Strategic Freight Transportation Analysis (SFTA): Freight Research and Implementation for the State

*Presentation to*

**Washington State Good Roads and Transportation Association**

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Our Mission Today!

✓ Review Eastern Washington Intermodal Transportation Study (EWITS).

✓ Introduce Strategic Freight Transportation Analysis (SFTA).

✓ Explain the direction and future activities of SFTA.
 EWITS

• Purpose
  • Facilitate existing regional and statewide transportation efforts.

  • Forecast future freight transportation and mobility needs.

  • Identify gaps in transportation infrastructure.
Results

- **O and D Study Characteristics**
  - Approximately 28,000 trucks surveyed.
  - 5 million truck trips originate from Western Washington
  - 1.2 million truck trips originate from Eastern Washington.
  - 8.1 million long-haul truck trips per year with a $150 billion cargo value.
  - About 70% of all truck trips pass through Washington State.
Results (continued)

- Extensive Database(s)
- 39 analytical reports and working papers.
- Over 40 presentations requested and delivered
- All available at EWITS website: http://ewits.wsu.edu/
Acceptance and Use

- Numerous and continuing requests:
  - Government agencies - other states and counties
  - Private consultants
  - Port, EDC and planning agencies

- Columbia / Snake River Drawdown
  - State study
  - U.S. Army Corps of Engineers Study
SFTA

- Needs were increasingly apparent!
- Data are outdated and decisions based on those data could be misdirected.

- Emerging issues:
  - Changing NAFTA flows
  - Border crossings and congestion
  - Larger rail cars
  - Mobility choke-points
  - Support for economic vitality
SFTA Scope

• Purpose:
  
  • SFTA will provide new and updated information (data and direction) for local, state and national investment decisions.

  • SFTA is a six year, $1.8 million comprehensive freight research and implementation project (*First two years are currently funded*).
SFTA Scope

- Goals:
  - Continuing to enhance knowledge about freight corridors
  - Assess operations of roadways, rail systems, ports and barges, choke-points.
  - Analyze modal cost structures and impact on traffic movements
SFTA Scope

- Goals: (continued)
  - Assess potential economic development opportunities.
  - Case studies of public and private transportation costs.
  - Assess potential for public/private partnerships.
SFTA Scope

Approach:

• A collaborative partnership among WSDOT, FMSIB, CRAB, AWC, Governor’s Office, Washington Ports, DCTED and WSU.

• Identify current issues, needed data, and collection / analyses methodologies.

• Adaptive management to address emerging issues and needs.
SFTA Status

- **Origin and Destination Study:**
  - Cooperation with WSP, Canadian Customs, US Customs and Immigration, Service Clubs, et al
  - Two seasons collected.
  - 15,000 completed questionnaires.
  - Inferences / preliminary comparisons.
    - Commodity Mix
    - Tonnage
    - Number of trucks
    - Urban movements
Daily Truck Trips, I-5

Daily Truck Trips on I-5 by Direction, Empty/Loaded Status and Year

- **1993/1994**
- **2002**

<table>
<thead>
<tr>
<th>Year</th>
<th>Northbound</th>
<th>Southbound</th>
<th>Both Directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>2,676</td>
<td>4,051</td>
<td>7,605</td>
</tr>
<tr>
<td>1994</td>
<td>4,737</td>
<td>2,868</td>
<td>7,605</td>
</tr>
<tr>
<td>2002</td>
<td>1,375</td>
<td>2,868</td>
<td>7,605</td>
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</tbody>
</table>

Legend:
- **Loaded**
- **Empty**
- **Total**

I-5 Corridor Map
### Daily Truck Trips, I-90

#### Daily Truck Trips on I-90 by Direction, Empty/Loaded Status and Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Direction</th>
<th>Loaded</th>
<th>Empty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993/94</td>
<td>Eastbound</td>
<td>953</td>
<td>478</td>
<td>1,431</td>
</tr>
<tr>
<td></td>
<td>Westbound</td>
<td>1,174</td>
<td>1,174</td>
<td>2,348</td>
</tr>
<tr>
<td></td>
<td>Both Directions</td>
<td>1,135</td>
<td>1,174</td>
<td>2,309</td>
</tr>
</tbody>
</table>

- **1993/94**: Loaded 953, Empty 478, Total 1,431
- **2002**: Loaded 1,135, Empty 1,174, Total 2,309

#### Comparison

- **1993/94**: Loaded 953, Empty 478, Total 1,431
- **2002**: Loaded 1,135, Empty 1,174, Total 2,309

- **1993/94** vs **2002**: Increase in total daily truck trips from 1,431 to 2,309.

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*Note: The chart shows the comparison of daily truck trips for different years and directions.*
Daily Truck Trips on Southbound US-395, by Empty/Loaded Status and Year

- **Loaded**
  - 1993/1994: 936
  - 2002: 2,380
  - Total: 3,283

- **Empty**
  - 1993/1994: 1,207
  - 2002: 903
  - Total: 2,110

- **Total**
  - 1993/1994: 2,143
  - 2002: 3,283
  - Total: 5,426
WSDOT Annual Traffic Counts

Truck Traffic Increase 1994 to 2001

Percent Increase

I-5
I-90
US 395

WSDOT (Annual)
SFTA (Two Seasons)
**SFTA Status (continued)**

- **Strategic Resource Road Network:**
  - Seasonal road weight restriction
  - Grain Freight Survey (90% response)
  - Mining
  - Forest products
  - Fruit/Vegetable/Hay

- **Railroad Analysis**
  - Heavy rail cars
  - Continuing rail abandonment
  - Modal competitive changes
  - Case studies:
    - Relationship between abandonment/roads/safety/economic development
    - Pros and Cons state ownership
SFTA Project Deliverables

** See Handout **
SFTA Benefits

- Enhanced teamwork within the transportation community

- Improved strategic coordinated investment decisions

- Current and timely databases to service ongoing needs and requests
  - Geo-coded route and trip information
  - GIS Capability
  - Metadata model
SFTA Benefits (continued)

- An increased awareness of the relationship between transportation and economic vitality.

- Information on border crossing issues.

- Adaptive research management to address emerging issues.

- Knowledge transfer.....Lions Club members, graduate students, WSP, etc.
SFTA Focus

SFTA’s desired outcome is improved freight mobility for economic vitality.

To achieve this the SFTA research and implementation project, with its collaborative partnerships and integrated dynamic freight data warehouse will aid in strategic infrastructure investment choices, including transportation support for economic development, responding to NAFTA impacts, and other emergent issues!
SFTA Information

Website: www.sfta.wsu.edu