

Philadelphia Regional Port Authority

**Channel Deepening Briefing to the
Delaware Valley Goods Movement Task Force
"Our Port... Our Legacy"**



April 19, 2006

Philadelphia Regional Port Authority



- The Philadelphia Regional Port Authority (PRPA) is an Independent Agency of the Commonwealth of Pennsylvania.
- The PRPA's mission is to enhance waterborne trade and commerce within an established regional port zone along the Delaware River.
- PRPA owns seven marine cargo facilities.

PRPA 2005 Cargo Statistics



Packer Avenue Marine Terminal (Above)

937,727 Metric Tons
Breakbulk (Steel, Military,
Lumber, Project)

194,372 Containers (TEU's)

Tioga Marine Terminal (Below)

317, 596 Metric Tons (Fruit,
Steel, Wood, Paper & Pulp)

10,540 Containers (TEU's)



Cargo Statistics (Cont'd)



Piers 38-40; 78-80 Forrest Products Facility (Above)

764,695 Metric Tons (Paper,
Wood, Steel, Lumber & Pulp)

Pier 84 Cocoa Facility (Below)

202,058 Metric Tons Cocoa
Beans



Economic Impact PRPA Terminals



Impacts	
Total Port and Port Related Jobs	23,109
Total Income	\$290,734,000
Business Revenue	\$300,765,000
Local Purchases	\$17,438,000
State and Local Taxes	\$30,064,000

PRPA Terminals in 2002

Source: 2003 Martin & Associates

SUPPORT THE

DELAWARE RIVER CHANNEL-DEEPENING PROJECT

The maritime industry's effort to get the Delaware River's channel deepened to 45 feet is very close to being a success!
Show your support by displaying this sign in your office, home or car!

DREDGING = JOBS

www.philaport.com

FOR PA & NJ

45 FEET NOW!



Philadelphia Regional
Port Authority

Delaware River Channel Deepening Project Facts



- Increase the depth of the Main Channel from 40 ft to 45 ft from the mouth of the Delaware Bay to the Ben Franklin Bridge 102 miles
- 27 million cubic yards of dredged material
- Approximately \$300 million project; local match of \$76 million

Who Pays?



Philadelphia Regional
Port Authority

Federal Government has authorized \$200 Million and has already spent \$53 Million

DRPA set aside \$50 Million in 1999 and has spent \$10 Million

Pennsylvania \$15 Million

New Jersey \$8 Million

Delaware \$2 Million

Historical Perspective

A Visual Timeline



Philadelphia Regional
Port Authority



Historical Perspective – Time Line



- 1983 Congress Directs Army Corps of Engineers to investigate feasibility of channel deepening
- 1987 Historic Meeting of Governors on the Delaware River
- 1992 Congress Approves Project and authorizes \$200 million - \$54 million has been appropriated to date
- 1992 Environmental Impact Statement Released
- 1997 Supplemental Environmental Impact Statement Released
- 1999 The DRPA approves the project and commits \$50 million
- 2002 GAO report questions economic benefit and calls for reanalysis; Comprehensive reanalysis conducted
- 2002 Independent Review process verifies economic benefit
- 2004 Supplement to Comprehensive Reanalysis Released

Environmental Review & Approvals



Department of
Environmental Protection

“The Corps of Engineers has largely addressed environmental concerns related to the project to the satisfaction of federal and state environmental agencies”
GAO Report June 2002



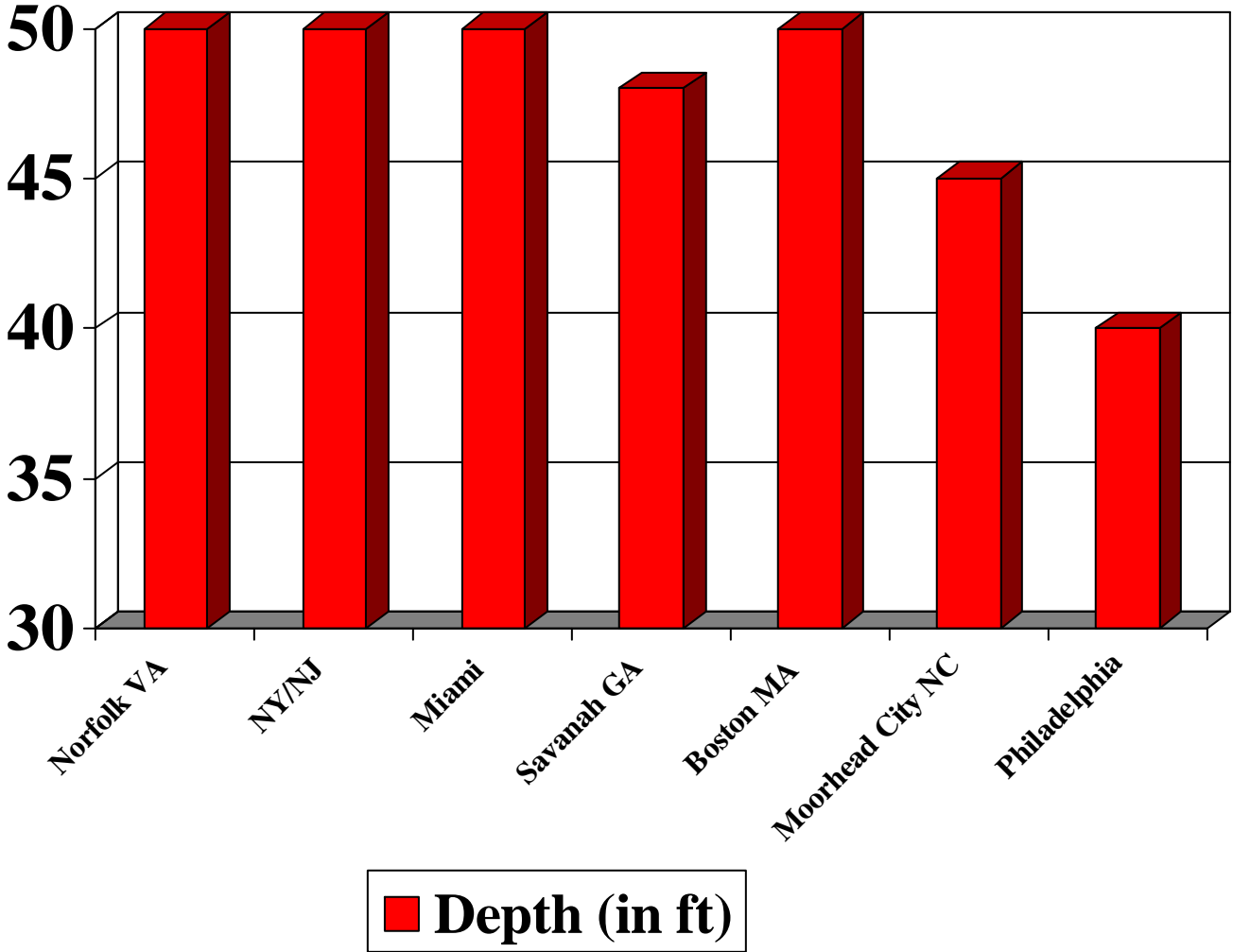
NOAA's National Marine Fisheries Service



What other ports are doing



Philadelphia Regional
Port Authority



Dredge Material Disposal



- 26 Million Cubic Yards of Material to be Removed
- 7 Million Yards of Sand for Beach Replenishment - Delaware
- 19 Million Yards Silt and Rock
 - Gov. Rendell has agreed to accept 75%
 - 14.5 Million Yards - Pennsylvania
 - 4.5 Million Yards - New Jersey

Dredge Material Disposal Beneficial Use Projects



- PA Mine Reclamation 550,000 yds
- Philadelphia Airport Runway 1,200,000 yds
- Tweeter Center 200,000 yds
- River Winds Golf and Recreation Center
149,000 yds
- NJ Turnpike Exit 1 Toll Plaza 180,000 yds

Beneficial Reuse Port Development and Expansion



Philadelphia Regional
Port Authority



SouthPort and Intermodal Complex

Navy Yard

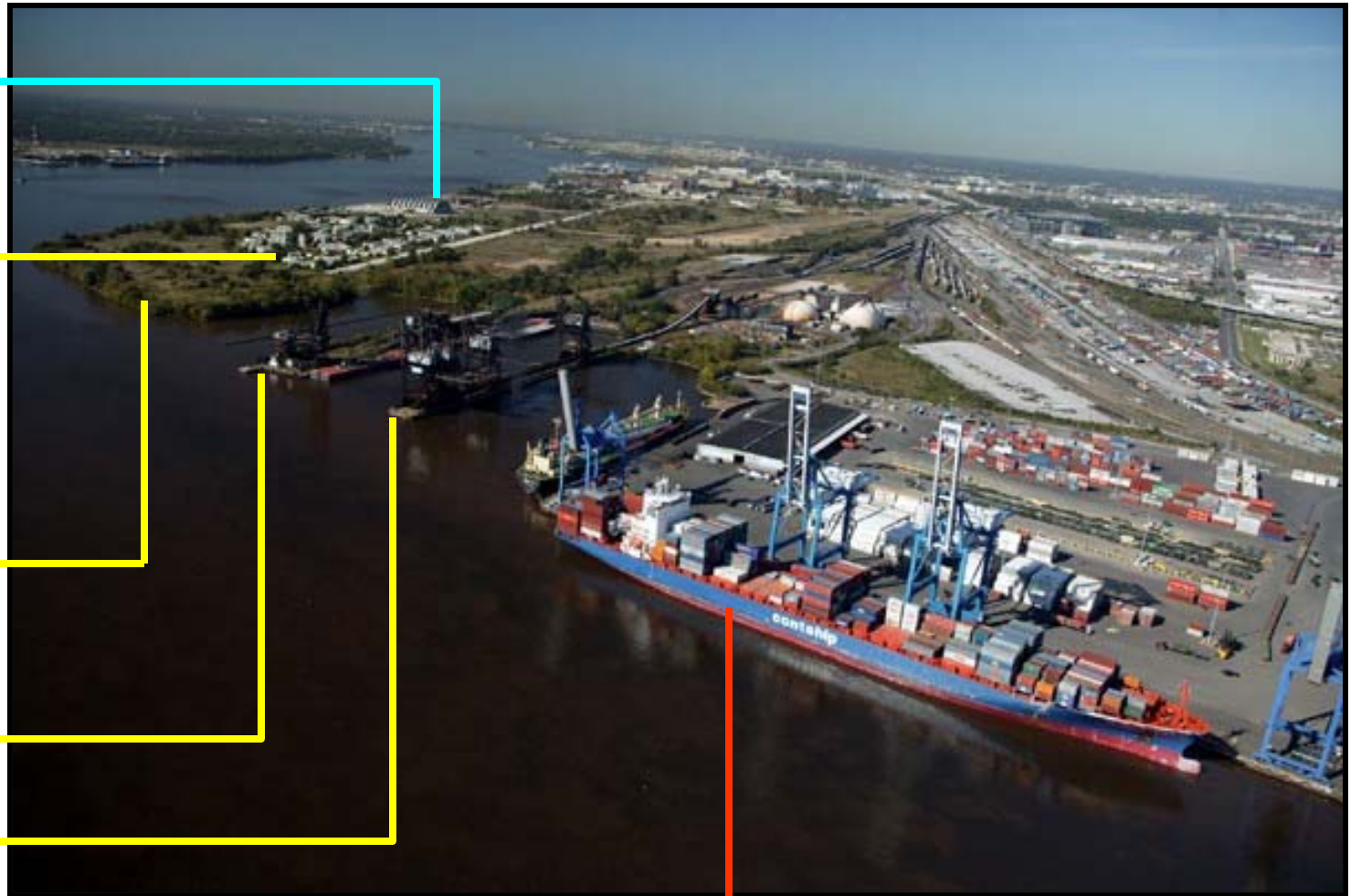
SouthPort

Abandoned
Naval
Housing

Parcel 9A
47 Acres

Pier 124

Pier 122

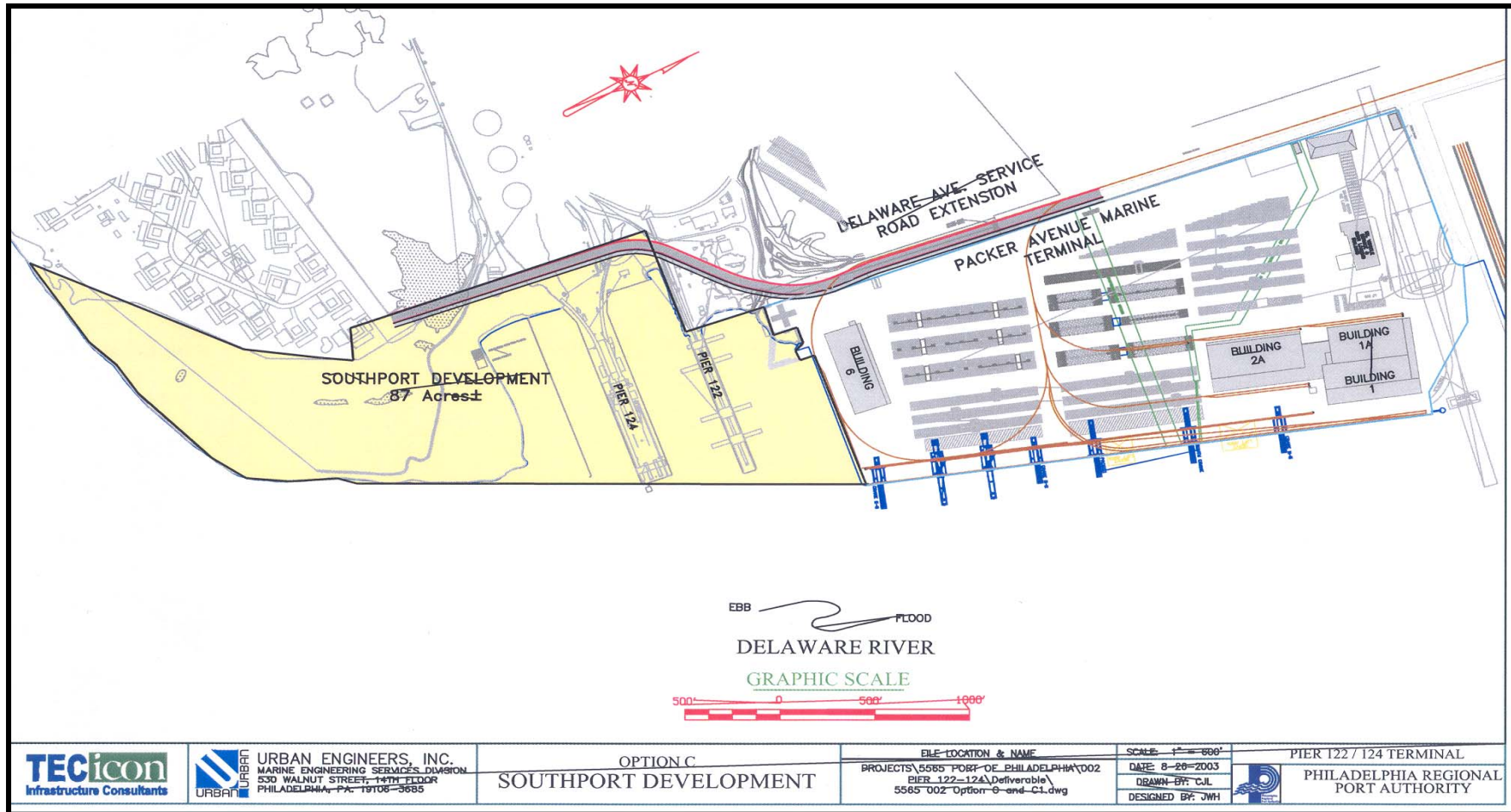


• Packer Avenue Marine Terminal

SouthPort will use 6 Million Yds



Philadelphia Regional
Port Authority



		URBAN ENGINEERS, INC. MARINE ENGINEERING SERVICES DIVISION 530 WALNUT STREET, 14TH FLOOR PHILADELPHIA, PA. 19106-3685	OPTION C SOUTHPORT DEVELOPMENT		FILE LOCATION & NAME PROJECTS\5585 PORT OF PHILADELPHIA\002 PIER_122-124\Deliverables\	SCALE: 1" = 600' DATE: 8-20-2003 DRAWN BY: CUL DESIGNED BY: JWH	PIER 122 / 124 TERMINAL PHILADELPHIA REGIONAL PORT AUTHORITY
			5585_002 Option C-end-C1.dwg				

North Port Expansion



Philadelphia Regional Port Authority

Thank you!



Delaware Valley Goods Movement Task Force SJ-PIDN: Good Public Policy



Congestion Mitigation

Economic Development

Efficiency/Flexibility

SJ-PIDN Objective

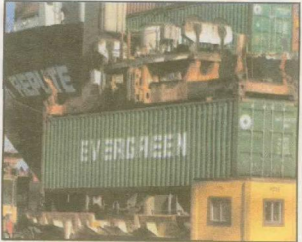
- Enhance Southern NJ, Philadelphia, PA & Wilmington, Del's economic redevelopment initiatives and promote job growth while providing a cost effective alternative to intermodal trucking between northern and southern New Jersey

The Port of New York and New Jersey

The Port Delivers Cargo and Jobs

Thousands of people pass by the port of New York and New Jersey everyday, but few of us stop to think about what it is and its impact on the region. Yet this port – the third largest in the country – is a critical economic engine, providing a greater financial impact on our two state area than many other industries.

The New York and New Jersey region has a rich maritime



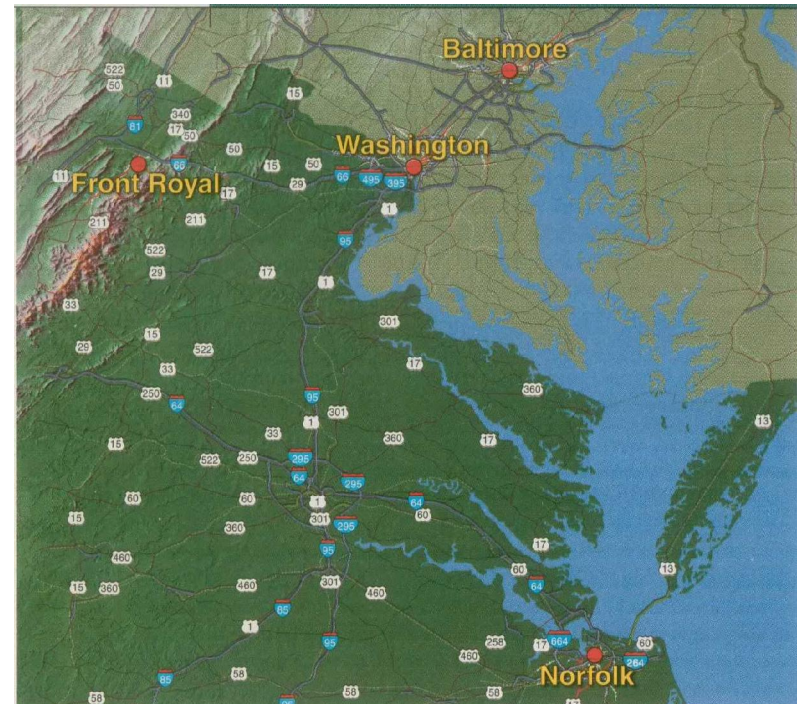
12 Union County Directions

DELIVERING PROSPERITY TO REGION

The Port of New York and New Jersey

SJ-PIDN Key Elements

- Motivating Factors
- Terminal Location
- Market
- Stakeholders
- Business Plan
 - Service Parameters
 - Capital Investment
 - Cost & Revenue Comparison
- Public Benefits
- Synergy
- Recommendation
- Next Steps

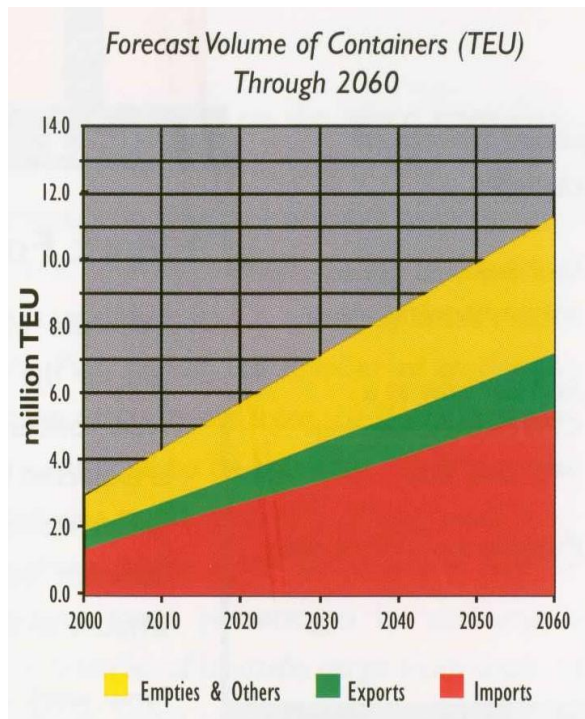


Northwest passage

Nearly 20 years after opening, Virginia's inland port at Front Royal is growing up

PIDN – Motivating Factors

- Significant Volume Increases



PONYNJ – CPIP Forecast

Rank by U.S. Discharge Port		(July 2004 – June 2005)			
1	New York-New Jersey	37.0%	2,367,706	2,122,256	11.6%
2	Charleston	13.7%	876,621	769,934	13.9%
3	Virginia ports ³	12.9%	824,537	761,423	8.3%
4	Georgia ports ⁴	11.3%	723,665	623,347	16.1%
5	Miami	7.2%	457,614	448,670	2.0%
6	Delaware River ports ⁵	4.9%	315,562	293,374	7.6%
7	Port Everglades	4.0%	256,169	219,392	16.8%
8	Baltimore	3.8%	244,930	211,737	15.7%
9	Jacksonville	2.3%	143,961	148,459	-3.0%
10	Boston	1.1%	72,053	69,796	3.2%
Total Top 10 Discharge Ports		98.3%	6,282,816	5,668,387	10.8%
Total All Discharge Ports		100.0%	6,393,027	5,754,717	11.1%

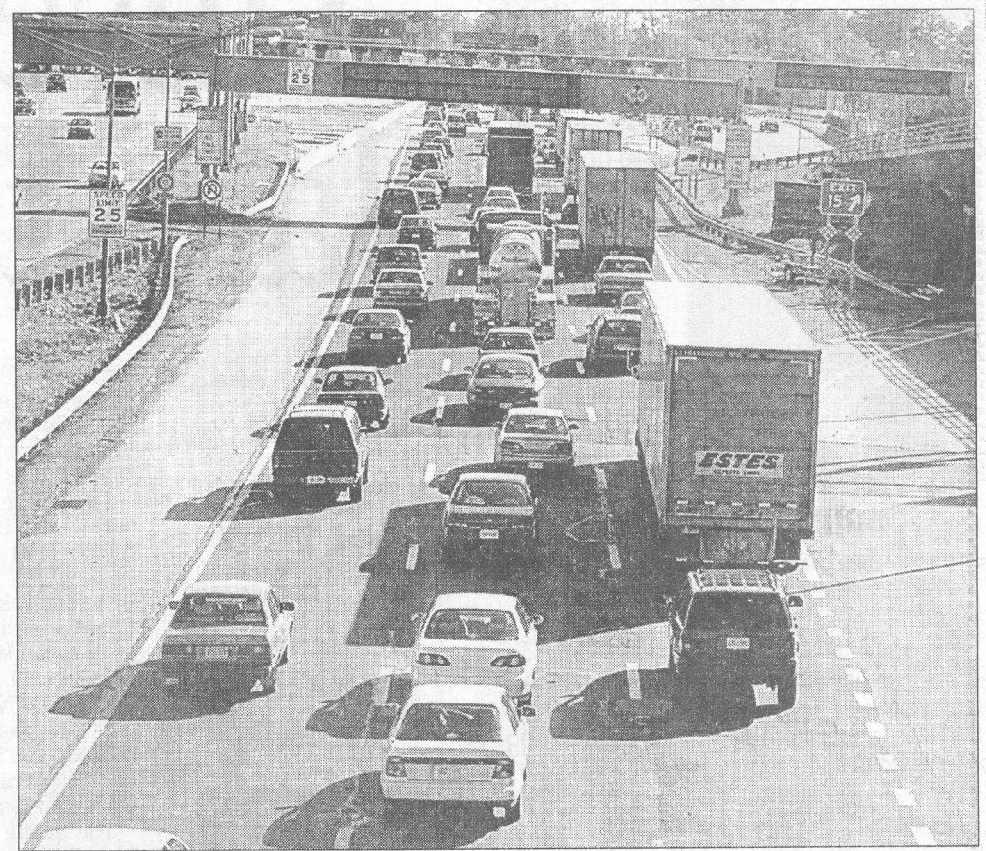
Notes:
 TEU count includes all containerized oceanborne cargo discharged at U.S. ports, including imports from Puerto Rico. U.S. port range does not include discharge ports in Puerto Rico or Canada. The report does chart Puerto Rico and Canadian origin ports and entities as available.
 Last overseas port cargo may have prior cargo carriage, and U.S. first discharge port cargo may have further cargo carriage to destination.
 1. A.P. Moller-Maersk, parent of Maersk Sealand, acquired Royal P&O Nedlloyd, parent of P&O Nedlloyd in August. The two carriers' totals are shown combined.
 2. TUI AG, parent of Hapag-Lloyd, has made an offer to acquire CP Ships, whose brands include ANZDL, Canada Maritime, CAST, Contship Containerlines, Italia Line, Lykes Lines and TMM Lines.
 3. Virginia ports include Hampton Roads and Richmond.
 4. Georgia ports include Savannah and Brunswick.
 5. Delaware River ports include Philadelphia, Chester, Camden, Salem, Pennsauken, Gloucester, Eddystone, and Wilmington, Del.

Source: PIERS, the Port Import Export Reporting Service, a sister company of Shipping Digest, www.piers.com.

Containerized Imports Via US East Coast Ports

PIDN – Motivating Factors

- Roadway Congestion
 - Annual cost of regional congestion is nearly \$2 billion*
 - As Gas Price ↑ Gap ↓



ADVANCE PHOTO ■ ROB SOLLETT

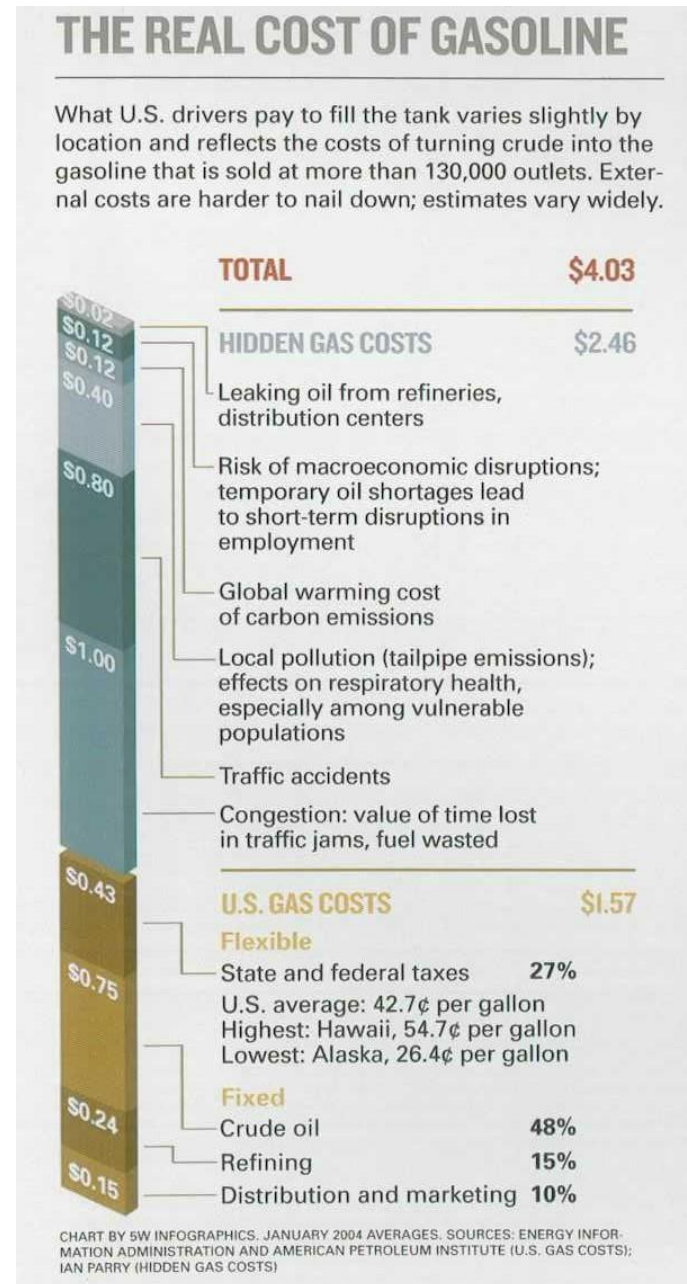
Price of Crude Oil
Above \$60/Barrel

* - Texas
Transportation
Institute 2003

PIDN – Motivating Factors

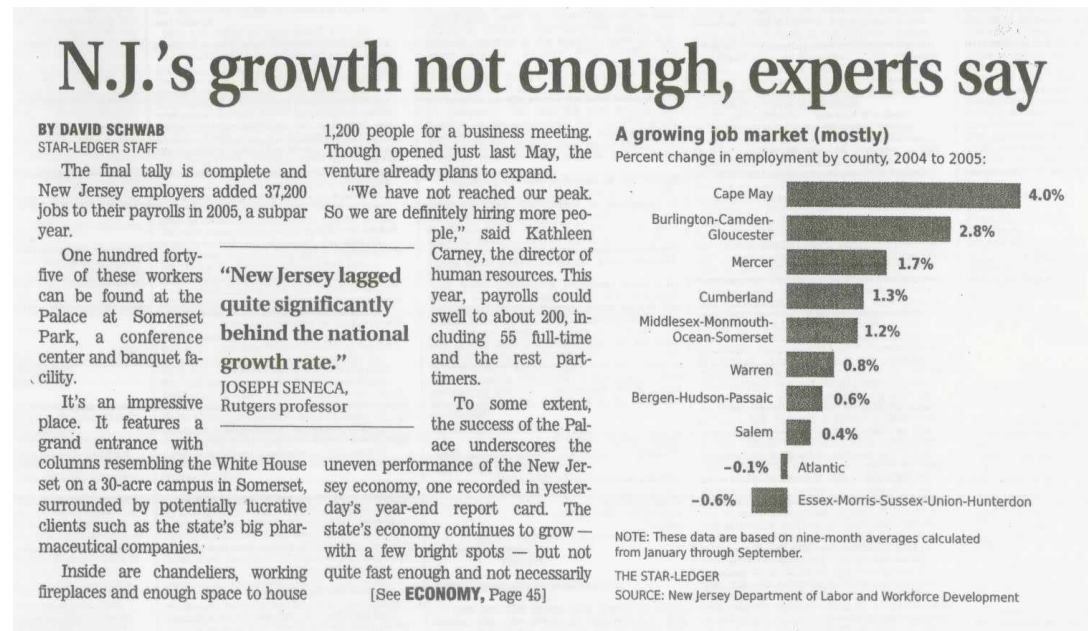
- Current over-the-road price to shippers
 - Phase 1 = \$380.00 RT or approx \$2.00 per mile
 - ü excludes hidden costs
- Real Cost is some 2.5 times higher
 - Generates actual transport price is upwards of \$950.00 RT

Source:
National Geographic



PIDN – Motivating Factors

- Forecast
 - Increased Containerized Trade Volumes
 - Increased Roadway Congestion
 - Continued NJ Terminal Congestion
 - Regional Growth Not Enough
 - Impact:
 - Loss of Efficiency
 - Higher Port Costs
 - Less Direct Cargo
 - Less Competitive Region
 - Less Jobs



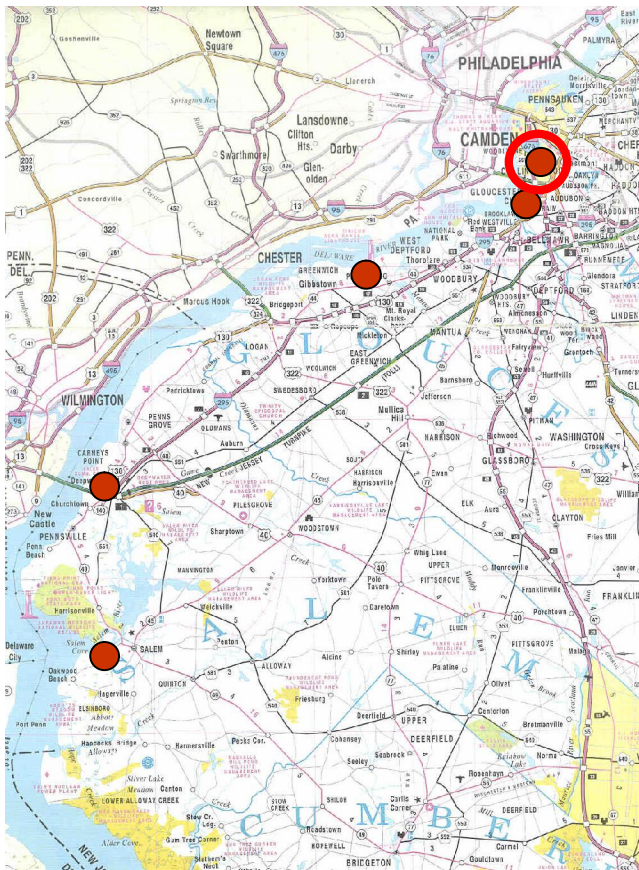
Is there a Cost Effective,
Environmentally Sensitive Alternative?

Phase 1: Potential NJ Sites

- **Broadway Terminal**
- **Gloucester City**
- **Paulsboro BP**
- **Deepwater Dupont**
- **Salem Mid Atlantic Shipping and Stevedoring**

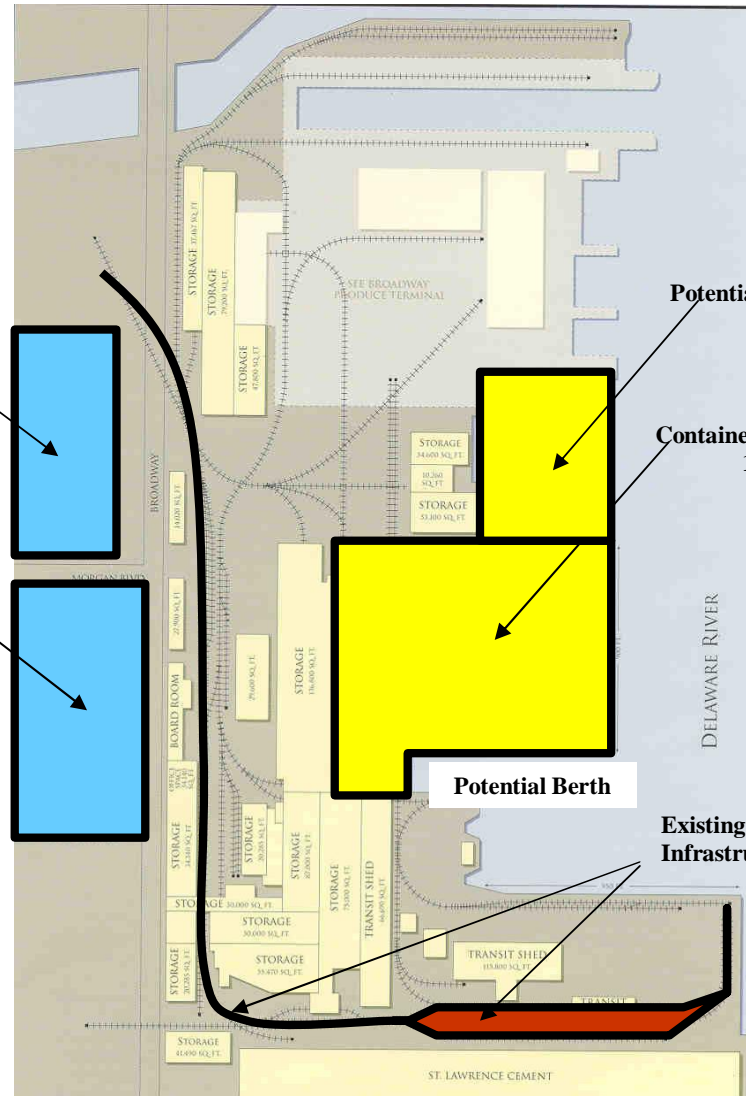


Phase 1: Broadway Terminal Site Plan



Potential Expansion Area
7.5 acres

Potential Expansion Area
9.1 Acres



Potential Expansion Area
6.5 Acres

Container Handling Area
14 Acres

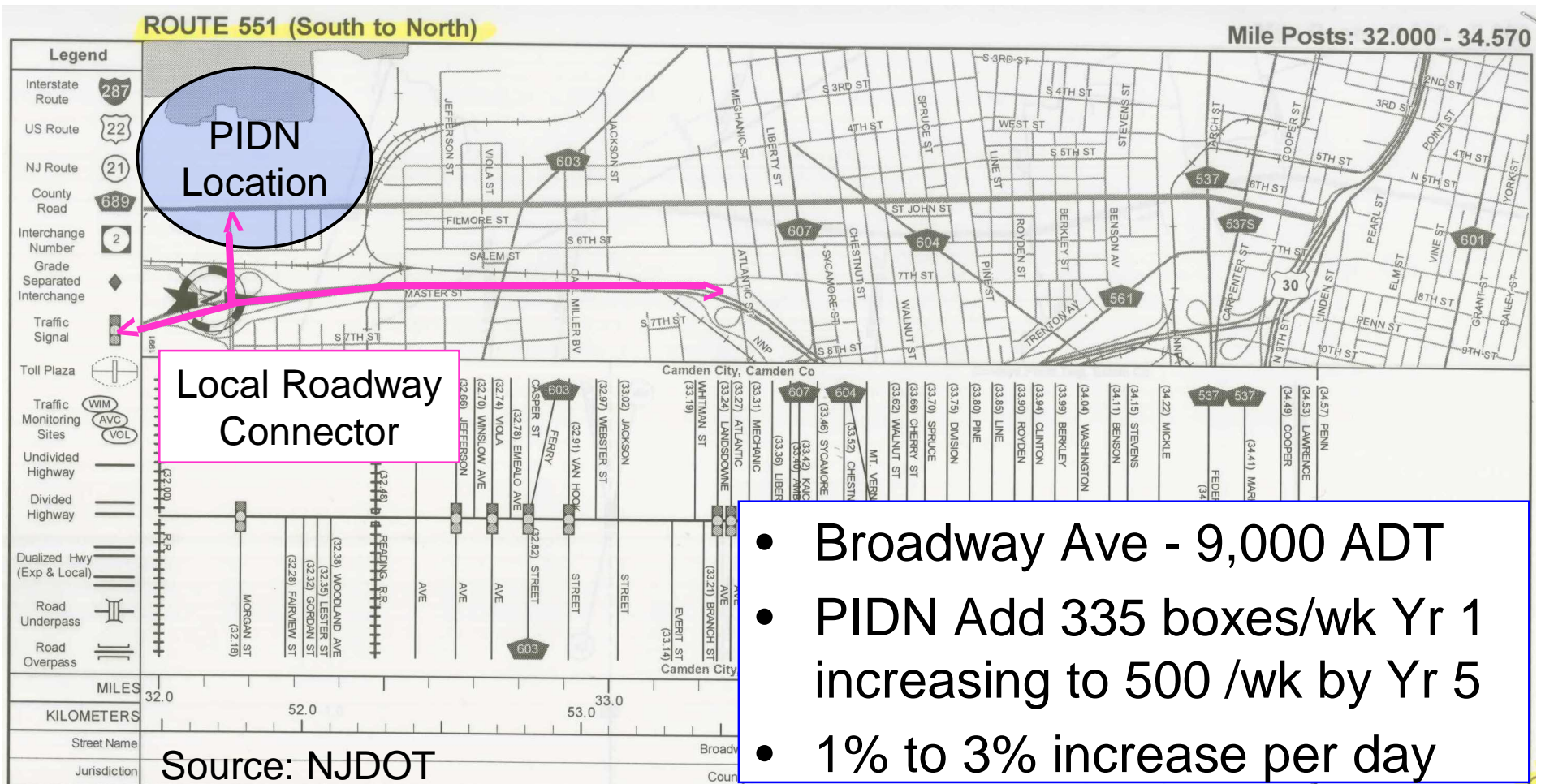
Potential Berth

Existing Rail Infrastructure

ST. LAWRENCE CEMENT

Local Roadway Plan

- Access Via Broadway & Morgan Street Interchange



Business Plan – Regional Market



LEGEND

TEUs by Zipcode

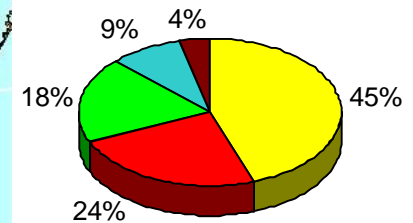
- 0-2,000
- 2,000-7,000
- 7,000-16,000
- 16,000-594,000

● Centroid of Dense Trade Cluster

Total TEUs

Export	137,387
Import	358,170
TOTAL	495,557

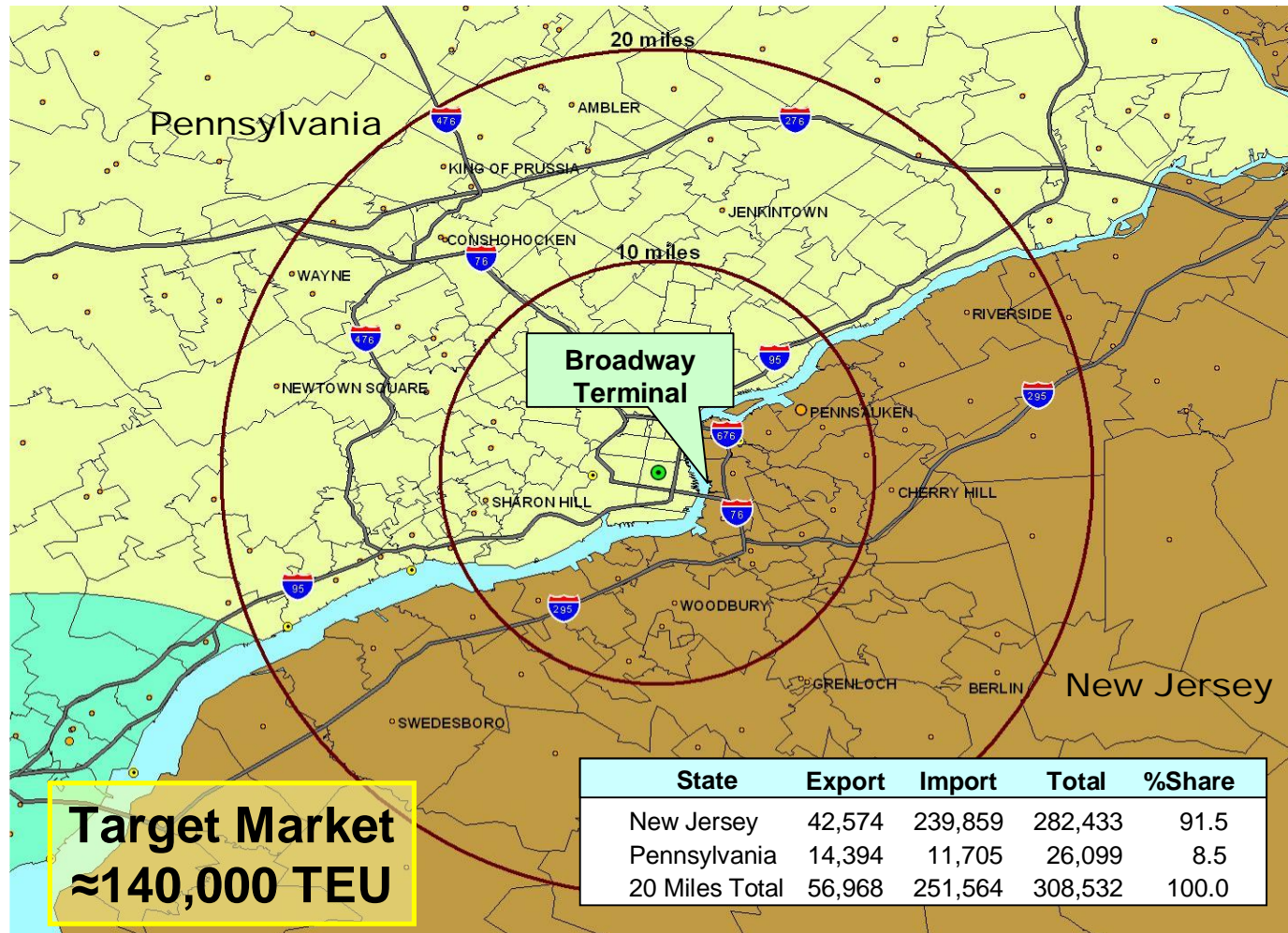
%Share by Port



- PONYNJ
- Other North Atlantic
- West Coast (Direct)
- West Coast (Warehouse)
- Canadian Ports

Source: PANY&NJ / M&N – PIDN Philadelphia/Camden 1998/1999 Case Study

Business Plan – Target Market



LEGEND

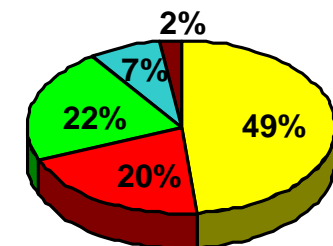
TEUs by Zipcode

- 0-2,400
- 2,400-8,800
- 8,800-19,400
- 19,400-37,800

Total TEUs

Export	56,968
Import	251,564
TOTAL	308,532

%Share by Port

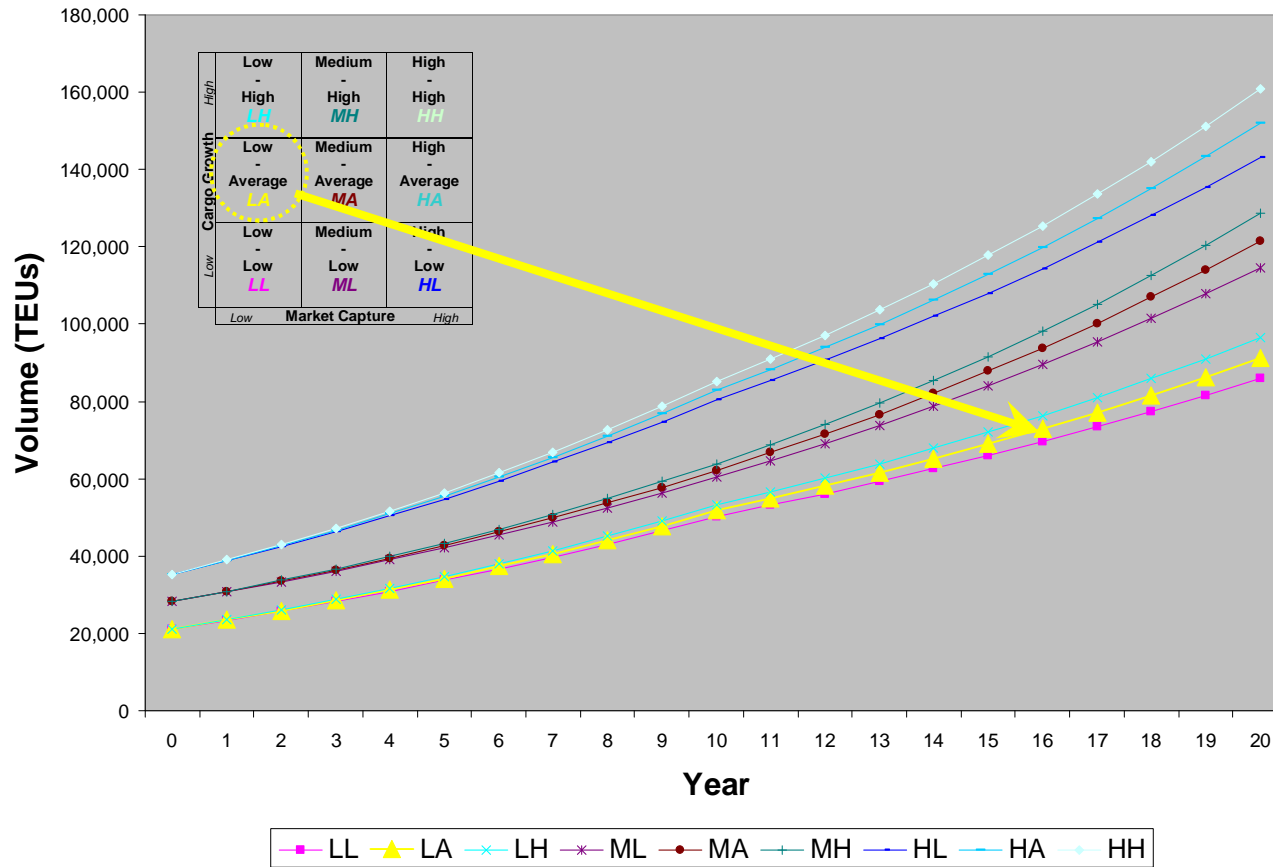


- PONYNJ
- Other North Atlantic
- West Coast (Direct)
- West Coast (Whse)
- Canadian Ports

Source: PANY&NJ / M&N – PIDN Philadelphia/Camden 1998/1999 Case Study

Business Plan – Market Capture Forecast

Projected Annual Volumes for South Jersey PIDN
Dense Trade Cluster via the PONYNJ



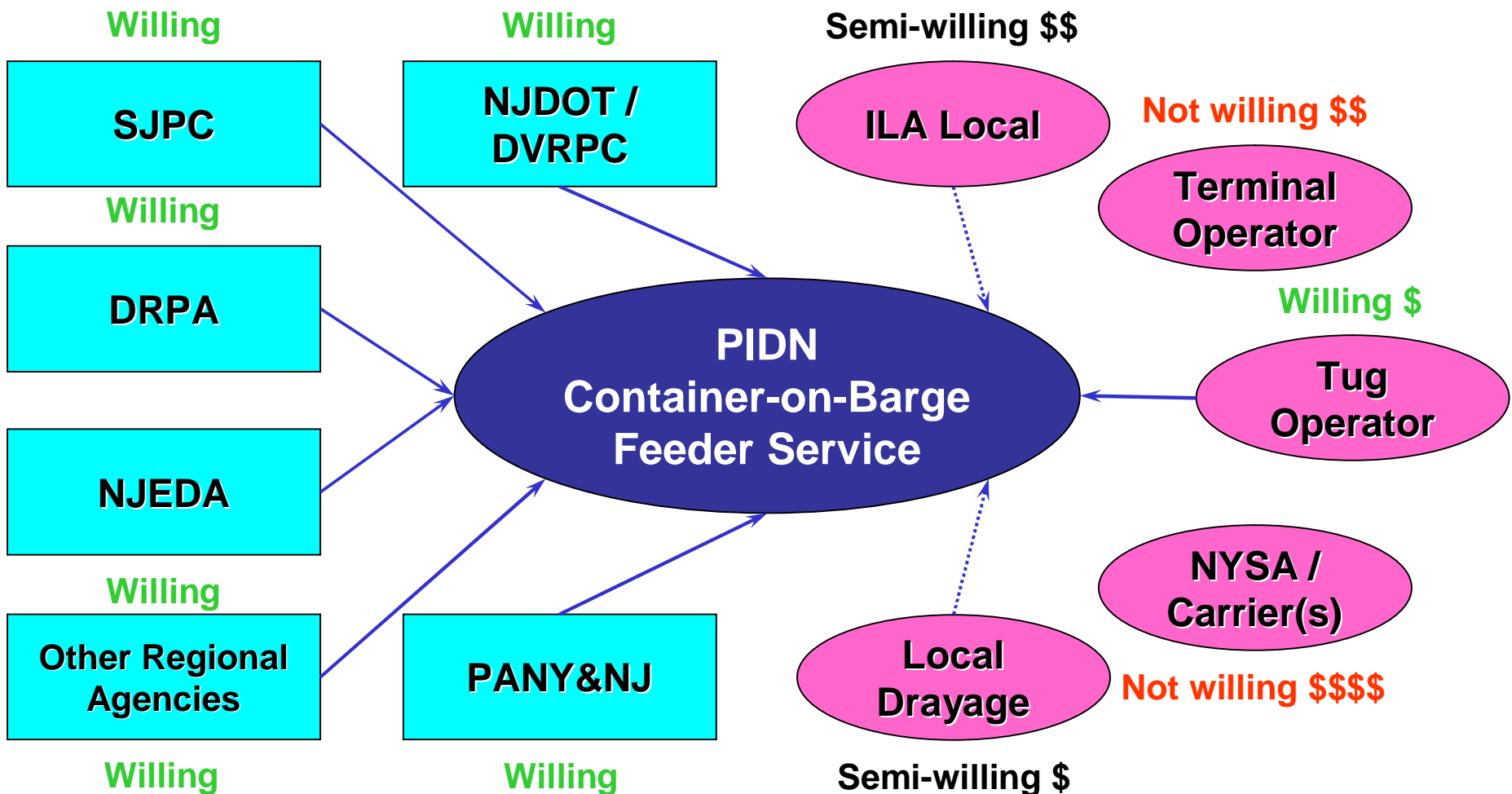
Business Plan – Stakeholders

- Private entities
 - Shipping Line
 - Port of NY&NJ Terminal Operator
 - Trucking Company
 - Warehouse & Distribution Center
 - Shipper / Consignee
 - Consortium Manager
 - Container-on-Barge Service Provider
- Public Entities (NJ Focus)
 - New Jersey DOT
 - South Jersey Port Corp.
 - Delaware Valley Regional Planning Commission
 - Delaware River Port Authority
 - New Jersey EDA
 - Port Authority of NY&NJ
 - Other State Port Authorities
 - Other State DOT's / EDA's
 - Municipalities / Counties

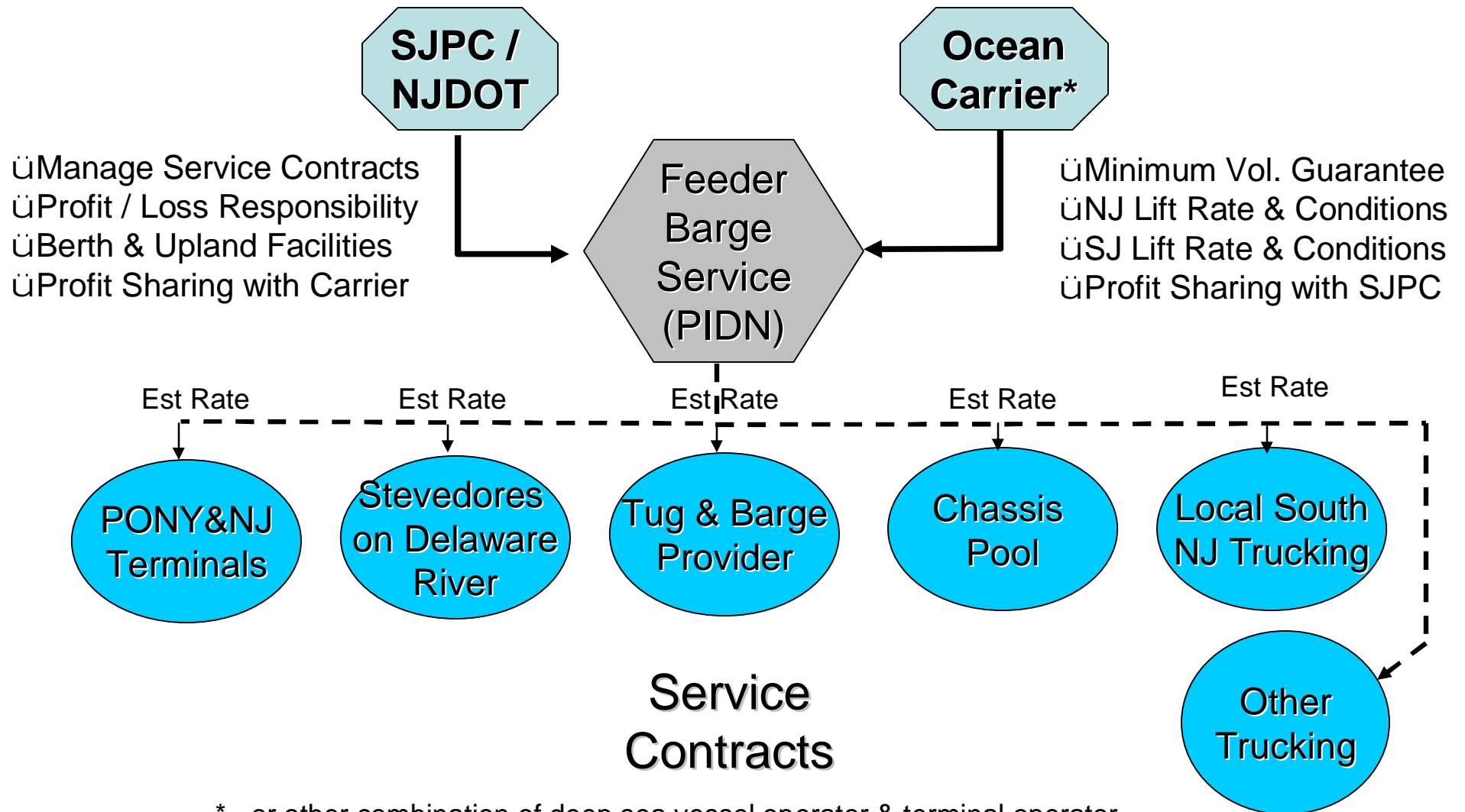
Business Plan – Stakeholders

PUBLIC SECTOR

PRIVATE SECTOR



Business Plan – SJ Arrangement







* - or other combination of deep sea vessel operator & terminal operator

Why Barge In Lieu Of Rail?

- Rail opportunity is mid to long term – not near term
- Hurdles for rail use include:
 - Scheduled passenger and freight train service windows
 - Multiple railroads: Amtrak, NJT / SNJLRL, Septa, Conrail, CSX, NS
 - Operational issues include:
 - Single vs. double equipment – impacts road crew deadhead
 - Height and weight limitations (i.e. lack of double stack clearance along entire route)
 - Crewing requirements
 - North East Corridor fees
 - Yard concerns include: controlled access, air brake inspections, available storage tracks & train make-up

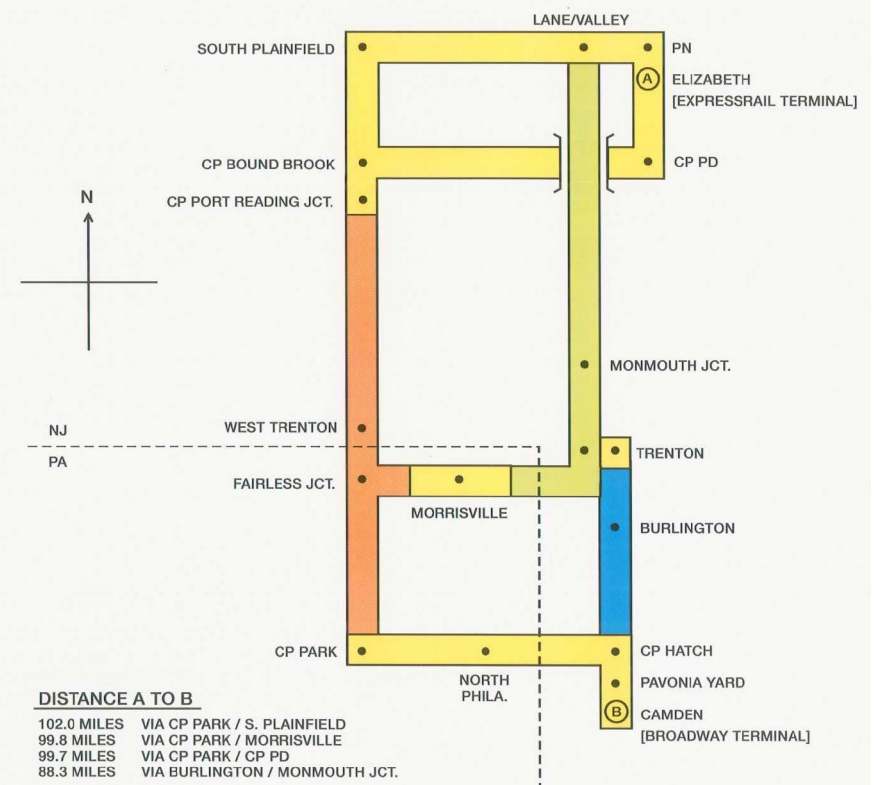
ROUTE SYMBOL KEY

ROUTE	RAILROAD
	CONRAIL
	AMTRAK
	CSX
	SNJLRL

NO SCALE

Port Inland Rail Distribution Network Rail Option: Camden, NJ

FIG



Business Plan – Service Parameters

- PONYNJ Marine Terminal(s)
 - Modify gang size; Lock-in “Lifts/Hour” Handling Criteria
- Tug & Barges – maximize efficiency
- SJ PIDN Terminal Operator (SJPC)
 - Stevedoring (Delaware River Stevedores)
 - Wharfage & Dockage
 - Storage / Demurrage
 - Direct to In-Terminal Yard or Stack
- Terminal Drayage (Champion Trucking)
- Local Drayage (Various Trucking Companies)
- Value Added Activity / Acreage Available
 - SJPC, NJEDA, City of Camden
 - VAL services may consist of: stripping / stuffing, repackaging, parts assembly, US Customs clearance, quality assurance inspections, product upgrades, installation of accessories, preparation for retail sale, commodity processing and inventory management

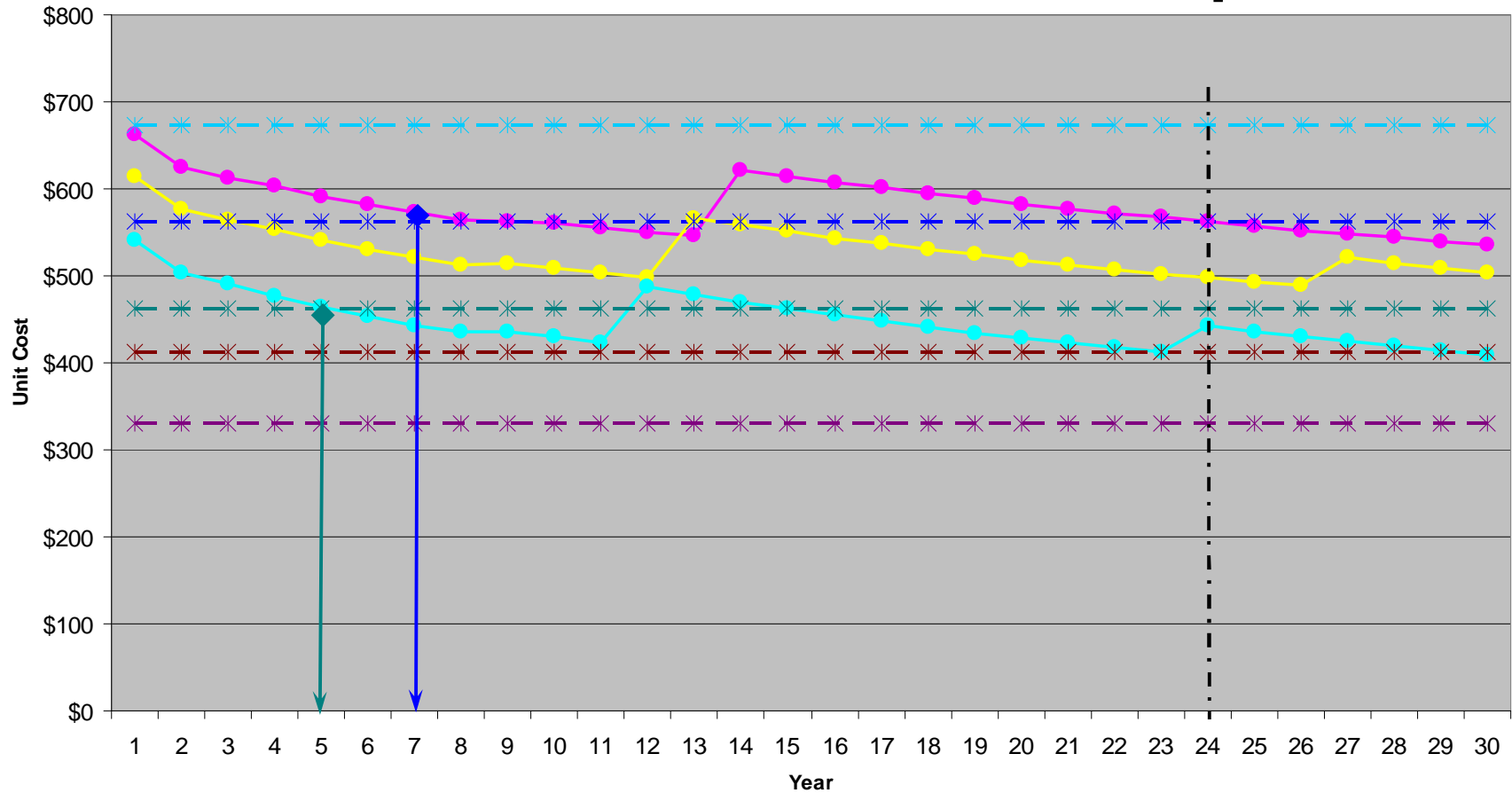
Business Plan – Capital Requirements (minimal public \$ at outset)

- Marine terminals and associated infrastructure:
 - Preliminary estimate*: \$0.0 million
- Equipment
 - Barges \$0.0 million
 - Cranes \$0.0 million
 - Yard Equipment \$1.0 million
 - Other Equipment \$0.5 million

 - Total ± \$1.5 million*

* – Assumes startup operations via SJPC's existing facilities and lease of major equipment, i.e., barges and cranes if necessary at a later date

Business Plan – Revenue / Cost Comparison



Cost }
 --- }
 Revenue }

- Probable
- Achievable
- Opportunistic
- * OTR
- * OTR + 25% Fuel Surcharge
- * OTR + 25% Fuel Surcharge + MT Return @ \$50
- * OTR + 25% Fuel Surcharge + MT Return @ \$50 + VAL Revenue @ \$100
- * OTR + 25% Fuel Surcharge + MT Return @ \$50 + VAL Revenue @ \$100 + NYSA Assessment @ \$110

Business Plan – Subsidy Costs

Cumulative Subsidy



Year

Probable Achievable Opportunistic

Public Benefits - Full Marginal Cost

- FMC

- Costs from additional traffic movements
- Direct Operating Cost
- Direct Travel Time Cost
- Congestion Cost
- Accident Cost
- Infrastructure Cost
- Air Pollution Cost
- Noise Cost

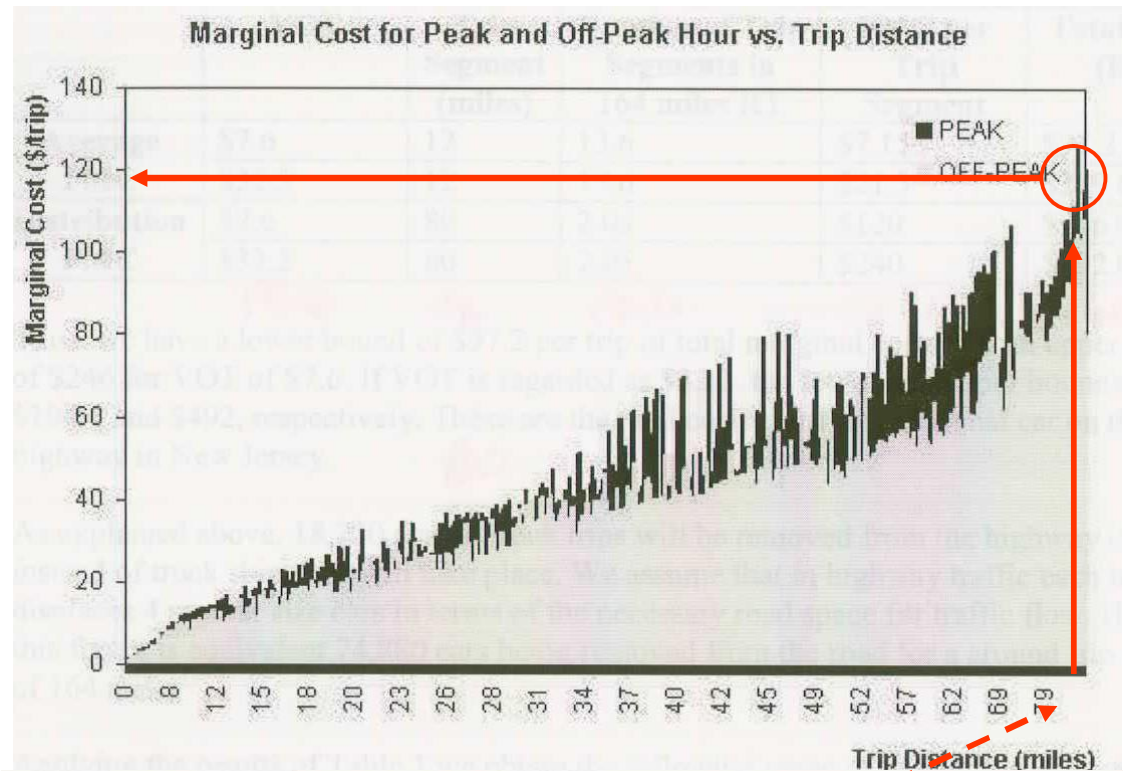


Table 2: Summary of FMC Results for Alternative VOT (Annual)

	VOT	Trip Segment (miles)	Number of Trip Segments in 164 miles RT	FMC per Trip Segment	Total FMC (RT)
Average FMC	\$7.6	12	13.6	\$7.153	\$97.2
	\$32.3	12	13.6	\$21.3	\$289.6
Distribution FMC	\$7.6	80	2.05	\$120	\$246.0
	\$32.3	80	2.05	\$240	\$492.0

Public Benefits Quantified

Total Social Cost-Savings: 1 Container = 3 Cars

Total FMC (RT)	Container Throughput Per Year	Number of Cars Removed From Traffic Due to Barge Operation	Total Social Cost Savings (million)/Year
\$246.0 (VOT=\$7.6)	18,720	56,160	\$13.81
\$492.0 (VOT=\$32.3)	18,720	56,160	\$27.63

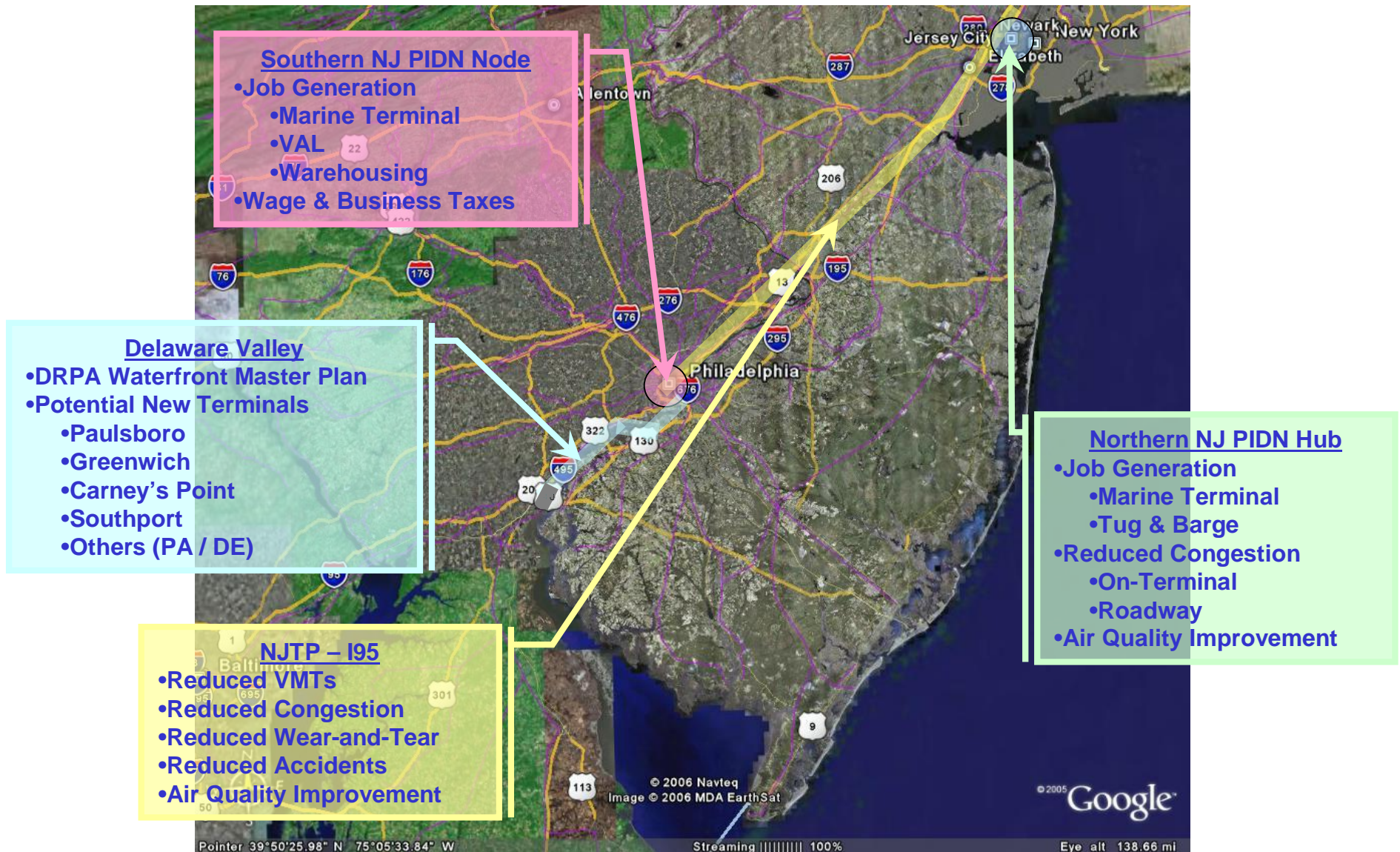
Total Social Cost-Savings: 1 Container = 4 Cars

Total FMC (RT)	Container Throughput Per Year	Number of Cars Removed From Traffic Due to Barge Operation	Total Social Cost Savings (million)/Year
\$246.0 (VOT=\$7.6)	18,720	74,880	\$18.42
\$492.0 (VOT=\$32.3)	18,720	74,880	\$36.84

Minimum = \$13.8 million per year

Average = \$20.7 million per year

Benefits – Locale Specific



Business Plan – Synergies



Business Plan – Wrap Up

- Market
 - At a minimum, 140,000 TEUs – 82,500 containers
 - 20% capture is 315 boxes/week
- Once-weekly service - \$10 MM subsidy
 - \$ 4 MM oper. revenue vs. \$14 MM oper. costs
- Twice-weekly service - \$13.5 MM subsidy
 - \$ 4 MM oper. revenue vs. \$17.5 MM oper. Costs
- If 2-year service, then \$21.5 - \$28.5 MM investment
- Benefits are \$27.5 – \$41.5 MM
- Go / No-Go “fork in the road/river”

Considerations for No-Go

- Principal users are “non-committal” – seemingly have other priorities
- Transport policy environment is not yet ready
- Requires combined alignment of high-productivity, low costs and VAL services
- Key question:
 - Stakeholders need to determine by means of a comparative analysis whether available funds could generate even more incremental public benefits via other initiatives.

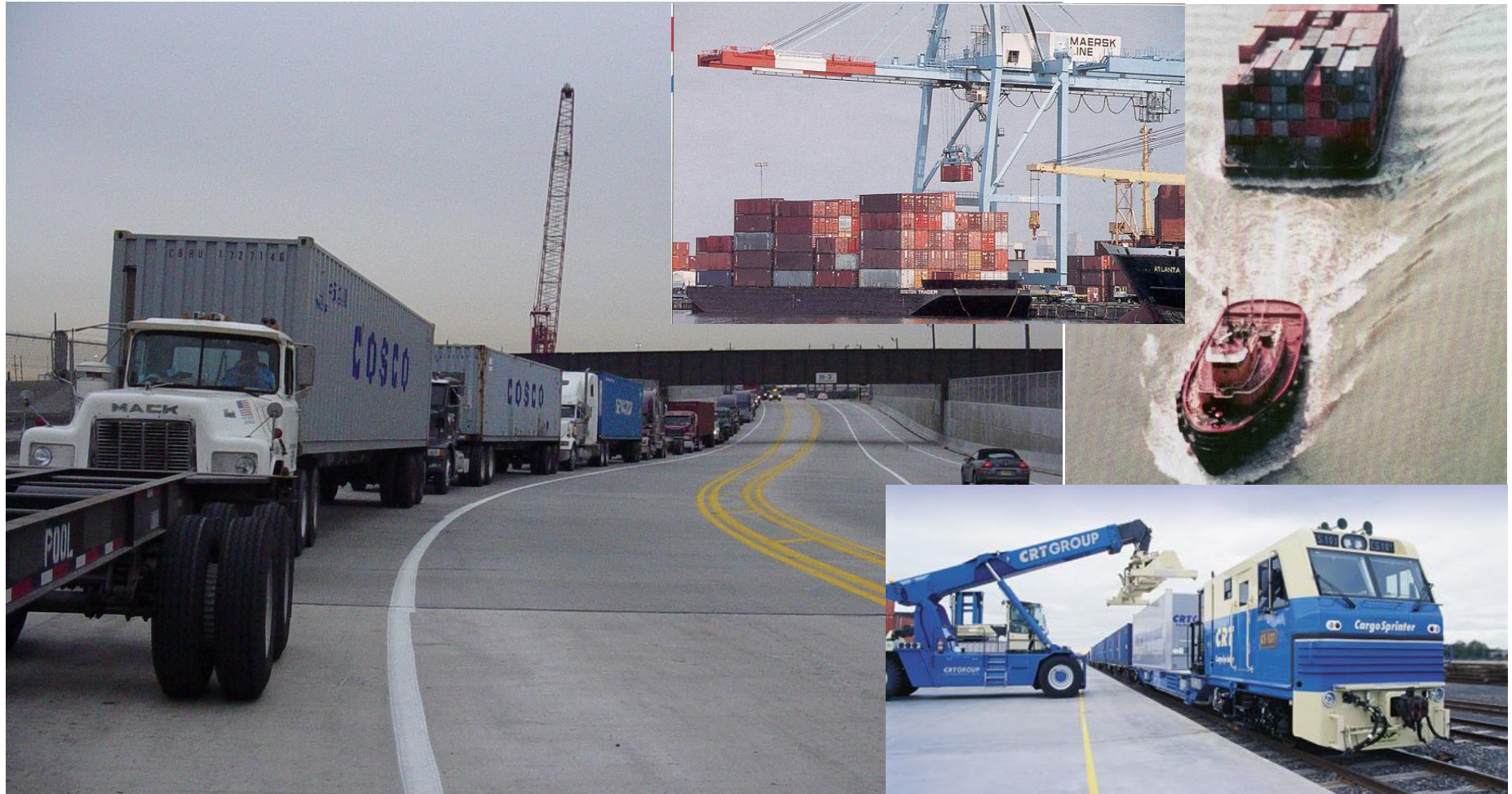
Considerations for Go

- B/C Ratio > 1 = Good Public Policy
- Regional congestion relief w/out local impacts
- Creates regional multi-modal competition
- Builds upon existing SJ economic and residential base
- Has potential to attract new SJ investment
- Enhances SJ economic development and job generation initiated by other programs
 - NJEDA's focus on warehouse / distribution / port Initiatives and potential identification of a revenue allocation district
 - Southern NJ waterfront master plan (DRPA)
 - City of Camden's master plan
 - Camden's ERB renaissance initiative
- Enables multi-agency buy-in in NJ / PA / DE
- Enhances regional redundancy

If Go – Target Issues

- Institutional issues to be integrated are:
 - Adopt uniform ILA and terminal handling ‘PIDN’ provisions
 - Plan terminal operations with flexibility to assure negotiated ‘PIDN’ lift rates are maintained
 - Necessity of VAL to cover shortfalls
 - Disincentives to reduce truck traffic
 - Pursue short-haul rail opportunity as more northern NJ facilities come online
 - Modify NYSA’s tonnage assessment process and / or terminal lease provisions

Delaware Valley Goods Movement Task Force SJ-PIDN: Good Public Policy



Congestion Mitigation

Economic Development

Efficiency/Flexibility