Memphis Urban Area Metropolitan Planning Organization (MPO)

Regional Freight Plan
American Railway Development Association (ARDA) Annual Meeting
Memphis TN

June 2017
About Memphis MPO

Tri-State MPO - Coordination with West Memphis MPO

Bi-State MPO - Tennessee & Mississippi

Population 1.1 million

West Memphis MPO, AR

1 in 4 employed in transportation and related sector

Transit covers two States (TN and AR)

West Memphis is one of the highest ridership routes for MATA. System wide 10 million trips
Freight Overview

4 R’s
Rail, Road, River, Runway

5 class 1’s railroads with over $400 million invested in last few years

Busiest US cargo airport in North America, 2nd busiest in the world (was busiest airport in the world for 16 years in a row).

5th Largest Inland Port
### Freight Overview

#### Freight Movement in the Greater Memphis Area

**Modal Freight Summary by Tonnage & Value**

- **Roadway**: 76% (Ton), 83% (Value)
- **Rail**: 3% (Ton), 1% (Value)
- **River**: 5% (Ton), 0% (Value)
- **Runway**: 0% (Ton), 3% (Value)
- **Other**: 16% (Ton), 13% (Value)

**Total Freight Summary by Tonnage & Value**

- **Inbound**: 43% (Tons), 59% (Value)
- **Outbound**: 40% (Tons), 31% (Value)
- **Local**: 16% (Tons), 10% (Value)

### Top Commodities for All Modes (Inbound-Outbound)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Tons</th>
<th>Percent of Total</th>
<th>Commodity</th>
<th>Value</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>29,849,289</td>
<td>34.10%</td>
<td>Electronics</td>
<td>$44,075,068,300</td>
<td>18.20%</td>
</tr>
<tr>
<td>Other foodstuffs</td>
<td>7,064,627</td>
<td>8.10%</td>
<td>Pharmaceuticals</td>
<td>$37,544,630,100</td>
<td>15.50%</td>
</tr>
<tr>
<td>Gasoline</td>
<td>4,748,710</td>
<td>5.40%</td>
<td>Precision instruments</td>
<td>$21,870,198,700</td>
<td>9.00%</td>
</tr>
<tr>
<td>Cereal grains</td>
<td>4,629,293</td>
<td>5.30%</td>
<td>Machinery</td>
<td>$16,317,364,800</td>
<td>6.70%</td>
</tr>
<tr>
<td>Nonmetal min. prods.</td>
<td>4,401,679</td>
<td>5.00%</td>
<td>Motorized vehicles</td>
<td>$14,409,903,000</td>
<td>6.00%</td>
</tr>
<tr>
<td>Gravel</td>
<td>4,399,506</td>
<td>5.00%</td>
<td>Transport equip.</td>
<td>$11,699,049,500</td>
<td>4.80%</td>
</tr>
<tr>
<td>Basic chemicals</td>
<td>3,640,552</td>
<td>4.20%</td>
<td>Mixed freight</td>
<td>$10,279,547,200</td>
<td>4.20%</td>
</tr>
<tr>
<td>Other ag prods.</td>
<td>2,579,590</td>
<td>2.90%</td>
<td>Plastics/rubber</td>
<td>$10,195,714,100</td>
<td>4.20%</td>
</tr>
<tr>
<td>Base metals</td>
<td>2,407,117</td>
<td>2.70%</td>
<td>Misc. mfg. prods.</td>
<td>$7,898,673,000</td>
<td>3.30%</td>
</tr>
<tr>
<td>Fuel oils</td>
<td>2,191,818</td>
<td>2.50%</td>
<td>Textiles/leather</td>
<td>$7,882,355,500</td>
<td>3.30%</td>
</tr>
<tr>
<td><strong>Total Top 10</strong></td>
<td>65,912,182</td>
<td>75.20%</td>
<td><strong>Total Top 10</strong></td>
<td>$182,172,504,200</td>
<td>75.30%</td>
</tr>
<tr>
<td><strong>Total All Other Goods</strong></td>
<td>21,710,196</td>
<td>24.80%</td>
<td><strong>Total All Other Goods</strong></td>
<td>$59,862,518,600</td>
<td>24.70%</td>
</tr>
</tbody>
</table>

Source: 2015 FAF
Freight Advisory Committee
2013 - Major Change
• Conducted a FHWA peer exchange
  • Washington DC
  • Chicago
  • Atlanta
  • Cincinnati
• Restructured Freight Advisory Committee
Membership includes Tri-State Area
  • Chair - Policy Board Member (elected official)
  • Vice Chair - FAC Member (private sector)
Regional Freight Plan cont.

Work Plan

- Started June 2016
- Leveraging Previous Studies/Plans
- Urban and Rural alignment
- Land Use
- Management Strategies for through traffic
- Alignment with Arkansas
- Performance metrics & tracking
- Timeline- Completion estimated November 2017
Stakeholder Outreach Meetings

- **MPO Committee Meetings** – Freight Advisory, Planning & Land Use Advisory, Engineering & Technical Committee and Transportation Policy Board – 11 meetings

- **Public & Private Sector Meetings** – Greater Memphis Chamber of Commerce, Desoto County Chamber of Commerce, Economic Development Growth Engine (EDGE), Memphis Port Authority, Airport Authority, BNSF, NS, Trucking Industry, FedEx, West Memphis MPO, TDOT, MDOT, Developer/Real Estate – 12 meetings

- **MPO Jurisdiction Meetings** – City of Memphis & Shelby County, Tennessee Suburban Municipalities, Fayette County (TN), Desoto & Marshall Counties in Mississippi – 5 meetings

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**Key Questions**

- Transportation and infrastructure projects with a freight component
- Land use and development projects and plans that have a significant freight component
- Issues and challenges related to freight
Regional Freight Plan cont.

- Regional Connections across North America
- Peer Regions and Cities:
  - Regional economic features
  - Transportation network connections
  - Potential for regional connections
- **Peer Cities:** El Paso, Oklahoma City, Tulsa, Kansas City, St. Louis, Minneapolis, Louisville, Cincinnati and Nashville
Regional Freight Plan cont.

2015 Total Freight Flow, All Modes

In Dollars

In Tons

Source: FAF Data
Regional Freight Plan cont.

Transportation Network Connections
- Truck trips over seven days - Trip length and connections

- 24-hours
- Sevan Days
- Three days
Regional Freight Plan cont.

- Industrial Zones across the Tri-State Area – 30+
- Based on Traffic Analysis Zones
- Attempt to identify a unifying theme for the zone
Industrial Use Factors – Site Characterization

- **Site Metrics:**
  - Location
  - Total Acreage
  - Number of Properties (by type)
    - Distribution
    - Manufacturing
    - Service
    - Truck Terminal
    - Warehouse
    - Other

- **Industry and Economic Sectors:**
  - Number of Employees
  - Income Range
  - Workforce Characteristics
Regional Freight Plan cont.

Transportation Network Connections

- Railroad networks
Freight Survey

- Released End of January 2017
- Truckers survey - “Man on the Street” - **294 responses**
- Public Online Survey – **400 responses**
Public Survey Questions and Responses

How often you shop online?

- Daily: 1%
- Weekly: 30%
- Few times a month: 40%
- Seasonally (around...): 20%
- Do not do online shopping: 5%

What type of delivery option do you select?

- Next Day: 1%
- 2 days: 10%
- 5 or more business days: 50%
- Not applicable: 20%

In future, do you foresee continuing to do:

- More online shopping: 5%
- About the same for both online and in-store: 40%
- Less online shopping and...: 10%

91.5% responded that freight is important for the local/ regional economy.
Regional Freight Plan cont.

Truckers Survey Questions and Responses

Challenges

- Truck parking
- First mile/last mile
- Traffic congestion
- Safety - accidents
- Incident clearance time
- Information (related to...)
- Regulations - work hours
- Delay at delivery (in...)
- Transportation costs
- Driver shortage
- Others

Extreme weather impact

- Flooding
- Winter weather (ice, snow)
- Tornados
- No or not applicable

Potential solutions

- Reducing incident
- Rerouting options
- Getting information
- Automated systems
- Better quality pavement
- More truck rest areas
- Others
Regional Freight Plan cont.
Regional Freight Plan cont.

Next Steps

- Collaborate on the Area, Zone and Region wide evaluations
- Public sector strategies
- Formulate Programs and Projects
Regional Freight Plan

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