports (new)
• Workforce shortages

Preservation
• Heavy vehicle routes and pavement damage
• Railroad maintenance e.g. track and bridge conditions, landslides (new)
• Waterway channel maintenance (new)

Safety
• Truck parking shortages (new)
• Highway-rail grade crossing improvements (new)
Updated: Trends and Issues

Mobility
• Bottlenecks
• Capacity constraints: air cargo (new)
• Intermodal connections: inland ports (new)

Environmental Sustainability
• Air quality
• Noise
• Hazardous material risks: crude by rail (new)
• Modal conflicts: bike lanes (new)

Stewardship
• Congestion caused by freight (new)
• System resilience (new)
• Improved data collection
Outreach and Schedule

February – March 2017: Initial scoping to solicit input and information, focusing on our scope and approach for the 2017 Plan update, and present the issues and trends identified in 2014.

April – June 2017: In-progress update to present our preliminary analysis of issues and trends for 2017, and present the recommendations and strategies identified in 2014.

July – August 2017: Review of findings, and sharing the final draft of the plan and soliciting feedback on recommendations and strategies.

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Next WAFAC meeting tentatively scheduled for Friday, June 16th
Final review before public outreach

Proposed discussion topics:
• Draft plan status
• Performance measures
• Strategies and recommendations
Questions?

For more information, please contact:

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Documents will be available at the WSDOT freight site:
http://www.wsdot.wa.gov/freight/