EIGHT COUNTY FREIGHT STUDY

DUBUQUE MPO & BHRC

ILLINIOS DEPARTMENT OF TRANSPORTATION
FREIGHT COUNCIL MEETING

APRIL 25TH, 2019

Eight-County Freight Study

Summary Report

Prepared for:
East Central Intergovernmental Association
Blackhawk Hills Regional Council

Prepared by:
CPCS Transcom Inc.

In association with:
WSP | Parsons Brinckerhoff
American Transportation Research Institute

Solutions for growing economies
REASONS FOR A FREIGHT STUDY

01 PANAMA CANAL
Increase in freight traffic due to improvement to Panama Canal.

02 NEW INTERMODAL FACILITY AT CEDAR RAPIDS
Impact of new intermodal facility on the region.

03 BUSINESS RETENISION & ATTRACTION
Retain existing businesses that highly rely on freight and attract new ones.

04 COST OF TRANSPORTATION
How can transportation costs be reduced for business within the region.
ESTABLISHING STUDY REGION

Dubuque MPO & RPA 8

Iowa

Illinois

Rockford MPO

Blackhawk Hills Regional Council

Bi State Regional Commission
The Eight-County Region is near the heart of significant US manufacturing and agricultural activity and includes the counties of Carroll, Jo Daviess, Stephenson, and Whiteside in Illinois, and Clinton, Delaware, Dubuque, and Jackson in Iowa.
INDUSTRY RESPONSE FROM PRIVATE SECTOR

96 company responses

200 one-on-one interviews

SurveyMonkey

Industries Represented

- Manufacturing (ex. food, heavy, general)
- Consumer Goods (ex: wholesale, retail, direct sales)
- Transportation and Logistics (ex. warehouse, terminals, carriers)
- Agriculture (ex. corn, soybeans, milk, livestock)
- Natural Resources (ex. energy, forestry, mining, quarrying)
TONS & VALUES BY DIRECTION (Year 2014)

Study region has fairly “balanced” freight flow

Tons by Direction
Total = 67.3 Million tons

Value by Direction
Total = $50.4 Billion

Source: WSP Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data. Preliminary
TONS & VALUES BY MODE (Year 2014)

Trucks represent 73% of tonnage and 82% of value, indicating trucks are used to carry higher-value, lower weight manufactured goods.

### Tons by Mode
- Total = 67.3 Million tons
  - Truck: 49.3 million (73%)
  - Rail: 15.5 million (23%)
  - Water: 0.7 million (1%)
  - Multiple Modes: 1.8 million (3%)

### Value by Mode
- Total = $50.4 Billion
  - Truck: $41.2 billion (82%)
  - Rail: $3.4 billion (7%)
  - Water: $0.7 billion (1%)
  - Multiple Modes: $5.1 billion (10%)

TONS & VALUES BY COMMODITY (Year 2014)

Top tonnage and value commodities are linked to the Region’s key industries – manufacturing and agriculture.

**Tons by Commodity**
Total = 67.3 Million tons

- Cereal grains 18%
- Fertilizers 17%
- Gravel 15%
- Other ag prods. 7%
- Coal 5%
- Nonmetal min. prods. 5%
- Animal feed 4%
- Other foodstuffs 4%
- Gasoline 2%
- Waste/scrap 2%
- Machinery 8%
- Unknown/Mixed 8%
- Motorized vehicles 7%
- Other ag prods. 6%
- Other foodstuffs 6%
- Cereal grains 5%
- Pharmaceuticals 4%
- Electronics 4%
- Fertilizers 5%

**Value by Commodity**
Total = $50.4 Billion

- Cereal grains 5%
- Fertilizers 5%
- Electronics 4%
- Fertilizers 5%
- Pharmaceuticals 4%
- Motorized vehicles 7%
- Other ag prods. 6%
- Other foodstuffs 6%
- Cereal grains 5%
- Plastics/rubber 5%
- All Other 42%
- Machinery 8%
- Unknown/Mixed 8%
- Other foodstuffs 4%
- Gasoline 2%
- Waste/scrap 2%
- Nonmetal min. prods. 5%

**Total**
- Tons by Commodity = 67.3 Million tons
- Value by Commodity = $50.4 Billion
**KEY FINDINGS**

Less usage of River

<table>
<thead>
<tr>
<th></th>
<th>Eight County Region 2014 Tonnage Share</th>
<th>US Total Tonnage Share (excluding Air, Pipeline, Other)</th>
<th>Eight County “Modal Quotient”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck</td>
<td>73.3%</td>
<td>79.6%</td>
<td>0.92</td>
</tr>
<tr>
<td>Rail</td>
<td>23.0%</td>
<td>12.4%</td>
<td>1.85</td>
</tr>
<tr>
<td>Multiple</td>
<td>2.7%</td>
<td>3.1%</td>
<td>0.88</td>
</tr>
<tr>
<td>Water</td>
<td>1.1%</td>
<td>5.0%</td>
<td>0.21</td>
</tr>
</tbody>
</table>

3% of shift from truck to water will double water ton miles

<table>
<thead>
<tr>
<th></th>
<th>Rate per Ton-Mile</th>
<th>Ton-Miles, 2014</th>
<th>Estimated Transportation Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck</td>
<td>$0.108</td>
<td>13,056,538,943</td>
<td>$1,410,106,206</td>
</tr>
<tr>
<td>Rail</td>
<td>$0.083</td>
<td>6,159,485,019</td>
<td>$511,237,257</td>
</tr>
<tr>
<td>Multiple</td>
<td>$0.097</td>
<td>1,012,159,822</td>
<td>$98,179,503</td>
</tr>
<tr>
<td>Water</td>
<td>$0.050</td>
<td>385,064,490</td>
<td>$19,253,224</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$2,038,776,190</td>
</tr>
</tbody>
</table>

Within a 3-day truck drive from the region

Less usage of River 3% of shift from truck to water will double water ton miles

Total Estimated Transportation Cost: $2,038,776,190
SAFETY & CONGESTION IMPROVEMENTS TO US 20, US 30, US 151/61 ETC.

POLICY PROJECTS

SUPPLY CHAIN IEI BARGE TERMINAL ETC.
MAJOR PROJECTS

1. **US 20 IMPROVEMENTS** *(Safety)*
The study identified the need for safety improvements on the US Highway 20 corridor from Dubuque to Freeport.

2. **US 20 IMPROVEMENTS MPO** *(Safety / Congestion)*
The study identified the need for safety and congestion improvements within the MPO.

3. **PORT EXPANSION** *(Supply Chain)*
The study recommended improvements to existing ports to accommodate freight from other modes.

4. **US 30 IMPROVEMENTS** *(Safety)*
The study suggested further studies of US Highway 30 from DeWitt to Cedar Rapids to accommodate future growth around the corridor.

5. **REDUCE DELAY WITHIN THE MPO** *(Congestion)*
The study recommended to reduce delay on major corridors within the Dubuque MPO to accommodate freight through the region.

6. **CHANGES TO REGULATIONS** *(Policy)*
Local jurisdictions feel that the project may not be implemented quickly enough because of limited funding.
Reduce the number and severity of truck-related crashes and improve overall corridor performance for users; reduce the need for truckers to use longer and more expensive alternative routings (US-61/I-88, et al.)

**RECOMMENDATION**

ILDOT recently completed Highway Safety Assessment (HSA) to identify safety improvements along the corridor and do spot improvements to address safety.

**PROJECT**

The HSA generated list of projects that each entity can work with ILDOT to implement them.
US 20 IMPROVEMENT WITHIN MPO

US 20 is one of the most congested corridors in Dubuque Metro area with 40,000 vehicles per day with 212 crashes and one fatality in 2018.

RECOMMENDATION

Reduce delay and improve safety for freight traffic by avoiding US 20 during peak hours.

PROJECT

The Dubuque MPO in partnership with the City of Dubuque, Dubuque County and Iowa Department of Transportation (IADOT) is in process of completing US 52 / SW Arterial. This project will help to detour freight traffic from urban core.
RECOMMENDATION

Improve Marine Terminal capacity in the Dubuque area to accommodate a broad range of higher-value ro-ro, break-bulk, and project cargo; containers, liquid bulk, or dry bulk.

PROJECT

The Dubuque MPO is conducting a Port Expansion Study. The Study is designed to address the following:

- Potential market demand
- Sustainable operation vs existing capabilities
- Long term sustainability
- Market Analysis
- Infrastructure needs

GOAL 3%
ANNUAL TRUCK CRASH ANALYSIS ON US 30

RECOMMENDATION

Improve access between the Study Area, new multimodal transfer facilities being developed at Cedar Rapids IA, and potential future marine terminal at or near East Clinton IL; reduce the need for truckers to use longer and more expensive alternative routings (US-61/I-80, et al.)
The goal of the Smart Traffic Routing with Efficient and Effective Traffic Signals (STREETS) project is to develop a smart, next-generation, traffic management and control system. This system will use traffic control strategies to enable dynamic traffic routing to maximize the use of existing roadway capacities in the Dubuque metro area.

**RECOMMENDATION**

Improve efficiency and reduce congestion on all major corridors within metro area

**PROJECT**

The goal of the Smart Traffic Routing with Efficient and Effective Traffic Signals (STREETS) project is to develop a smart, next-generation, traffic management and control system. This system will use traffic control strategies to enable dynamic traffic routing to maximize the use of existing roadway capacities in the Dubuque metro area.
• Truck regulation harmonization between Iowa and Illinois
• Illinois seasonal exemption for agricultural loads (up to 90,000lbs)
THE STUDY WAS SUCCESSFUL

COLLABORATION

PARTNERSHIPS

RECOMMENDATIONS

IMPLEMENTATION
EIGHT COUNTY FREIGHT STUDY

Freight Stakeholders

QUESTIONS?

Project Partners

Eight-County Freight Study

Summary Report

Prepared for:
East Central Intergovernmental Association
Blackhawk Hills Regional Council

Prepared by:
CPCS Transcom Inc.

In association with:
WSP | Parsons Brinckerhoff
American Transportation Research Institute

Solutions for
growing economies