presented to
“A Meeting of the Modes”

Florida Transportation Commission

presented by
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Projected Freight Ton Growth by Mode
2004-2035
Freight Demand

The four major drivers behind the increasing freight demand are –

- **Consumption**
  - Population growth

- **Production**
  - Expanding durable and non-durable goods manufacturing

- **Trade**
  - Import and export growth

- **Supply Chain Practices**
  - Changing logistics strategies
Trade Growth, 1860 to 2005

The value of U.S. trade—measured in constant dollars by coast and land border—has grown rapidly over the last 30 years.
Trade Growth

Growth in Trade as a Percentage of US GDP

1980: 13%
2000: 25%
2020: 35%
New Automobiles Supply Chain

Many supply chains depend on tightly integrated international and domestic freight moves to keep inventory and product costs down.

Source: Boston Logistics Group and Cambridge Systematics, Inc
Freight Tons, Value, Ton-Miles by Mode, 2035

- **Truck Tons**: 81% (Up from 79% in 2005)
- **Rail Tons**: 13% (Down from 14% in 2005)
- **Water Tons**: 6% (Down from 7% in 2005)
- **Truck Value**: 96% (Up from 94% in 2005)
- **Rail Value**: 3% (Down from 5% in 2005)
- **Water Value**: 1% (Same)
- **Truck Ton Miles**: 65% (Up from 61% in 2005)
- **Rail Ton Miles**: 28% (Down from 29% in 2005)
- **Water Ton Miles**: 7% (Down from 9% in 2005)

Source: Global Insight, Inc, TRANSEARCH 2004 data and economic forecasts
Waterborne Freight Network

- Coastal System
- Great Lakes and St. Lawrence System
- Inland System

Source: U.S. Army Corps of Engineers
U.S. Ports by Tonnage, 2004

Note: TEU totals combined for the Ports of Los Angeles/Long Beach.

Source: Cambridge Systematics based on American Association of Port Authorities data
U.S. Ports by Container (TEU) Volume, 2005

Note: TEU totals combined for the Ports of Los Angeles/Long Beach and Seattle/Tacoma

Source: Cambridge Systematics based on American Association of Port Authorities data.
Port and Terminal—Forecast Capacity/Demand

Port and Terminal—Forecast Capacity/Demand
(Millions of Twenty-Foot Equivalent Container Units)

- Demand 2004
- Capacity 2010
- Demand 2010

Source: Modern Terminals Limited.
Highlights of Panama Canal Expansion

- $5.2 Billion Construction cost
- Expansion will double current capacity
- Targeted completion date 2014

<table>
<thead>
<tr>
<th>Current Lock Dimensions</th>
<th>Expanded Lock Dimensions</th>
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<tbody>
<tr>
<td>110 feet wide</td>
<td>189 feet wide</td>
</tr>
<tr>
<td>1,000 feet long</td>
<td>1,400 feet long</td>
</tr>
<tr>
<td>Current Limits</td>
<td>Expanded Limits</td>
</tr>
<tr>
<td>4,400-TEU vessels</td>
<td>12,000-TEU vessels</td>
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</tbody>
</table>
Freight-Truck Highway Flows in 2005 and 2035

Source: Cambridge Systematics based on Global Insight, Inc TRANSEARCH 2004 data and economic forecasts
Major Freight-Truck Bottlenecks, 2004

Rail Flows in 2005 and 2035

Source: Cambridge Systematics based on Global Insight, Inc TRANSEARCH 2004 data and economic forecasts
Major Freight-Rail Choke Points and Congested Areas, 2006 (preliminary)

Railroad choke points—locations with recurring congestion & delay

Source: Cambridge Systematics, Inc
Total Logistics Cost

Percentage of U.S. Gross Domestic Product

Economic Effects of Transportation
Transportation investments improve industry productivity and access to markets, resulting in greater competitiveness and growth.

Transportation System Investment

Transportation System Efficiency
- Travel Time
- Cost
- Reliability

Productivity
Labor and Market Access

Competitiveness

Economic Growth

Source: Cambridge Systematics, Inc
Percentage Increases in Construction Costs 1993-2015

Percentage Increases in Construction Costs 1993–2015

Public Investment
Bad News
The federal program may be in crisis by 2008.

Highway Program Funding Faces an Immediate Crisis

- Highway Program Funding - Current Law
- HTF/Highway Account Balance - Current Law
- Reduced Highway Program for Solvency
- HTF/Highway Account Balance after Reduction
Restoring the Federal Program’s Purchasing Power

This will require the program to be increased from $43 billion to $73 billion.

To do this will require a 10 cent increase in the federal fuel tax or its equivalent between 2010 and 2015.
Future Freight Financing Alternatives*

- % of Customs Fees for Port and Intermodal Investments
- Container or Freight Fee
- Transportation Finance Corporation
- Investment Tax Credit for New Rail Capacity
- Public-Private Partnerships

* In addition to traditional industry sources.
Public Sector Freight Issues

- No clear and consistent description of the freight transportation system, its performance, and investment needs

- Insufficient public sector knowledge of freight transportation and supply chain management and their importance to businesses and economic growth

- Lack of coordinated public and private actions on freight transportation policies, programs, and finance, and

- Lack of public sector focus on transportation operations
AASHTO
Freight Transportation Network

www.freight.transportation.org