Transportation and Economic Impacts of the Freight Industry in Miami-Dade

Final Report

presented to
Miami-Dade County Metropolitan Planning Organization
Freight Transportation Advisory Committee

presented by
Cambridge Systematics, Inc.
Marlin Engineering, inc.

December 7, 2011
Agenda

- Overview
- Miami-Dade’s Freight Infrastructure
- How Significant is Goods Movement in the Region?
- Why is Freight Important to Miami-Dade?
- How Much Freight-Related Economic Activity will there be in the Future?
- How will the Findings from this Study be Used?
Overview

- Miami-Dade County is home to a well-established freight transportation system serving as the cornerstone of the region’s economy.

- Freight activity has positive impact on the economy, but it also has adverse impact.

- The *Transportation and Economic Impacts of the Freight Industry in Miami-Dade County Study* provides the County with a critical tool to help understand the magnitude of the freight industry.

- This study documents direct impacts of the freight industry and applies economic multipliers to determine full impact on the economy.

- The findings will be critical as Miami-Dade continues to position itself to compete on a global scale.
Miami-Dade’s Freight Infrastructure

- Miami is an international destination dominated by tourism, international trade, agriculture and mining, and natural resources.

- Miami International Airport handles almost 80 percent of Florida’s air cargo and is the 12th busiest cargo airport in the world.

- Port of Miami is the largest container port in Florida and the “cruise capital of the world.”

- Miami River provides key niche waterborne cargo services to Caribbean ports and supports an active industrial core.
Miami-Dade's Freight Infrastructure (continued)

- FEC and CSX connect South Florida to the rest of North America, providing intermodal and carload services.

- Mature warehouse/distribution center infrastructure is in place in western Miami-Dade County that supports all of South Florida.

- Well established network of roadways serve all the key freight hubs and activity centers and provide regional mobility.
How Significant is Goods Movement in the Region?

- Miami-Dade’s freight infrastructure handled over 137 million tons of domestic and international freight in 2010 – this number is forecast to grow to 222 million tons by 2035.
Why is Freight Important to Miami-Dade?

- Freight and logistics permeates all aspects of the economy from the import of consumer products at POM to the delivery of milk to your local supermarket.

- Supports local economy through well-paying jobs.

- Helps maintain a lower cost of living through lower transportation costs.

- An efficient freight transportation system allows businesses to be more competitive, which supports economic development and expansion.
Why is Freight Important to Miami-Dade?

- Direct, 151k jobs, 55%
- Indirect, 49k jobs, 18%
- Induced, 75k jobs, 27%

<table>
<thead>
<tr>
<th>Metric</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs</td>
<td>274,552</td>
</tr>
<tr>
<td>Labor Income (millions)</td>
<td>$ 14,886</td>
</tr>
<tr>
<td>Average Compensation</td>
<td>$ 54,219</td>
</tr>
<tr>
<td>GRP (millions)</td>
<td>$ 25,106</td>
</tr>
<tr>
<td>Economic Output (millions)</td>
<td>$ 42,796</td>
</tr>
</tbody>
</table>
Why is Freight Important to Miami-Dade?

Direct Jobs

- In-House Other Industries: 14%
- Wholesale: 50%
- Couriers/Messengers: 9%
- Truck: 9%
- Freight Forwarders: 6%
- Water: 3%
- Air: 4%
- Warehousing & Storage: 2%
- Rail & Pipeline: 0%
- Logistics Consulting: 1%
- Brokers: 2%
- TSA Agents: 0%
- Other Industries: 14%
- In-House Other Industries: 14%
- Wholesale: 50%
- Couriers/Messengers: 9%
- Truck: 9%
- Freight Forwarders: 6%
- Water: 3%
- Air: 4%
- Warehousing & Storage: 2%
- Rail & Pipeline: 0%
- Logistics Consulting: 1%
- Brokers: 2%
- TSA Agents: 0%
Why is Freight Important to Miami-Dade?

Indirect Jobs

- Professional Services: 33%
- Finance, Insurance, & Real Estate: 20%
- Miscellaneous Business Services: 17%
- Leisure & Hospitality: 7%
- Information: 7%
- Other Services: 5%
- Construction: 1%
- Retail Trade: 2%
- Manufacturing: 2%
- Fed/State/Local Government: 4%
- Others: 2%

10%
Why is Freight Important to Miami-Dade?

Induced Jobs

- Retail Trade: 20%
- Health Care: 17%
- Finance, Insurance, & Real Estate: 16%
- Leisure & Hospitality: 12%
- Other Services: 11%
- Professional Services: 7%
- Miscellaneous Business Services: 4%
- Education: 4%
- Private households: 3%
- Information: 2%
- Others: 4%
Why is Freight Important to Miami-Dade?

Other Direct Positive Impacts

- **Tax Revenue**
  - Equipment Taxes
  - Truck Registration
  - Fuel Taxes
  - Real Estate Taxes
  - Business Taxes

- **Investment on Freight-Related Construction Projects**
Why is Freight Important to Miami-Dade?

Negative Impacts/Costs

- Congestion delay (from trucks on the road)
- Road maintenance attributable to truck traffic
- Rail crossing delay attributable to freight trains
Why is Freight Important to Miami-Dade?

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Metric</th>
<th>2008 Impact</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive</strong></td>
<td>Jobs</td>
<td>274,552</td>
<td>IMPLAN/CBP/CS</td>
</tr>
<tr>
<td></td>
<td>Output</td>
<td>$42,796</td>
<td>IMPLAN/CBP/CS</td>
</tr>
<tr>
<td></td>
<td>Labor Income</td>
<td>$14,886</td>
<td>IMPLAN/CBP/CS</td>
</tr>
<tr>
<td></td>
<td>GRP</td>
<td>$25,106</td>
<td>IMPLAN/CBP/CS</td>
</tr>
<tr>
<td></td>
<td>Equipment Taxes</td>
<td>$9</td>
<td>Miami-Dade County</td>
</tr>
<tr>
<td></td>
<td>Truck Registrations</td>
<td>$272</td>
<td>Miami-Dade County</td>
</tr>
<tr>
<td></td>
<td>Fuel Taxes</td>
<td>$11</td>
<td>FL Dept of Revenue</td>
</tr>
<tr>
<td></td>
<td>Real Estate Taxes</td>
<td>$249</td>
<td>Miami-Dade County</td>
</tr>
<tr>
<td></td>
<td>Business Taxes</td>
<td>$1</td>
<td>Miami-Dade County</td>
</tr>
<tr>
<td></td>
<td>Freight-Related Construction Projects</td>
<td>$310</td>
<td>Miami-Dade County</td>
</tr>
<tr>
<td><strong>Negative</strong></td>
<td>Road Maintenance</td>
<td>$102</td>
<td>FDOT/FHWA</td>
</tr>
<tr>
<td></td>
<td>Congestion</td>
<td>$297</td>
<td>FDOT/FHWA</td>
</tr>
<tr>
<td></td>
<td>Rail Crossings</td>
<td>$2</td>
<td>CS/FDOT</td>
</tr>
</tbody>
</table>

**Net Economic Impact = $25.6 billion in 2008**
Why is Freight Important to Miami-Dade?

![Bar chart showing freight employment and other employment in various sectors in Miami-Dade County.](chart_image)
How Much Freight-Related Economic Activity will there be in the Future?

- Panama Canal Expansion
- Deep Dredge at the Port of Miami
- Port of Miami Tunnel
- Port of Miami Rail Connection
- Reconstruction of 836/826 Interchange
- 25th Street Viaduct
How Much Freight-Related Economic Activity will there be in the Future?

Combined forecasts from the POM, MIA, Trade and Logistics Study, and the MPO’s LRTP

<table>
<thead>
<tr>
<th>Macro Industry</th>
<th>2008 Jobs</th>
<th>2035 Jobs</th>
<th>CAGR</th>
<th>Source*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale trade</td>
<td>76,075</td>
<td>102,339</td>
<td>1.1%</td>
<td>Population LRTP</td>
</tr>
<tr>
<td>Messenger</td>
<td>14,302</td>
<td>22,805</td>
<td>1.7%</td>
<td>T&amp;L Study Truck Traffic</td>
</tr>
<tr>
<td>Truck</td>
<td>13,347</td>
<td>21,283</td>
<td>1.7%</td>
<td>T&amp;L Study Truck Traffic</td>
</tr>
<tr>
<td>Freight Forwarders</td>
<td>8,513</td>
<td>26,360</td>
<td>4.3%</td>
<td>Mixed MIA and POM</td>
</tr>
<tr>
<td>Air</td>
<td>6,300</td>
<td>16,602</td>
<td>3.7%</td>
<td>Miami International</td>
</tr>
<tr>
<td>Water</td>
<td>4,345</td>
<td>13,948</td>
<td>4.4%</td>
<td>Port of Miami</td>
</tr>
<tr>
<td>Warehousing &amp; Storage</td>
<td>3,581</td>
<td>11,089</td>
<td>4.3%</td>
<td>Mixed MIA and POM</td>
</tr>
<tr>
<td>Brokers</td>
<td>3,212</td>
<td>9,946</td>
<td>4.3%</td>
<td>Mixed MIA and POM</td>
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<tr>
<td>Logistics Consulting</td>
<td>915</td>
<td>1,457</td>
<td>1.7%</td>
<td>Average from T&amp;L</td>
</tr>
<tr>
<td>Rail &amp; Pipeline</td>
<td>134</td>
<td>161</td>
<td>0.7%</td>
<td>T&amp;L Study</td>
</tr>
<tr>
<td>In-House</td>
<td>20,591</td>
<td>32,793</td>
<td>1.7%</td>
<td>Average from T&amp;L</td>
</tr>
<tr>
<td>Total</td>
<td>151,314</td>
<td>258,785</td>
<td>2.0%</td>
<td></td>
</tr>
</tbody>
</table>
Total job growth of 65% over the 27 years

Average growth of approximately 2% annually

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Metric</th>
<th>2008 Impact</th>
<th>2035 Impact</th>
<th>Resulting CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>Jobs</td>
<td>274,552</td>
<td>453,949</td>
<td>1.88%</td>
</tr>
<tr>
<td></td>
<td>Output</td>
<td>$42,796</td>
<td>$70,648</td>
<td>1.87%</td>
</tr>
<tr>
<td></td>
<td>Labor Income</td>
<td>$14,886</td>
<td>$24,025</td>
<td>1.78%</td>
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<tr>
<td></td>
<td>Value Added (GRP)</td>
<td>$25,106</td>
<td>$40,088</td>
<td>1.74%</td>
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<tr>
<td></td>
<td>Equipment Taxes</td>
<td>$9</td>
<td>$13</td>
<td>1.41%</td>
</tr>
<tr>
<td></td>
<td>Truck Registrations</td>
<td>$272</td>
<td>$433</td>
<td>1.74%</td>
</tr>
<tr>
<td></td>
<td>Fuel Taxes</td>
<td>$11</td>
<td>$17</td>
<td>1.74%</td>
</tr>
<tr>
<td></td>
<td>Real Estate Taxes</td>
<td>$249</td>
<td>$412</td>
<td>1.88%</td>
</tr>
<tr>
<td></td>
<td>Business Taxes</td>
<td>$1</td>
<td>$1</td>
<td>1.10%</td>
</tr>
<tr>
<td></td>
<td>Net Construction Impact</td>
<td>$310</td>
<td>$417</td>
<td>1.10%</td>
</tr>
<tr>
<td>Negative</td>
<td>Road Maintenance</td>
<td>$102</td>
<td>$163</td>
<td>1.74%</td>
</tr>
<tr>
<td></td>
<td>Congestion</td>
<td>$297</td>
<td>$474</td>
<td>1.74%</td>
</tr>
<tr>
<td></td>
<td>Rail Crossings</td>
<td>$2</td>
<td>$3</td>
<td>0.67%</td>
</tr>
</tbody>
</table>
How will the Findings from this Study be Used?

- Complements Miami-Dade MPO/FTAC’s body of work
- Help educate local communities and residents
- Provide freight transportation leaders with an additional resource to help continue building support for our freight transportation system
Questions?