2006 Port Everglades Master Plan Update

Phase I Workshop

The Board of County Commissioners of Broward County

February 20, 2007

Master Plan Team

Company	Role
DMJM Harris	Project Management
JWD/DMJM Harris	Port Planning
Dickey Consulting Services	Public Involvement
J.D. Sanchez Consulting	Planning / Comp Plan
Sandra Walters	Environmental
Martin Associates	Containerized Cargo Market Assessment
Michael L. Sclar Associates	Non-Containerized Cargo Market Assessment
Bermello, Ajamil & Partners	Cruise Analysis
Lakdas/Yohalem Engineering	Marine Structures
CMS	Cost Estimating

Goal Of 2006 Master Plan Update

Create a plan to maximize market share and revenue through a realistic 5 year facility development program within a framework of 10 and 20 year vision plans.

Work Products of 2006 Master Plan Update

- Updated Market Study
- 10 & 20 Year Vision Plans
- 5 Year Capital Improvement Plan
- Updated Deep Water Component of Comp Plan

Where We are Today . . . Public Participation

- Managing Public Participation Program
- Conducted 2 Public Participation Meetings
- Established Interactive Website
  - www.portevergladesmasterplanupdate.com
  - Check schedule of events
  - View meetings / presentations / workshops
  - Ask questions / give comments

Where We are Today . . . Meetings Conducted

- Two Group Tenant / Stakeholder and Agency Meetings
- One-on-one Tenant / Stakeholder Meetings
- Multiple Master Plan Meetings with Convention Center and Fort Lauderdale Hollywood International Airport

Where We Are Today . . . Tasks Conducted

- Prepared Existing Facilities Assessment
- Developed Market Assessment By Commodity
- Forecasted Unconstrained Needs Assessment
- Applied Physical Constraints
- Created Vision Plans
- Requesting Guidance

Where We Will Be Going . . .

In Spring 2007 . . .

- Refinement of 10- and 20-year Vision Plans
- Prepare Economic Impact of Potential Projects
- Develop Financial Strategy
- Preparation of 5-year Capital Improvement Program
- Phase II Workshop with Board of County Commissioners

In Summer 2007 . . .

- Update Deep Water Component of Comp Plan

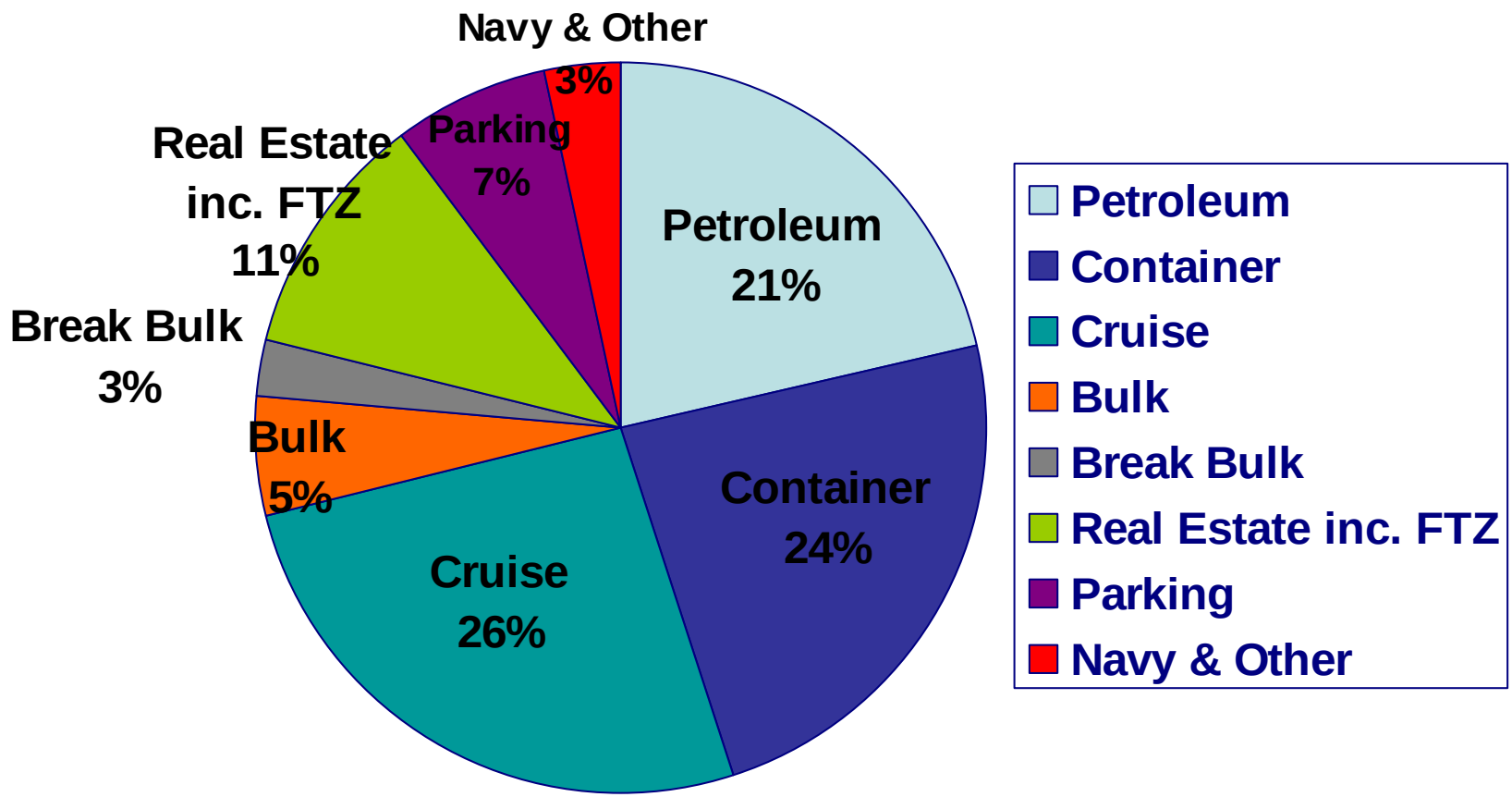
Mission Statement

The mission of Port Everglades is to manage the County's Port- related assets to maximize the economic benefits to the citizens and businesses of Broward County and the State of Florida. The Port will manage the County's assets in a financially responsible, environmentally sound manner, consistent with the local, state and federal rules and regulations which govern international and domestic trade, transportation and the Port Industry.

Commodity Types Handled At Port Everglades

- Containers
- Dry Bulk / Neo-Bulk
- Cruise
- Liquid Bulk / Petroleum

Port Everglades Revenue Centers



Port Everglades Annual Throughput – FY 2006

- Cruise Passenger ---------- 3.2 million passengers
- Containerized Cargo ------ 5.1 million tons (864,000 TEUs)
- Bulk Cargo ---------- 3.0 million tons
- Break Bulk Cargo ---------- 335 thousand tons
- Petroleum ---------- 123.5 million barrels

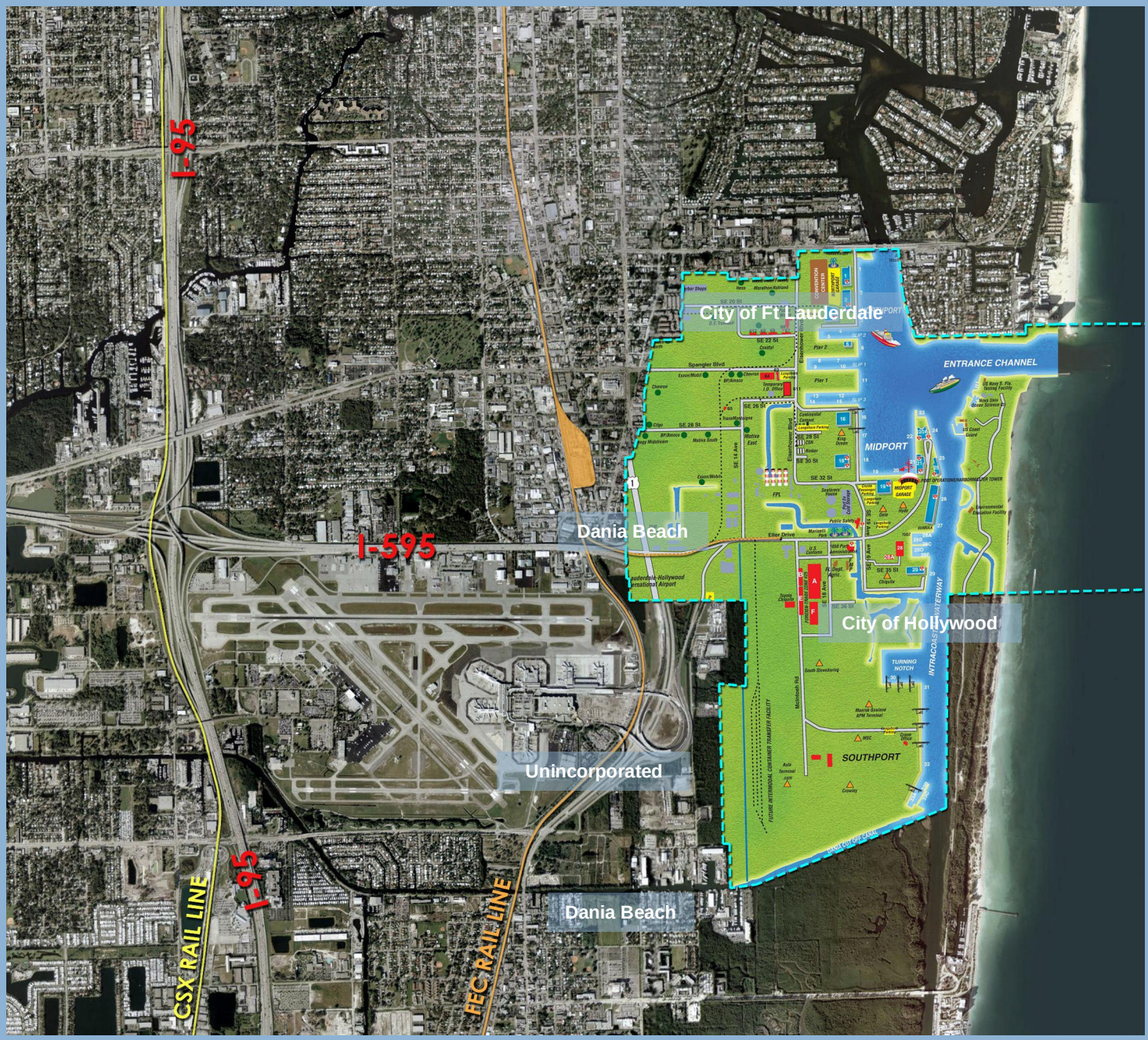
Port Everglades Economic Impact on the Surrounding Region

- 25% of State's waterborne commerce
- $11 billion cargo value (import/export)
- 15,000 direct jobs
- $880 million in personal income
- $2.9 billion in business activity
- 37% of Florida's Gasoline Use

Source MARAD Economic Impact Model – FY 2005

Existing Facilities Assessment

Port Everglades' Assets Today



Infrastructure Assets at Port Everglades

- Deepwater Port
- 2000+ Acres of Jurisdictional Area
- Interstate Highway Connection
- Freight Rail Connection
- Proximity to FLL
- Cruise Facilities Infrastructure
- Cargo / Container Infrastructure
- Petroleum Storage Infrastructure

Opportunities

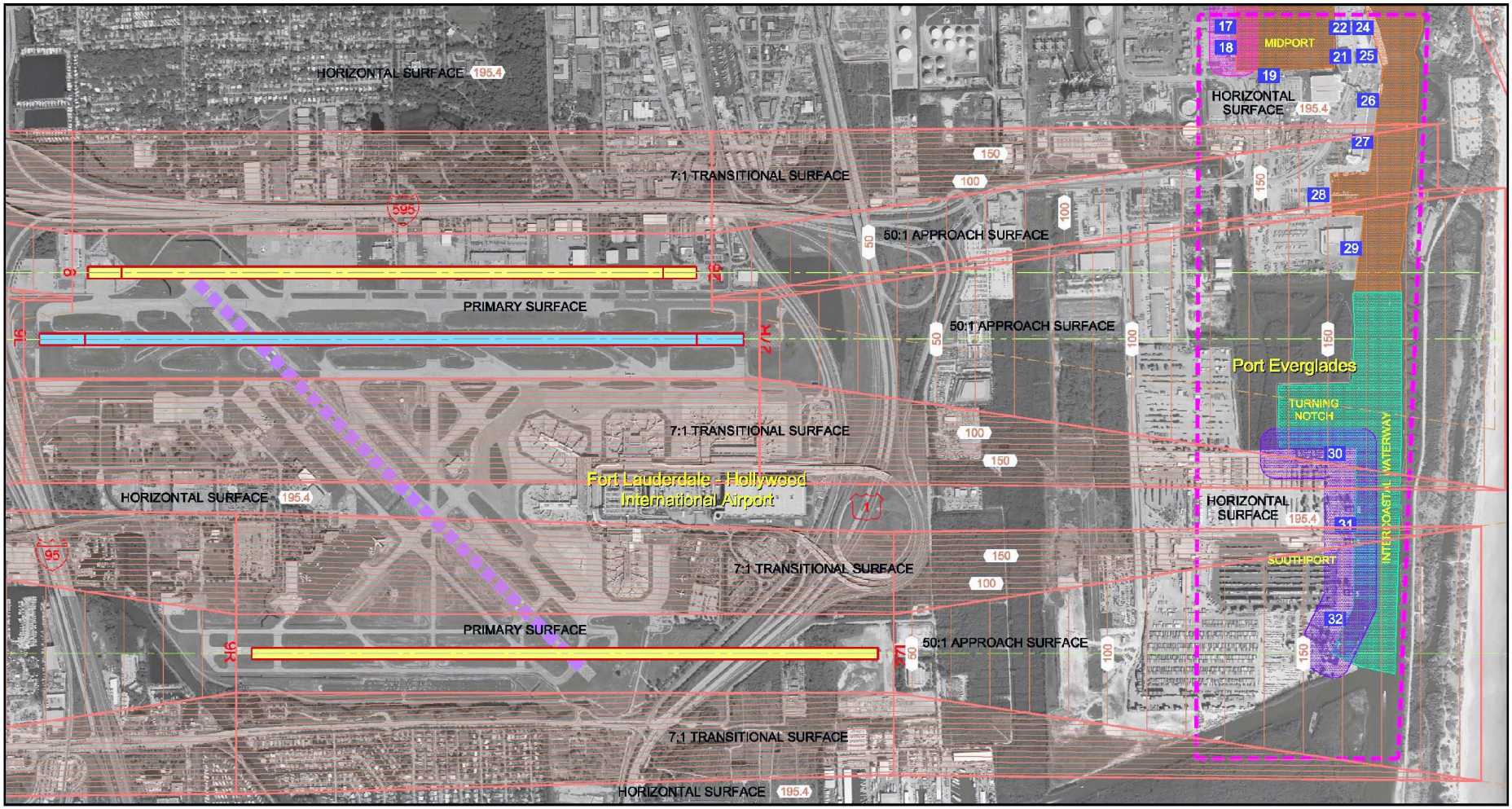
- Enhance the Port's Assets
- "Carve Out" Convention Center
- Improve Traffic Circulation
- Develop Intermodal Rail Facility
- Partner With FLL in Shared Facility
- Continue Improving Security

Environmental Objective

- Identify and Quantify True Environmental Impacts From Projected Infrastructure Improvements
- Use Environmental Impacts in the Project Decision Making Process
- Inform Public on Environmental Initiatives

Master Plan Interfaces

- Broward County Intermodal Center and People Mover
  - Alternative corridors
  - Alternative locations for an IMC
  - Potential seaport station locations
- Fort Lauderdale-Hollywood International Airport
  - Shared Airport/Seaport facility-US-1 north of Eller Drive
  - Evaluate obstacle clearances associated with current and future airfield and seaport operations
  - Evaluate baggage handling operations



AIRPORT

- Existing runway
- Proposed new runway / runway extension (1)
- Decommissioned runway
- Extended runway centerline
- FAR Part 77 surface
- 150 — Elevation contour of above-named surface, feet AMSL

SEAPORT

- Study area
- 25 — Berth number
- Crane envelope of operation, approximately 160 feet AMSL
- Crane envelope of operation, approximately 280 feet AMSL
- Cargo ships, up to 55m (180 feet) above waterline
- Cruise ships, up to 62m (203 feet) above waterline

(1) Extended South Runway (9R-27L) from EIS team, Alternative 91b. New North Parallel Runway (9-27) from EIS team, Alternative D1.

NORTH

0 600' 1200' 2400'

DRAFT
November 16, 2006

Figure 4
FAR PART 77 SURFACES OVER STUDY AREA PROPOSED AIRFIELD DEVELOPMENT
Airspace Obstruction Study
Port Everglades Cranes and Ships
Fort Lauderdale-Hollywood International Airport
November 2006

JACOBS CONSULTANCY
Airport Management Consulting

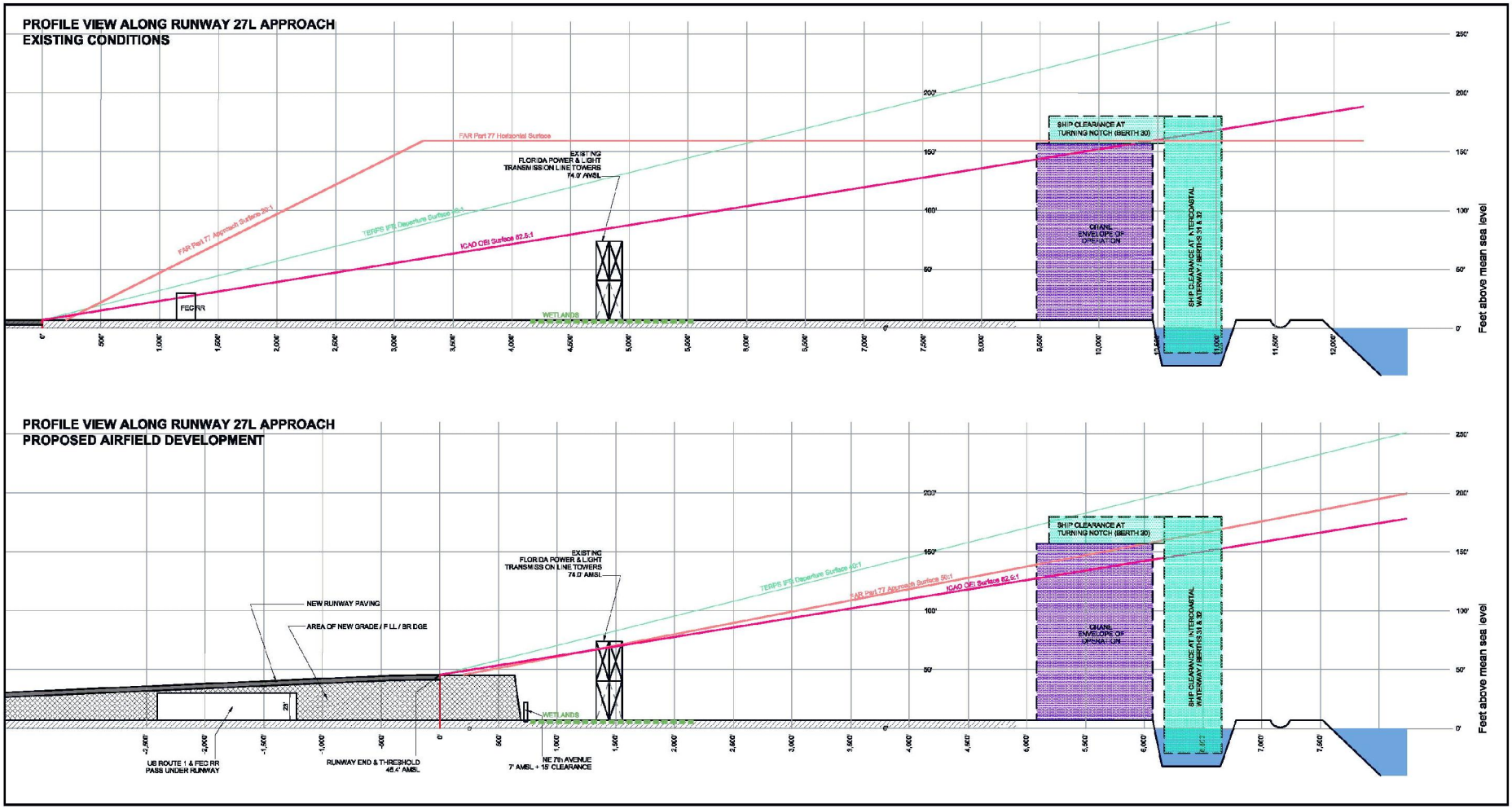


Figure 9
PROFILE VIEW
Airspace Obstruction Study
Port Everglades Cranes and Ships
Fort Lauderdale-Hollywood International Airport
November 2006

0 400' 800' 1600'
WITH 10x VERTICAL EXAGGERATION

DRAFT
November 16, 2006

JACOBS CONSULTANCY
Airport Management Consulting

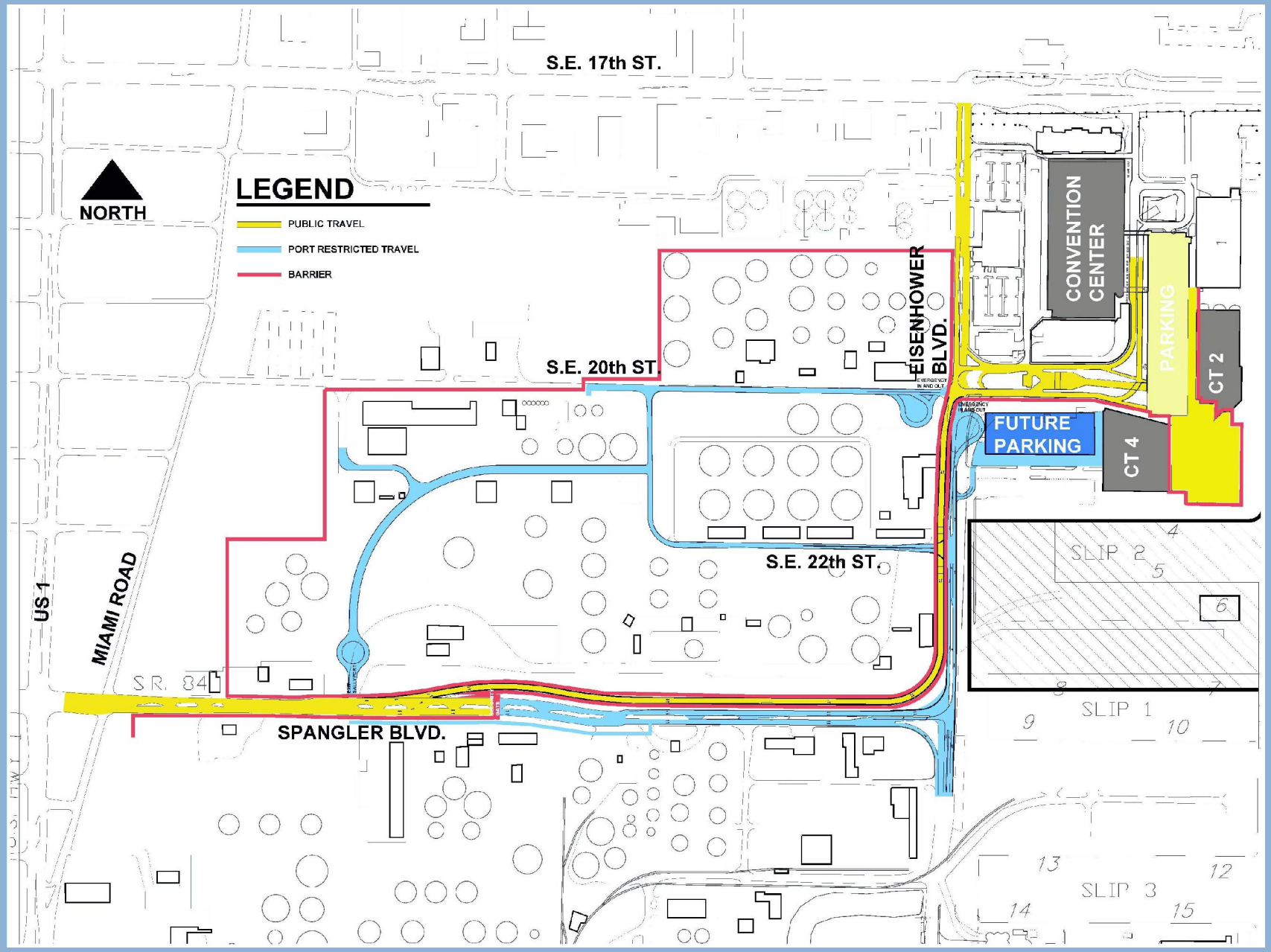
Master Plan Interfaces

- Florida East Coast Railroad
  - Incorporating FDOT's Eller Drive Overpass
  - Evaluating potential of Intermodal Container Transfer Facility (ICTF)
  - Evaluating potential of import aggregate facility
- Army Corps of Engineers Dredging Program
  - Inner harbor deepening to 49 ft.
  - Approach channel deepening to 54 ft.
  - Dania Cut Off Canal to 32 ft.
  - Hard bottom within channel issues

Master Plan Interfaces

- Calypso and AES pipeline proposals
  - Coordinating to maintain Port development options
- Convention Center “Carve Out”
  - Public access to Convention Center / Hotel development
  - Maintain Port’s security perimeter as required by Federal / State law
  - Allow Convention Center / Hotel to expand
  - Allow Port to develop Mega Cruise terminals

By-Pass Road


S.E. 17th ST.
NORTH
LEGEND
PUBLIC TRAVEL
PORT RESTRICTED TRAVEL
BARRIER
EISENHOWER BLVD.
CONVENTION CENTER
PARKING
CT 2
CT 4
FUTURE PARKING
S.E. 20th ST.
S.E. 22nd ST.
US 1
MIAMI ROAD
SR 84
SPANGLER BLVD.
SLIP 2
SLIP 1
SLIP 3
4
5
6
7
8
9
10
12
13
14
15

Traffic Mitigation Measures

- Increase Intermodal Zone Area
  - Lengthen Drop-Off Curb / Reduce Congestion
- Intermodal Rail Use
- “Empties” Located Off-Port
- Use Right-hand Turns

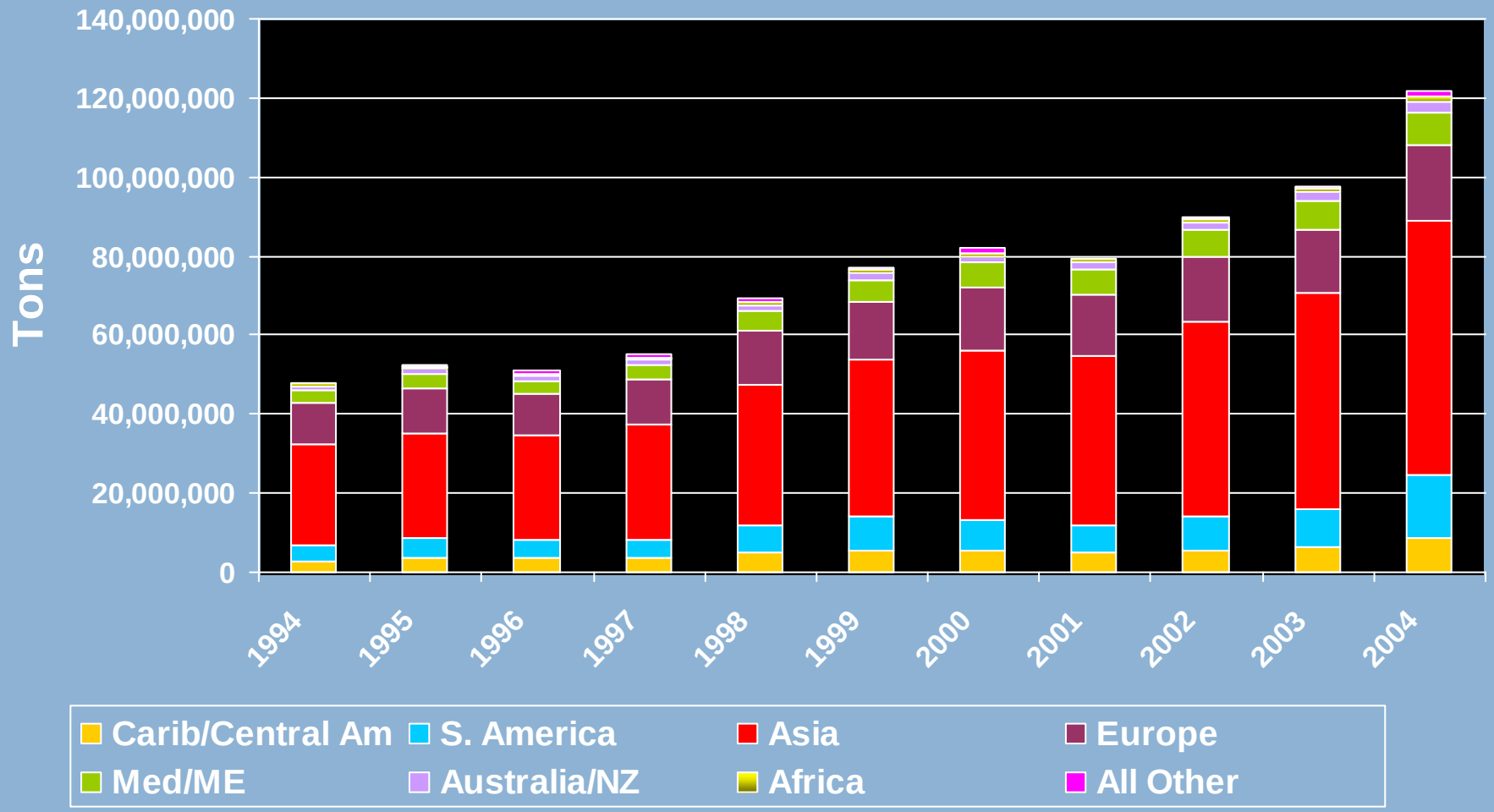
Market Assessment

- Container cargo
- Non-container cargo; dry bulk & neo-bulk cargos (i.e. cement, lumber, etc.)
- Liquid bulk (petroleum products)
- Cruise

Container Market Assessment

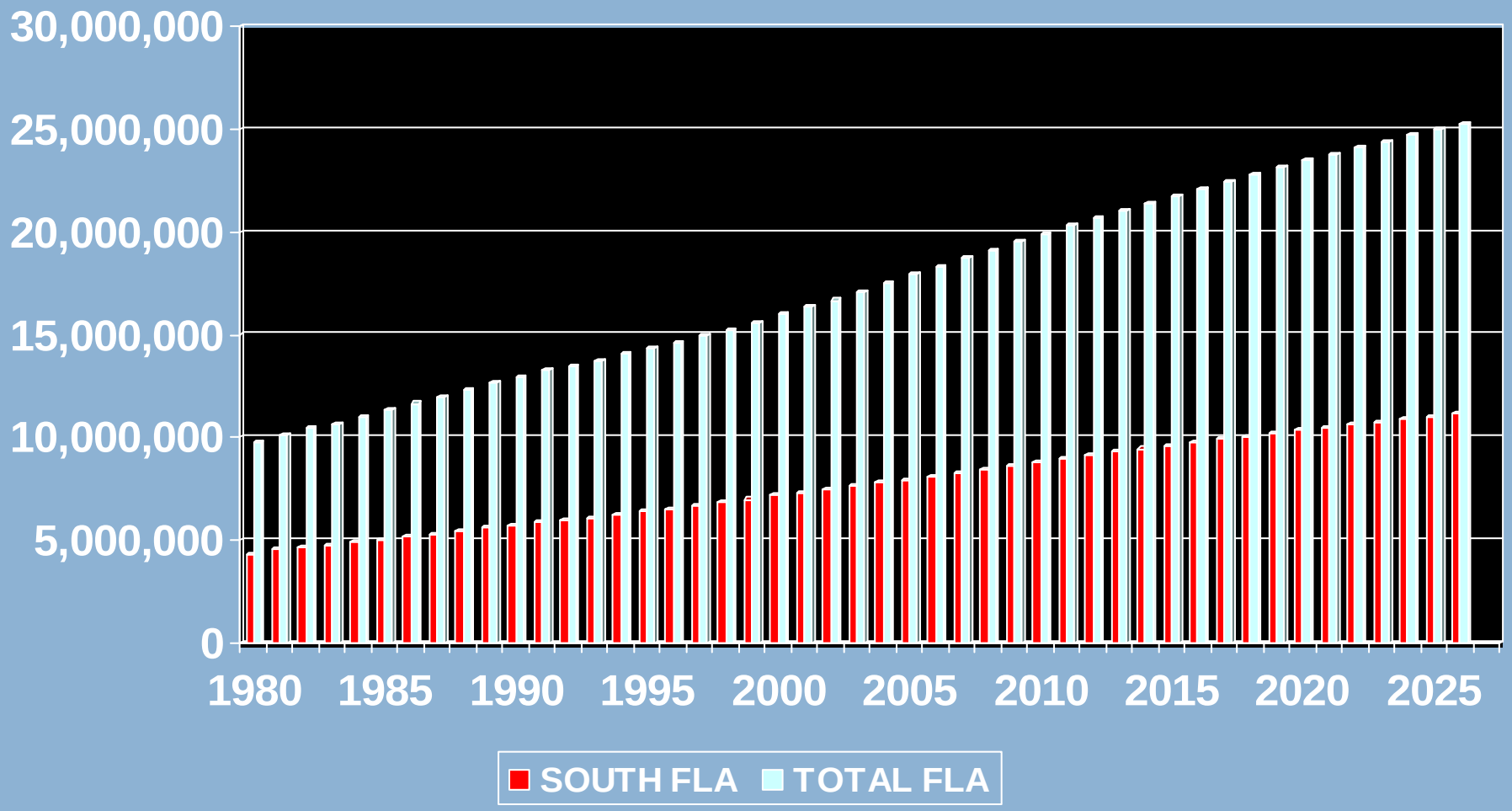
- Assess historical containerized growth
  - US Port growth
  - Southeast Port growth
  - Florida Port growth
- Examine historical container growth of key trading partners
  - Asia
  - Europe
  - Latin America/Caribbean
  - Other world areas
- Examine historical and future GDP growth of Latin American and Caribbean regions
  - International Monetary Fund
  - Economic Commission for Latin American and the Caribbean (ECLAC)
- Determine Florida and South Florida population growth and projections

US containerized import cargo has grown at an average annual rate of 9.8% -- driven by Asian imports



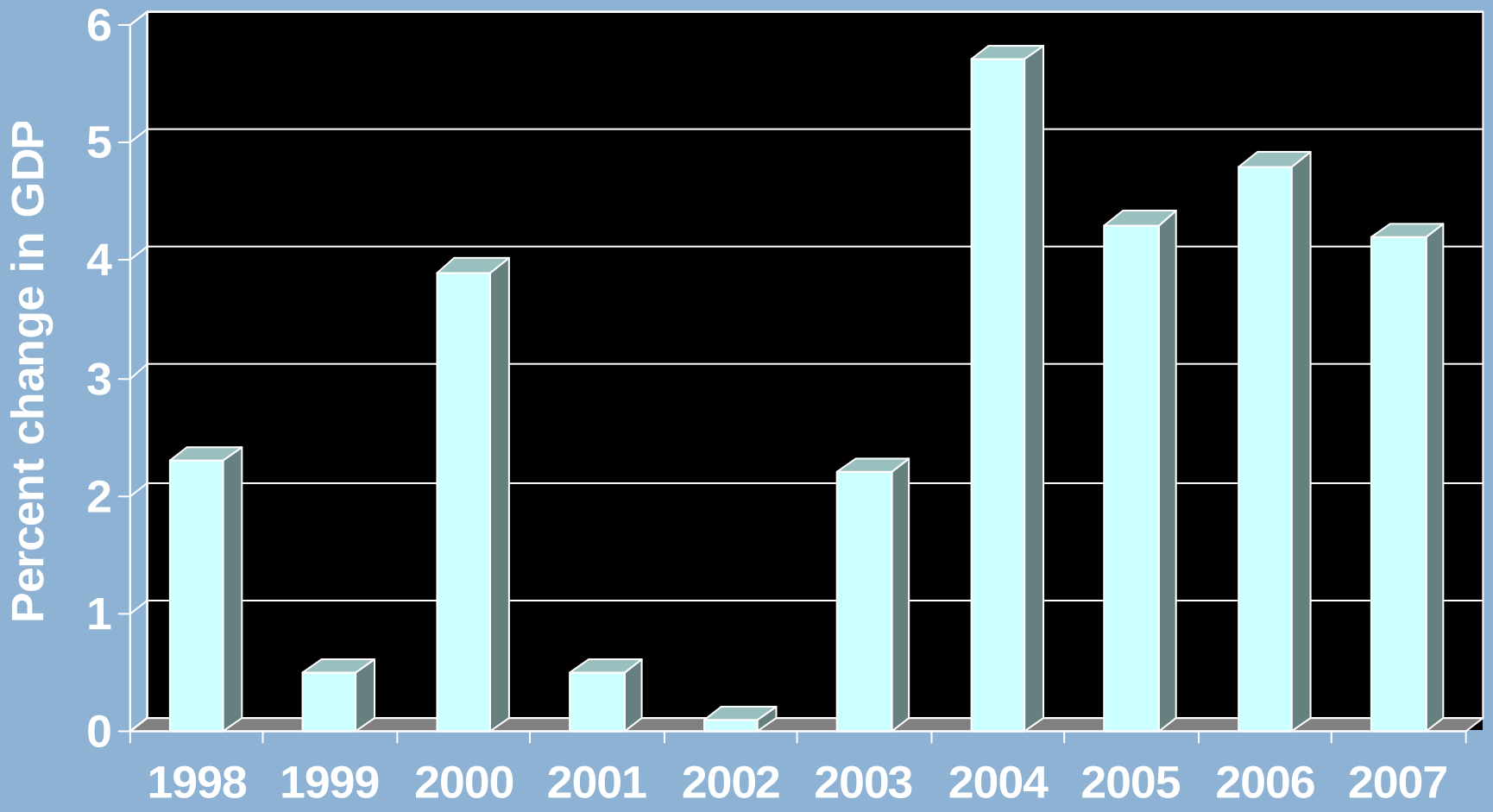
Florida/Southern Florida population growth and estimates 1980-2026

Southern Florida population growth is expected to average nearly 1.6% annually over planning horizon



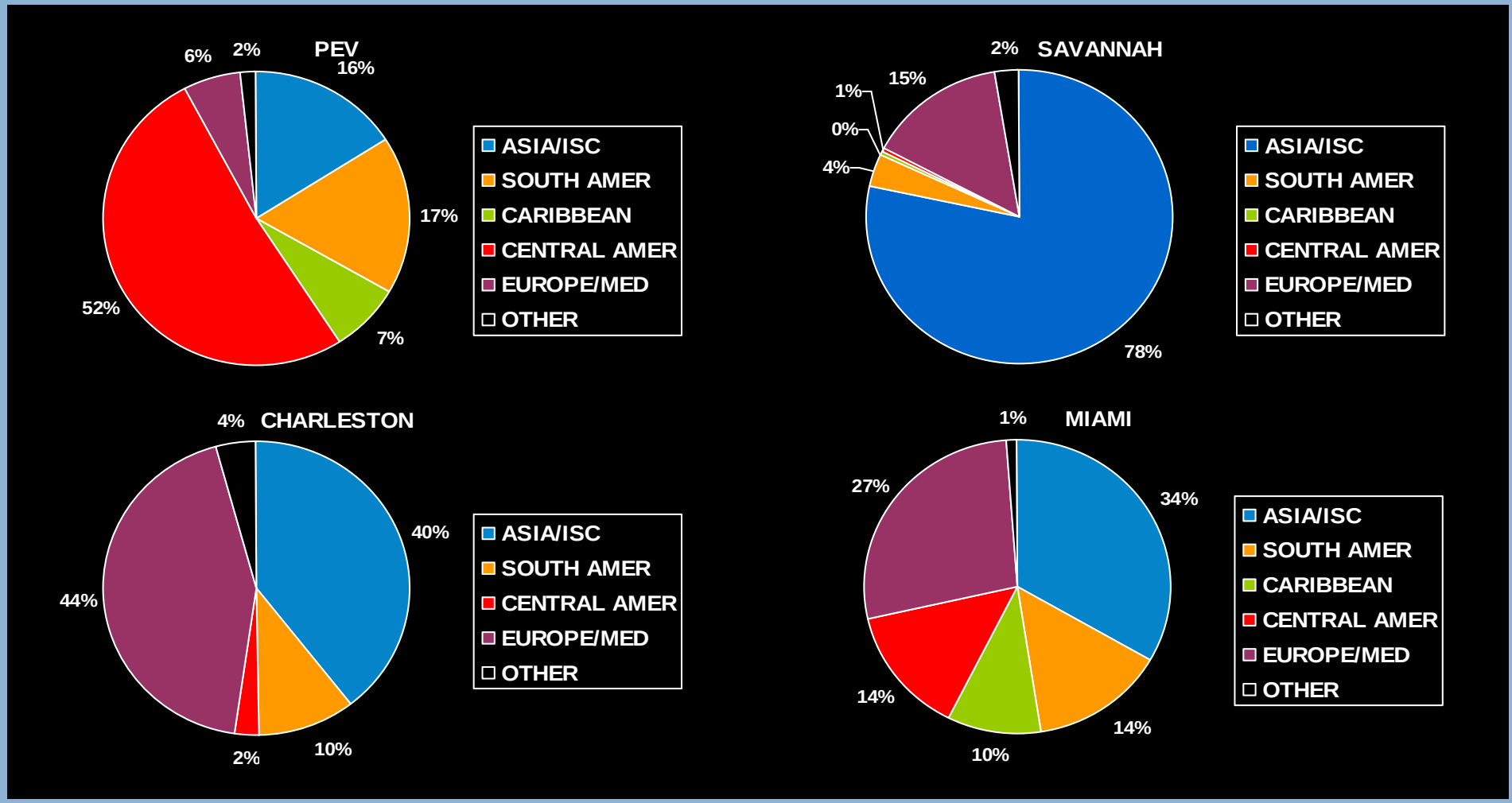
Source: Demographic Estimating Conference Database, updated July 2006; South FLA counties include: Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Indian River, Lee, Manatee, Martin, Miami-Dade, Monroe, Okeechobee, Palm Beach, St. Lucie and Sarasota

Latin American and Caribbean GDP growth rates are expected to maintain levels between 4% and 5% in the near term



Source: International Monetary Fund, World Economic Outlook, September 2006

Percent of Container Imports by Trade Route
2006 comparison with other Ports

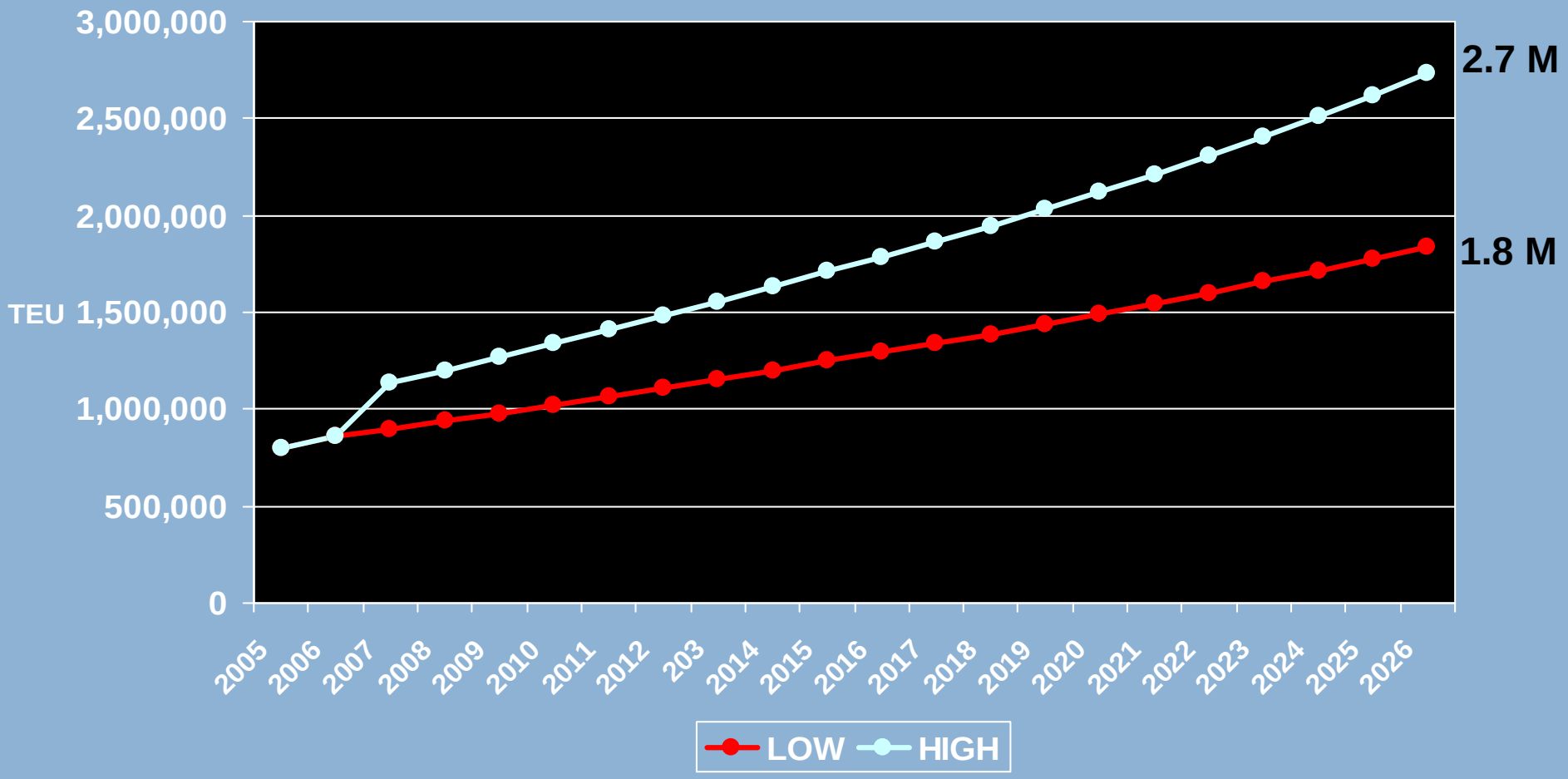


Source: PIERS Database, 2006

Container Forecast Assumptions

- Developed LOW and HIGH scenarios
  - LOW scenario assumes modest growth based on historical and projected growth
    - South Florida population growth (import consumption)
      - Statistically closely related to container growth
    - Growth by trade lane
    - Latin American and Caribbean GDP (export)
      - ECLAC and IMF historical and near-term projections
    - South Florida (PEV + Miami) container growth
    - Assumes same carrier composition, NO NEW SERVICE
  - HIGH scenario assumes more robust growth based on historical and projected growth
    - South Florida population growth (import consumption)
    - Growth by trade lane
    - Latin American and Caribbean GDP
    - Terminal and carrier near-term projections
    - New services
      - Latin American/Caribbean
      - Asian/Northern European POTENTIAL

Low/High Container Forecast



Note: High Forecast TEUs represents the Needs Forecast

Non-Container Cargo Market Assessment

- Overview
  - The overwhelming proportion of dry bulk and neo-bulk cargos are related to the Florida construction industry
  - Dry bulk cargos are dominated by cement and aggregates for the cement industry
  - Similarly, the largest proportion of neo-bulk cargos are steel (rebar) and lumber

Other Commodities - Neo-bulk

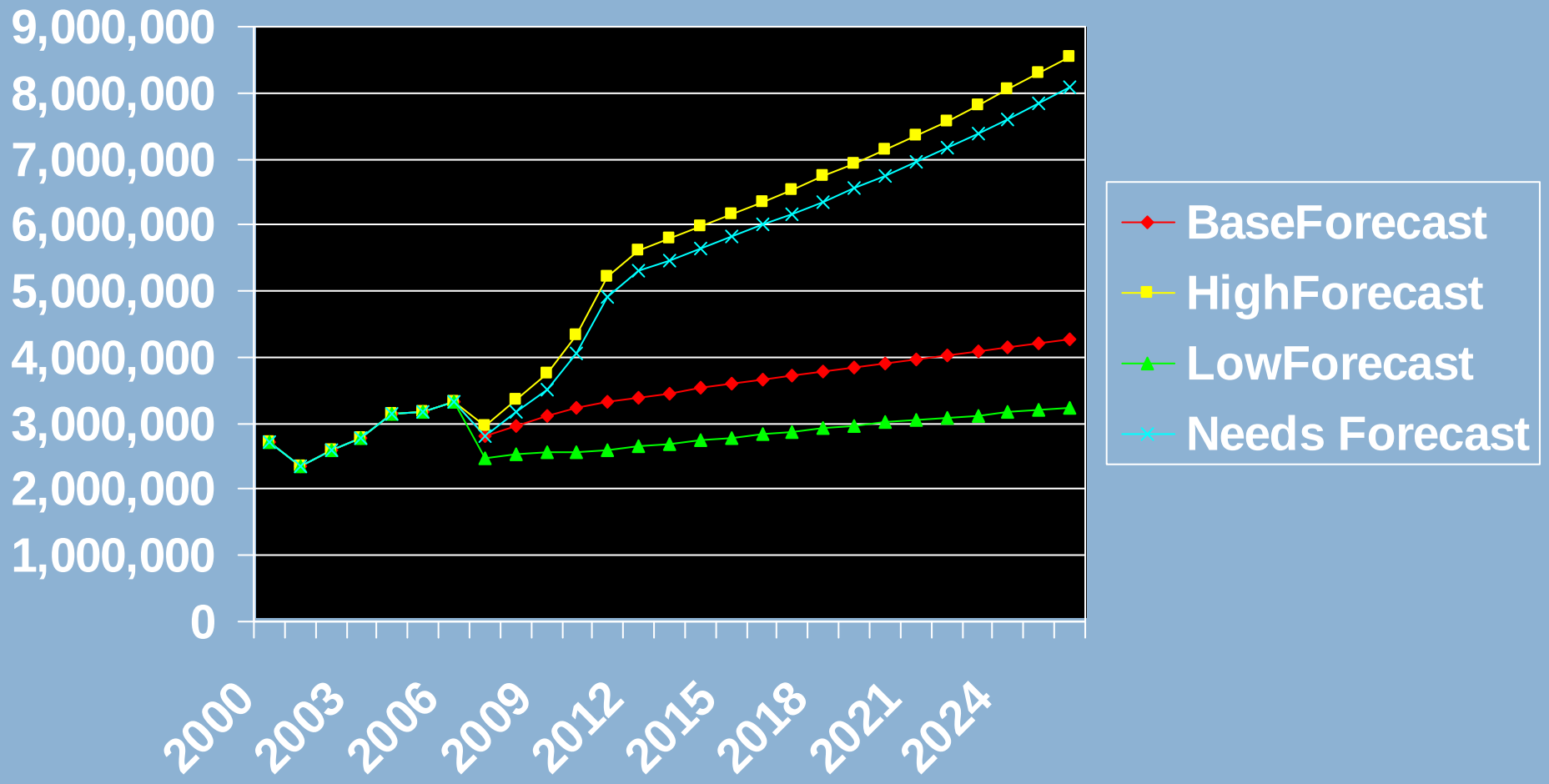
- Yachts and autos for export represent the two other significant neo-bulk commodities
- Yacht imports are projected to increase significantly with the potential to double every 5 years (until the market is saturated)
- Autos handled in Port Everglades are primarily used automobiles for export; new cars are routed via Jacksonville

Primary Forecast Drivers

- Over the long-term, the growth of the Florida construction industry will approach the growth rates for Florida population
- The economic cycles impacting construction growth rates will dominate the long-term trends
- Specific events such as court-ordered limitations on crushed rock mining at the Lake Belt mines could create a significant opportunity for Port Everglades

High, Baseline, Low and Needs Assessment Forecasts

Dry bulk and neo-bulk tonnage for Port Everglades



Conclusions

- Cement represents the most stable market
- The dry bulk and neo-bulk markets for Port Everglades are relatively flat
- Growth in yachts and a stable used car market round out the neo-bulk market
- The addition of 2-4 million tons of aggregate represents the most significant potential upside, if feasible

Cruise Market Assessment Factors

- Very successful in developing new products that generate sustained interest in cruising
  - New, larger, exciting vessels, diverse onboard products and services
  - Products deliver a high level of passenger satisfaction, leading to repeat clientele and lower conversion costs
  - Several lines report repeat levels of over 45%
  - Lines have learned to adapt quickly to changing market conditions and shift business models accordingly

Evolution of Cruise Vessels

Period	Length	Draft	PAX	Characteristics of the Period
1960	508 ft.	36 ft.	500	Vessels acquired & refurbished.
1970	705 ft.	32 ft.	650	Standard business model used with profitable results until the fuel crisis.
1980	803 ft.	29.5 ft.	1,500	Change in business model; experimentation with larger ships and operating itineraries.
1990	902 ft.	26.25 ft.	2,600	Larger ships becoming the destination. Shallower drafts.
1997	965 ft.	26.25 ft.	3,600	Mega-ships that are floating cities. Focus on maximizing passenger capacity. One-region vessels not capable of Panama Canal Transit.
2000	1,000 ft.	29.5 ft.	3,000	Larger ship volume concentrating on creating efficiencies with ship design, outside cabin development, ship services and flexible deployment.
2006	1,000 ft.	29.5 ft.	4,000	Freedom class, 160,000-GT. Allows for increased onboard revenue areas, largest ship in world status (ego / marketing boost), economies of scale.
Next Generation (Genesis)	1,100 – 1,400 ft.	32 - 36 ft.	5,000+	Product and service led design; new innovative marine hull design to support more above water structure. Separate apartment towers, entertainment zones and amenities. Limited port deployment options.

Fantasy Class

Grand Class

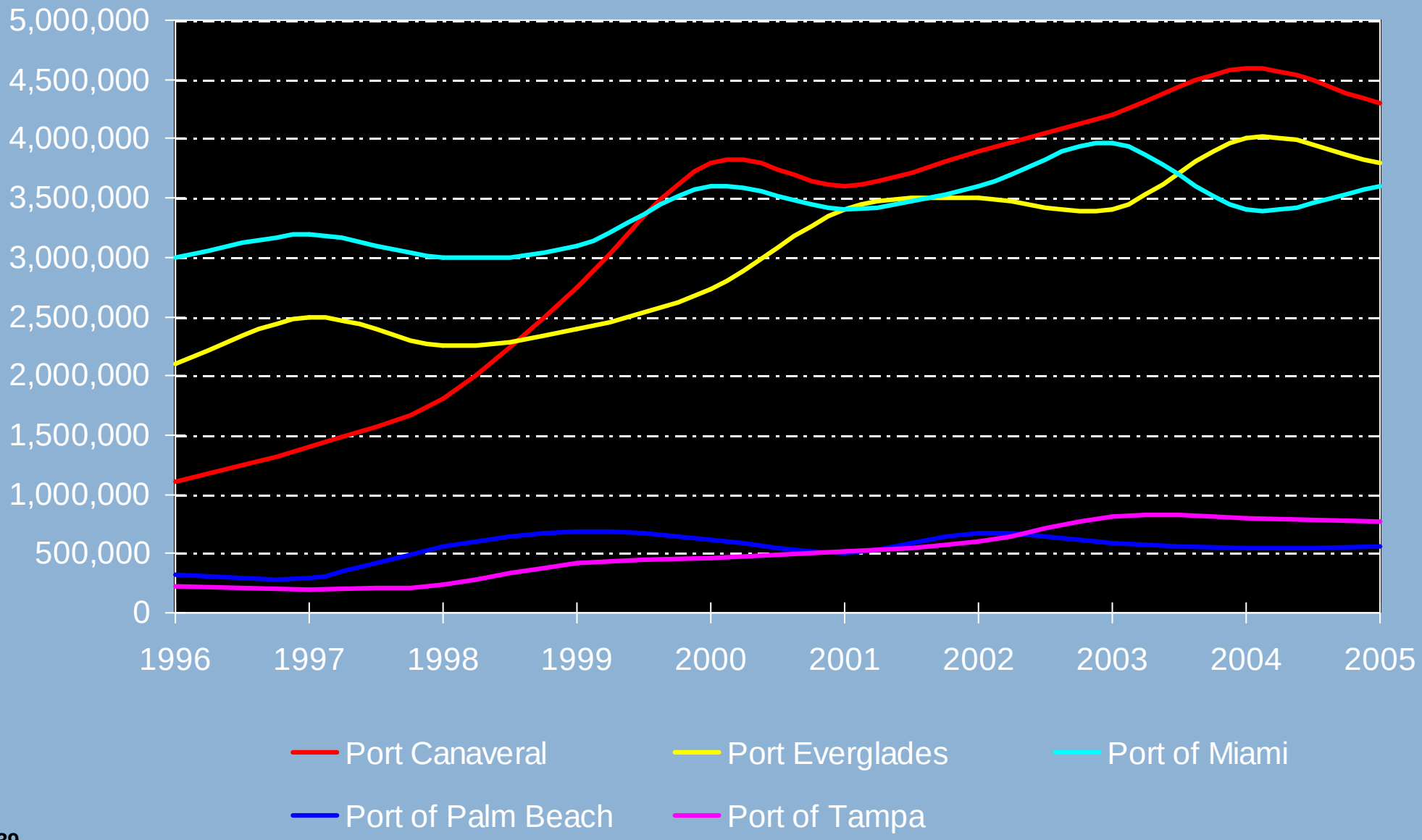
Radiance Class

Freedom Class

Cruise Overview

- Strengths include:
  - Access to regional consumers
  - High quality tourism infrastructure
  - Convenient marine access
  - Number and length of cruise berths
- Improvement foreseen in cruise terminal facility offerings
  - Capability of terminals to receive largest cruise vessels
  - Availability of additional berthing areas on peak days of operation
  - Ingress/egress issues impacting cruise operations and parking

Regional Homeport Passenger Throughput



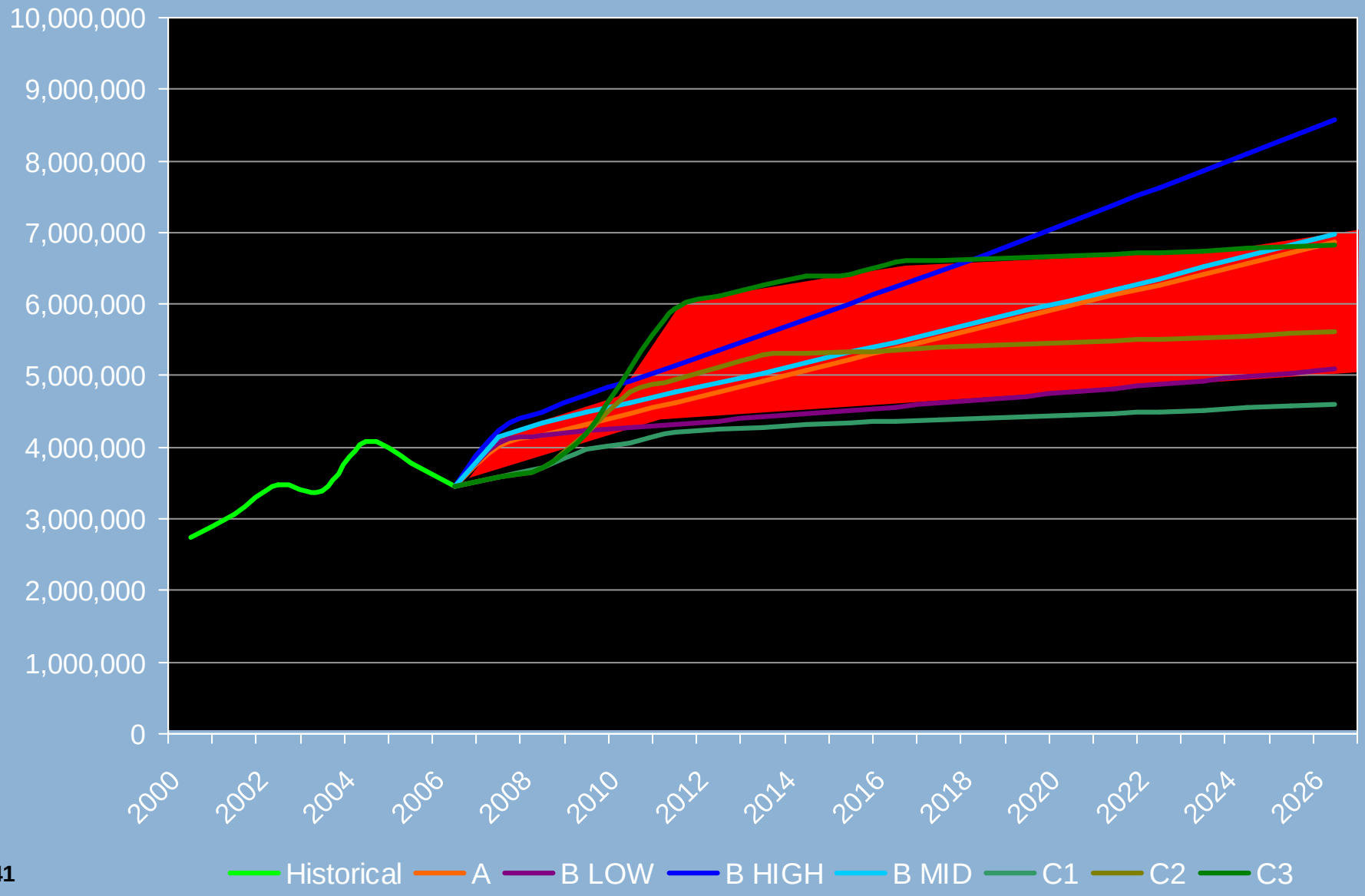
Source: B&A, 2006

Attractiveness of Port Everglades to Cruise Market

Criteria	Assessment
Marine Access	(short channel for large ships) ¾ / ã
Terminal Location(s)	ã
Pier / Berthing	(length of berths) ¾ / ã
Apron	¾
Gangways	(new systems installed) ¾ / ã
Terminal Operations	¾
Ground Transportation Areas (GTA)	¾ / ã
Parking	(proximity to terminals) ¾
Provisioning	ã
Security	¾ / ã
Landside Access	(gate and roadway access) ¾ / ã
Airport and Airlift	(proximity and capacity) ¾ / ã
Lodging	ã
Attractions and Venues	ã
Access to Consumers	ã
General Appeal	ã
Marketing / Communications	¾ / ã
Key: Strong (ã), Fair (¾), Weak (ä)	

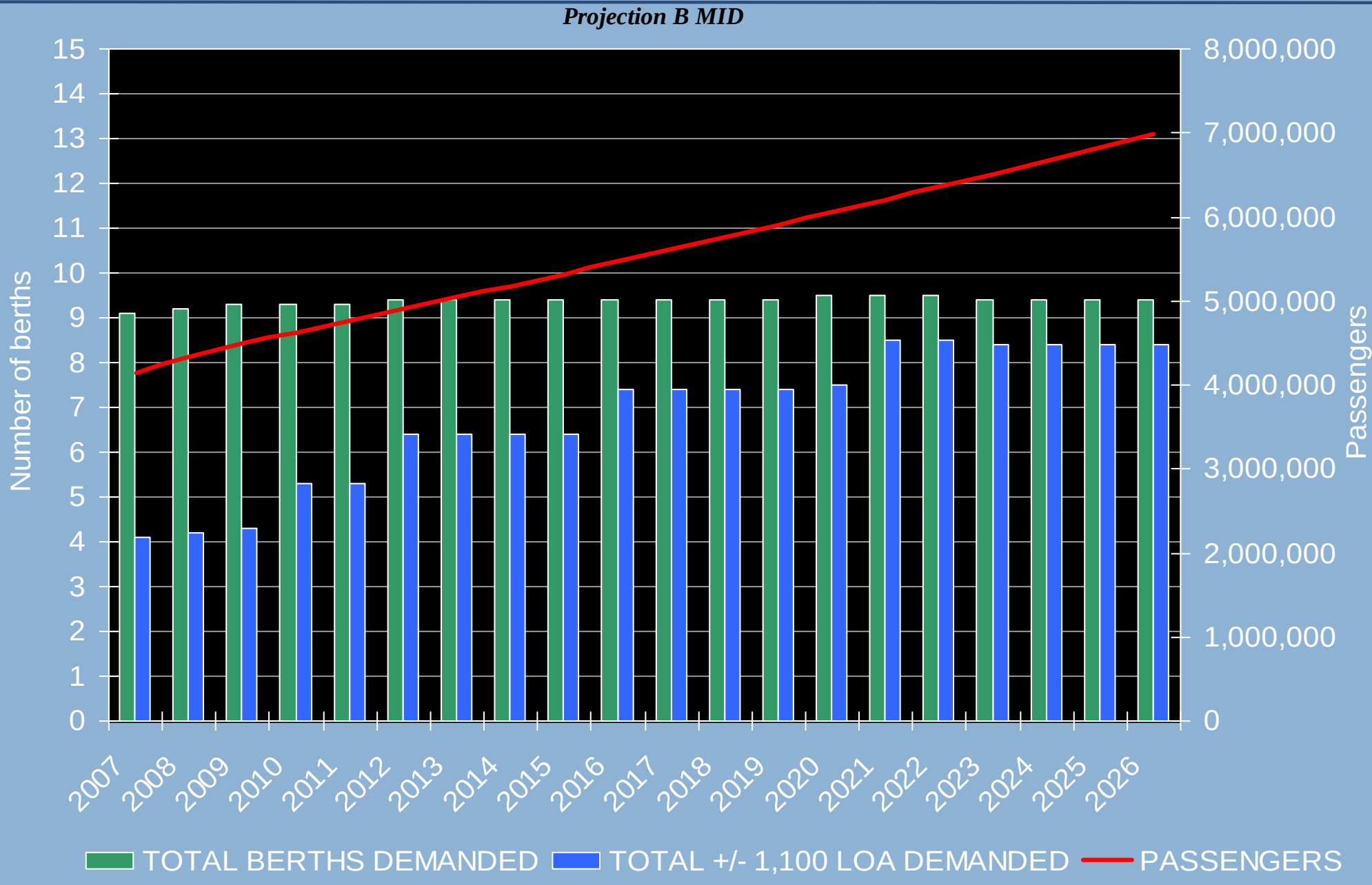
Source: B&A, 2006

Range of Revenue Total Passenger Projections



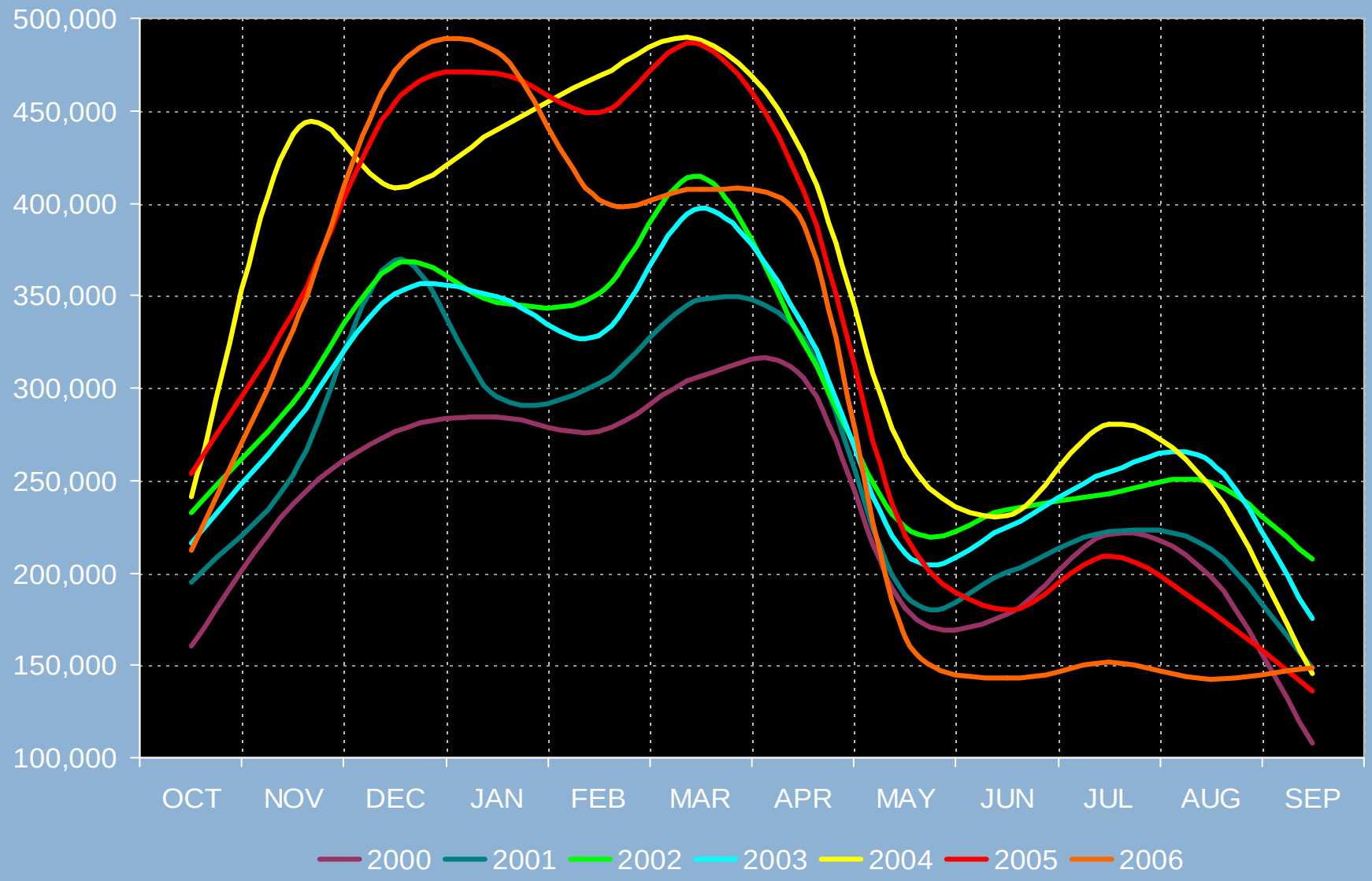
Source: B&A, 2006

Berths vs. Volumes – Mid Projection



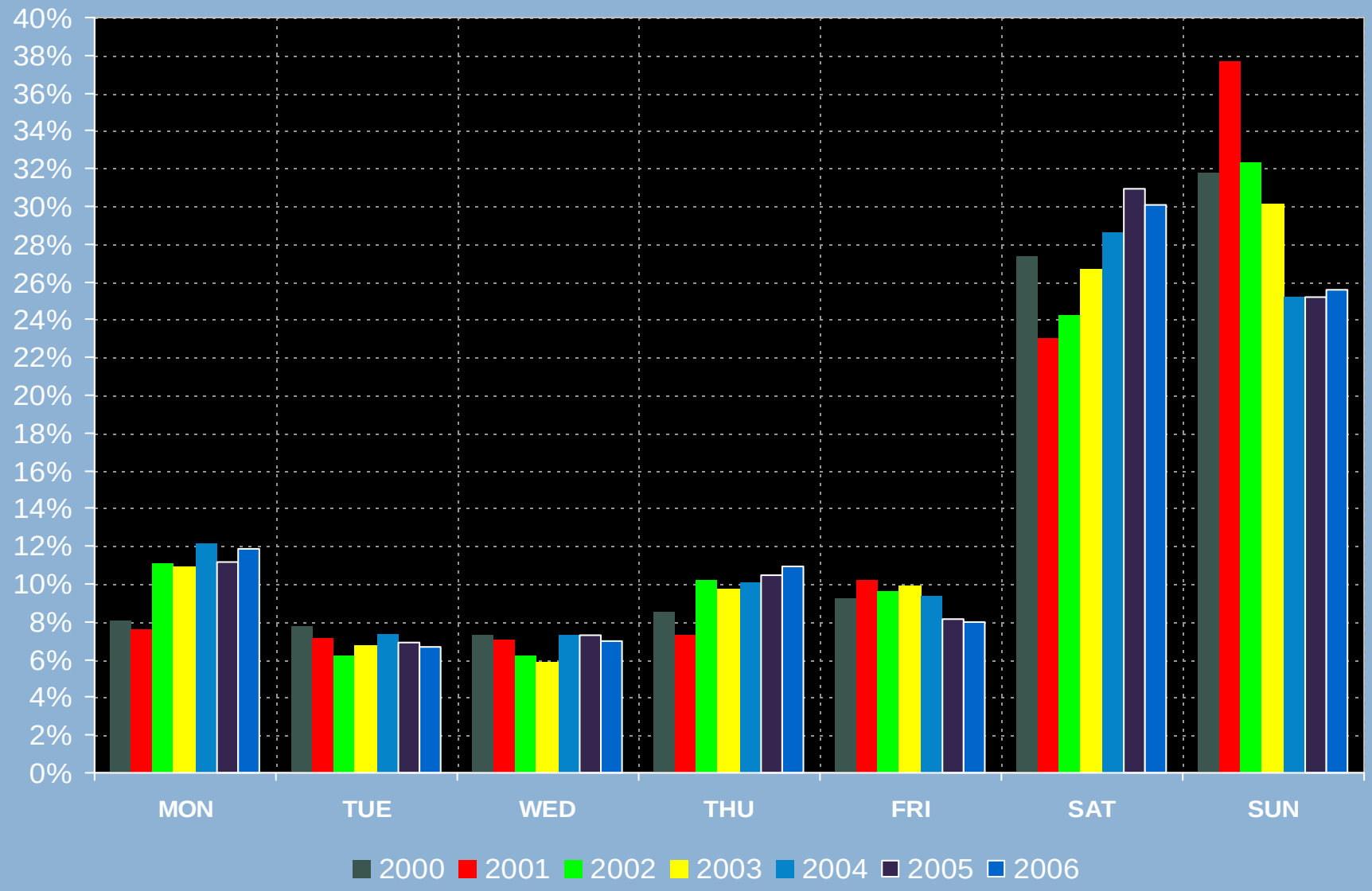
Note: Projection B Mid Berths and Passengers Represents the Needs Forecast

Monthly Passenger Traffic



Source: B&A, 2006.

Daily Passenger Traffic Comparison



Source: B&A, 2006.

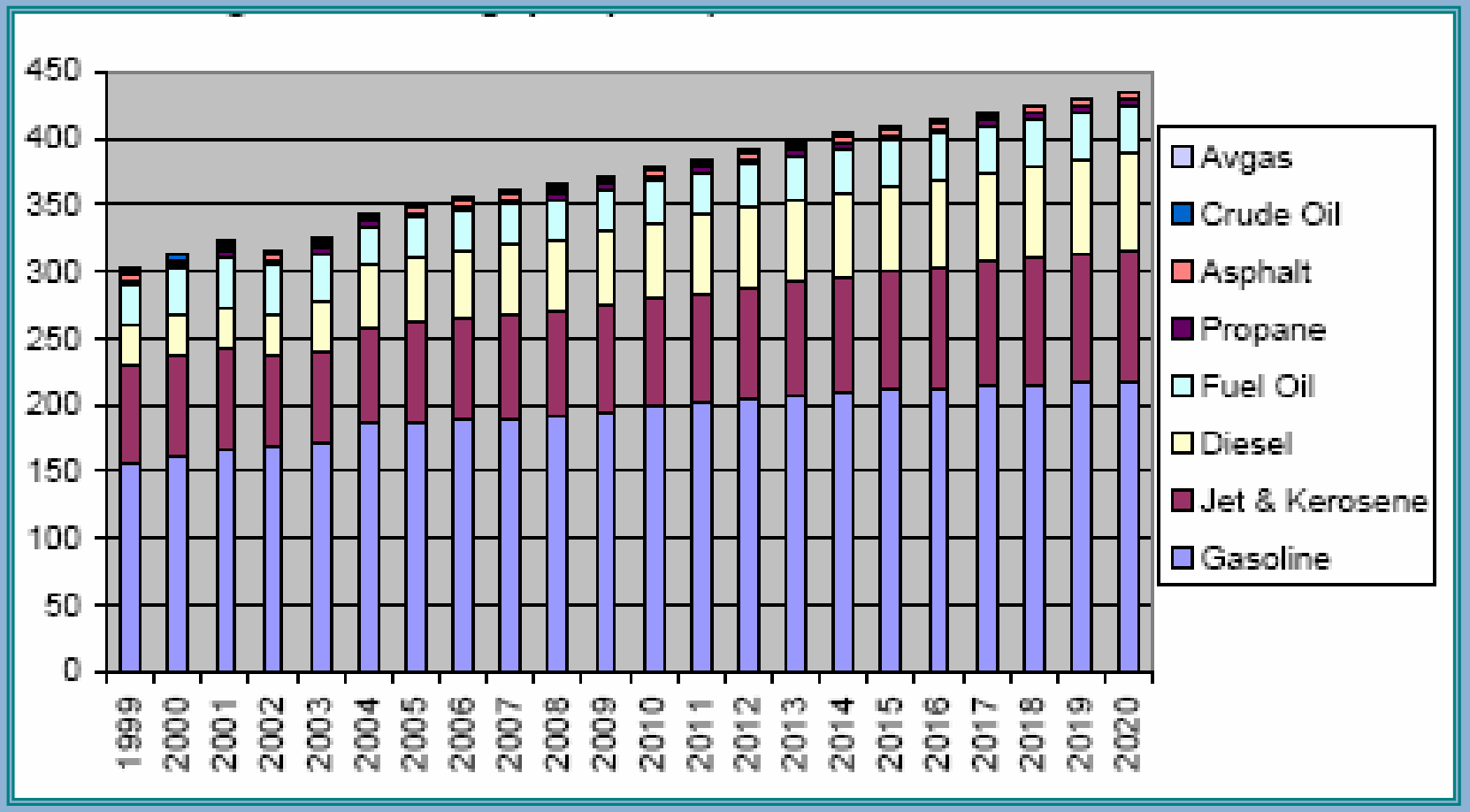
Port Everglades' Petroleum Industry serves a 12-County Region

- Primary Market: Broward, Miami-Dade, Palm Beach, Martin Counties
- Secondary Market: Collier, Glades, Hendry, Indian River, Lee, Monroe, Okeechobee, and St. Lucie
- Port supplies 87 percent of gasoline demand in region and 37 percent of Florida's gasoline requirements
- Port supplies jet fuel to FLL and MIA and other airports

Petroleum Product Diversity

- Regional petroleum product demand is growing at about 2.7 percent annually
- Gasoline predominates, but Port also supplies diesel, asphalt, jet fuel, fuel oil for the power plants, propane, bio-diesel and ethanol fuels
- Industry services include
  - Selling gasoline to retail gas stations in the region
  - Supplying the region's international airports
  - Fueling the Port's cargo and cruise ships
  - Serving military needs
  - Providing emergency storage

Port Everglades Petroleum Throughput Forecast 1999-2020 (Thousand Barrels per Day)



Market Characteristics

- Percentage of vessel calls is shifting from barge to tanker, with more product coming from international sources
- Tankers coming from international markets are larger than those from domestic sources
- Existing petroleum berths are utilized to capacity
- Fully loaded larger tankers can experience constraints (berth length, slip width, water depth)
- Emergency situations such as hurricanes during peak seasonal demand can stress tenants' storage and distribution capabilities

Needs Assessment

What is Needed to meet Market Forecasts . . . .

- Container Cargo
  - Add berths and increase yard utilization
    - Add longer/flexible berths
    - Increase efficiencies
      - Increase berth occupancy
      - Increase lifts per call
      - Use higher density stacking equipment
  - Deepen and widen channel / harbor
- Non-Container Cargo
  - Determine feasibility of aggregate as major import commodity

What is Needed to meet Market Forecasts . . . .

- Cruise
  - Increase berth lengths to handle ships 1100 ft. in length
  - Increase cruise season/weekday use
  - Continue dual use of berths for cargo and cruise
- Petroleum
  - Increase receiving system efficiencies
  - Add berth efficiencies and safety for larger vessels
  - Deepen and widen channel / harbor

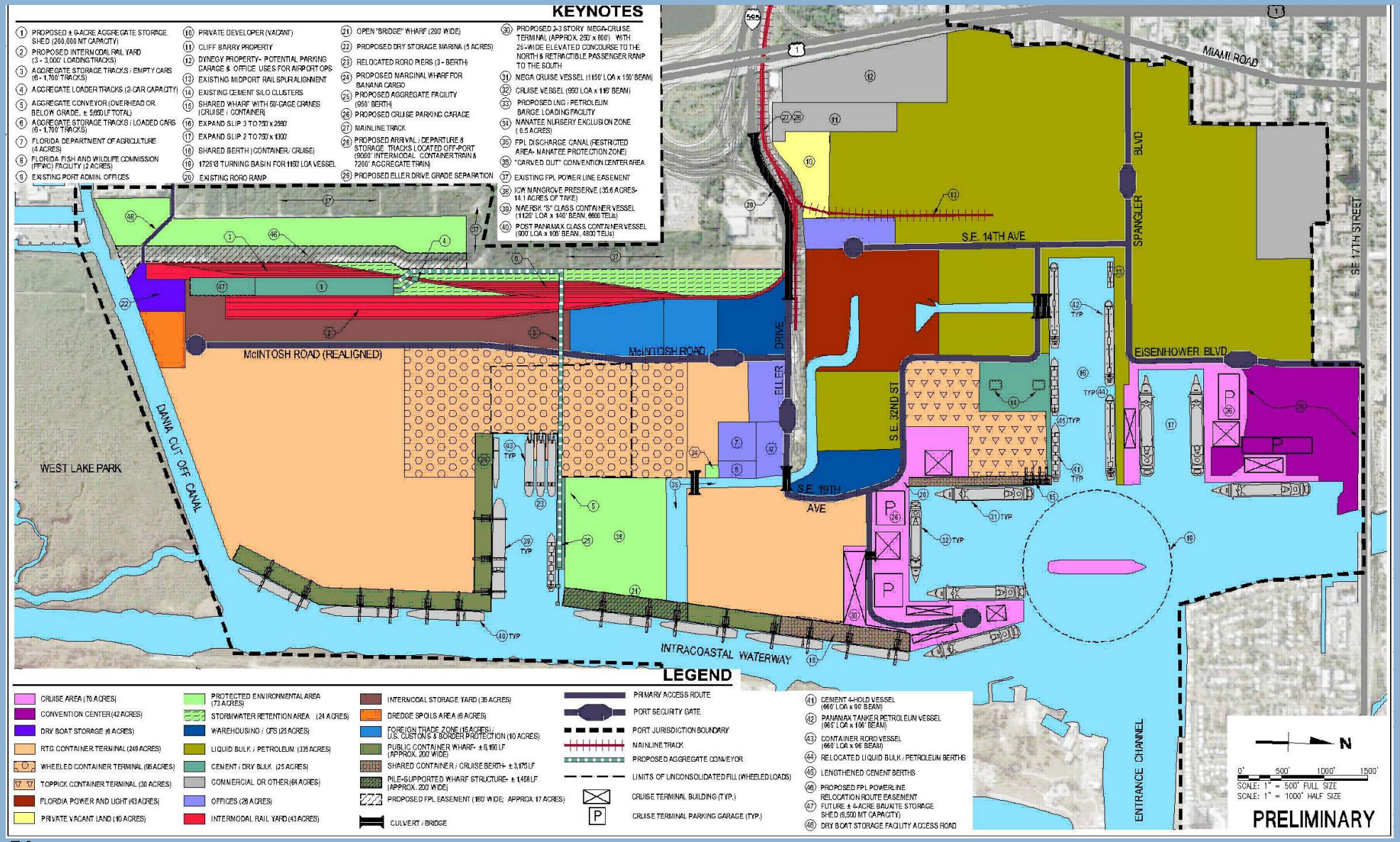
Results of Market Based Needs Assessment (Build Out - 2026)

	Berth Length (Ft)	Berths Required (rounded)	Gross Area (acres)
Container Terminals			
STD Dock Side Cranes	1100	5.6 (6)	140
RORO	700	2.9 (3)	89
Bananas (wheeled)	650	0.5 (1)	6
Non-Container Cargo Terminals			
Steel	700	0.8 (1)	7.7 (8)
Lumber	900	0.7 (1)	1.1
Cement	750	1.7 (2)	8.3 (10)
Aggregate	900	0.9 (1)	4.2 (6)
Cruise Terminals	1100-1300	8-10	NA
Petroleum Terminals	3 vessel/1 barge		292

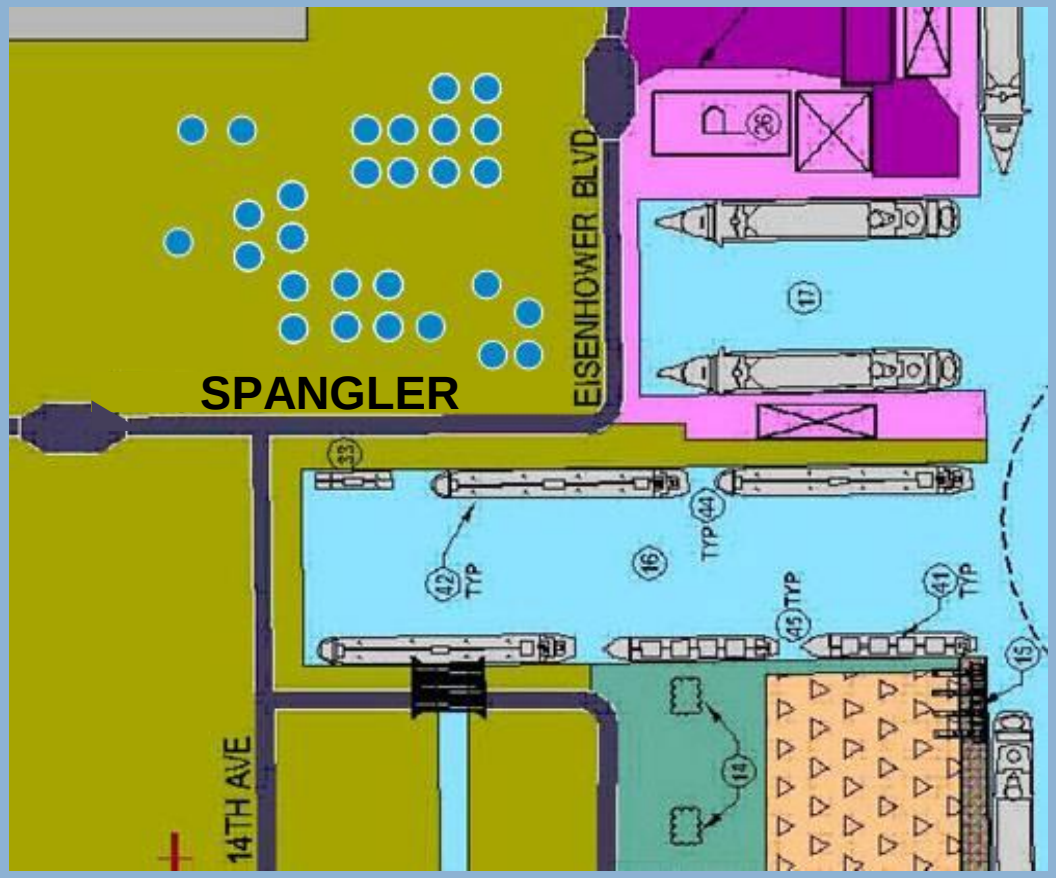
Berth Provisions of 2026 Vision Plan

	Berths Required	Vision Plan		
Container Terminals				
STD Dock Side Cranes	5.6 (6)	6-7		
RORO	2.9 (3)	3		
Bananas (wheeled)	0.5 (1)	1		
Non-Container Cargo Terminals				
Steel	0.8 (1)	shared		
Lumber	0.7 (1)	shared		
Cement	1.7 (2)	2		
Aggregate	0.9 (1)	1		
Cruise Terminals	8-10	7+2 flex		
Petroleum Terminals	3/1 barge	3/1		

2026 Year Vision Plan

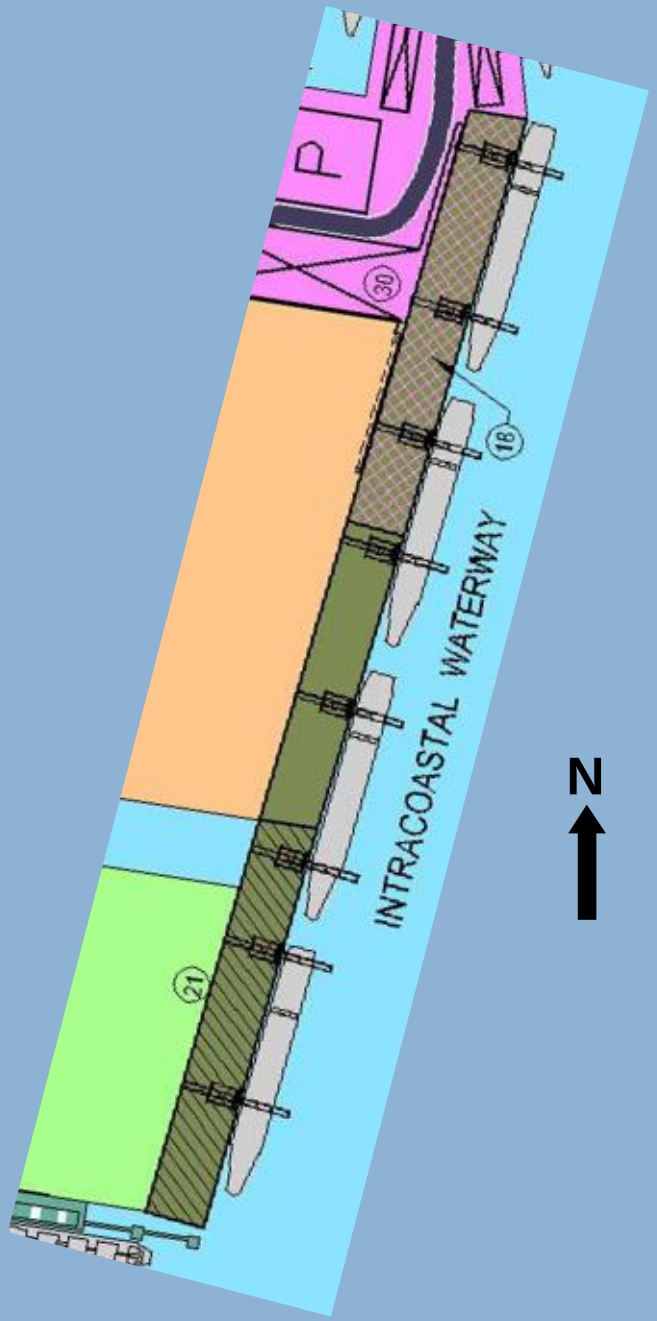


Vision Plan – Area 1



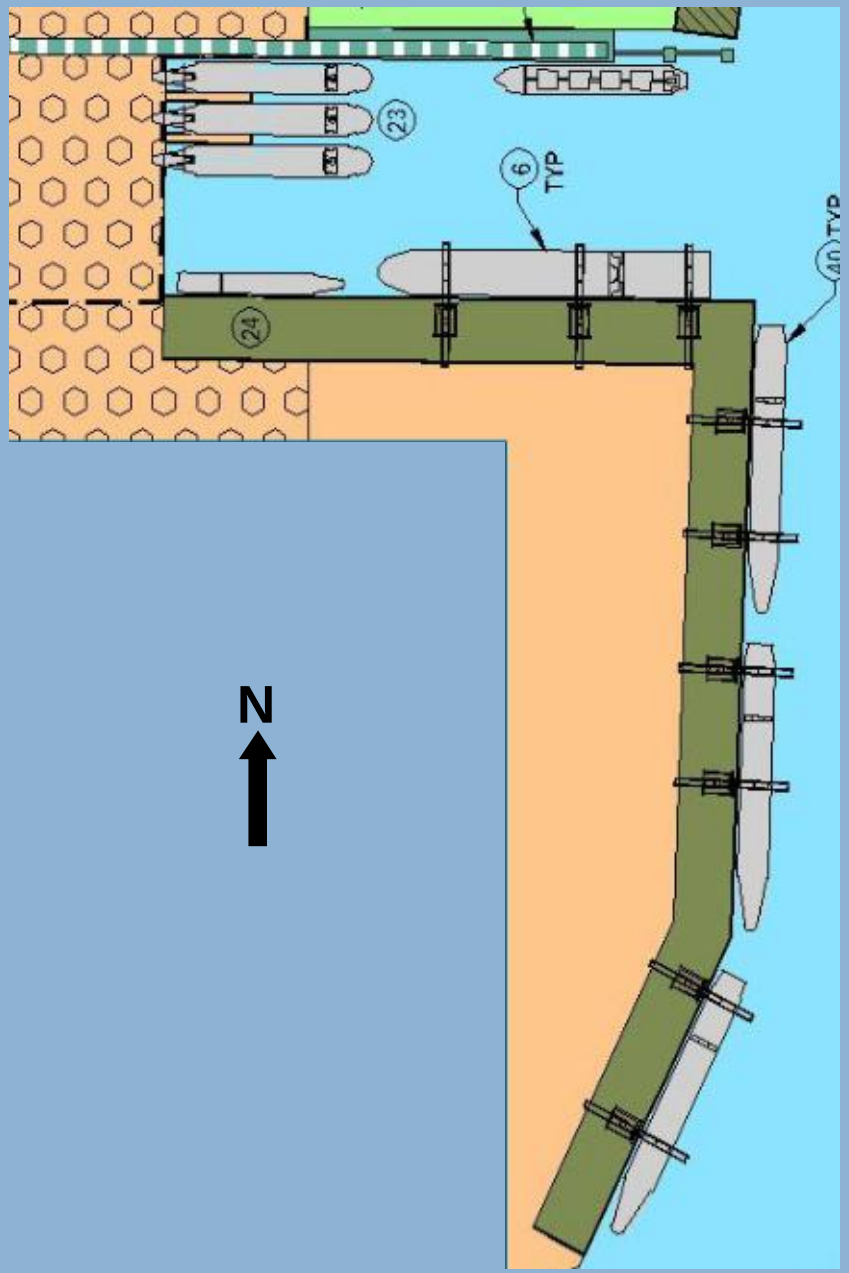
Area	Benefits	Issues
Reconfigure & Expand Slips 1-3	•Creates one additional mega cruise berth & enlarges one to mega cruise size •Separates Cruise & Petroleum activities • Accommodates larger vessels •Increases navigational safety •Adds berth length for cement •Mitigates soil contamination in Superfund site • Increases petroleum distribution efficiencies •Reconstructs deteriorating bulkheads	•Take of private property/tank farm relocation •Significant dredging and piping costs •Cost for new terminal

Vision Plan – Area 2



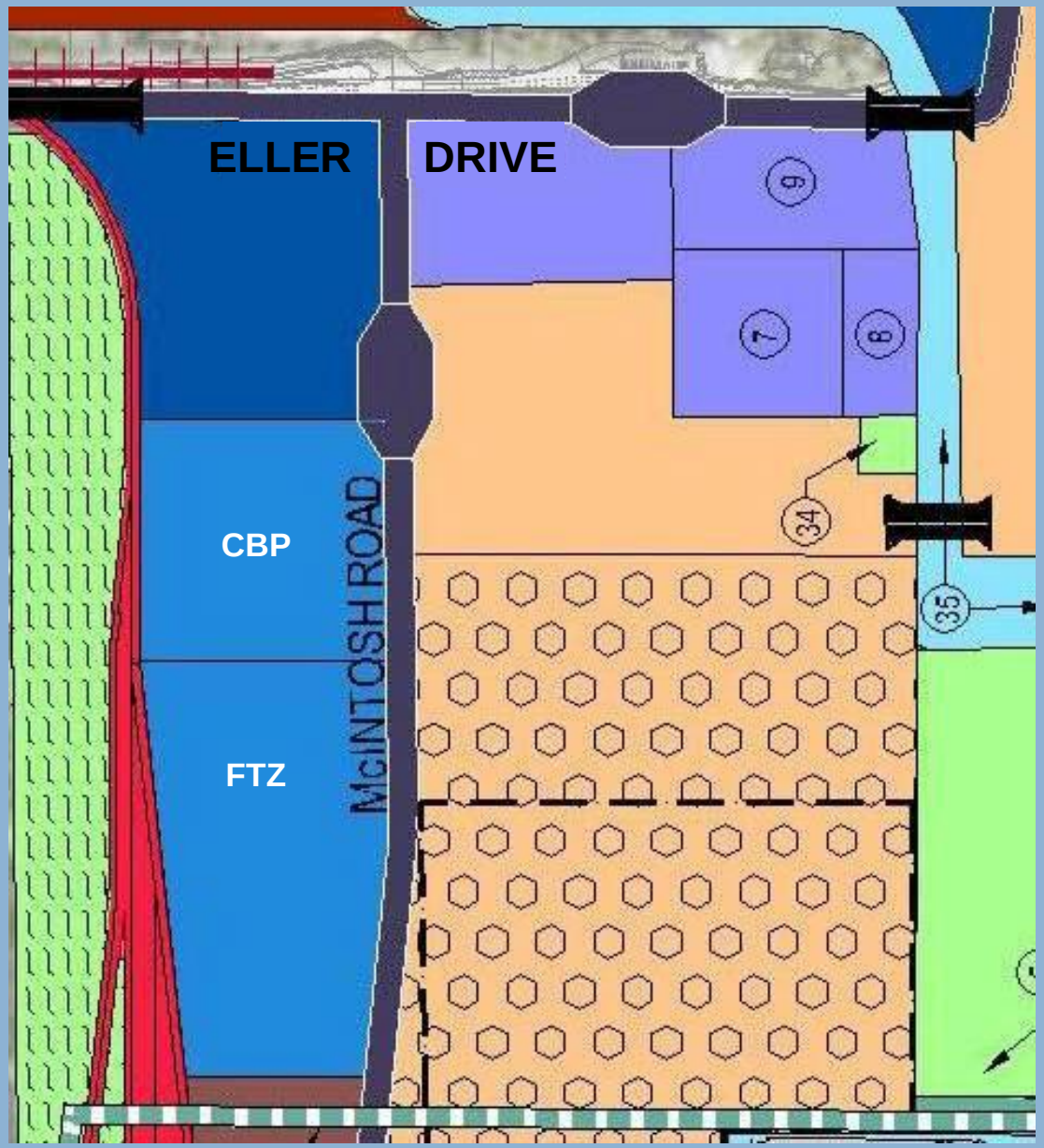
Area	Benefits	Issues
Expand container berths along ICW	•Creates additional berth lengths •Increases flexibility to berth longer ships & ability to accommodate both container and mega cruise ships at (2) berths •Reconstructs deteriorating bulkheads	•Significant development cost •Environmental impact to conservation easement

Vision Plan –Area 3



Area	Benefits	Issues
Relocate Southport RORO Piers	•Creates additional long container berth •Minimizes impact of larger vessels on aviation flight path •Places wheeled cargo ops on unstable geotechnical property •Minimizes dredging impacts at DCC & West Lake Park •Increases flexibility to berth longer ships	•Significant dredging costs •Excavation in closed landfill •Conservation area impact

Vision Plan – Area 4



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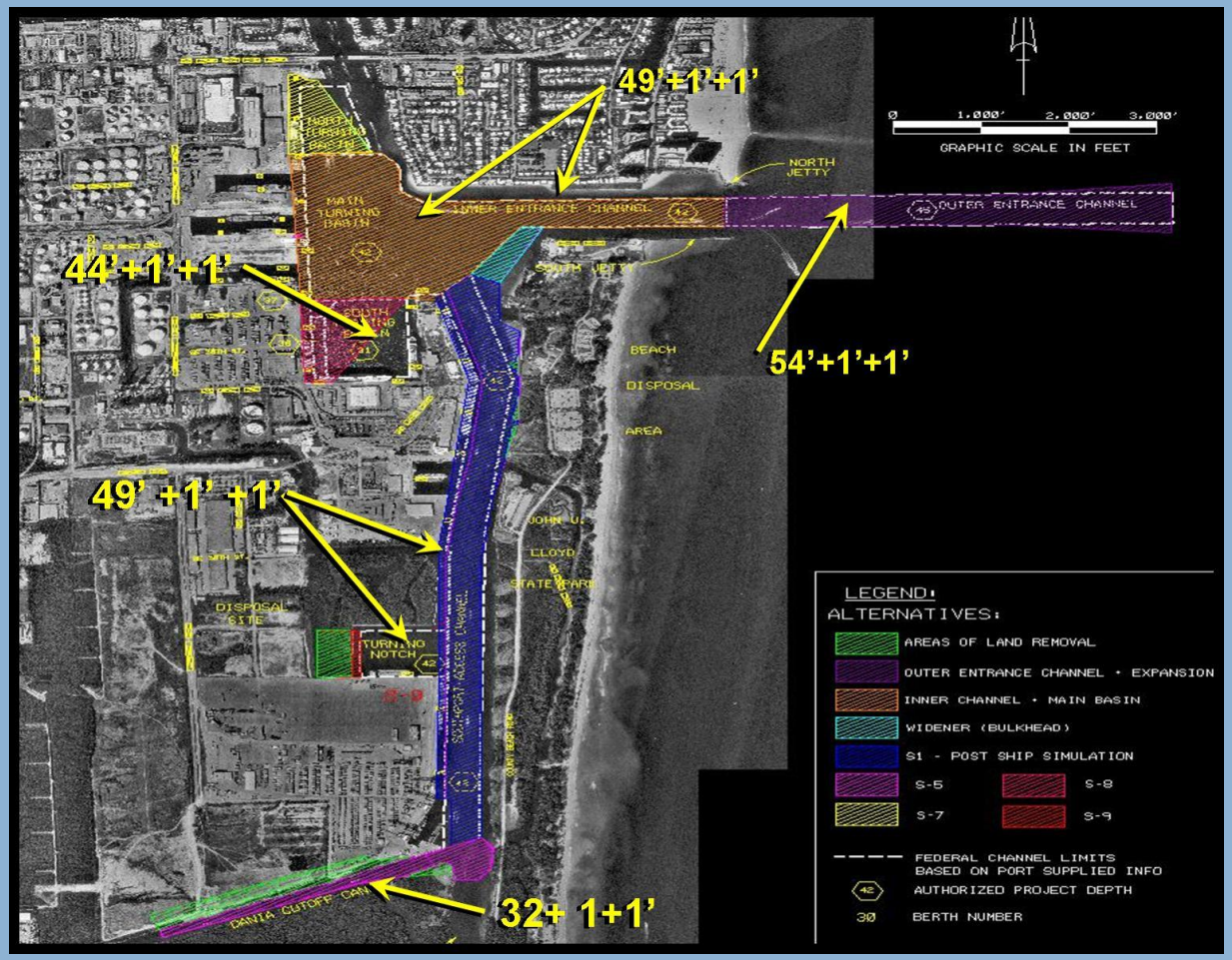
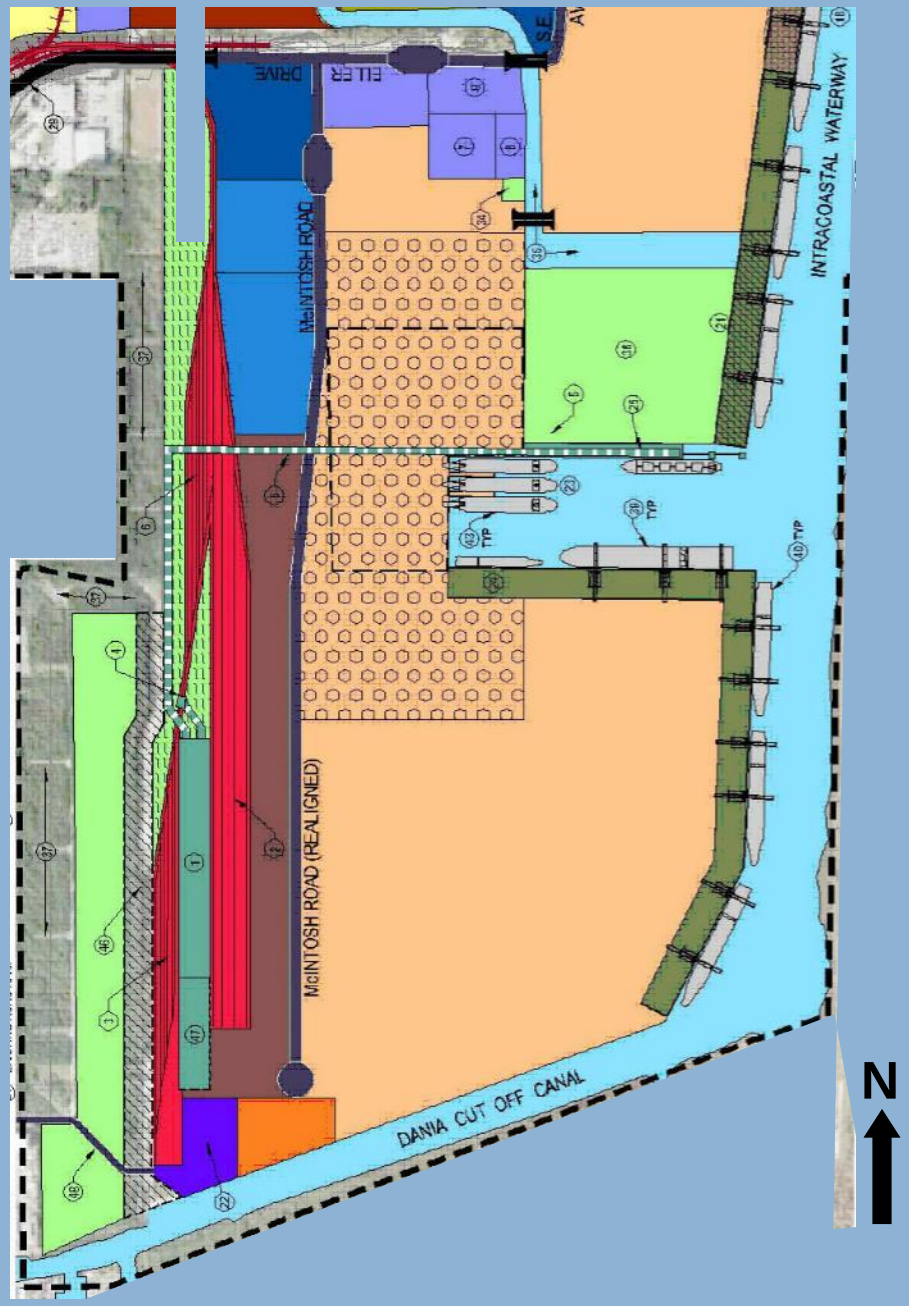
Area	Benefits	Issues
Relocate FTZ & CBP facility west of McIntosh Road	•Allows contiguous container terminal expansion of Southport & Midport areas, adjacent to the water •Provides circulation within Port restricted area •Replaces aged buildings	•Cost of relocating FTZ and CBP operations •Cost of new buildings

Vision Plan – Area 5



Area	Benefits	Issues
•Entrance channel & harbor deepening and widening	•Accommodates longer and deeper vessels •Increases navigational safety •Necessary to meet tenants & future market requirements	•Environmental impact •Significant shared dredging costs

Vision Plan – Area 6



Area	Benefits	Issues
•Intermodal rail yard & import rock facility	•Reduces truck traffic on Port and in Region •Creates potential for greater hinterland market penetration by rail •Supports import of aggregate materials in Florida, to replace potential quarry closures	•Significant costs associated with rail & site infrastructure •Long-term investment with slow start-up revenues

Conclusion - Berth capacity is the primary limiting factor to Port growth

- Balance upland infrastructure improvements and efficiencies to berth capacity
- Maximize flexibility and multi-use of berths

Next Steps

- Develop economic impact & financial strategy
- Balance capital improvements with operational efficiencies and environmental stewardship to achieve optimum Master Plan