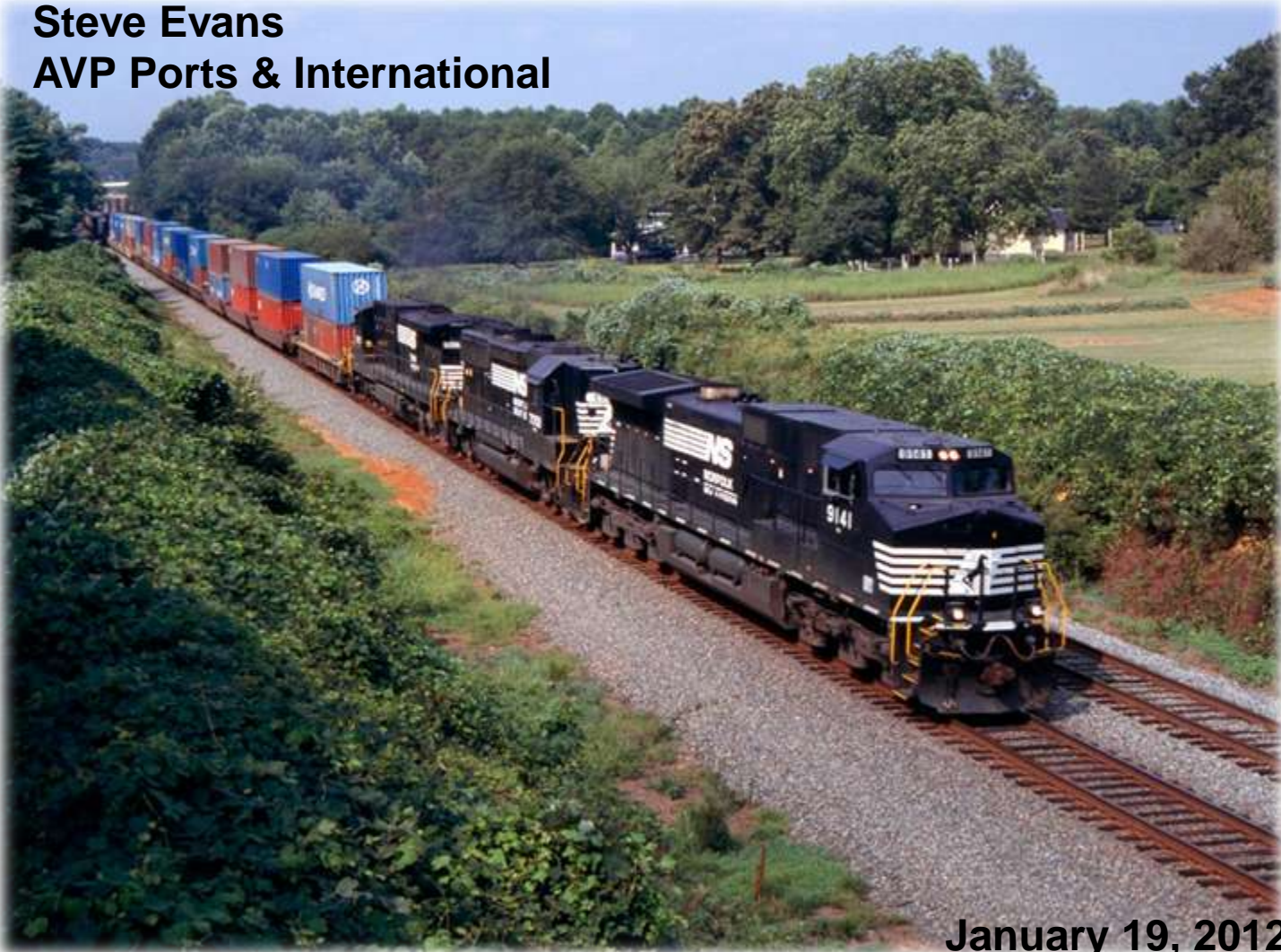


# Shifting International Trade Routes

American Association of Port Authorities

Steve Evans  
AVP Ports & International



January 19, 2012

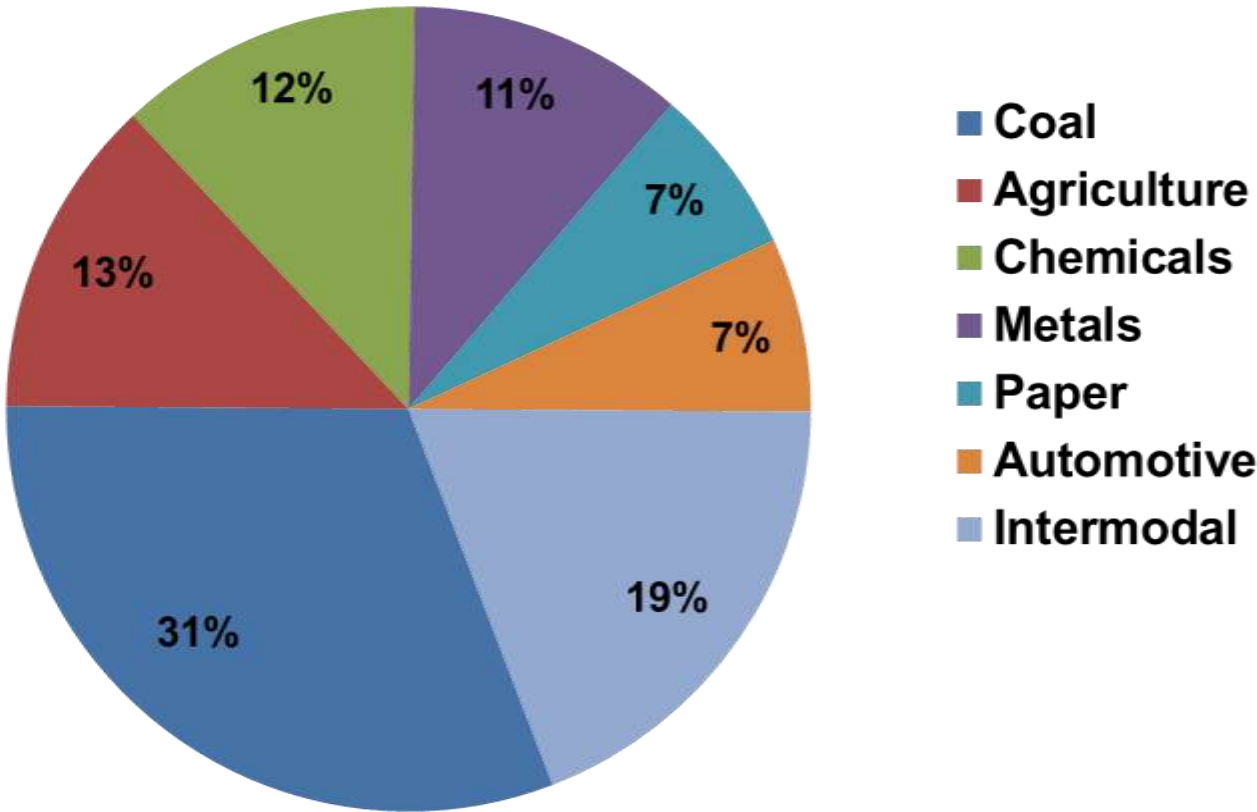
# The Thoroughbred

A few words about Norfolk Southern



I promise, just a few....

# 2011 Norfolk Southern Revenue Breakout

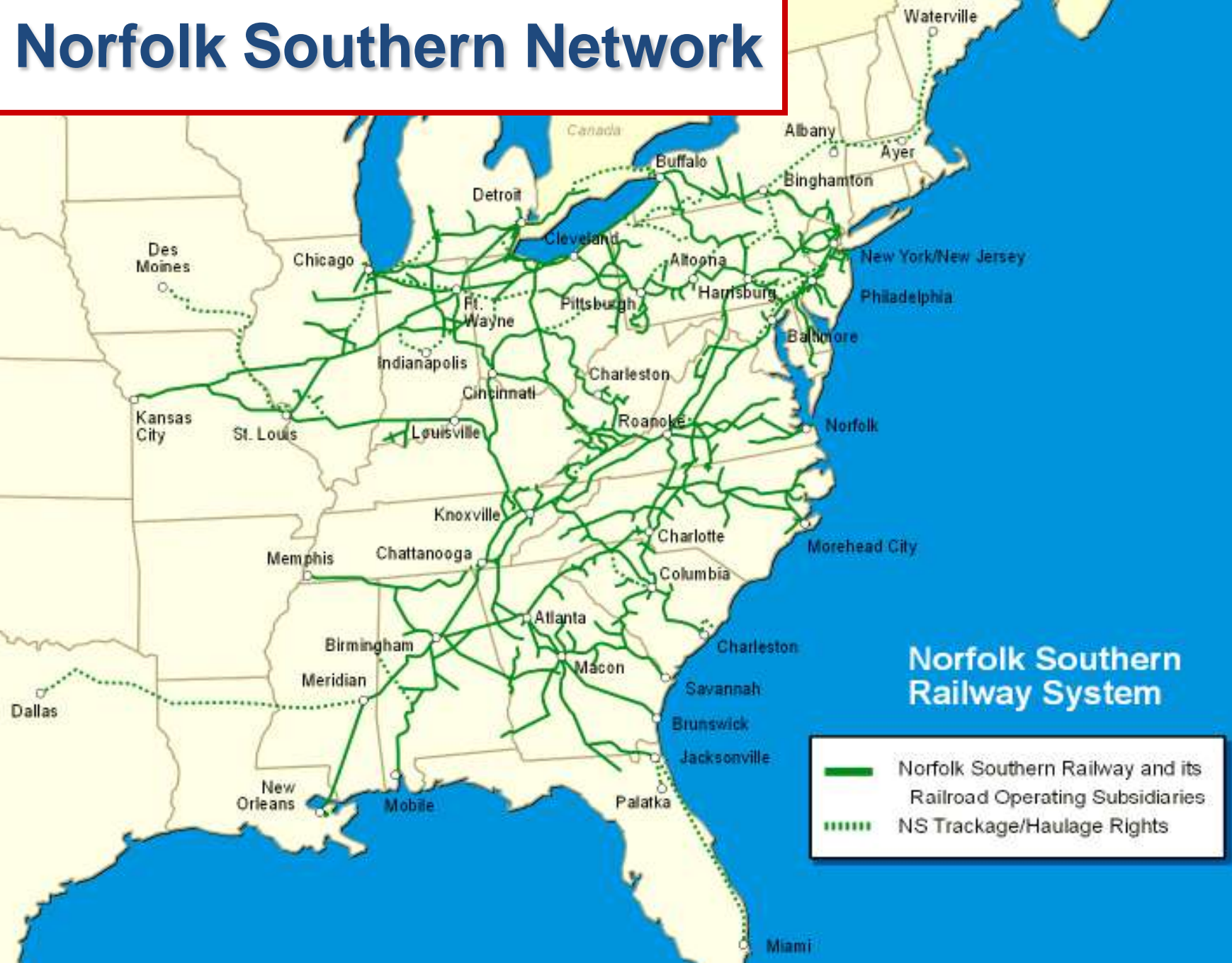


# Description of Business

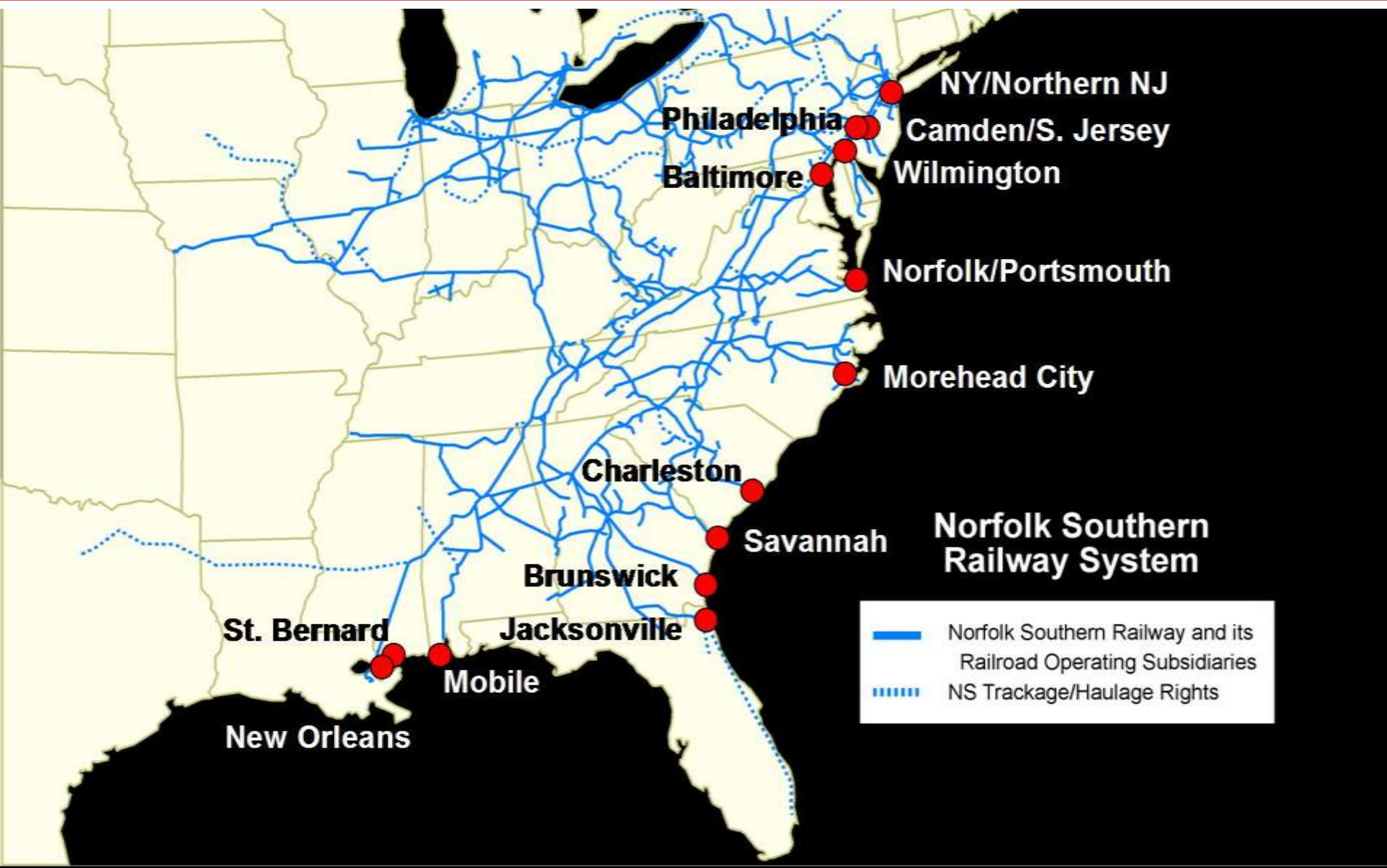
- 4<sup>th</sup> Largest Class 1 Railroad in North America
- Operations in 22 states and the District of Columbia
- NS serves every major container port in the eastern United States
- Safest railroad in North America
- Largest automotive and steel franchises in North America by volume
- Largest Intermodal franchise in the east



# Norfolk Southern Network



# Ports Served by Norfolk Southern



# Ports and International Trade Balance

How does Norfolk Southern see the trade routes shifting after the expansion of the Panama Canal?



# Ports and International Trade Balance

We don't have a clue



**“If one were to ask 10 experts to give you their opinion regarding the impact of the opening of the third set of new, improved, and larger Panama Canal locks (effectively slated for 2015), they would likely receive 10 different, well thought, thorough prognostications.”**

**-John Larkin, Stifel Nicolaus**





# Ports and International Trade Balance

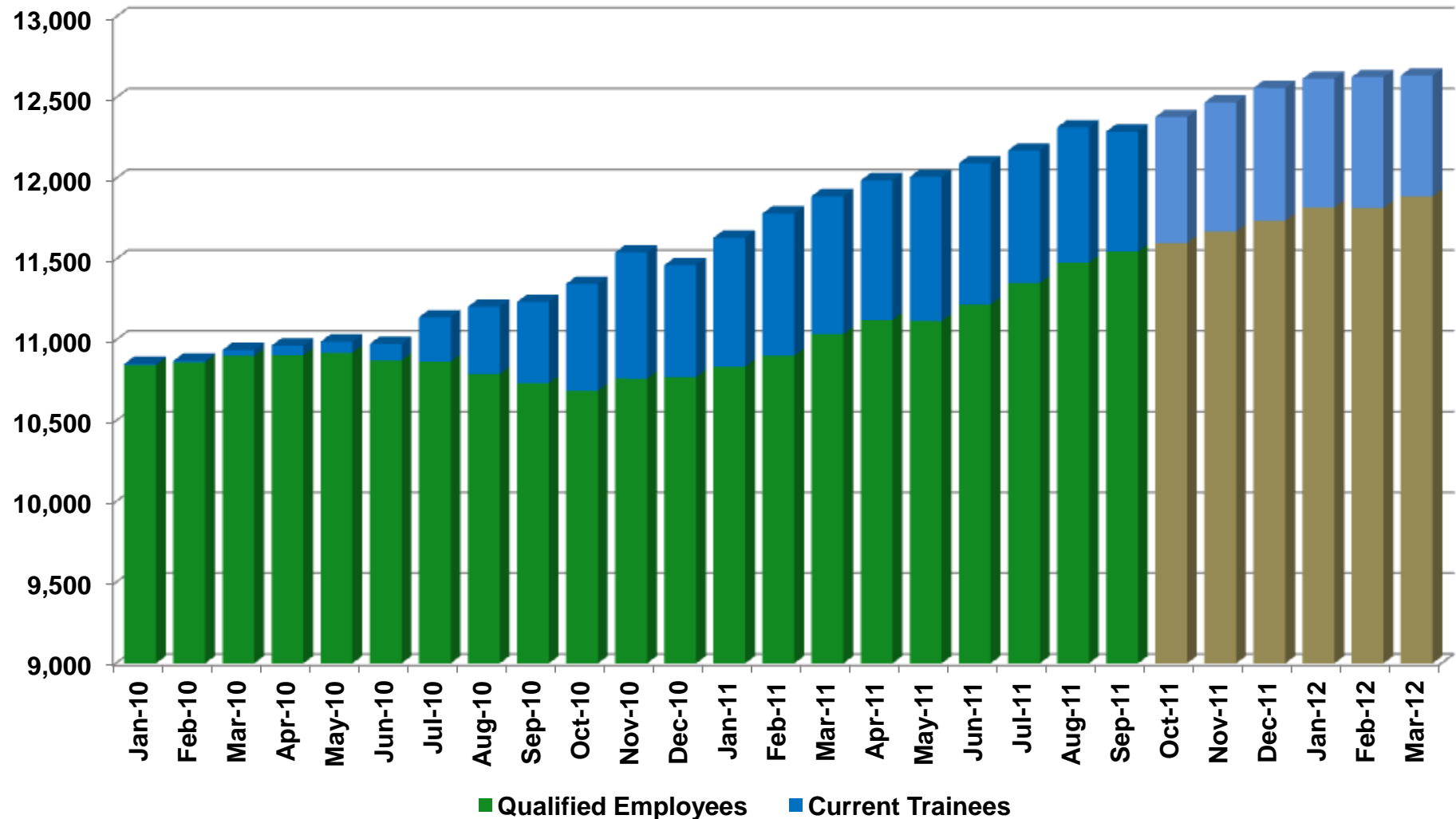
But doing nothing is not an option



So how do we prepare for the unknown?

# Manpower Planning Model

## Total Qualified T&E Employment plus Trainees



# Ports and International Trade Balance

## Spend Money



# Total Capital Program

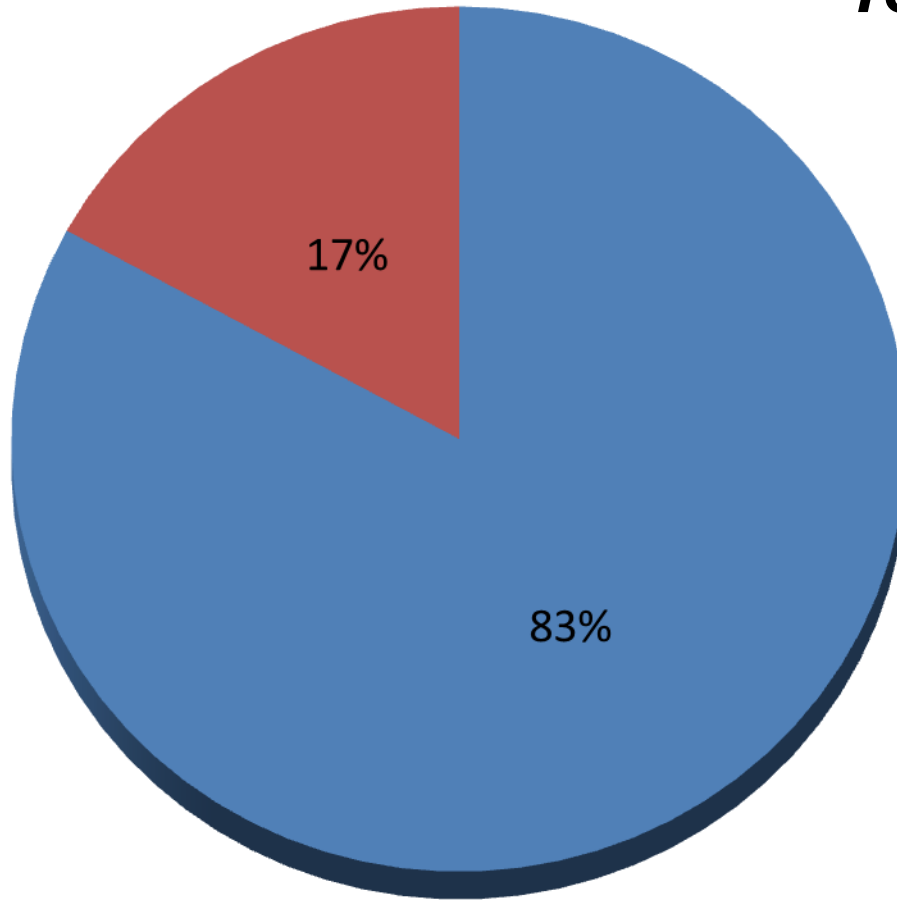
(\$ millions)



# 2011 Baseline Capital Program

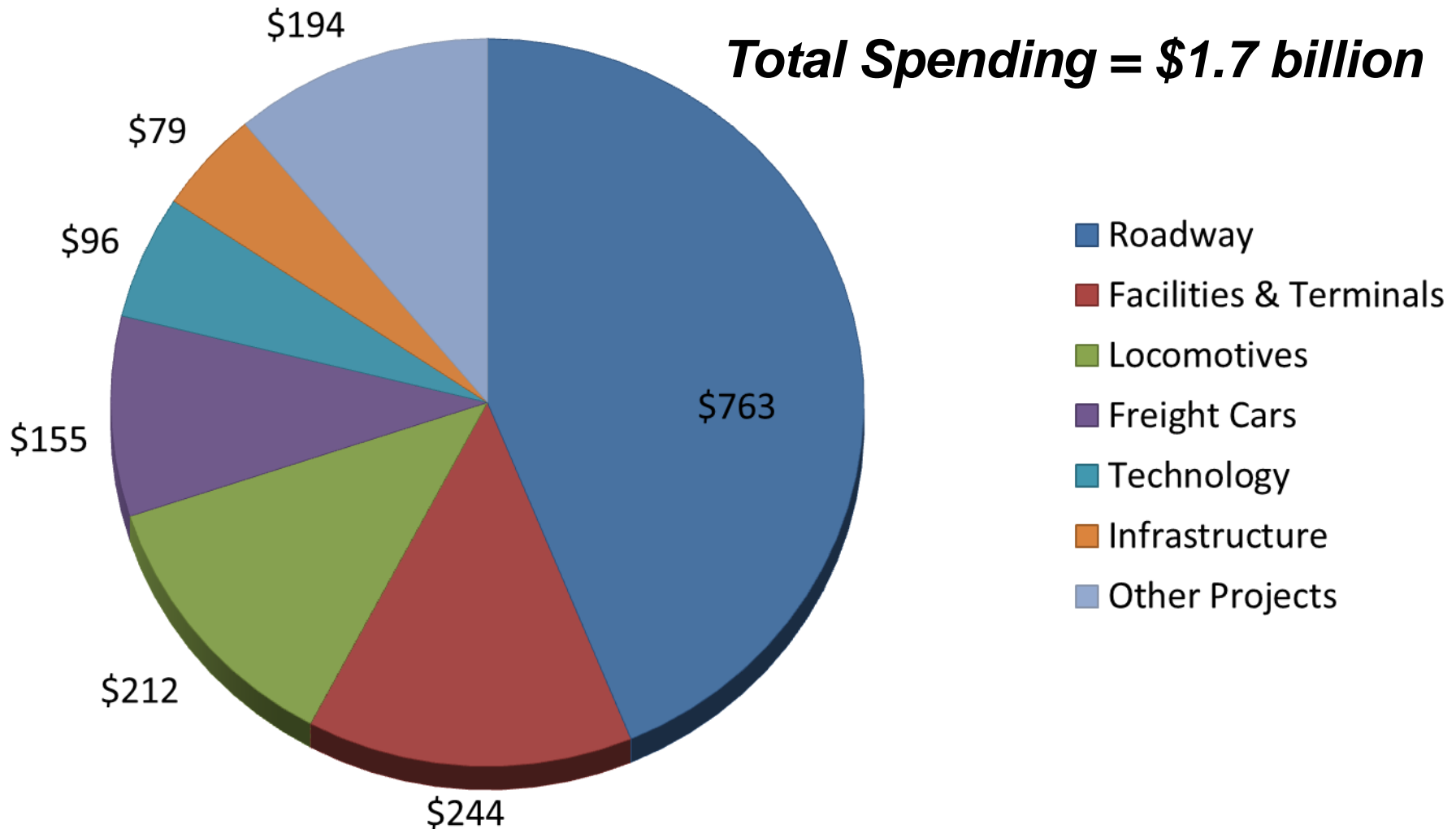
## Replacement/Core vs. Growth

**Total Spending = \$1.7 billion**



- Replacement/Core
- Growth/Productivity

# 2011 Baseline Capital Program (\$ Millions)



# 2011 Capital Program Objectives

- Maintain the franchise
- Strengthen the coal fleet
- Invest in business growth
- Optimize capital efficiency (purchase versus lease)

# Major Port Categories

- Container/Intermodal
- Ro Ro
- Bulk
- Break Bulk

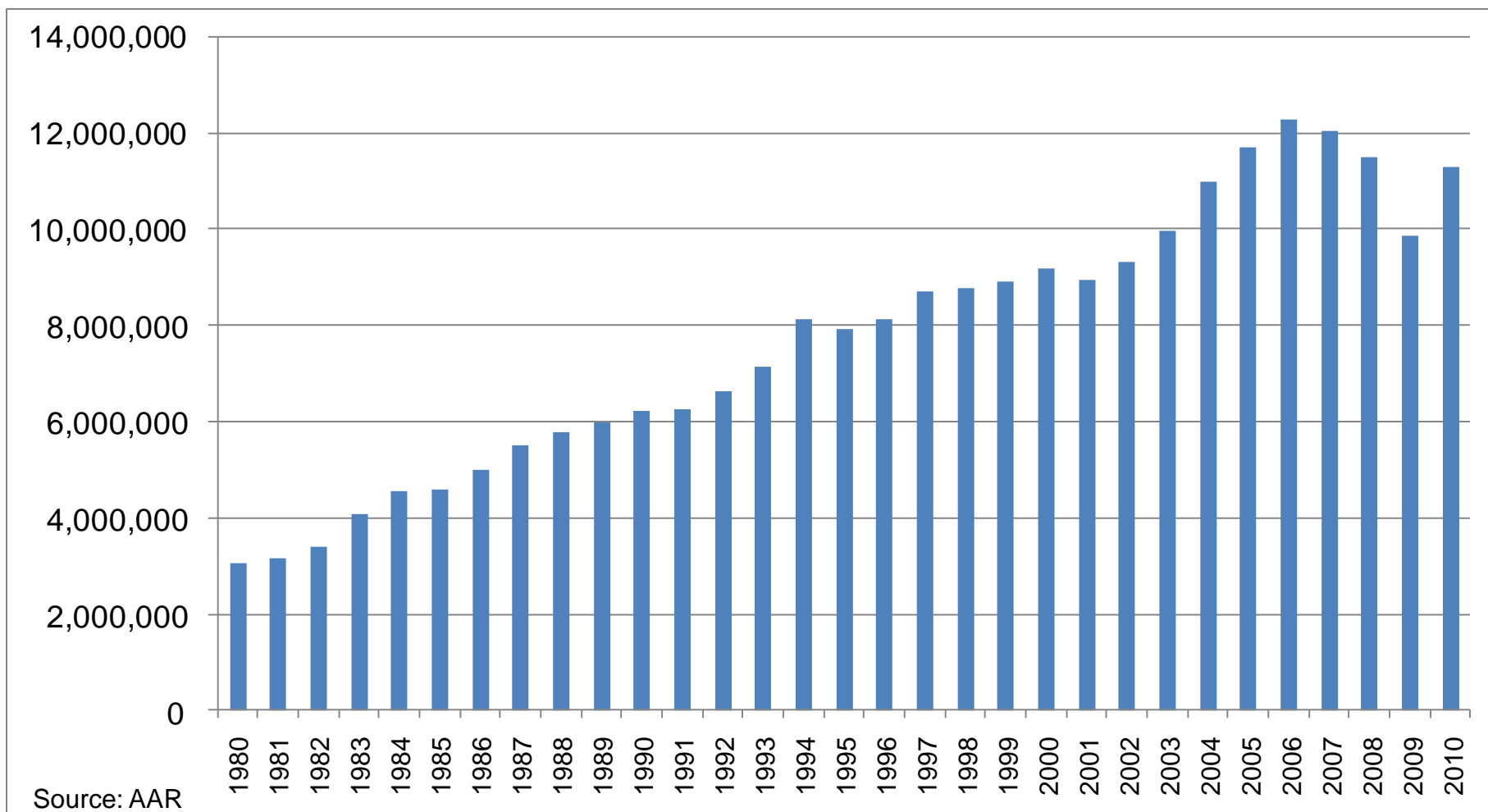


# Key Drivers for Continued Container/Intermodal Investment

- Rising demand for logistics savings from shippers and BCOs
- Shifting long-term supply chain patterns
  - Shorter haul service (250 – 1200 mi) or (400-1930 km)
  - Higher quality service demands
  - International from both coasts
- Continued, but tempered, U.S. economic growth
- Increasing environmental awareness
- Increasing motor carrier costs and capacity constraints

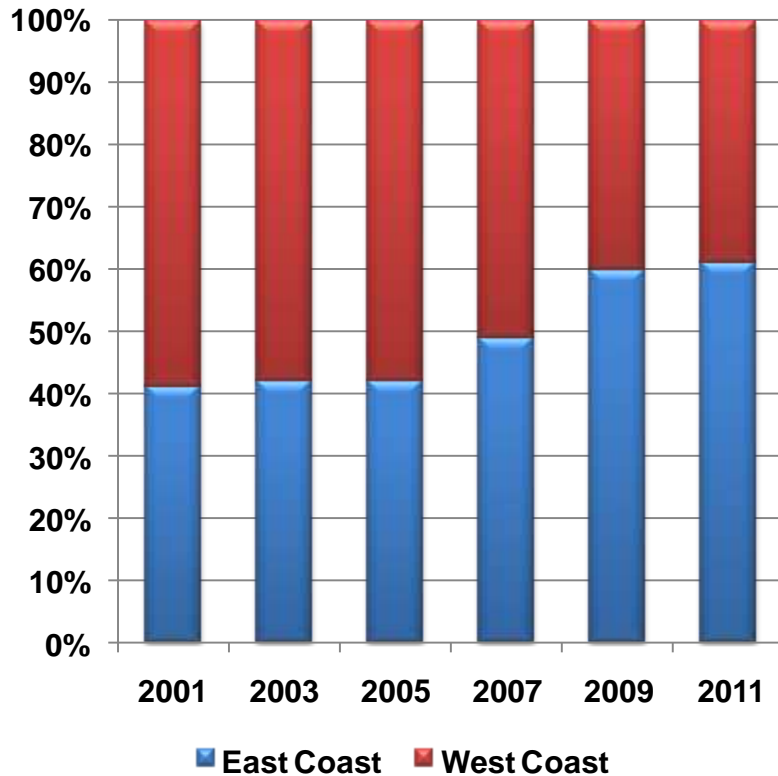


# Total US Intermodal Units Originated

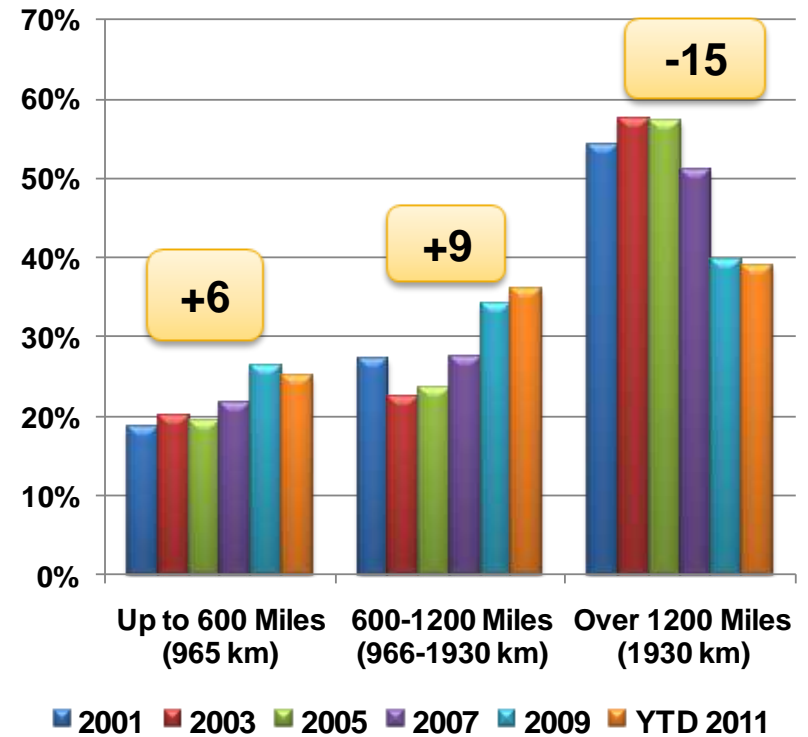


# Changing International Trade Characteristics

## NS East Coast vs. West Coast Market Share

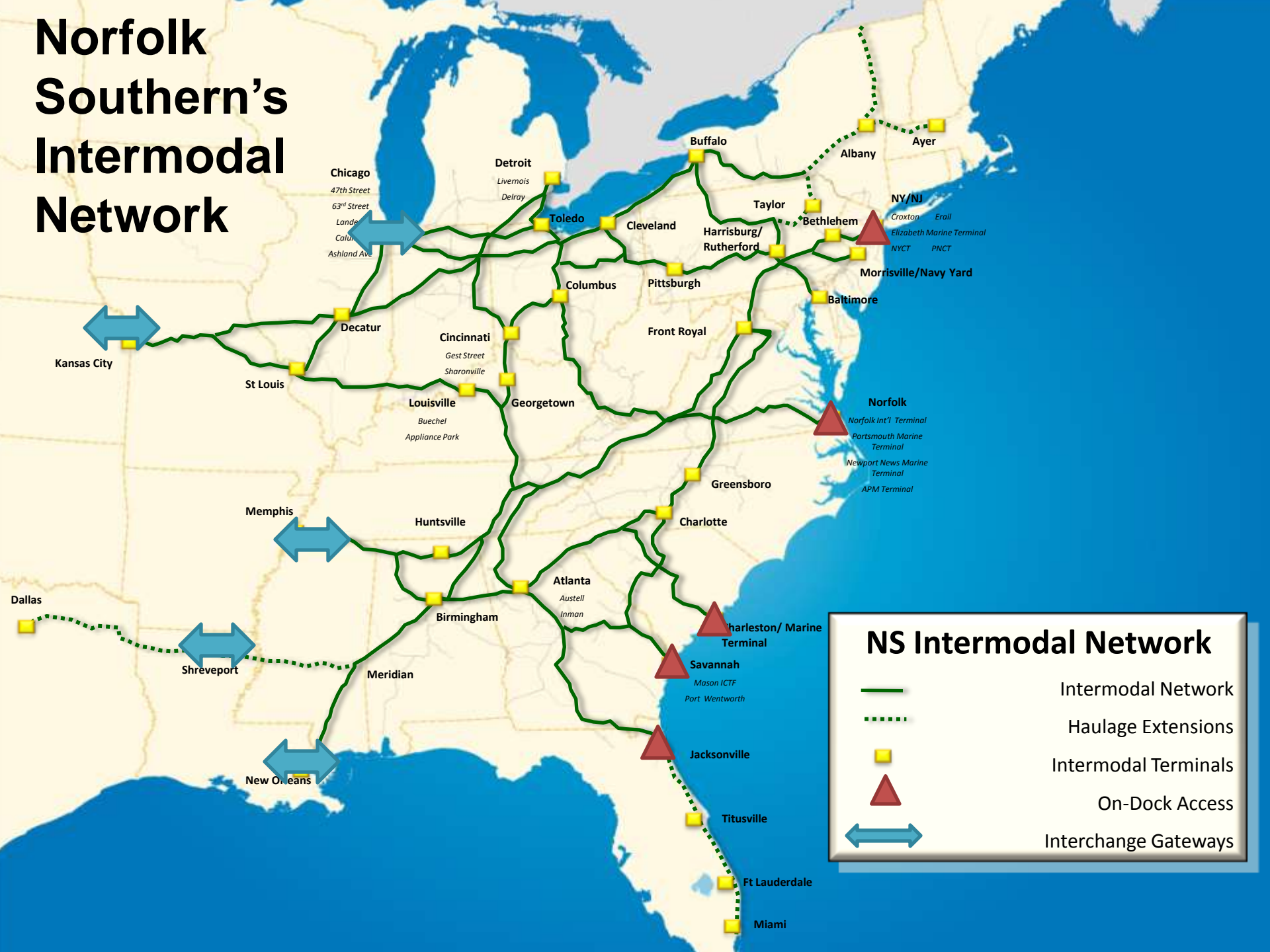


## NS International Length of Haul



Share growth in points from 2001 to 2011

# Norfolk Southern's Intermodal Network



### NS Intermodal Network

- Intermodal Network
- Haulage Extensions
- Intermodal Terminals
- On-Dock Access
- Interchange Gateways

**Chicago**  
47th Street  
63rd Street  
Landon  
Colvin  
Ashland Ave

**Detroit**  
Livernois  
Delray

**Buffalo**

**Albany**

**Ayer**

**Toledo**

**Cleveland**

**Taylor**

**Harrisburg/  
Rutherford**

**Bethlehem**

**NY/NJ**  
Croton  
Erail  
Elizabeth Marine Terminal  
NYCT  
PNCT

**Columbus**

**Pittsburgh**

**Morrisville/Navy Yard**

**Baltimore**

**Kansas City**

**Decatur**

**Cincinnati**  
Gest Street  
Sharonville

**Front Royal**

**St Louis**

**Louisville**  
Buechel  
Appliance Park

**Georgetown**

**Norfolk**  
Norfolk Int'l Terminal  
Portsmouth Marine Terminal  
Newport News Marine Terminal  
APM Terminal

**Memphis**

**Huntsville**

**Greensboro**

**Charlotte**

**Atlanta**  
Austell  
Inman

**Charleston/ Marine Terminal**

**Birmingham**

**Savannah**  
Mason ICTF  
Port Wentworth

**Dallas**

**Shreveport**

**Meridian**

**Jacksonville**

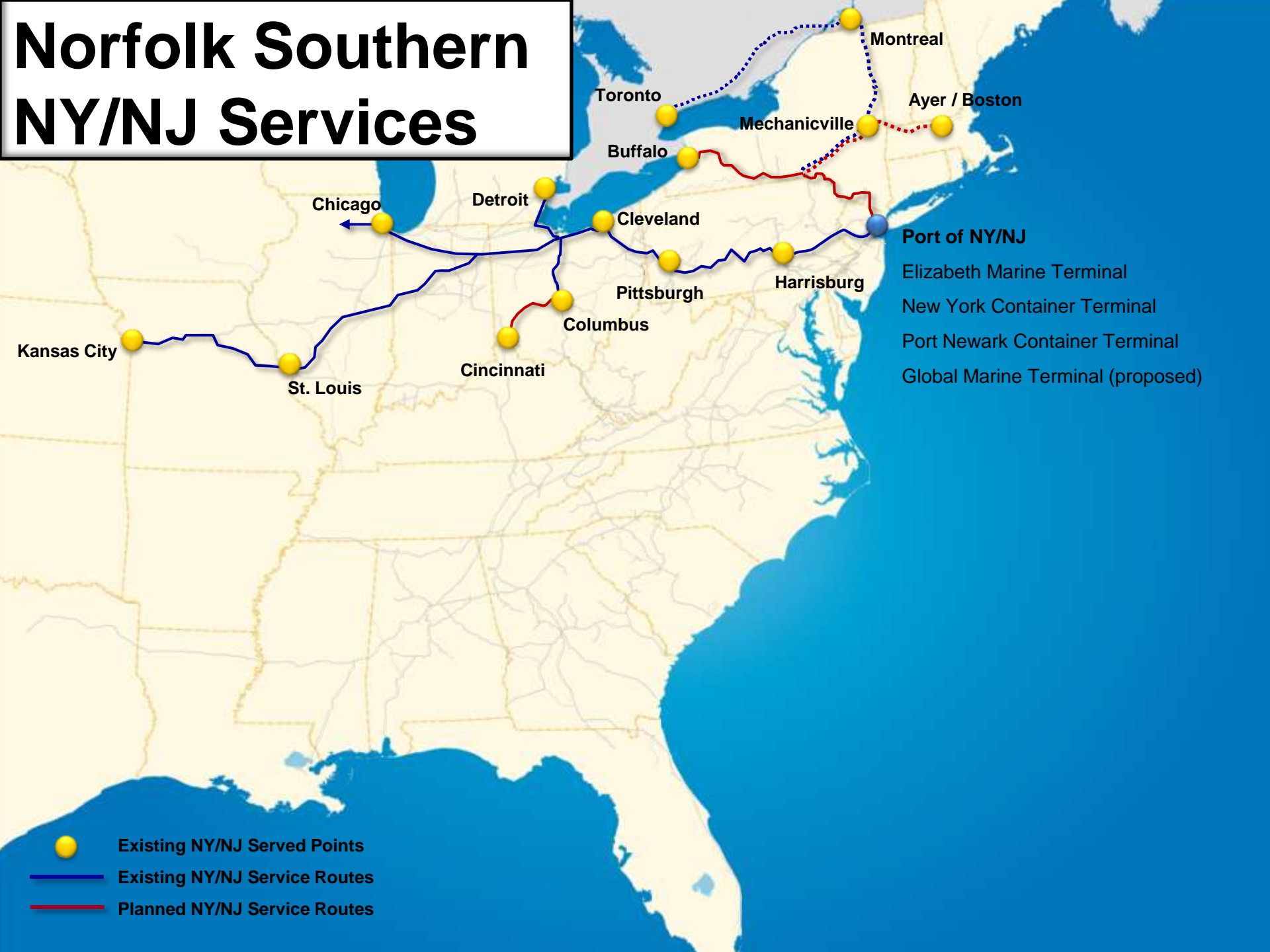
**New Orleans**

**Titusville**

**Ft Lauderdale**

**Miami**

# Norfolk Southern NY/NJ Services



# NS Norfolk Port Services



# NS Southeast Port Services



# Panama Canal - 2014

- In preparation for the Panama Canal widening, NS will have completed:
  - The Heartland Corridor
    - New Columbus Terminal
  - The Meridian Speedway
  - The PanAm Southern Corridor
  - The Crescent Corridor
    - New Birmingham Terminal
    - New Memphis Terminal
- Our capacity initiatives will continue with a focus on enhancing network efficiency and eliminating cost

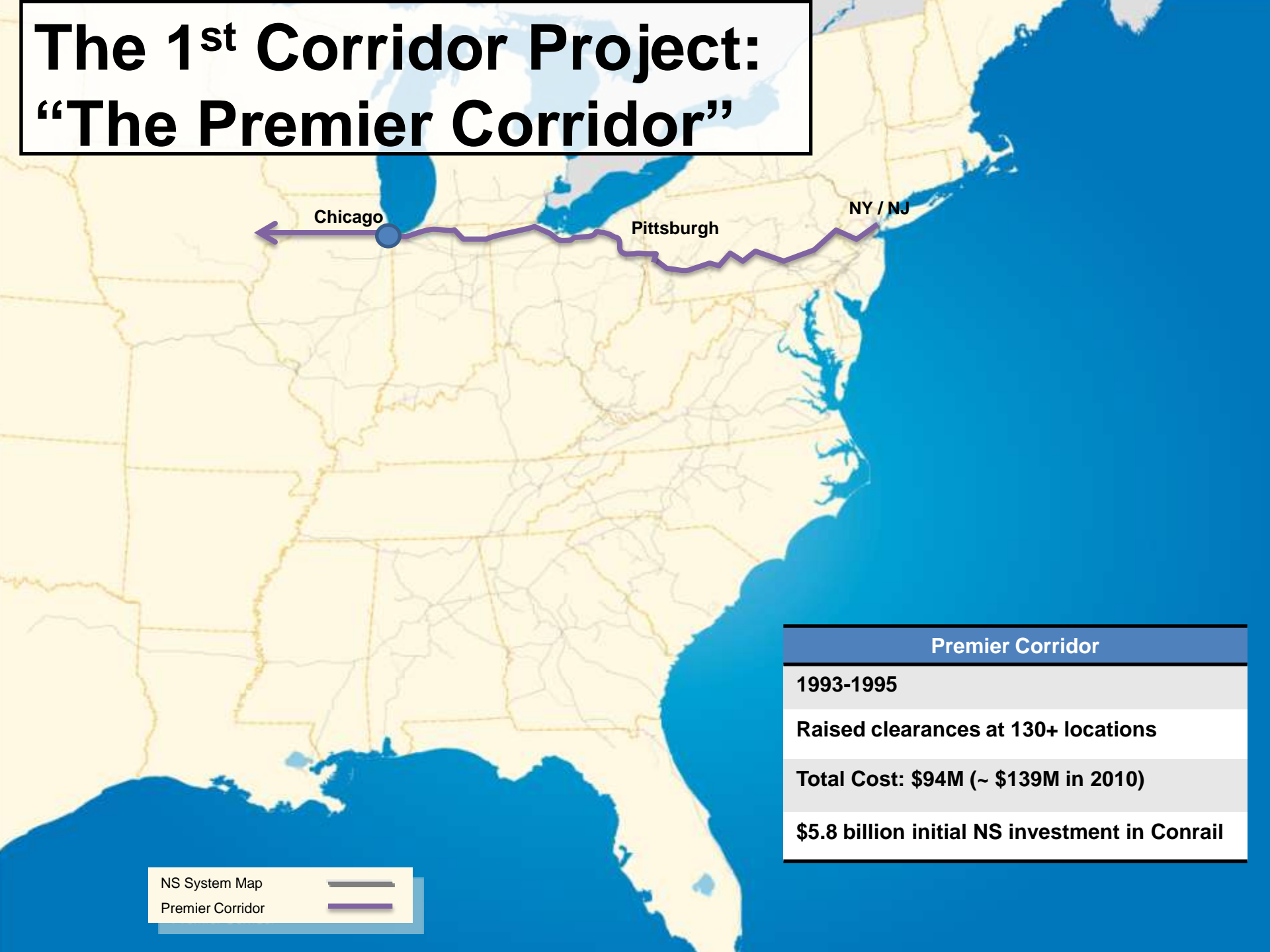






Completion Dates	
Premier	1995
MSLLC	2011
Heartland	2011
PanAm Southern	2012
Crescent Phase I	2012

# The 1<sup>st</sup> Corridor Project: “The Premier Corridor”



Premier Corridor
1993-1995
Raised clearances at 130+ locations
Total Cost: \$94M (~ \$139M in 2010)
\$5.8 billion initial NS investment in Conrail

NS System Map ———  
Premier Corridor ———

# Meridian Speedway



Shreveport

Meridian

**Meridian Speedway**

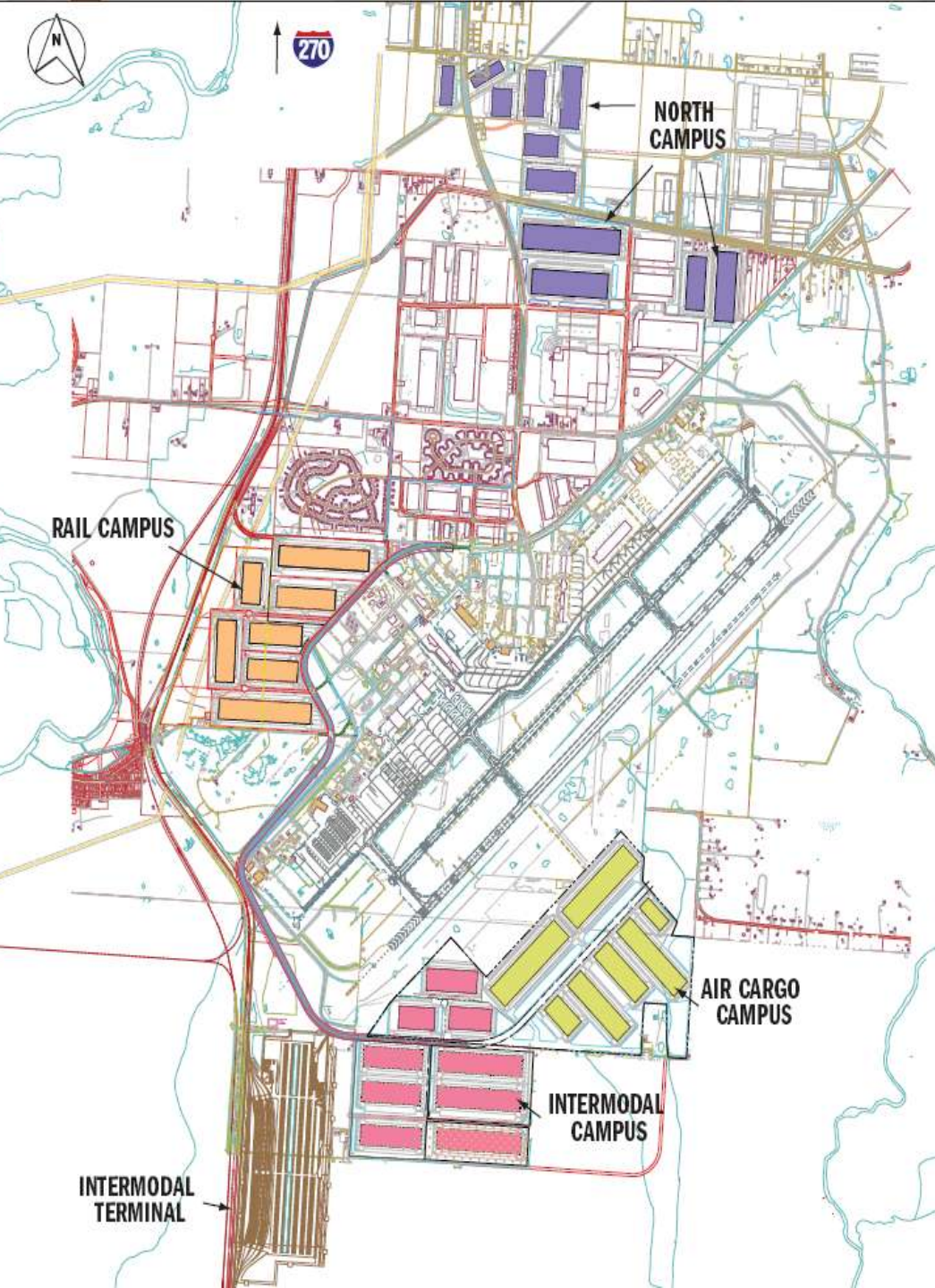
Joint venture with KCS

# The Heartland Corridor



	Total Cost
Mainline Clearance	\$150M
Roanoke Terminal	\$22M
Prichard Terminal	\$19M
<b>TOTAL</b>	<b>\$191M</b>

# GLP - Rickenbacker (Columbus, OH)



- **GLP – Rickenbacker is NS’ first integrated logistics park**
- **Located 18 miles from Columbus**
- **Over 15,000 acres of existing or planned development**
- **Anchored by NS’ new 300 acre intermodal facility and the Rickenbacker airport**
- **Integrates intermodal, carload and logistics capabilities**
- **Accommodates the delivery of overweight containers throughout the facility**

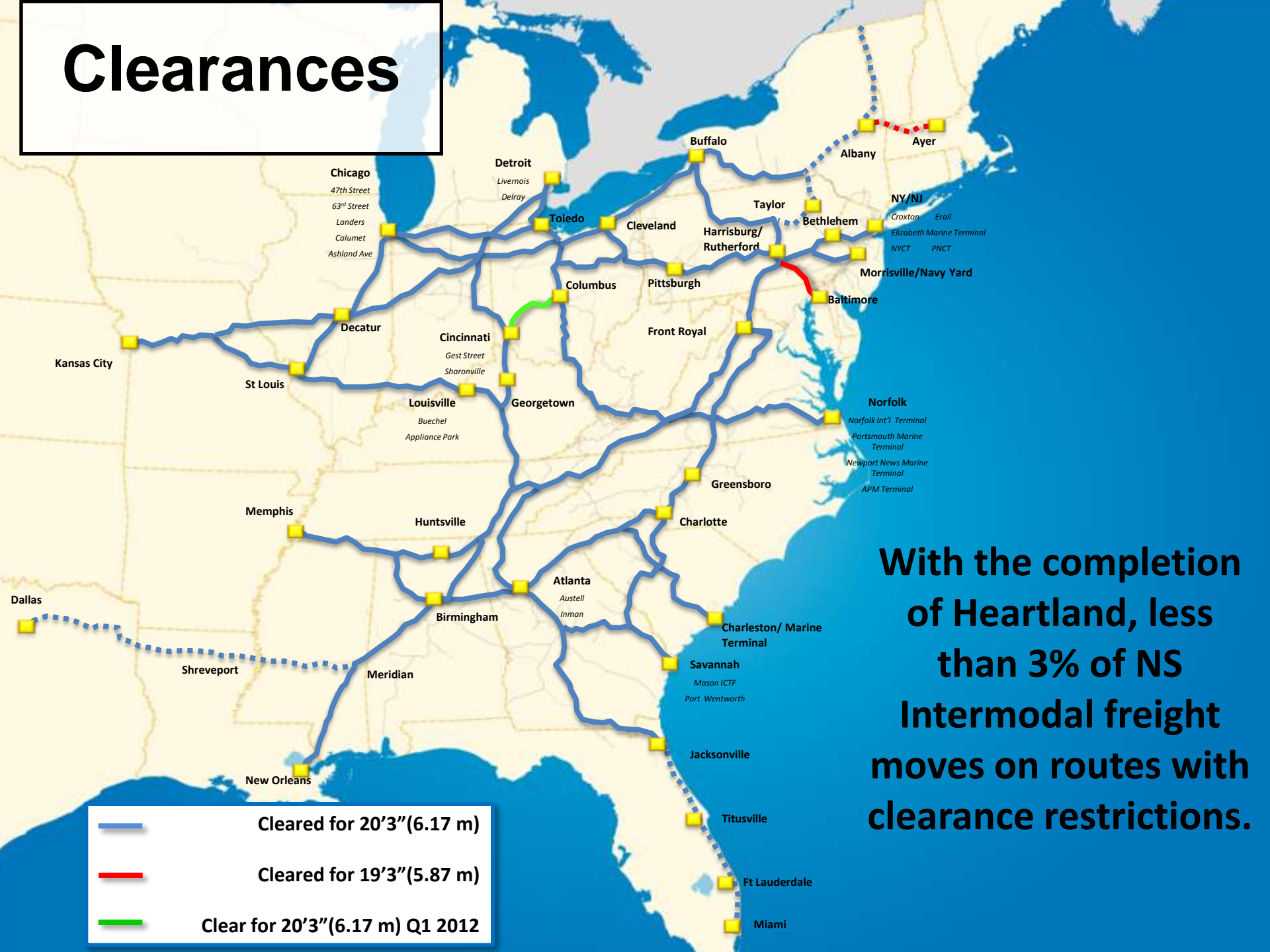
# Rickenbacker Logistics Park

**300 Acres available**  
**4 Support Tracks (14,000')**  
**3 Pad Tracks (9,300')**  
**Expanded Leads to/from Mainline**

**1,888 Wheeled Parking Spots**  
**408 Stacked Spaces (2 high)**  
**4 Overhead Cranes / 1 Sideloader**



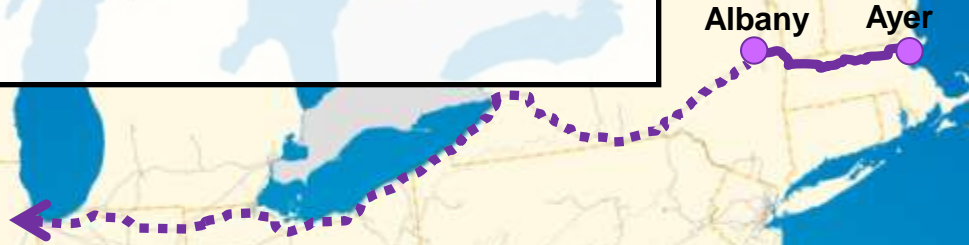
# Clearances



**With the completion of Heartland, less than 3% of NS Intermodal freight moves on routes with clearance restrictions.**

	Cleared for 20'3" (6.17 m)
	Cleared for 19'3" (5.87 m)
	Clear for 20'3" (6.17 m) Q1 2012

# PanAm Southern JV



Investment	Total Cost
Track Upgrades	\$50M
Terminal Capacity	\$40M
<b>TOTAL</b>	<b>\$90M</b>



# The Crescent Corridor

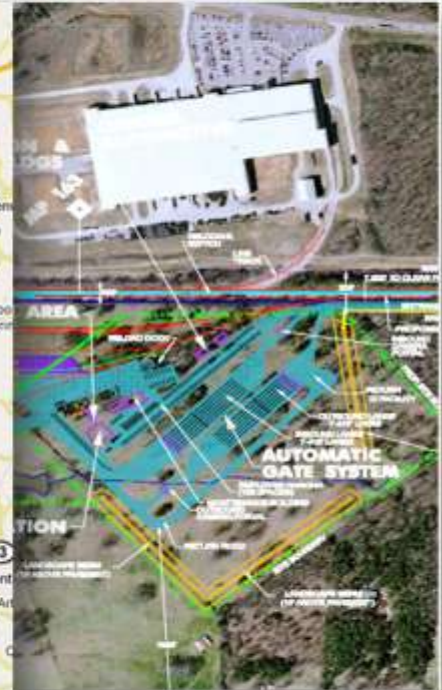
Mechanicville Ayer



## Birmingham, AL (McCalla)

Construction Start Date: Q4 2010

- 165,000 lift capacity
- Average pad length 4,300'
- 3 pad tracks
- Investment – \$100+ Million
- Opening 2012



Q1 2010:  
\$53M TIGER  
Award

Q2 2010:  
NEPA, Design,  
Permitting  
Complete

Q1 2011:  
Sitework  
Complete

Q4 2011:  
Paving,  
Buildings  
Complete

Q1 2012:  
Trackwork/C&S  
Complete

Terminal  
Opening

# Birmingham, AL (McCalla)

- 165,000 lift capacity
- Average pad length – 4,300' (1,311 m)
- 3 pad tracks
- Investment - \$100+ million
- Opening 2012

Birmingham Regional Intermodal Facility

# Birmingham, AL

Looking west, panorama of Birmingham Intermodal site



North and South views from McAshan overpass

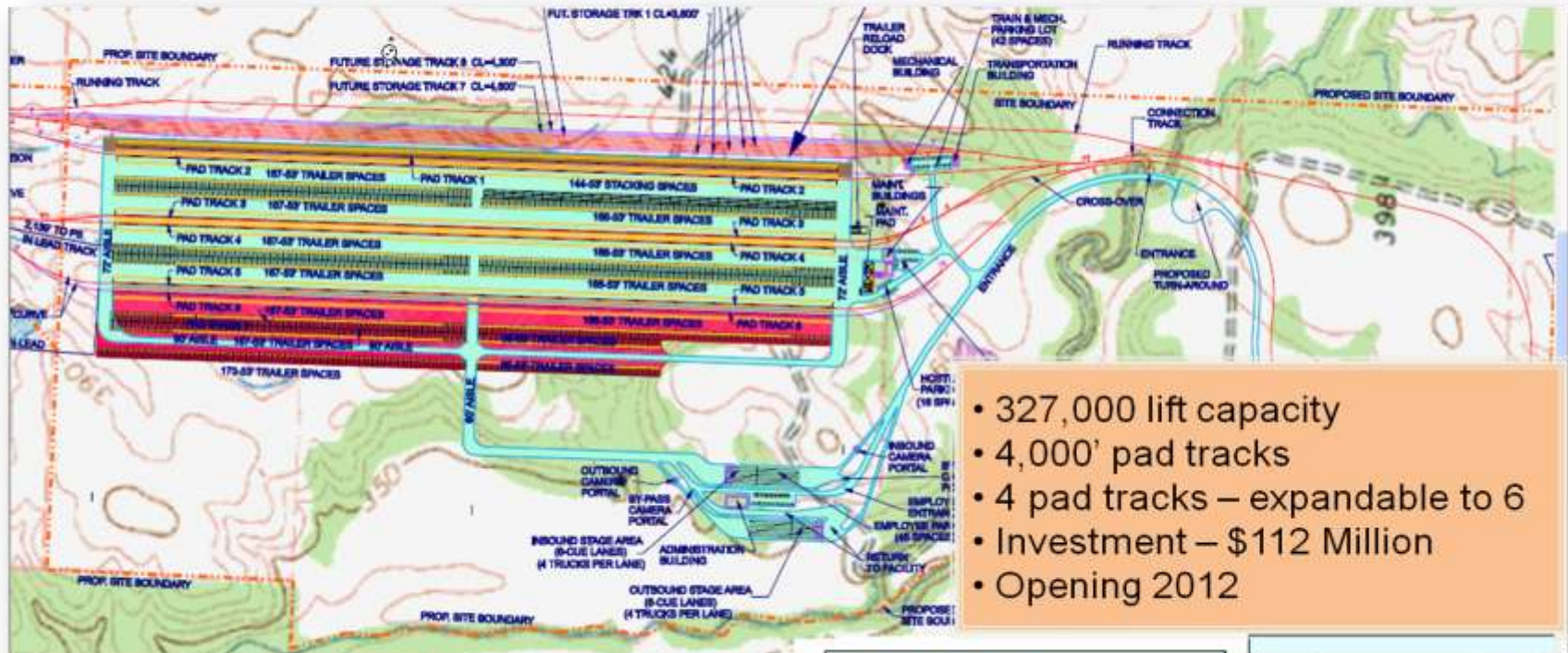


# The Crescent Corridor

Mechanicville Ayer

## Memphis, TN (Rossville)

Construction Start Date: Q4 2010



- 327,000 lift capacity
- 4,000' pad tracks
- 4 pad tracks – expandable to 6
- Investment – \$112 Million
- Opening 2012

Q1 2010:  
\$53M TIGER  
Award

Q2 2010:  
NEPA, Design,  
Permitting  
Complete

Q3 2011:  
Sitework,  
Bridge Work  
Complete

Q4 2011:  
Paving,  
Buildings  
Complete

Q1 2012:  
Trackwork/C&S  
Complete

Terminal  
Opening

# Memphis, TN (Rossville)

- 327,000 lift capacity
- 4,000' (1,219 m) pad tracks
- 4 pad tracks – expandable to 6
- Investment - \$112 million
- Opening 2012



Memphis Regional Intermodal Facility

# Aerial of Memphis Site

WB - NS Main Line - EB



# What does this all mean?

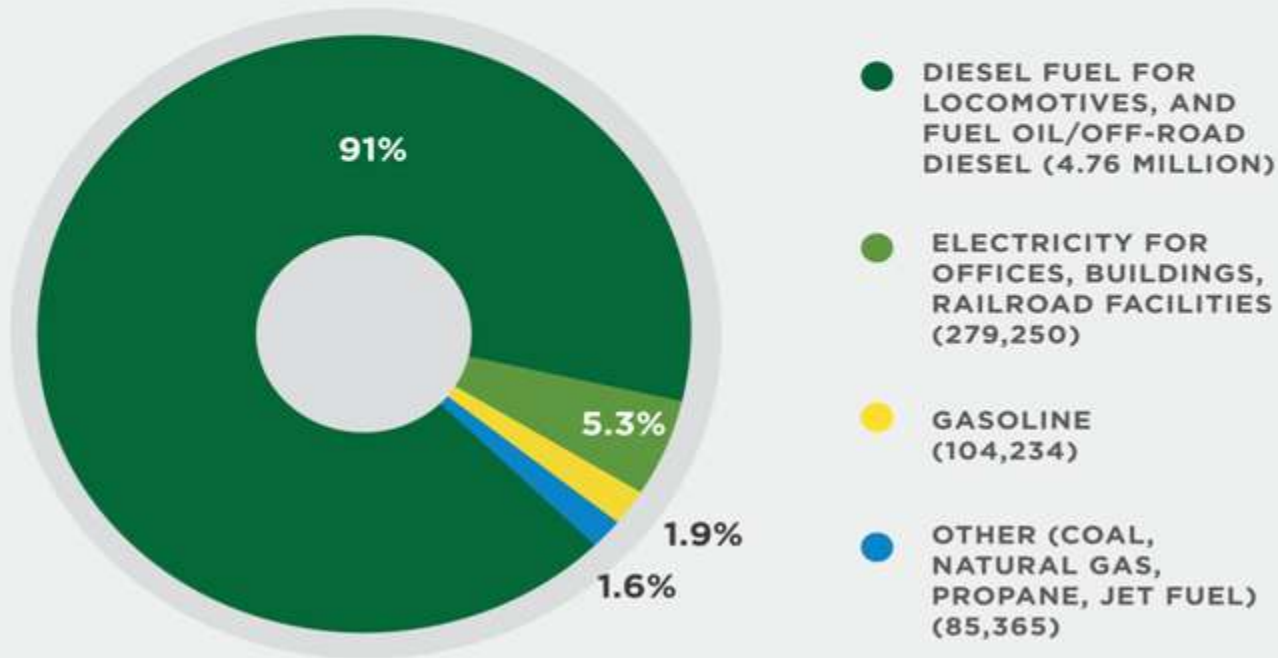
- Our largest volume impact might *not be* due to route shifting and the opening of the canal
  - Rail growth will likely be rooted in:
    - Sustainability, making rail a “green” option
    - Ability to offer truck competitive service with shorter length of haul
    - Support through expansion of existing infrastructure and construction of new facilities
  - Increased number of T&E employees will support improved velocity efforts and service

# Norfolk Southern Carbon Mitigation Strategy

## NORFOLK SOUTHERN'S 2010 CARBON FOOTPRINT

**TOTAL EMISSIONS OF CARBON DIOXIDE EQUIVALENTS= 5.2 MILLION METRIC TONS**

Emissions of CO<sub>2</sub> equivalents, measured in metric tons.



We are working to reduce greenhouse gas emissions by 10% per RTM between 2009 and 2014.

**2010 Progress:**  
3.9% reduction,  
goal 40% complete



# Norfolk Southern Carbon Mitigation Strategy

- Hybrid and fuel cell technologies
- Computer technology
- Reduced friction on rail through lubrication improvements (with solar lubricators)
- Reduced locomotive/heavy equipment idling time
- Avoidance of “stretch” braking
- “Pacing” of trains by dispatchers

# Conservation Initiatives: Green Trees

6.04 MILLION TREES  
WILL BE PLANTED.  
For NS, that represents:



# Potential Port Opportunities

- Wood Pellets
- Rail/Container Transload Facility
  - Grain/Grain Products
  - Other Commodities
- Export Coal
  - Many export facilities full
  - How long will the boom last?
- Export Automobiles
  - BMW, Mercedes Benz, Toyota
  - Vehicles to/from Mexico



**Thank You**