Freight Planning Efforts in the Bi-State Region

March 2018 – Iowa Freight Advisory Council

Some Presentation Slides were Developed by Cambridge Systematics and/or WSP Parsons Brinkerhoff in Preparing the Bi-State Freight Plan
Freight Planning in the Bi-State Region

- Bi-State Region Characteristics & Network
- Freight Planning History
- Freight Planning Process
- Recent Plan Results & Recommendations
- Freight Lessons Learned
Bi-State Region Characteristics

2 States IA/IL, 5 Counties
Regional Population 428,000
Metro Population 298,000 – Bisected by the Mississippi River

Highway Network
4 Interstates – 80, 280, 88, 74
5 US Highways – 6, 34, 61, 67, 150

Rail Network
2 Class 1 – CP, BNSF
1 Class 11 – Iowa Interstate

Riversystem and Air
Multiple Barge Terminals + 4 Locks/Dams
1 Commercial Airport, 5 General/Local Airports
Bi-State Region Highway Network

Total Truck Volumes on the Bi-State Region’s Highway System

Legend

<table>
<thead>
<tr>
<th>Truck AADT</th>
<th>Color</th>
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<tbody>
<tr>
<td>&lt; 250</td>
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<td>250 - 1,000</td>
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<td>1,000 - 3,000</td>
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<td>3,000 - 5,000</td>
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<td>&gt; 5,000</td>
<td>Red</td>
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Bi-State Region Rail Network

Study Area Railroad Operators and Average Daily Trains

Bi-State Region Mississippi River System
Bi-State Region Airports
Bi-State Region Large Freight Industries

Regional Industry Clusters

- Machinery Manufacturing
- Primary/Fabricated Metals Manufacturing
- Agribusiness/Food Processing and Technology
- Furniture and Related Products Manufacturing
Bi-State Region Freight Generators

Legend
- Freight Generators
  - Agriculture
  - Mining
  - Manufacturing (Grain Prods.)
  - Manufacturing (Wood Prods.)
  - Manufacturing (Metal Prods.)
  - Transportation
  - Warehousing
- Primary Freight Network (41k)
- Rail Network
- State Truck Network

[Map of Bi-State Region showing freight generators and networks]
## Bi-State Region Freight Modes/Industry

<table>
<thead>
<tr>
<th>(NAICS) Industry</th>
<th>Highway</th>
<th>Rail</th>
<th>Water</th>
<th>Air</th>
<th>Pipeline</th>
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<tbody>
<tr>
<td>(11) Agriculture, Forestry, Fishing and Hunting</td>
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<td>(21) Mining</td>
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<td>(22) Utilities</td>
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<td>(23) Construction</td>
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<td>(31-33) Manufacturing</td>
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<td>(42) Wholesale Trade</td>
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<td>(44-45) Retail Trade</td>
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<td>(48-49) Transportation and Warehousing</td>
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</table>

**Key:**
- Less important
- More Important
Bi-State Region Freight Planning History

- 1989 Federal Funded Barge Terminal Study for Metro Area
  - Containers on Barges Not Feasible
  - Best Location – Site of New Entertainment Development
  - Private Ownership
- Freight Network Discussion Required Element in MPO Long Range Plans since mid 1990’s
- Economic Development Related Logistics Industry Council 2000’s
- Assistance with Grant Applications for Transload Facilities, Switch Yard Studies, Rail Spurs, Grade Separations, etc.
- 2014-15 Regional Freight Study
Freight Plan Scope

- Data Collection – Physical/Operation Profile, Industry Surveys
- Needs Analysis – Performance Measures, Commodity Flows, Projected Modal Profiles
- Study Recommendations

Steering Committee – Local Governments, DOT’s, Economic Development Organization, Modal Industry, Corps of Engineers, Corporations/Businesses, Farm Bureau
Freight Plan – Regional Trends

- Expansion of Panama Canal
- Agricultural Production and Export
- E-Commerce
- Energy Diversification and New Sources – Wind Energy, Natural Gas Pipeline, Nuclear, Hydroelectric
- Freight Workforce
Freight Plan – Regional Future Commodities

Directional Share by Tonnage 2007/2040

Bi-State Regional Modal Share by Tonnage

Commodity By Tonnage 2040
- Cereal grains: 23%
- Gravel: 19%
- Nonmetal min. prods.: 9%
- Other foodstuffs: 7%
- Chemical prods.: 6%
- Coal: 5%
- Natural sands: 4%
- Waste/scrap: 4%
- Other ag prods.: 4%
- Animal feed: 3%
- Base metals: 3%

Legend:
- Blue: 2007
- Green: 2040
Freight Plan – Database & Visualization Tool

- Database/Tool was developed to:
  - Assemble different data sources in one place
  - Make it easy to query data and report results
  - Develop modal and commodity profiles
  - Identify hot spots and choke points
  - Help the study team formulate freight strategies and recommendations
Freight Plan – Visualization Tool Profile

Bi-State Region Freight Profile

Freight Flows to and from Bi-State Counties (Disaggregated FAF 2007)

Top Commodities

- Cereal grains
- Gravel
- Other ag prod.
- Fertilizer
- Nonmetall min. metals

Thousands of Tons

Type of Flow
- From IA/IIL to elsewhere
- Not related to IA/IIL
- To IA/IIL from elsewhere
- Within IA and IL

Relation to Bi-State Counties
- For flows related to IA/IIL
  - (All)
  - Bi-State Counties in IA/IIL
  - Halo Counties in IA/IIL

Year
- 2007
- 2040

Mode
- (All)
- Intermodal
- Rail
- Truck

Commodities
- (All)
- Alcoholic beverages
- Animal feed
- Articles-base metal
- Base metals
- Basic chemicals
Freight Plan – Improvement Recommendations

- Improve Lock and Dams
- Improve Rail Bridges/Lines - 286K Compliant
- Intermodal Facilities
  - Study Container Port in Muscatine
  - Complete Transload/Intermodal Facility
- Expand/Attract Air Cargo at QCIA
- I-74 Bridge Widening and Replacement
- Highway Capacity Improvements – I 80 Widening
- Roadway and Bridge Maintenance – I 80 Bridge Replacement
Freight Plan – Implementation

- Port Initial Feasibility Study (Publically Funded) Completed and Second Feasibility Study (Privately Funded) Nearing Completion
- Seek Funding to Study Rail Bridge Needs
- Established On-going Freight Stakeholders Group
- Enhanced Staff Capabilities in Freight Data and Analysis
- Integrated Projects into 2045 Long Range Plan
- Continue to Foster Collaboration to Implement Projects
Bi-State Freight Planning Lessons Learned

- Additional Funding Often Needed for Studies – Start Early to Seek Assistance
- Difficulty in Engaging Freight Industry – Use their time Wisely
  - Study Steering Committee/Freight Forum
  - Freight Stakeholder Input into MPO Long Range Plan
- What Goes Around Comes Around – Containers on Barges may be Feasible Now
- Clarify Terminology
- Participate in Freight Forums and Round Tables when Invited – Stay Involved
For more information, visit our website: www.bistateonline.org

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