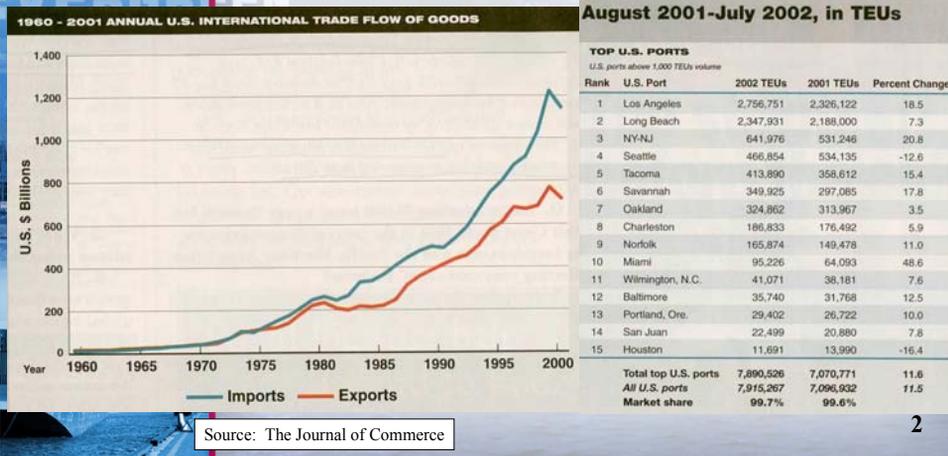




Final Report - Title Page



- **WHY** is a Port Inland Distribution Network Under Consideration?
 1. Sources of container growth include increased market demand and ...



The volume of international containerized trade has steadily increased since its introduction in the early 1960s.

Significant growth in container volumes through the Port of New York and New Jersey has followed a similar trend and is due to a number of economic factors including the growth of global trade and a shifting of trade lanes from transpacific routes to routes utilizing the Suez Canal, Mediterranean Sea and the Atlantic Ocean.

Delaware Valley Regional Planning Commission

New Jersey Department of Transportation Office of Maritime Resources

- WHY** is a Port Inland Distribution Network Under Consideration?
 - Sources of container growth include increased market demand and
 - A shift of China and SE Asia trade from West Coast Ports to PONYNJ

Source: A Report of the Connecticut Regional Institute for the 21st Century

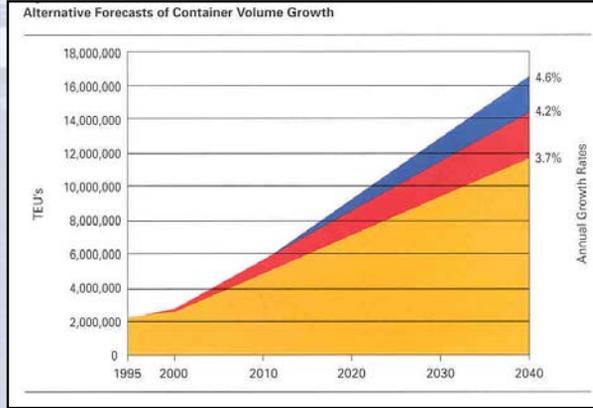
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In addition, a recent article from *The Journal of Commerce*, dated December 16-22, 2002 indicates a continuing trend for U.S. East Coast Ports:

“Shippers, carriers and port executives expect trans-Pacific carriers to add four to six all-water services next year from Asia to the U.S. East Coast. Direct routings to the East Coast have been increasing in recent years, but got a boost from this year’s lockout of longshoremen at West Coast ports...”



Generating an annual volume of 9.4 million TEUs (by 2020), which equates to 15,400 containers per day based on 7 days per week

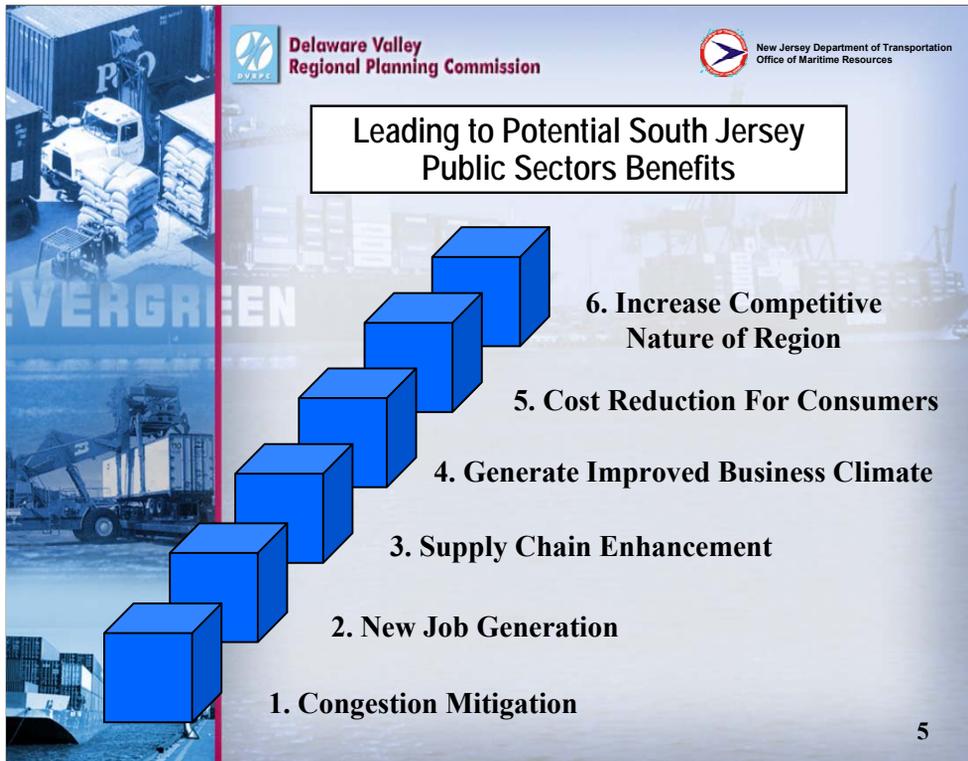


The Port of New York & New Jersey
Container Growth Projections

Source: PANY&NJ – Development & Investment Study

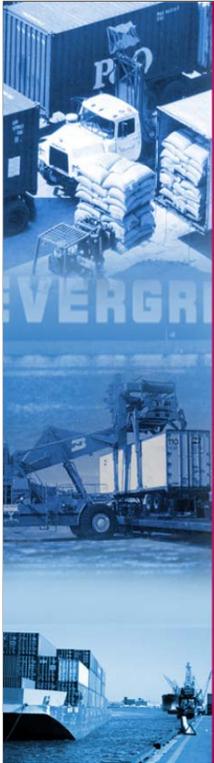
Due to the continuing growth in global trade, plus the restructuring of global trade lanes is prompting the Port of New York and New Jersey (PONYNJ) to plan for significant growth in container volumes throughout the next 20 and 40-year horizons.

Physical infrastructure improvements currently under development for the PONYNJ include numerous terminal improvements and the deepening of access channels from 40' to 45' and 50'.



In addition to providing the potential for congestion mitigation along key elements of the New Jersey Turnpike and other roadways throughout New Jersey, a successful PIDN feeder service could provide the following public sector benefits to South Jersey:

- Improved air quality (I.e. as it relates to reduced vehicle miles traveled by trucks carrying import and export containers),
- New Job Generation
- Supply Chain Enhancement,
- Improved Business Climate (I.e. within the local and regional South Jersey terminal area),
- Cost Reduction For Consumers (I.e. some percentage of transportation cost savings could be forwarded from the shipper on to the consumer),
- Increase in Competitive Nature of Region (I.e. for both business and consumers).



SJ-PIDN Project Objectives

- Evaluate five Southern NJ sites for PIDN potential by three modes:
 - Barge, Rail and Highway
- Recommend site(s) for further consideration
- Investigate commercial viability and public benefits of a proposed feeder service between South Jersey site(s) and the Port of New York and New Jersey

DMJM+HARRIS was retained by the Delaware Valley Regional Planning Commission (DVRPC) to evaluate sites in Southern New Jersey having potential as Port Inland Distribution Network (PIDN) locations. The Inland Distribution Network concept is currently being evaluated due to a combination of events, including changes to global sourcing patterns, continued growth in regional (NJ / PA / NY) demand, the reliance on over-the-road truck haulage for inland transport and increasing congestion along the major interstate and local connector highways.

While overall highway congestion directly related to marine activity is small in comparison to general traffic, as port-related volumes increase, more trucks will be required to serve the port business, thereby adding to the growing congestion on local, and interstate highways. A consensus of experts projects the volume of general cargo moving via container into and out of the United States by ship will grow by 4.0 % annually between 2002 and 2040. At this rate, the Port of New York and New Jersey (PONYNJ) will grow from 2.5 million TEU's (twenty foot equivalent units) to roughly 9.5 million TEU's by 2020, a nearly 4-fold increase.

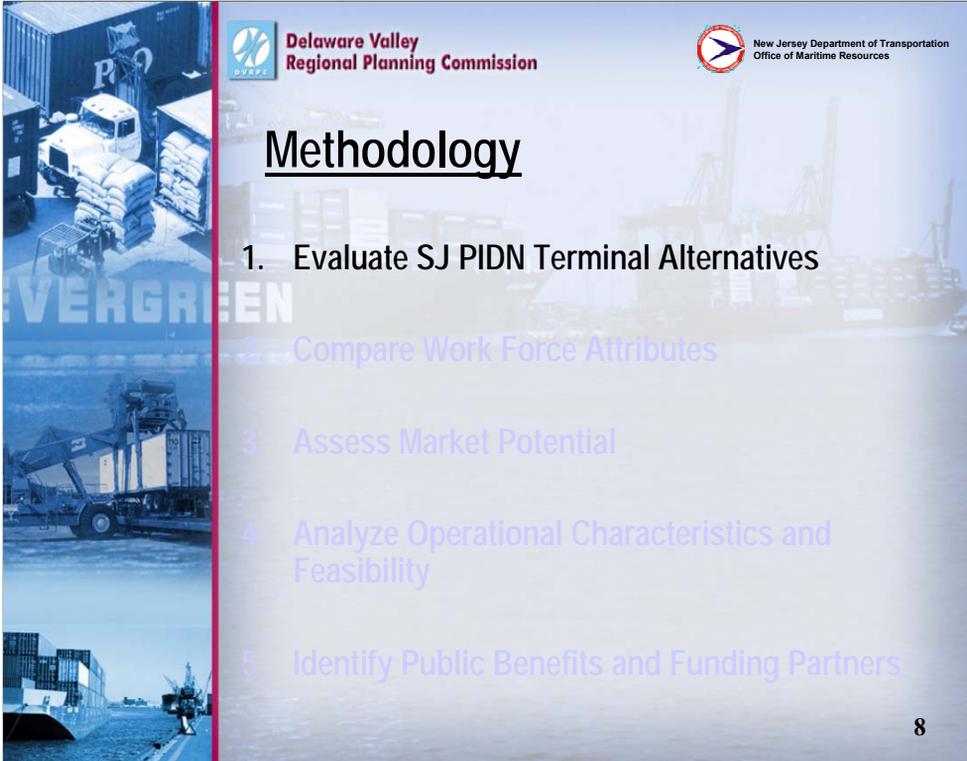
If roadway or highway congestion is left unchecked, it may seriously impact economic growth and regional air quality. PIDN offers the potential to relieve some of the congestion by increasing the modal split of transportation for containers destined to inland locations through the use of a feeder barge or rail service that directly connects the PONYNJ with a South Jersey container facility. In addition, a successful feeder service could act as a catalyst for the creation of economic development opportunities through the combination of industrial, trade, service and logistic programs on a single site, where each business element benefits from the capabilities of the other elements.



Methodology

1. Evaluate SJ PIDN Terminal Alternatives
2. Compare Work Force Attributes
3. Assess Market Potential
4. Analyze Operational Characteristics and Feasibility
5. Identify Public Benefits and Funding Partners

The SJ-PIDN study effort followed a 5-step methodology that commenced with an evaluation of terminal alternatives, reviewed existing labor and market potential, investigated operational characteristics and associated cost structures, established potential public benefits and identified private and public-sector funding partners.



**Delaware Valley
Regional Planning Commission**

New Jersey Department of Transportation
Office of Maritime Resources

Methodology

1. Evaluate SJ PIDN Terminal Alternatives
2. Compare Work Force Attributes
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5. Identify Public Benefits and Funding Partners

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Step 1: Evaluate SJ PIDN Terminal Alternatives, specifically analyzing on-site and off-site characteristics.

Five potential sites, each located along the eastern shore of the Delaware River, were chosen to be analyzed. These five geographically diverse sites were the result of a combined public outreach and brownfield redevelopment initiative conducted by the NJDOT and other state, regional and local agencies.



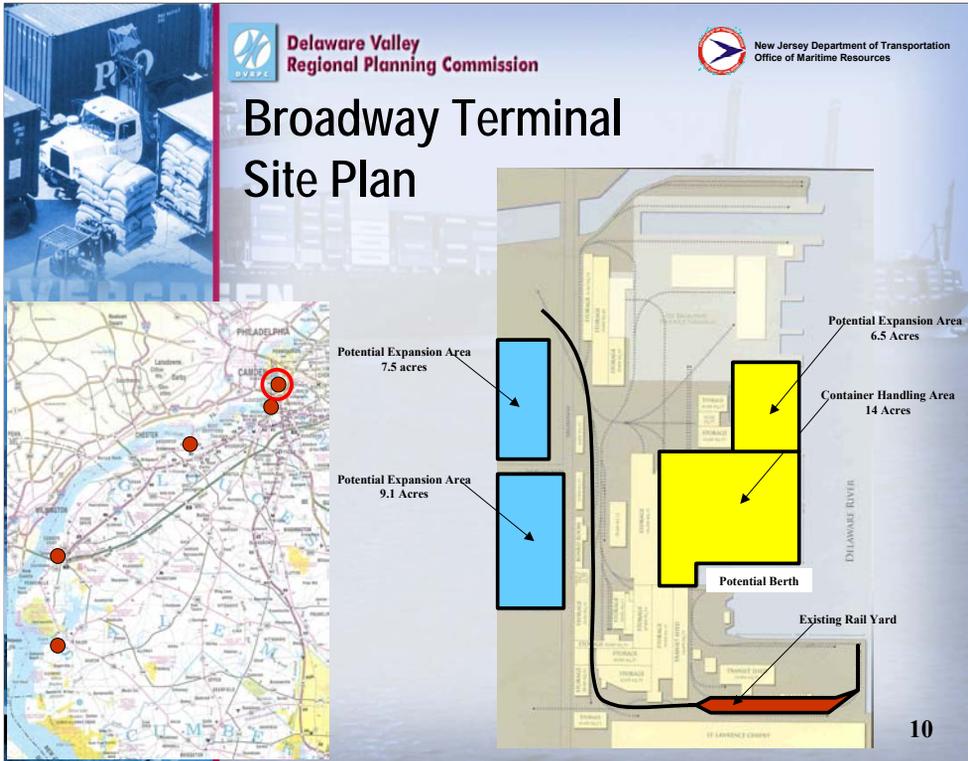
Potential Sites

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

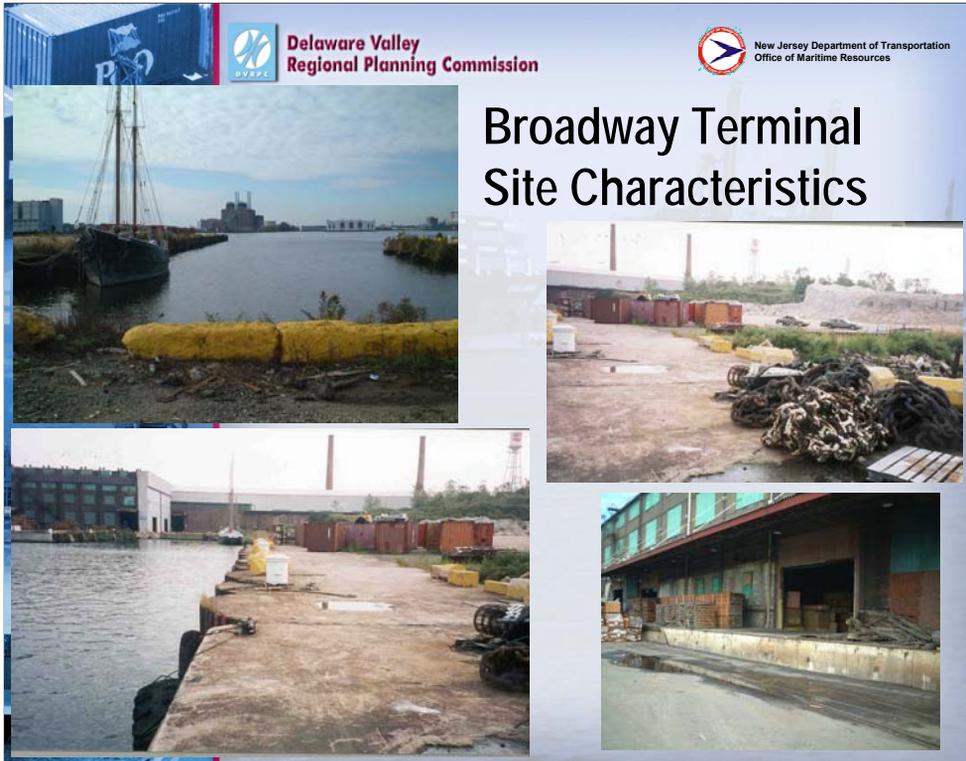


Sites chosen for evaluation include from north to south:

1. Broadway Terminal, Camden
2. Gloucester Point, Gloucester City
3. BP Plant, Paulsboro
4. Dupont Plant, Deepwater
5. Mid Atlantic Shipping and Stevedoring, Salem



Broadway Terminal is owned by the South Jersey Port Corporation (SJPC) – a government entity of the State of New Jersey. As part of SJPC’s redevelopment plan, a parcel of approximately 14 acres has been identified for container handling, with an additional 6.5 acre area immediately adjacent that could be used for potential expansion. The expansion area could include approximately 600 additional feet of berthing space. Two off-site parcels (9.1 and 7.5 acres) are also available for expansion and possibly value added activity. Adjacent to the proposed container yard is roughly 100,000 sf of existing warehouse space, inclusive of existing rail transload and yard facilities.



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Broadway Terminal Site Characteristics

Broadway Terminal is a good candidate for a PIDN facility.

Positive PIDN attributes for the Broadway Terminal include: (1) More than adequate water depth at existing berth (35-ft) and easy access to main channel; (2) Existing facility with security, lighting, labor force, available warehouse space, available maintenance facility and gate; (3) Good access to the interstate highway system that could accommodate local final delivery from container handling area; (4) Acreage available for value added expansion, on-site and immediately off-site; (5) Existing rail yard could accommodate dedicated rail move to PONYNJ; (6) Owner is actively seeking funding for needed improvements including PIDN.

Negative Attributes include: (1) The facility is old and will require some upgrading to accommodate a PIDN operation, including new paving for the container handling facility, upgrading perimeter protection and lighting and improved warehouse / truck loading areas and internal roadway system between container handling area, rail yard and off-site value added areas; (2) Container handling equipment will have to be purchased, e.g. mobile harbor crane and reach stackers; and (3) On-facility truck scales may be required (SJPC currently uses a nearby truck scale) in order to effectively accommodate value-added service capabilities.

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**New Jersey Department of Transportation
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Gloucester City Site Plan

Potential Container Handling Area
10.5 Acres

Potential Berth

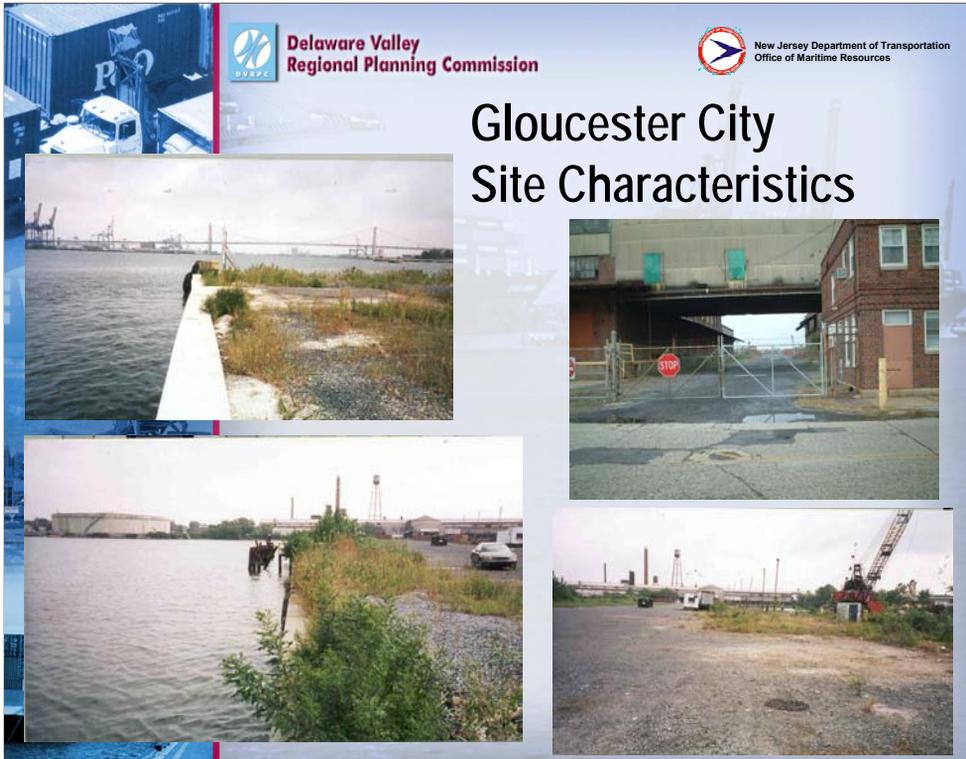
Gloucester Point Potential Marine Terminal
9-Acres

PHILADELPHIA
CAMDEN

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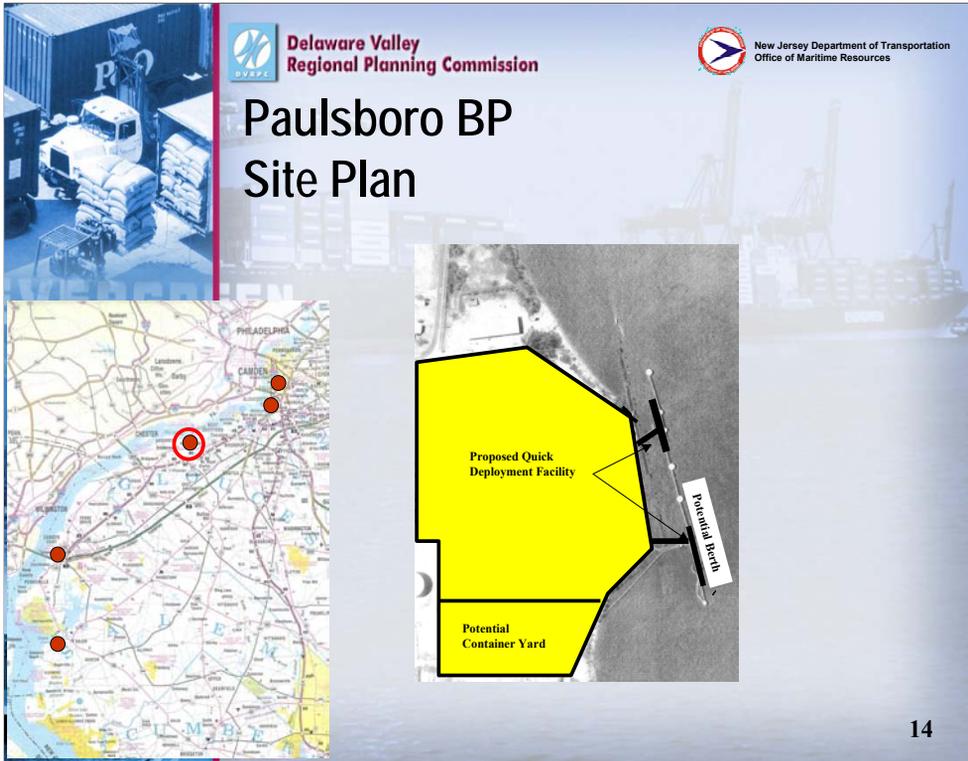
Gloucester City is located to the immediate south of Camden along the Delaware River. Of the potential sites in the Southport Redevelopment Area, identified by the Gloucester City Economic Development Corporation, Gloucester Point provides the most promise as a container barge landing site.

Gloucester Point is owned by a private-sector entity and comprises approximately 9 acres, which could be utilized as a container unloading / loading area for a PIDN operation. The most likely parcel for a container storage yard would be the GAF site across the street from Gloucester Point. The GAF site is also owned by a private-sector corporation.



Gloucester Point and related parcels in the Southport Redevelopment Area, while demonstrating some positive attributes as a PIDN facility, overall shows less promise as a potential PIDN than other sites that were evaluated in the study. The factors leading to the above conclusion include: (1) Gloucester Point pier is over 100 years old, the structural condition of the pier is unknown and the configuration of the pier (e.g. a finger pier, long and narrow), is not optimal for handling containers; (2) The container loading/unloading area on Gloucester Point is physically separated by a mapped street from the potential container storage yard, the former GAF site; (3) There is virtually no existing warehouse space for value added activities and the area is prone to flooding*; (4) A labor force to handle the marine and land side operations would have to be developed; (5) Since no existing marine operation currently exists in the redevelopment area, the costs associated with providing adequate infrastructure and trained labor force would be significantly higher than other sites evaluated with existing marine operations. This includes the costs for container handling equipment, lighting, security, paving, utilities, gates, warehouse space and dredging; (6) Off-site local connector roadway access from Gloucester Point is poor, passing through lower income residential areas, a school, or a designated historical area. Some of the key tenants surveyed by the Florio Group, under contract with the city of Gloucester, with businesses in the area raised the issue of poor local highway connectors to the Interstate system; (7) No on-terminal rail service or usable rail infrastructure within close proximity to the site was identified and (8) Gloucester City is seeking other development opportunities for the Southport Redevelopment Area that may be of more interest to the City and the private property owner relative to producing higher rates of return as well as jobs and income.

* There are serious flooding problems in the redevelopment area, as noted in a 1999 report entitled "Gloucester City Redevelopment Opportunities". This problem would have to be corrected prior to making an investment in a PIDN facility.



The BP Paulsboro facility is approximately 15 miles south of Camden on the Delaware River. The BP Paulsboro site is owned by BP, a private-sector corporation. The 150-acre facility, a former petroleum and chemical storage facility, is no longer operational and is in the process of being dismantled. Thirty tanks have been removed and approximately 60 remain on site in various conditions. All underground piping has been removed and drained of product. The site is undergoing remedial action for ground water contamination. A series of perimeter wells pump ground water to an on-site treatment facility. The perimeter wells were installed to reverse the movement of product off-site to the surrounding neighborhoods. BP is competing to attract a “Quick Deployment” facility to serve the military. The facility would be the permanent home base for 2 or 4 vessels that would be used to move military equipment as needed around the world.

Commission

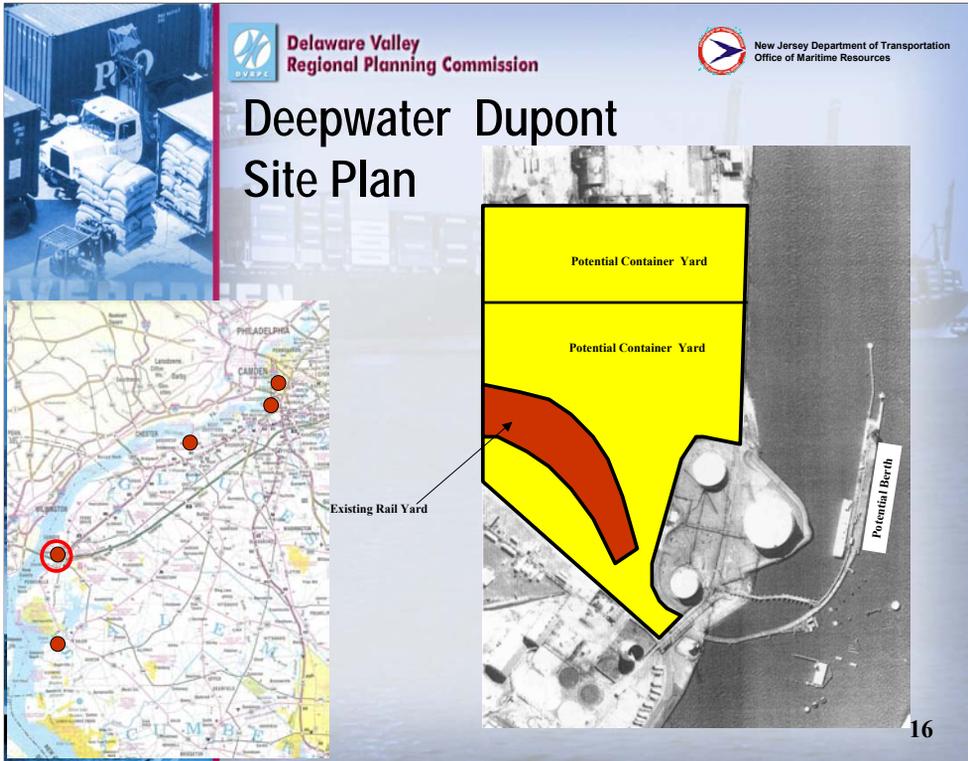
New Jersey Department of Transportation
Office of Maritime Resources

Paulsboro – BP Site Characteristics



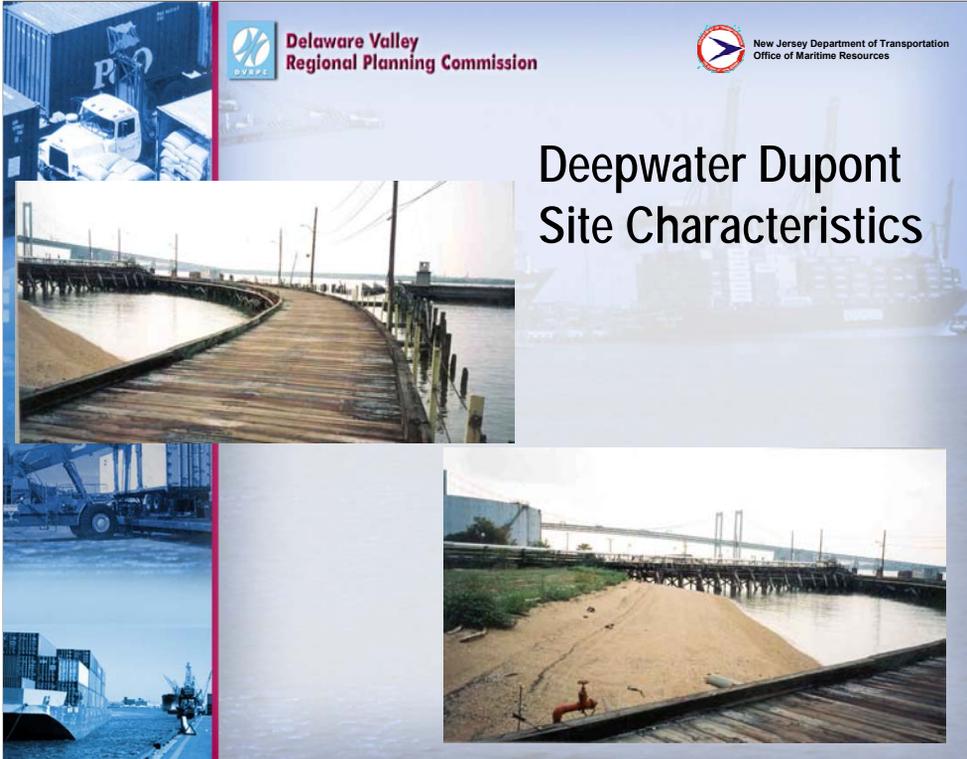
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The BP Paulsboro facility is not well suited for a PIDN site for the following reasons: (1) The site is undergoing significant and long-term environmental remediation. Significant environmental challenges would have to be overcome prior to developing the site as a PIDN facility; (2) A new container loading/unloading structure would have to be constructed at significant cost. The existing trestle piers and the proposed Quick Deployment piers are not designed to handle containers due to their limited width; (3) The area designated as the container storage facility would require grading, paving, utilities, lighting, security, new container handling equipment, a paved access roadway and creation of warehouse space; (4) A labor force to work the PIDN facility would have to be developed; (5) The truck route to the facility from I-295 is narrow (two-lane), circuitous and passes through residential communities; (6) While there is some existing rail infrastructure, it is in poor condition and not in close proximity to the area designated for a container yard and the local CSAO Paulsboro Rail Yard is used primarily as a tank car facility serving local refineries.



Deepwater, owned by the Dupont Corporation – a private-sector corporation, is the home of one of Dupont’s major east coast chemical facilities and is located directly beneath the Delaware Memorial Bridge linking New Jersey to Delaware.

The proposed site for PIDN is located at the southern most point on the facility. The existing trestle pier is designed to load and offload liquid chemicals and an existing operational rail yard is within the designated PIDN area.



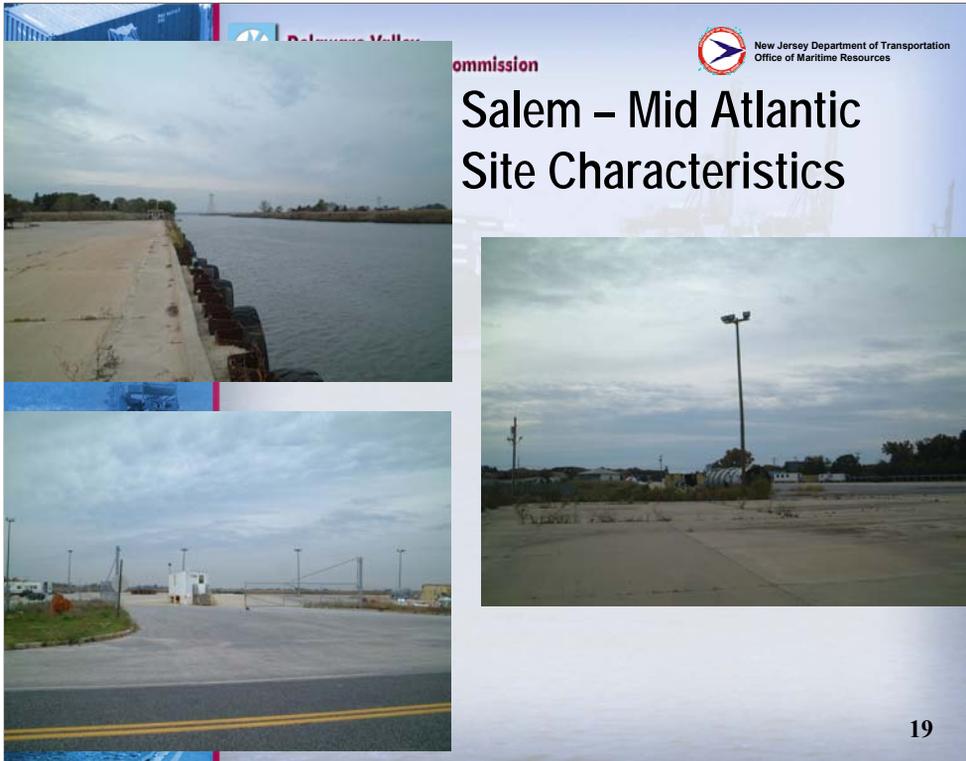
Deepwater Dupont Site Characteristics

The Deepwater facility is not recommended for further consideration as a potential PIDN location for the following reasons: (1) Although the site has excellent access to the interstate highway system, the route from the main gate to the potential PIDN terminal is circuitous and passes through high security areas, therefore the strict security measures related to the Dupont business could create difficulties for an independent PIDN operation; (2) The existing radial timber trestle pier is not suited to handle containers, therefore a new pier would have to be constructed for a container feeder barge facility; (3) The area designated for a container yard would require utilities, paving, lighting, fencing, a truck scale and a gate; (4) No existing warehouse facilities are available for value added activities; (5) Existing above ground piping systems would have to be removed which may lead to significant environmental issues; (6) No local container-related maritime labor force currently exists and (7) Rail is available on-facility but would require significant modification to accommodate containers.



The Salem Mid Atlantic Shipping & Stevedoring facility is located on the Salem River in Salem, NJ. The main facility, located directly to the north of the potential container yard serves the International Bermuda trade. There is a vacant, privately owned 10 acre facility (Tilbury Terminal) adjacent to the main Mid Atlantic facility. The Tilbury Terminal was built in 1994 but never put into service. Salem is 184 nautical miles from the PONYNJ and about five miles from the main Delaware River channel.

Rail service is not available at either of the Salem sites, but is available in the village of Salem



The 10-acre Tilbury Terminal has significant positive attributes that would support a PIDN facility, including: (1) It is the closest facility to the PONYNJ by barge and has good highway access; (2) Water depth at the wharf is approx. 17 ft MLW, channel depth is 16-ft MLW with a 5.5 ft tide range. Existing channel high spots (13-ft MLW) mean that loaded barges may need to “ride the tide”, although the SJPC is leading an effort for the ACOE to perform maintenance dredging in the 2003/2004 timeframe, thereby deepening the entire channel reach to it’s authorized depth of 16-ft MLW; (3) The facility is relatively new and already has many of the necessary infrastructure attributes to operate a PIDN container operation, such as paving, utilities, perimeter fencing, high mast lighting, reefer plugs for refrigerated cargoes and a gate house; (4) Some container handling equipment is available such as a stick crane and reach stackers; (5) Warehouse space is available for cross-dock operations; (6) Land will become available in the near term for expansion of value-added services and (7) SJPC supports the Salem Port Authority, providing maritime experienced labor on an as needed basis, although the Tilbury Terminal is currently owned by a private sector entity that currently utilizes non-union maritime labor.

Site Characteristics Comparison

COMPARISON OF FIVE SOUTH JERSEY POTENTIAL PIDN SITES																	
SITE / CRITERIA	Barge Travel Time to PANYNJ	Berth Water depth	Berth Length	Proximity to Container Yard	Cost to Develop Container Yard	Available Warehouse S.F.	Available Container Handling Equipment	Established Maritime Labor	Local Connector Access Route	Interstate Highway Access	Early Service Commencement	Access to Public Funding	On-Facility Rail Service	Rail Travel Time to PANYNJ	Compatibility with Existing Operation	Further Consideration	
Broadway Terminal	O	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	Y
Salem	+	+	+	+	+	+	+	+	O	+	+	+	O	O	+		Y
Gloucester Point	O	-	+	+	-	-	-	-	-	+	-	-	-	O	O		N
BP Paulsboro	O	+	-	+	-	-	-	-	+	+	-	-	+	O	-		N
Deepwater Dupont	O	+	-	O	-	-	-	-	-	+	-	-	-	O	O		N

Based on the site characteristics identified previously, the above table provides a summary comparison of each potential South Jersey site location. As indicated in the table, the Broadway and Salem facilities are recommended for further consideration regarding the potential feasibility of establishing a viable inland distribution network via the Port of New York and New Jersey.



Methodology

1. Evaluate SJ PIDN Terminal Alternatives

2. Compare Work Force Attributes

3. Assess Market Potential

4. Analyze Operational Characteristics and Feasibility

5. Identify Public Benefits and Funding Partners

Step 2: Compare Work Force Attributes



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New Jersey Department of Transportation
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Regional Work Force

- Labor Force
 - NJ 21-County
 - Average = 199,040
 - Range = 430,004 to 31,492
 - Camden County = 251,306 (8th)
 - Gloucester County = 128,492 (14th)
 - Salem County = 31,097 (21st)
- Employment Level
 - NJ 21-County
 - Average = 185,895
 - Range = 414,326 to 29,665
 - Camden County = 240,890 (7th)
 - Gloucester County = 123,526 (14th)
 - Salem County = 29,665 (21st)

Source: Bureau of Labor Statistics

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As displayed in the regional workforce numbers for labor force and employment levels by NJ County, Camden County has a significantly larger labor pool, in excess of eight-fold, as compared to Salem County. Salem County has the smallest available labor force and associated employment level within the State of New Jersey while Camden County has the 8th and 7th largest labor force and employment level respectively.

In comparison, Camden County's labor force and employment levels are between 25 to 30% greater than New Jersey's 21-County average whereas Salem County's levels are 16% of the NJ average.

According to the U.S. Census Bureau's 2000 County Business Patterns data, the top 3 industries within each County (i.e. Camden, Gloucester and Salem) in terms of number of employees:

Camden – (1) Health Care and Social Assistance, (2) Retail Trade and (3) Manufacturing.

Gloucester – (1) Retail Trade, (2) Manufacturing and (3) Health Care and Social Assistance.

Salem – (1) Retail Trade, (2) Manufacturing and (3) tie between Utilities and Accommodation & Food Services.



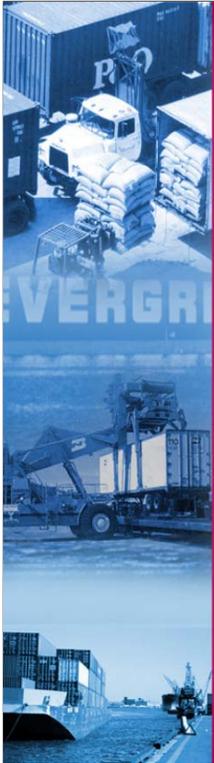
Regional Workforce

- Unemployment
 - NJ 21-County
 - Average = 8,364
 - Range = 19,535 to 1,432
 - Camden County = 10,416 (8th)
 - Gloucester County = 4,966 (14th)
 - Salem County = 1,432 (21st)
- Unemployment Rate
 - NJ 21-County
 - Average = 4.4%
 - Range = 8.2% to 2.1%
 - Camden County = 4.1% (9th)
 - Gloucester County = 3.9% (11th)
 - Salem County = 4.6% (7st)

Source: Bureau of Labor Statistics

The unemployment levels for each of the Counties are comparable to the labor force and employment numbers previously presented, however the unemployment rate for Salem County is the 7th largest in NJ and slightly exceeds the state's average.

In contrast, Camden County has the 9th highest unemployment rate, but it's rate is less than NJ's 21-County rate.



Site Specific Existing Work Force

- **Broadway Terminal (SJPC)**
 - Local 18, International Federation of Professional and Technical Engineers (IFPTE): AFL-CIO & CLC
 - Current Agreement: Dec. 1, 2000 through Nov. 30, 2005
 - ILA Local 1291
- **Salem (2 Facilities: SJPC & Mid-Atlantic)**
 - SJPC / Salem Port Authority (Salem Port Workers Association)
 - No Affiliation with a National Union Organization
 - Mid Atlantic Terminal
 - Company Employees

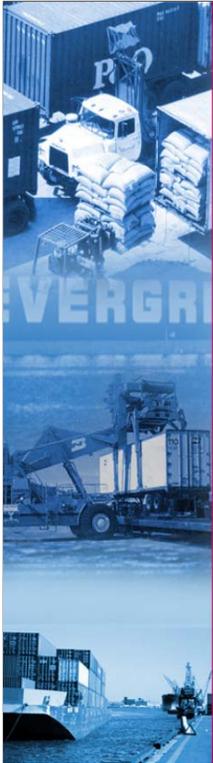
Labor (Union / Non-union issues must be addressed prior to the commencement of PIDN container barge feeder service.) 24

Broadway and Mid Atlantic Terminals are both existing terminals that handle maritime-related cargoes. Broadway Terminal is an union operation that currently handles bulk and break bulk commodities whereas Mid Atlantic Terminal is a non-union operation that currently services containerized cargo.

While there are differences between the handling requirements for bulk, break bulk and containerized cargoes, such as gang size, equipment needs, productivity rates and storage plans, the goals of minimizing cost while maximizing efficiency remain constant. To this end, each unit of cargo needs to be handled a minimum number of times while each piece of equipment needs to move as much cargo as possible during a unit of time. Two examples are (1) the number of container picks per crane per hour (to/from barge to land) and (2) the number of turns (truck deliveries from terminal to shipper and back to terminal) per day per truck driver.

Maritime related container operations in the Port of New York and New Jersey, as well as along the Eastern Atlantic seaboard are predominantly performed by union labor forces. These services are conducted in accordance with a Master Agreement that is executed between the ILA and numerous terminal operators as well as local agreements between specific ILA union halls and terminal operators. One condition of these agreements is that signatory carriers agree that if the carrier uses ILA labor in any port, it must use the ILA in other ports where the union is present (for container services only).

Due to readily available and experienced maritime-labor at both Broadway and Salem Terminals, a start-up container feeder service could be commenced at either location. Any potential labor issue that impacts cost or efficiency must be addressed prior to the commencement of feeder barge services.



PIDN Site Comparison

- Based on the on-site, off-site and work force attributes:
 - Broadway Terminal & Salem are recommended for further consideration as SJ-PIDN locations
 - Gloucester Point, BP Paulsboro and Deepwater Dupont are not recommended for further consideration.

As noted in the graphic above, the Broadway and Salem locations are recommended for further consideration as SJ-PIDN facilities based on the analysis of existing on-site, off-site and work force attributes.

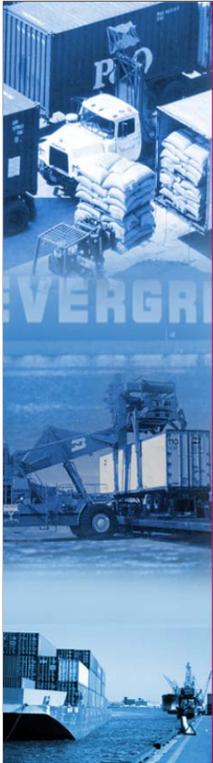
Conversely, Gloucester Point, BP Paulsboro and Deepwater Dupont are not recommended for further consideration for the reasons highlighted in the Site Characteristics Comparison graphic displayed on page 20.



Methodology

1. Evaluate SJ PIDN Terminal Alternatives
2. Compare Work Force Attributes
3. **Assess Market Potential**
4. Analyze Operational Characteristics and Feasibility
5. Identify Public Benefits and Funding Partners

Step 3: Assess Market Potential



Assess Market Potential

- ✓ Trade Forecasts
 - Global, National, Regional and South Jersey
- ✓ Target Market
- ✓ PIDN: South Jersey Forecast

The market assessment commences with a recap of containerized cargo growth forecasts and focuses on a target market and 20-Year, South Jersey PIDN feeder service forecast, which is based on existing TEU distribution patterns as developed by the Port Authority of New York and New Jersey (PANYNJ).



Sources of container growth include increased market demand and a shift of China and SE Asia trade from West-Coast Ports to PONYNJ.

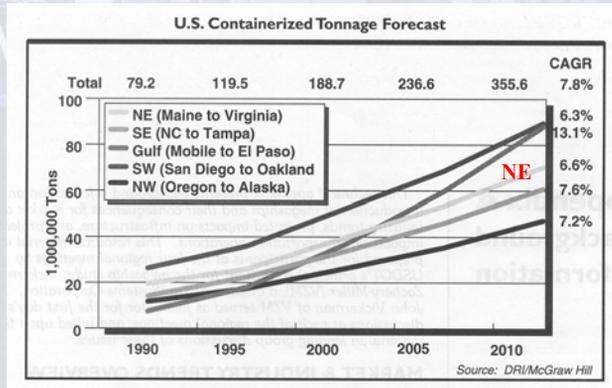


Source: A Report of the Connecticut Regional Institute for the 21st Century

As indicated in the beginning of this document, the significant growth in container volumes through the Port of New York and New Jersey is due to a number of economic factors including the growth of global trade and a shifting of trade lanes from transpacific routes to routes utilizing the Suez Canal, Mediterranean Sea and the Atlantic Ocean.

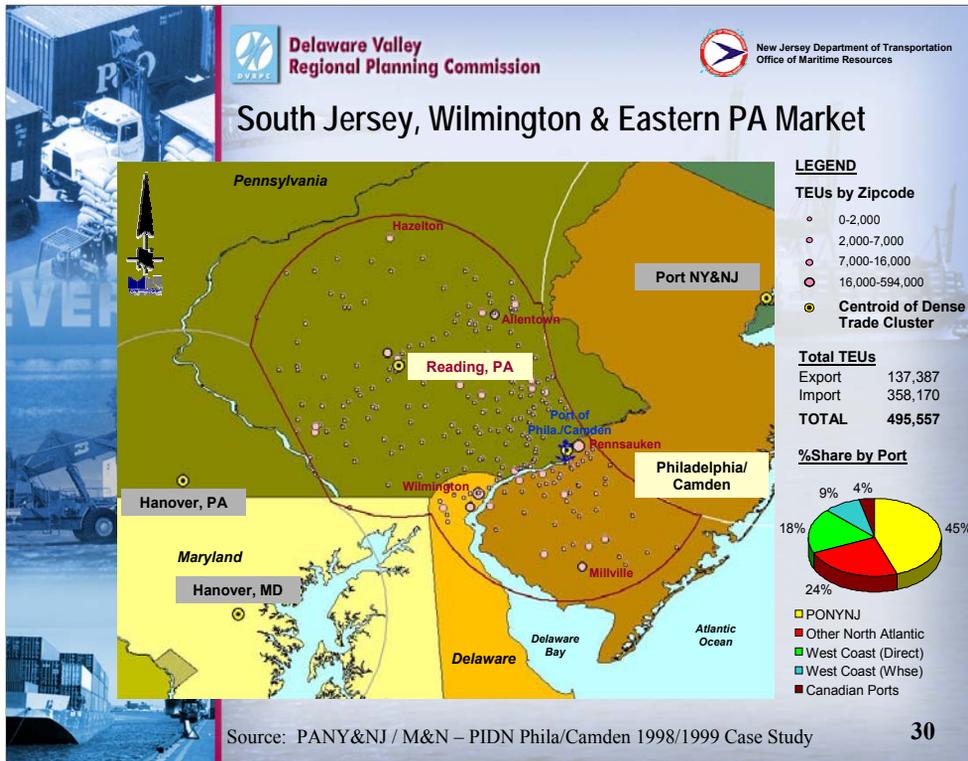


U.S. container trade is forecast to increase in excess of 6-fold from 1997 to 2040; a growth rate of 4.3% annually.



Recent cargo trends include lighter Asian imports that “cube-out” and heavy Australia-New Zealand frozen meats that “weight-out”²⁹

Significant increases in container traffic are forecast for the next 10-years throughout the United States. The containerized tonnage forecast for the Northeast Atlantic is expected to increase at a 6.6% compound annual growth rate (CAGR).



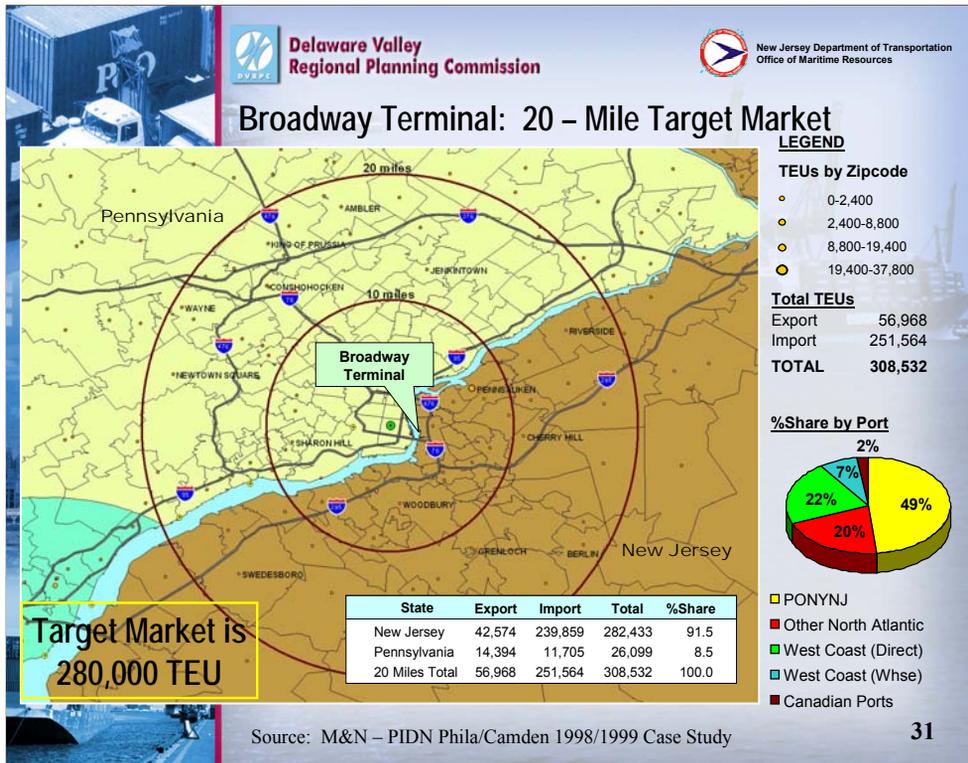
Based on PIDN analyses of origin and destination data for South Jersey and Philadelphia, PA, the geographical distribution of the 1998/1999 dense trade cluster market information for Camden and Philadelphia is depicted above.

As noted in the graphic, this market demand is served by many port facilities on both the Atlantic and Pacific coasts. Currently, the Port of New York and New Jersey handles approximately 45% of the Camden/Philadelphia total throughput followed by other North Atlantic ports, which facilitate roughly 24% of the market. The remaining market share is provided by West Coast and Canadian ports.

In 1998/1999, the top 5 import countries and their respective market shares were: China (12.6%), Central America / Caribbean (6.0%), UK / Ireland (5.9%), Hong Kong (5.5%) and Germany (4.9%).

In 1998/1999 the top 5 shipping lines and their respective market shares were: Maersk Sealand (10.9%), Evergreen (8.2%), Yang Ming (5.4%), China Shipping (4.4%) and P&O Nedlloyd (4.1%).

A variety of significant importers included Ames Department Stores, Owens Corning Fiberglass, Ikea, Panalpina and Atlantic Cocoa while significant exporters included EI Dupont, Becton Dickenson and several 3rd party forwarders or logistics providers.

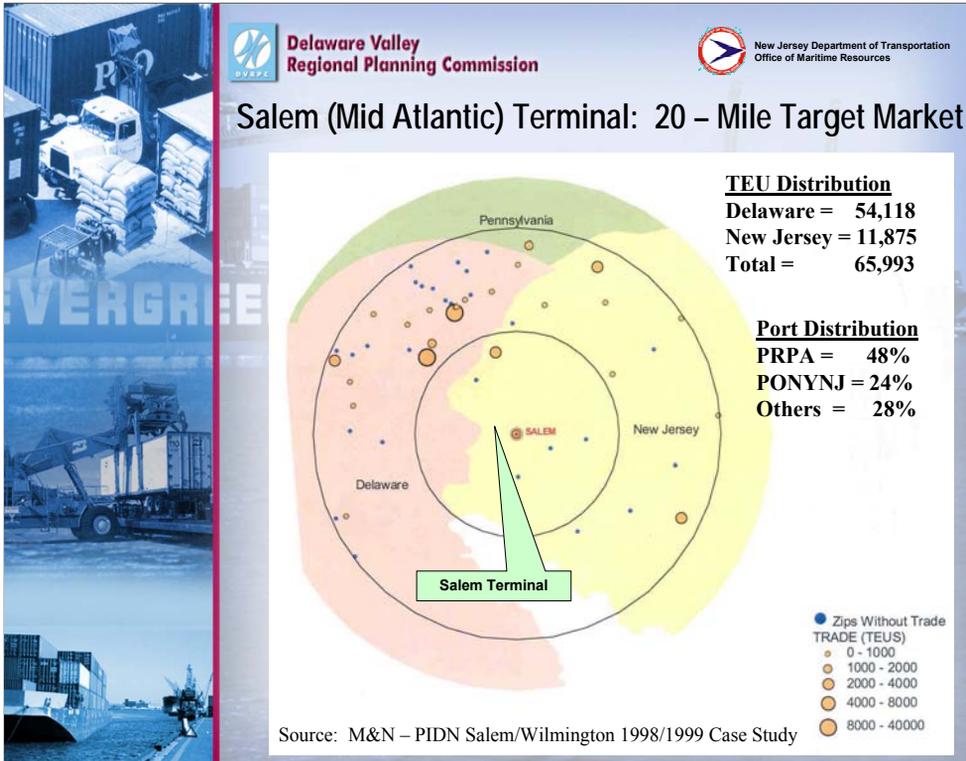


Based on the origin / destination data derived in the PANYNJ's - PIDN analyses, it was determined that in 1998/99, the overall market for the Southeastern Pennsylvania and South Jersey region represented nearly half a million TEUs (358,200 TEU – Imports and 137,400 TEU Exports). For the purposes of the SJ - PIDN analysis, the potential market is considered to be located within a 20-mile radius of a designated PIDN node.

As depicted in the attached figure, the overall 20-mile market for a Broadway Terminal based PIDN – South Jersey location, constitutes nearly 308,500 TEUs. A 20-mile roundtrip distance is assumed in order to minimize final over-the-road drayage operations, thereby maximizing trucker turn times and minimizing per TEU drayage costs.

In addition, due to the location of the Broadway PIDN node, it is considered unlikely that significant cargo volumes destined to Pennsylvania would be captured by a barge service since the incremental cost of tolls for using the Walt Whitman Bridge or other “cross-Delaware bridge”, combined with time impacts associated with possible congestion, could generate an uncompetitive total cost as compared to over-the-road haulage from the Port of New York & New Jersey.

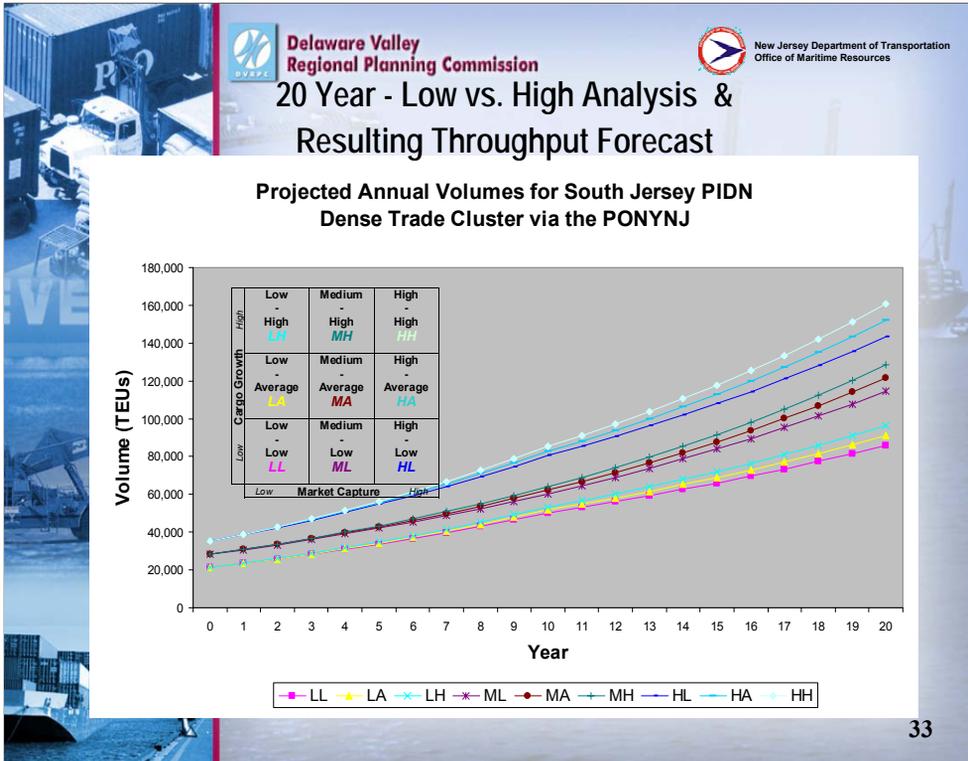
Based on the above, the target market for a feeder container service between the Port of New York & New Jersey and a PIDN node located @ Broadway Terminal is estimated to be approximately 282,400 TEUs.



In a similar fashion, the geographical distribution on containerized freight within a 20-mile radius of the Salem Terminal is presented. According to the 1998 / 1999 dense trade cluster data, nearly 12,000 TEU are destined to a region within 20 miles of the Salem Terminal.

Based on this analysis, the 20-mile Salem Terminal market is less than 5% of the Broadway Market. Due to the significant decrease in Salem’s potential 20-mile market demand (as compared to Broadway), it is the consultant’s recommendation that a Salem based PIDN location be considered as a secondary alternative or potential “add on service offering” to a successful Broadway based PIDN – South Jersey operation.

Specifically, the current lack of market demand for containerized freight within close proximity to the Salem Terminal will require longer final over-the-road drayage distances (to the north where population densities and current industries exist), thereby negatively impacting the cost effectiveness of a Salem-only based PIDN feeder service.



Due to the geographical distribution of the SJ-PIDN data previously presented, a market capture rate that ranges from a low of 15% to a high of 25% was analyzed over a period from initial start-up through a 20-year feeder service development program. Based on the range of market capture rates, the projected annual volumes for a Broadway based PIDN facility are presented above. These projections are based on a start-up or year 1 throughput volume of 28,000 TEU and include corresponding “LOW”, “AVERAGE” and “HIGH” forecasts for subsequent years.

Applying the increased capture rates, it is anticipated that this volume could increase to nearly 40,000 TEUs, or approximately 25,000 boxes, by the end of the fifth year and that it could further increase to nearly 60,000 TEUs, or approximately 35,000 boxes, by the end of the tenth year.

The “Low” growth forecast is based on annual throughput increases of 3.6% annually, whereas the “High” growth forecast is based on annual increases of 4.2%. The “Low” market capture forecast commences at a 15% capture rate for the 1st year of service and increases at a 1% capture rate per annum (i.e. 16% in year 0+1, 17% in year 0+2 etc.) for the first 10 years and reduces down to a 0.5% increase per year for years 10 through 20. The “High” market growth forecast commences at a 25% capture rate for the 1st year of service and increases at a 1.5% capture rate per annum for the first 10 years and reduces down to a 1.0% increase per year for years 10 through 20.

The projected growth rates are comparable to the Port Authority of New York and New Jersey’s long term forecast for the overall PIDN program.



Broadway Terminal: Feeder Service Volume

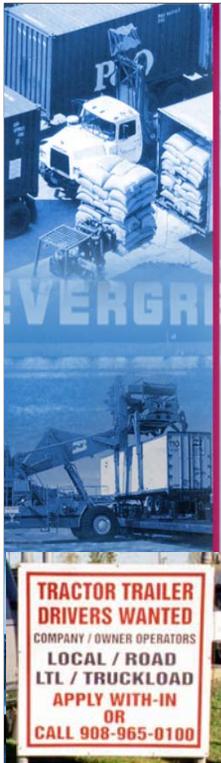


- 280,000 TEU is target market
- Nearly 50% via PONYNJ or 140,000 TEU is short-term market.
- 20% capture rate or 28,000 TEU (16,500 boxes) for 1st year service is considered feasible.
 - > Weekly service = 320 boxes (160 each way)
 - > Market share rate = 25% of 10-mile market via PONYNJ.
- PANYNJ long term forecast suggests that up to 40 – 45% of all cargo moving through the PONYNJ could be via the PIDN program

Based on the geographical distribution of the 20-mile market and defined capture rates, a target market of 280,000 TEU was established. Since nearly 50% of this market moves via the Port of New York and New Jersey, a total SJ-PIDN Year 1 “Start-Up” volume of 140,000 TEU through the Broadway Terminal – is available.

Based on a medium capture rate (20%) of containers currently moving through the Port of New York and New Jersey (PONYNJ), it is estimated that a start-up volume of 28,000 TEUs annually, or approximately 16,500 boxes is feasible.

From a qualitative standpoint, the start-up service volume is predicated on handling one out of every four import containers that currently move via truck from the PONYNJ to a destination within a 10-mile radius of the Broadway Terminal.



- Is a 20% “Start-Up” share too high.....NO!
- Elements that encourage diversion from trucks to feeder service include:
 - ✓ Delays and unreliability due by increasing roadway congestion.
 - ✓ Increasing marine terminal gate “queuing” and container handling surges due to “mega” vessels.
 - Lowenthal Bill - \$250 fine > 30 minutes in line
 - ✓ Shortage of qualified and interested long-haul truckers.
 - ✓ Leasing companies expansion into regional or national equipment pools.
 - ✓ Empty container repositioning requirements.
 - ✓ Carriers emphasizing global coverage & value-added logistics services with higher profit margins.
- Feeder service must be cost effective (as compared to truck movements), reliable and provide quality service. 35

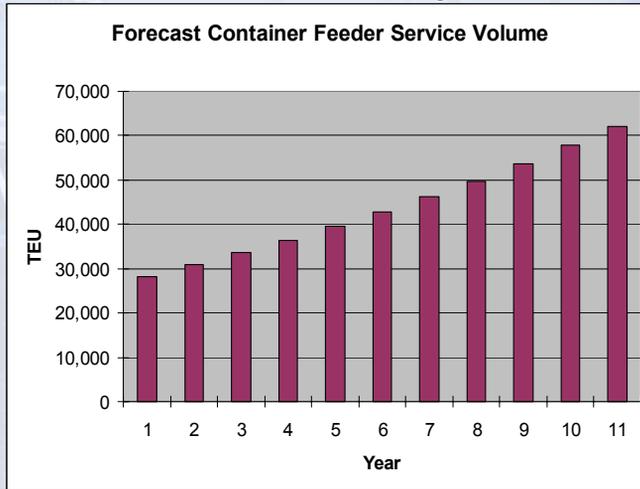
Each of the elements listed above encourage the diversion of over-the-road truck drayage to a cost-effective and reliable container feeder service. The majority of elements relate to events that are negatively impacting the private-sector’s efficient service operation, thereby increasing the service’s cost structure as well as negatively impacting environmental considerations (i.e. clean air).

A significant and recent public-sector legislative initiative relates to the Lowenthal Bill, which became effective January 1, 2003 in California. The Lowenthal Bill includes a number of “roadability” issues including the following: (1) marine terminals are required to certify the safety of their intermodal chassis, (2) marine terminals may be assessed responsibility for fines that truckers receive for operating defective chassis and (3) marine terminals may be assessed a fine for each truck that is required to wait in a gate queue for more than 30 minutes.

Many industry pundits are predicting that similar legislative efforts will develop along the eastern U.S. seaboard.



PIDN – South Jersey



Start-Up=28,000 TEU and 10-Year=60,000 TEU

Predicated on changing global trade lanes and shipping patterns, forecasts for increasing container demand throughout the U.S. and the Port of New York and New Jersey (PONYNJ), the current distribution systems for containerized freight in southern New Jersey and the operational considerations discussed on the previous slide, the forecast for a South Jersey based - Broadway Terminal – PIDN container feeder service is presented above.

A feeder service start-up volume of 28,000 TEU is projected, increasing to nearly 60,000 TEU within the first 10 years.



Methodology

1. Evaluate SJ PIDN Terminal Alternatives
2. Compare Work Force Attributes
3. Assess Market Potential
4. Analyze Operational Characteristics and Feasibility
5. Identify Public Benefits and Funding Partners

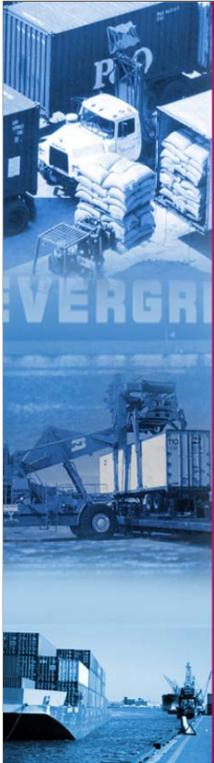
Step 4: Analyze Operational Characteristics and Feasibility



Operational Characteristics and Feasibility

- Travel Time & Distance
- Handling System & Equipment
- Cost Comparisons

Three key operating characteristics (i.e. distance, time and handling system) will be reviewed and associated cost elements identified and contrasted.



Travel Time & Distance (by Mode)

One Way Distances & Travel Times Between Potential PIDN Sites and PONYNJ						
From/To	PANYNJ					
	Nautical Miles	Travel Time *	Rail Miles	Travel Time **	Road Miles	Travel Time ***
Broadway Terminal	234	29 hrs	105	10-14 hrs	82	1.6 hrs
Gloucester City	231	29 hrs	107	10-15 hrs	84	1.7 hrs
BP Paulsboro	224	28 hrs	118	12-16 hrs	95	1.9 hrs
Deepwater Dupont	208	26 hrs	133	13-17 hrs	102	2.0 hrs
Salem	184	23 hrs	145	15-19 hrs	113	2.3 hrs

* Average Speed 8 Knots/Hr
 ** Estimates provided by CSX and NS
 *** Average speed 50 mph

- Highway Distance – 82 miles
- Rail Distance – 105 miles
- Nautical Distance – 235 miles

One of the most significant impediments for a successful SJ-PIDN operation via the Broadway Terminal centers on travel time between the facility and the PONYNJ, both for barge or by rail.

Barge:

A potential barge service from Broadway Terminal and the PONYNJ would make the approximately 234 nautical mile trip in 23-29 hrs at an average speed of 8 to 10 knots/hour. A full round trip cycle would take three days which would include loading/unloading and mooring since tugs and barges are hired on a charter basis (e.g. 24 hour per diem.) While Broadway Terminal is the furthest from PONYNJ compared to Gloucester, Paulsboro, Deepwater and Salem, there is no significant difference in overall time for a full cycle. All sites, with possibly Salem as the exception, would require a three day cycle and it follows that none of the sites enjoys an advantage for the water route.

Rail:

The approximately 105-mile rail route between Camden and the PONYNJ is circuitous and unpredictable, making it difficult to attain a scheduled service between Pavonia Yard, Camden’s major classification yard and the PONYNJ. The route is not cleared for double stack service, shares ROW with passenger service (SEPTA), and is for the most part single track, with numerous at-grade crossings. CSX estimates round trip travel time between Pavonia Yard and PONYNJ in excess of 12 hours, requiring a second crew to complete the trip and adding to the cost. All of the other sites are further from Pavonia Yard and will require more time, giving an edge to Broadway Terminal, if a predictable, economically competitive service can be established.

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Feeder Barge Operating System - Barge Alternatives

LO/LO

RO/RO

General Arrangement

Bay 6 Bay 5 Bay 4 Bay 3 Bay 2 Bay 1

Wharf, Lift Capacity & Chassis

Pier, Access Ramp & Chassis

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The multiple level, LO/LO system is displayed on the left while a single and double-decker RO/RO system, is displayed on the right.

In order to accommodate the 320 container per week service volume requirement (160 containers southbound and 160 northbound), a LOLO barge operation (carrying 160 containers) would need only one sailing per week in each direction whereas a RORO barge operation would require three sailings per week (carrying 65 containers per voyage). Since the roundtrip transport time requires approximately 2 to 3 days per one-way trip, the RO/RO service would need to operate 24 hours per day, 7 days per week to accommodate the start-up service volume.

Based on the time constraint identified above and combined with the fact that no containerized RO/RO operation is currently in use within the North Atlantic and no infrastructure (i.e. access ramps) currently exists in the various marine terminals within the Port of New York / New Jersey to accommodate a RO/RO operation, the RO/RO alternative has been removed from further consideration.



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LO/LO Feeder Barge Operating Program

- 1 - Loading / unloading wharf or pier structure + yard
- 2 - Mobile harbor crane or similar lifting equipment
- 3 - Yard tractor and chassis
- 4 - Reach stacker or similar container handling equipment

The LO/LO feeder barge unloading process is outlined above.

The equipment requirements include some form of crane capacity, such as a mobile harbor crane (MHC). Mobile harbor cranes are often preferred due to their effective handling capability for containers plus the versatility to handle other commodities such as break bulk items (lumber, paper and other palletized products) and bulk items via interchangeable grab (i.e. bucket) attachments.

Yard equipment includes, but is not limited to yard tractors, bomb carts, reach stackers, top-picks and other types of similar container equipment.

Yard tractors and bomb carts are used to transport containers from the wharf into the container yard or field (and vice versa). This operation can also be performed through the use of highway tractors and over-the-road chassis. The bomb cart simplifies the handling process due to the guide-rails that run along each side of a chassis. A reach stacker or top-pick is used to off-load the bomb cart or chassis and place - or stack - the container in the appropriate yard location.

In general, the loading process follows the same sequence, but in the opposite direction (i.e. item 4, 3, 2 and 1).



Conceptual Operating Characteristics PIDN @ Broadway

- Start-up Service (16,500 containers in year 1)
 - Once weekly drop & pick service (160 boxes each way)
 - Barge (300' x 72' x 18') = 440 TEU capacity
 - 2 barges leased for one year (68% utilization factor)
 - Total roundtrip sailing time = **3** days
 - Average sailing speed = 8 knots
 - Crane productivity @ Broadway = 15 lifts/hour
 - Mobile harbor or stick crane available to operator
 - Union (tbc) Container Handling Operation
 - Restacker handling equipment available to operator
 - Primarily a container on chassis "wheeled" operation
 - Chassis provided to operator or PIDN "pool" established
 - Local drayage averages **10** miles one-way

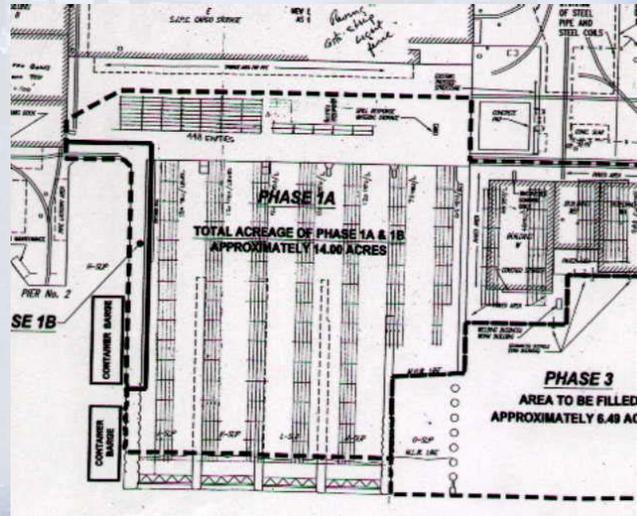
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The PIDN – Broadway Operating Program includes the above listed assumptions. Due to the extensive sailing time, a drop and pick operation is recommended. The drop and pick method requires that a 2nd barge be utilized, but it enables the highest cost element to provide continuous service. Specifically, once the southbound barge is delivered, the 2nd barge, which is previously loaded, is coupled to the tug and commences the northbound voyage. Otherwise, the tug would need to "stand-by" while barge 1 is unloaded and re-loaded.

The Broadway Operation envisions utilizing Local 1291 to work the barge / land interface for loading and unloading the container to or from the barge whereas Local 18 will work the landside container handling requirements. This container handling assumption will need to be formally established through an agreement between the appropriate stakeholders.



Conceptual Terminal Configuration @ Broadway



A conceptual layout for a “grounded” container operation for the Broadway Terminal. This layout incorporates separate handling areas for loaded, empty and reefer containers.

As currently configured, the site area consists of approximately 14 acres. For operational efficiency, the following infrastructure improvements need to be considered: wharf fendering, bollards, a new pavement system (sub-base, base coarse and a finish surface, complete with marking and associated drainage system), high-mast lighting, reefer stations, a secure perimeter (fence) and fire protection. A 14-acre infrastructure construction budget for the identified improvements would be approximately \$10 million. The majority of the cost is attributable to the new pavement system, therefore the infrastructure budget could be reduced by approximately \$4 million if the yard was to remain gravel in lieu of finished pavement during the initial feeder service years.

Based on a single level of container placement, excluding empty storage (3 or 4-high), the layout displayed above has a capacity of approximately 735 containers, which is greater than twice the weekly start-up volume.




Conceptual Annual Operating Cost Comparison – Barge vs. Road

	Road	Broadway Terminal			Broadway Terminal		
		Year 1	Year 5	Year 15	Year 1	Year 5	Year 15
Annual Container Throughput (TEU)		28,250	40,000	80,000	28,250	40,000	80,000
PONY/NJ Assessments	\$ 175	\$ 70	\$ 70	\$ 70	\$ 70	\$ 70	\$ 70
PONY/NJ Terminal Drayage	\$ 50						
Inland Transportation	\$ 330						
Inland Transport* (Tug & Barge)		\$ 119	\$ 86	\$ 84	\$ 88	\$ 63	\$ 62
Terminal Handling		\$ 395	\$ 395	\$ 395	\$ 395	\$ 395	\$ 395
Local Drayage (To & From Shipper)		\$ 70	\$ 70	\$ 70	\$ 70	\$ 70	\$ 70
Total Cost Per Standard Container	\$ 555	\$ 654	\$ 621	\$ 619	\$ 623	\$ 598	\$ 597

Harbor maintenance tax, container handling equipment (i.e. crane capacity, reach stackers, yard hostlers, chassis) and wharf or terminal improvements are not included

* - One way pricing

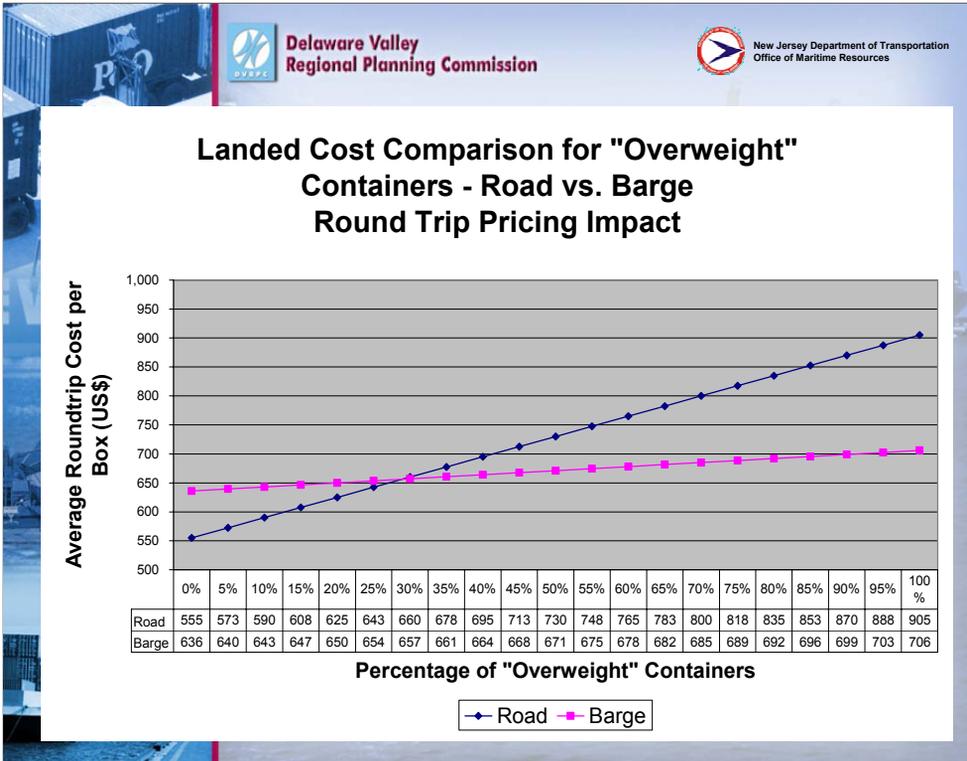
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The cost comparison aims to identify the break-even tariff for barge transportation, between the Port of New York & New Jersey (PONYNJ) and the Broadway Terminal, as it compares to the tariffs levied for road transportation. The main premise of the total cost per container is the final cost incurred to a particular end-user (i.e., for an import container) from a point in time after the container has been discharged from the ocean-going vessel until it is delivered to the end-user.

For over-the-road transportation, it is understood that the total roundtrip cost is \$555.00. In order to compete with road transportation, a barge service should represent no more than the \$555.00 cost to the end-user.

Based on the “Pick-Up and Drop-Off Service” concept, annual operating costs associated with establishing and running the barge service are compared against the over-the-road alternative. As evidenced in the comparative analysis (i.e. middle three columns for the Broadway Terminal), the water route and corresponding distance / time requirements is such that the barge service is not a cost-effective alternative to over-the-road transport.

If the cost of the barge charters are removed from the analysis – and paid for as a capital expense - the cost of the feeder barge operating program is approximately 8% higher than the over-the-road alternative (see three columns on the right).



The previous cost comparisons were based on a one-to-one relationship between containers moving over-the-road and containers moving via barge. According to the PANYNJ, approximately 10 – 15% of existing containers arrive to the Port of New York and New Jersey (PONYNJ) overweight, therefore requiring stripping services prior to moving over Interstate Highways to their final destination.

Utilizing the same “Annual Operating Cost” parameters indicated in the cost comparison, if approximately 30% of the containers destined to the SJ market in year 1 were overweight, a roundtrip barge service would provide an equivalent landed cost as the over-the-road transport alternative. In future years, (i.e. years 2-15+) as the cost efficiencies of barge transport are derived due to improved utilization ratios – evidenced by the declining total cost per standard container – the roundtrip barge service becomes cost equivalent to over-the-road transport.



Feeder Barge Operating System - Rail Alternative (RailRunner)



- RailRunner: A new car-less intermodal technology requires:
- Modified container chassis
 - Rail bogie that connects chassis
 - Transition unit – connects RailRunner consist to locomotive

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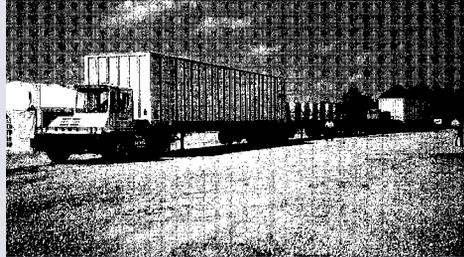
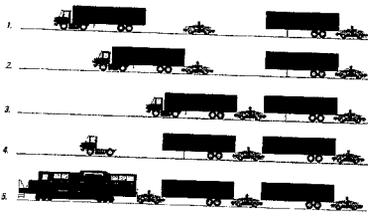
A rail operating program utilizing new “RailRunner” technology is provided for comparative purposes.

Information provided from the private-sector company - RailRunner, a new technology for container shipping.

Additional details can be provided if deemed necessary.



Building A RailRunner Train



RailRunner consists can be pulled behind regular freight or in a dedicated train of up to 100 containers

The benefits of a potential RailRunner Train is the utilization of existing infrastructure (i.e. existing mainline freight route between North Jersey, Philadelphia and South Jersey & existing rail yards in Port Newark and South Jersey) and new technology associated with the rail bogie, container chassis and a transition unit.

A schematic diagram regarding how to build a RailRunner Train is depicted above.



Operating Cost Comparison

Description	Road	RailRunner
Maritime assessments	\$175	\$175
Local drayage plus lift rate for train make-up	\$25	\$55
Long Haul Transport – Southbound + lift-off rate	\$165	\$173 (with equipment)
Local delivery + service fee	\$0	\$75
Long Haul Transport – Northbound + lift-on rate	\$165	\$173 (with equipment)
Local drayage plus lift rate for train unload	\$25	\$55
Total	\$555	\$706

Cost comparison data for truck versus RailRunner operation is based on information provided from Railrunner plus internal DMJM+HARRIS calculations. If the equipment requirement is removed from the analysis, a comparative cost of \$616 results. Predicated on a 160 container per week “Start-Up” service volume, a twice-weekly operation would be required.

Based on RailRunner data, the capital cost of equipment is approximately \$7.4 million.

Assumes trains are built within the Portside Yard or Corbin Street Rail Yard, near Port Elizabeth, and is based on single train crew per roundtrip operation.

Additional details can be provided if deemed necessary.



Operating Cost Comparison - Summary

Transport Mode	Cost	
	Start-Up Year 1	Typical Year 5
Over-the-Road	\$555	\$555
Feeder Barge	\$654	\$621
RailRunner	\$706	\$706

As indicated in the above summary table, over-the-road truck utilization is the most cost-effective transport mode during a single or first year of operation. Once sufficient volume is available for a feeder barge service (i.e. 30,000 for once-per-week service or 60,000 for twice-weekly service), the economies of scale available to a feeder barge service enable the cost per unit handled to be reduced. A key requirement is HIGH EQUIPMENT UTILIZATION.

Furthermore, this analysis is based on a one-truck to one-container assumption, but if the feeder barge service was able to capture a significant number of “over-weight” containers, (i.e. containers in excess of the over-the-road weight restrictions – 80,000 lbs or 20 tons/TEU), then the cost per unit handled would be reduced. A key requirement is to FACILITATE A HIGH VOLUME OF OVERWEIGHT CONTAINERS.

If significant volumes of overweight container transport is combined with a feeder barge service program that includes barge costs as a capital expense - rather than an operating expenses – and the PIDN transport initiative can be combined with value added warehouse, distribution activities and/or an anchor tenant concept - the PIDN service via the Broadway Terminal is likely to provide a feasible alternative to over-the-road transport.

As noted above, a key requirement is to provide PUBLIC BARGE FUNDING similar to public funds for highway development, buses or rail equipment.



Methodology

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2. Compare Work Force Attributes
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Step 5: Identify Public Benefits and Funding Partners



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New Jersey Department of Transportation
Office of Maritime Resources

Potential Public-Sector Partners

- New Jersey Department of Transportation
- Delaware Valley Regional Planning Commission
- South Jersey Port Corporation
- Port Authority of New York and New Jersey
- Others
 - New Jersey Economic Development Authority
 - New Jersey Redevelopment Authority
 - Camden County Comprehensive Economic Development Strategy

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Key public-sector stakeholders include a broad array of potential partners including local, regional and state agencies.



Why Should Public Agencies Be Interested in Creating a SJ-PIDN?

- Provides Congestion - VMT - Relief (NJ Turnpike)
 - Utilize mode shift to optimize existing roadway capacity rather than create new capacity
 - VMT reduction correlates with potential reduction in maintenance expenditures & air quality impact
- Consistent with Smart Growth
 - Promotes use of existing industrial property including (i.e. urban / brownfield renewal
 - Promotes utilization of existing labor force
 - Enhances utilization of existing transportation linkages
- Generates Economic Development
 - Port-related maritime jobs
 - Value-added warehouse / distribution jobs
 - Integrates international & domestic supply chains

In addition to providing a potential transportation alternative to over-the-road truck movements – and in so doing, creating additional roadway capacity - a successful feeder barge container service can complement smart growth initiatives while generating economic development.




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Congestion – VMT Reduction

NJ Turnpike (Exit 14 to Exit 3)

- Year 1 Volume = 28,000 TEU
– VMT Reduction > 7.4 million
- Year 5 Volume = 40,000 TEU
– VMT Reduction > 10.6 million
- Year 15 Volume = 80,000 TEU
– VMT Reduction > 21.0 million

Additional Benefit: Convert VMT Reduction Into Air Quality Credits

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Based on the feeder barge operating forecast, reductions in annual vehicle miles traveled (VMT) could range from approximately 7 million in year 1, increasing to some 20 million in year 15.

The VMT calculations are based on the following:

- 1 TEU = 0.588 containers or 1.0 container = 1.7 TEU
- 85 miles from Port of New York and New Jersey to Broadway Terminal less an average of 10 miles for local delivery or a total of 150 miles per container.
- Tractor trailer equivalent to standard vehicle is 3:1

The VMT reduction values are exclusive of additional VMT reduction benefits that could accrue from transportation of overweight containers via the feeder barge service.

One additional initiative, which the PANYNJ has expressed an interest in developing along with potential feeder port sponsors, is the potential to generate air quality credits from VMT reduction associated with container transport via barge or rail in lieu of via over-the-road transport. If air quality credits could be developed for PIDN, an additional form of cost incentive could possibly be available to entice shippers to utilize the feeder barge or rail service.



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Smart Growth – Economic Development Guiding Principles

The SJ-PIDN Program including the Value Added Development should:

- Support cargo movements to and from the Ports of NY-NJ, Camden and Philadelphia. Ideally, bi-directional traffic should result.
- Support state and local economic development initiatives and economic strengths.
 - Support and enhance local industries
 - Generate new job opportunities
 - Be consistent with state and local plans
- Be contextual – fit in the surrounding uses and community
- Should be financially self-sustaining and profitable. 54

To determine the type of development that should occur at the PIDN site, the team developed a set of guiding principles.

The principles focus on optimizing maritime cargo flows, local economic development, financial benefits and integration with the surrounding community. The guiding principles support the goals of brownfield redevelopment and smart growth articulated by the State of New Jersey.



Context: Value Added Centers Overseas

- Rotterdam – Distriparks
 - Cargo transfer center, warehouses, product manipulation facilities, offices, hotels and a variety of commercial services
 - In the vicinity of the Port of Rotterdam – Eemhaven, Botlek and Maasvlakte
- Germany – “Güterverkehrszentren” (GVZ) or Global Freight Villages
 - About 40 GVZs have been developed
- Singapore – Keppel Distripark

The team sought to learn from similar value added complexes developed by port agencies related to maritime cargo flows.

In Europe and the Far East, major port complexes have developed “Distripark” or “Global Freight Village” operations. These complexes provide a range of services from cargo transfer centers to distribution operations, value added operations and support functions.



Characteristics of German Global Freight Villages (GVZs)

- Dedicated to transportation and logistics operators, along with manufacturers and distribution centers
- Served by a multiplicity of modes (road, rail, maritime and air) and include trans-shipment facilities
- Provide access to both the long distance transportation network, as well as delivery points in urban areas;
- Offer cost savings for the provision of certain services (such as electricity and telecommunications)
- Provide public transit connections
- Established as public/private ventures

Germany has emerged as a leader in the development of Global Freight Villages (GVZs). A GVZ combines industrial, trade, service and logistics on a single site. The characteristics of a typical site include an orientation to freight and distribution operations, multi-modal access, public transit access for employees and development as public/private ventures.

The German GVZs seek to receive goods by rail and ship out by truck. The terminals are designed to efficiently unload/load goods from one transportation mode to another. This efficient transload, combined with incremental “value added” cargo handling capability, is considered the GVZ’s competitive edge.

The GVZ concept is now being developed elsewhere in Europe.

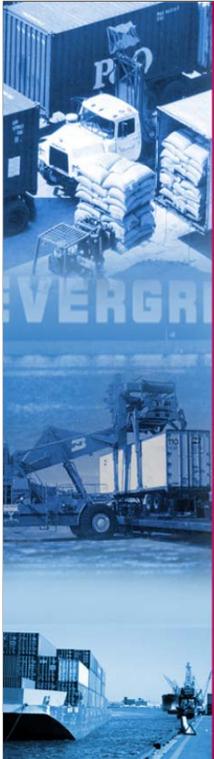


Public-Private Ventures

- **Public sector may:**
 - Assemble the site
 - Market/connect the site with existing freight operations
 - Provide financial support
- **Private sector may:**
 - Develop and/or operate the site
 - Market/develop the distribution and value-added business
 - Invest in the program development (or only one specific element)

The public-private joint development of sites can be applied in the US. As shown through freight and other types of development in the nation, the public sector can assemble the site, market the site, seek developers for parts or all of the site, develop the required transportation infrastructure, and provide financial support. Financial support can include direct funding for site preparation and development, as well as grants for rail sidings, reduced rates for utilities and assistance in creating job training programs. Initial tax incentives may also be offered.

As the benefits and value of a site become known, private sector interest and funding increases. In addition to developing the site, private sector firms may operate certain activities on the site, as well as to develop business for the location.



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Potential Value Added Concepts for South Jersey PIDN

1. Food Distribution Complex
2. Retail / Consumer Oriented Distribution Complex

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An initial review of the cargo flows and strengths of the surrounding areas yielded two potential concepts for the South Jersey PIDN site: A Food Distribution Complex and a Complex oriented towards retail and consumer goods.

As noted in the Regional Workforce discussion, according to U.S. Census Bureau's 2000 County Business Pattern data, retail trade is Camden County's number 2 employer, while it is the number 1 employer in Gloucester and Salem Counties. Furthermore, food is a key commodity, via containers or in break bulk, through the ports or NY/NJ, Camden and Philadelphia, and Wilmington and is a product of the roughly 3,300 farms in the South Jersey area (Burlington / Atlantic south to Cape May).



Concept #1: A Food Distribution PIDN

Elements:

- "Philadelphia Food Distribution" East or "Hunts Point" South for imported and locally produced food and beverage products.
 - This initiative could work in cooperation with these existing food distribution centers as well as on-going operations at Packer Avenue, Tioga Marine and other existing operations.
- Value added activities – food packaging, preparation, distribution and marketing.
- Employment opportunities for adjacent communities.
- Additional DC/PIDN capacity for consumer/service industry-related containerized goods.

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The Food Distribution PIDN would combine the flow of food and beverage products from overseas with locally raised products. In so doing, the complex would support port operations in northern and southern New Jersey, as well as the concentration of farms in the middle and southern regions of the State.

Building from the examples of the Philadelphia Food Distribution and Hunts Point in New York City, the Food Distribution complex would also include such value added activities as food packaging, preparation and marketing.

These value added activities have the potential for significantly increasing the job generation of the site. Combined with a job training program and potential synergies with the existing operations of Tioga and Packer Avenue marine terminals in Philadelphia, the proposed concept offers opportunities to the surrounding community.



Commodity Strengths – A Focus on Food

- Camden and Philadelphia are leading hubs for the import of fresh fruit and vegetables.
- NY-NJ imports cheese, juice concentrates, beer/alcoholic beverages, beef products and other food commodities.
 - These commodities are heavy.
 - Many move in “overweight” containers that must be stripped if moved inland by truck.

The maritime terminals in southern New Jersey and Philadelphia have emerged as a North American hub for the import of fresh fruit and vegetables. To the north, the Port of New York and New Jersey is a leading importer of cheese, beer and alcoholic beverages, frozen beef products, juice concentrates and other food products. Many of these commodities (such as the industrially sized cheese rounds, beer and frozen beef products) are packaged in overweight containers (i.e. in excess of 20 tons per containers). Overweight containers can be stripped at the initial port or entry and shifted to domestic trailers. Or, the overweight containers can be shipped by rail, barge or truck (with a special permit) to other locations for stripping and value added operations.

Specifically, the overweight containers that arrive via the Port of NY/NJ can be transported to the SJ PIDN via the feeder barge system. Once in SJ, the containers can be stripped, combined with domestic products, re-packaged into domestic trailers and forwarded to final destinations.

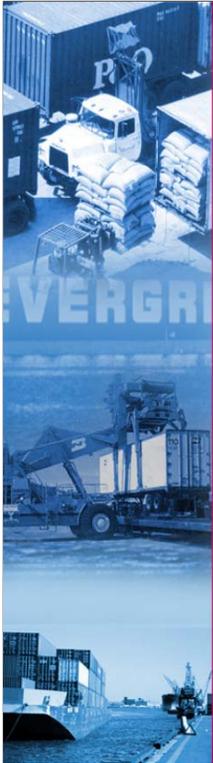


Local Strengths

- Many of NJ's working farms are accessible for the potential PIDN site.
 - 37% of NJ farms by *Number* are located south of Burlington County
 - 44% of NJ farms by *Acreage*
 - 58% of NJ farms by *Revenue*
- Major markets for food purchases are accessible to the site.
 - Atlantic City
 - travel time +/- 60 minutes
 - Cape May
 - travel time +/- 90 minutes
 - Philadelphia/Center City
 - travel time +/- 15 minutes
 - New York/New Jersey locations*
 - travel time +/- 90 or more minutes

In addition to the import flows, the proposed Food Distribution complex builds on and reinforces the significant concentration of farm operations in New Jersey.

The farms and imported food and beverage products are the “supply” of goods. The “demand” for these products comes from the major markets for food purchases in the vicinity of the proposed site in Camden. Atlantic City, Cape May, Philadelphia and areas of New York-New Jersey are within the market area of the site. The agglomeration and variety of products that would be offered at the site would be designed to attract the attention of restaurants, specialty stores and food markets in the area.

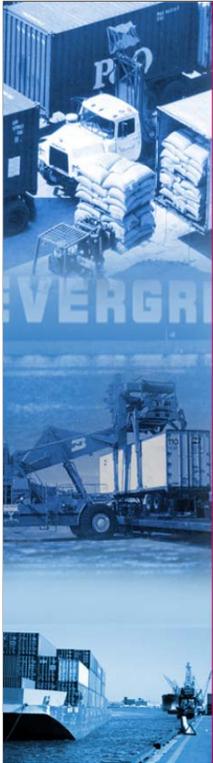


Economic and Community Development

- Focus on creating jobs for local residences and include on-site job training initiatives in concert with site development.
 - Job creation could include full spectrum of occupation categories from marketing/sales, computer systems, final assembly and customization services, warehouse data management, equipment operators etc.
 - Enhance existing port competitive strengths through inclusion of new commodity (i.e. break bulk vs. container)
 - Local job training programs were successfully incorporated in the Alameda Corridor program and used when CSX reactivated an intermodal rail in Chicago, IL.

Camden County is the 7th largest of the 21 counties in the State of NJ (labor force of 250,000) and has an unemployment rate of approximately 4.1% (year 2000 Census Bureau).

In addition to establishing the feeder barge transport service, the value-added service component should include a job training program that builds off the current regional business focus on retail trade, manufacturing and accommodation and food service industries. As noted in the regional workforce discussion, these existing industries are the three highest employment generators in the Camden, Gloucester and Salem Counties. Therefore the establishment of a Food Distribution PIDN should complement and build upon existing labor qualities and capabilities.

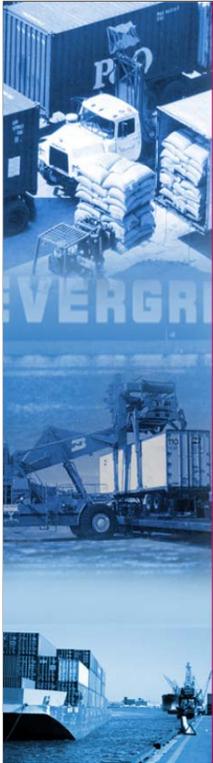


Potential Job Opportunities

- Hunt's Point Market generates .4 jobs/1000 square feet, the same job generation as general warehousing activity.
- With an aggressive value-added component, job generation may approach .8 jobs/1000 square feet.
- Total potential direct on-site job generation: 455 jobs.

The team's analysis of the Hunt's Point complex in New York City found that the market generates approximately .4 jobs per 1000 square feet of building space. This is the same job generation associated with general warehouse operations. Research by team members has also found that value added warehouse operations average about 1.28 jobs per 1,000 square feet. The additional employment flows from the value added services performed in the building. The greater the concentration of value added services, the greater the job generation. Extreme value added operations can have job generation rates that match manufacturing operations. Indeed, these extreme value added operations are the final elements of the manufacturing process.

Given the business and logistics components that could be added to food distribution, the team has determined that with aggressive development of a value added component, the buildings in the Food Distribution complex could achieve a job generation rate of .8 jobs per 1,000 square feet, yielding approximately 435 jobs on the proposed 25-acre site. Combined with the transportation operations on the site, the total potential employment at the Camden location is 455.



Concept #2: Retail/Consumer Oriented Distribution

Elements:

- Complex for local and regional distribution for retail and consumer goods
- Value added activities – final customization, packaging, assembly, distribution to retail trade
- Employment opportunities for adjacent communities from value added components
- Additional distribution center/PIDN capacity for containerized goods

The team also explored the concept of a PIDN complex oriented towards the distribution of retail and consumer goods. New Jersey is one of the leading centers for North American distribution. Chicago and Los Angeles are other major locations in the US.

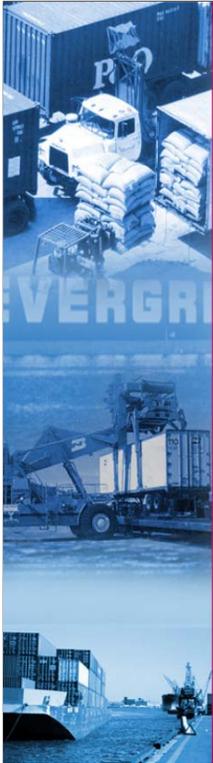
Buildings in such developments can achieve the 1.28 or even higher job generation per 1,000 square feet because of the amount of value added activity that may be done in the buildings, particularly when imported cargo is customized for local use.



Distribution Centers (DCs) in the Vicinity of the Port of Savannah

Company	Square Footage
The Home Depot	1,400,000 sq. ft.
Pier I Imports	400,000 sq. ft.
Best Buy	700,000 sq. ft.
California Cartage/Kmart	160,000 sq. ft.
Michael's	400,000 sq. ft.
Walmart	1,300,000 sq. ft.
Average	725,000 sq. ft.

Other ports have recognized the value of developing retail/consumer oriented complexes near their facilities. The Port of Savannah has actively marketed sites in their area for US distribution centers for major retail chains. They have been highly successful in attracting companies and, in so doing, increasing the amount of import cargo flowing through their port.



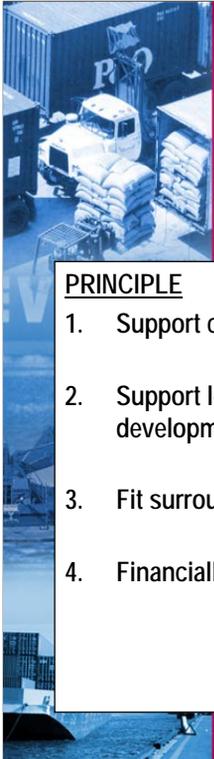
Distribution Center Land Requirements

- Typical building is over 500,000 square feet – need 50-to-100 acres minimum. More than 100 acres would be optimal.
- Unimpeded access to the interstate highway system.
- *The proposed SJ-PIDN site(s) will need to accommodate sufficient acreage with cost-effective feeder service and roadway access.*

The Savannah example also highlights the size of the typical buildings required for retail/consumer distribution centers (DCs). Typically, these DCs are over 500,000 square feet. Examples of such DCs in New Jersey can be found in the vicinity of Exits 8A and 7A on the NJ Turnpike.

Accordingly, the proposed Broadway site does not, at this time, contain sufficient acreage for retail/consumer DCs. However, if adjacent locations could be obtained and dedicated to distribution center activities, this concept could become viable either as a stand-alone initiative or could be combined alongside a Food Distribution concept.

Once the environmental remediation program is completed at the Salem site, sufficient acreage may be available to develop a retail/consumer DC.





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Guiding Principles vs. 5-Year Food Distribution VA Program

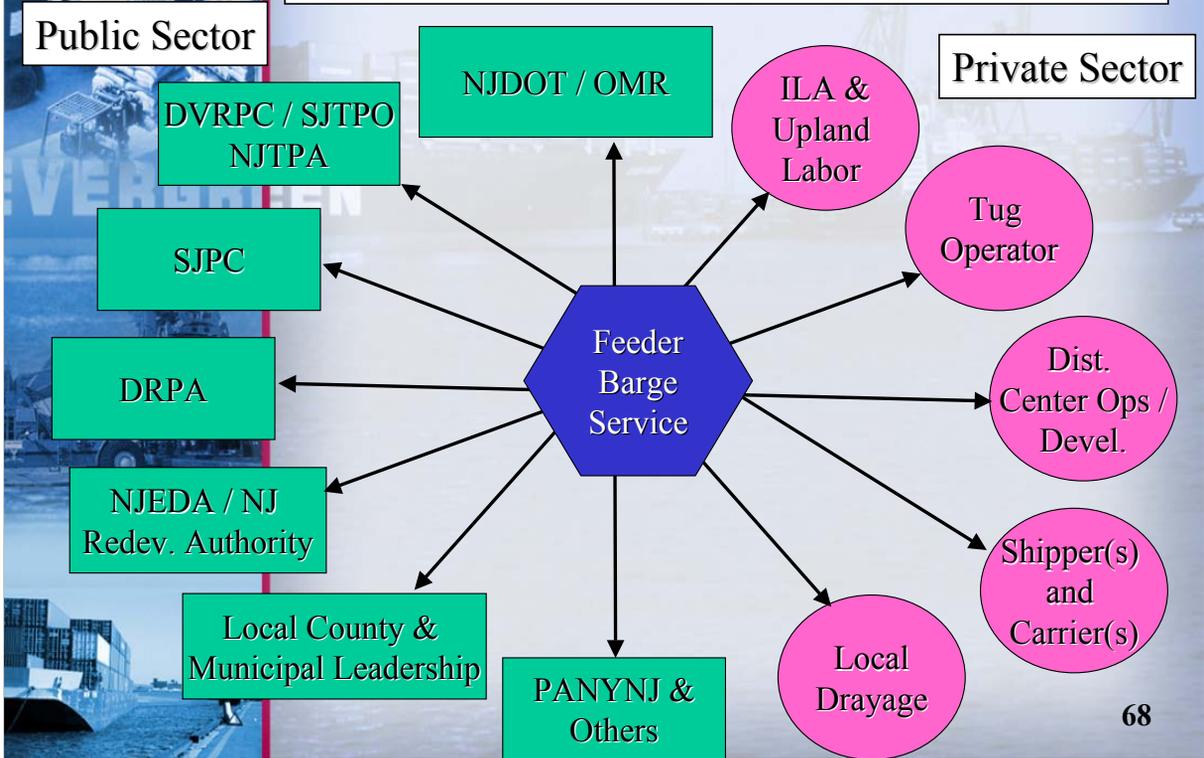
<u>PRINCIPLE</u>	<u>VA PROGRAM</u>
1. Support cargo movement	1. Strip 80 to 115 boxes/wk + incorp existing break bulk ops
2. Support local economic development	2. Generate 400+ local jobs; integrate maritime benefits with domestic industry
3. Fit surrounding uses & policies	3. Promotes urban & brownfield renewal + smart growth initiatives
4. Financially self-sufficient	4. Catalyst is PIDN, VA program provides synergy

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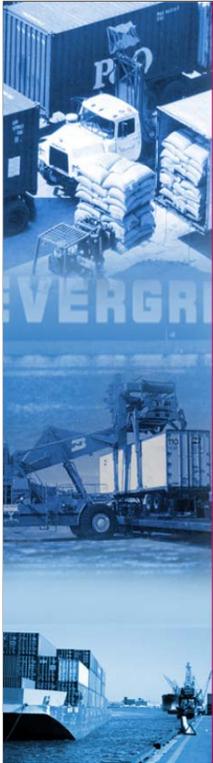
The table displayed above highlights the four Guiding Principles that were identified as key elements for the SJ-PIDN Value Added Development.

Each principle and value added program element are keyed to one another (i.e. Principle 1 related to VA Program 1 etc.)

Potential Implementation Partners



There are a number of interested public and private entities. Involvement from a broad spectrum of private and public stakeholders is required if a successful SJ-PIDN partnership is to be established and maintained.



Potential Public / Private Program

- NJDOT
 - Provide Planning, Implementation Oversight & Audit Services with PANYNJ, Other State and/or Federal Agencies
 - Procure Multi-Year Barge Charter & Lease to SJPC

- SJPC (or other terminal operator)
 - Contract with PANYNJ to Implement Multi-Year Feeder Service
 - Provide PIDN Terminal and Access Infrastructure
 - Coordinate PIDN Marketing Plan w/ PANYNJ & Shippers
 - Contract for Waterside & Landside Terminal Labor
 - Contract for Tug Service
 - Contract for Local Drayage Service
 - Contract for PIDN – Food Distribution
 - Local Drayage Provision Could Be Provided by VA Operator

From the broad assortment of potential public and private implementation partners identified on the previous slide, the two key public-sector participants related to a potential SJ-PIDN program at Broadway Terminal are NJDOT and SJPC. Specific responsibilities for each entity are identified for representative purposes only. Contractual responsibilities need to be addressed in significantly greater detail during subsequent planning and/or implementation efforts.



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Potential Public Funding Stakeholders

- **NJDOT**
 - PIDN Incentive Program
 - Project of National Significance
- **SJPC**
- **NJ Economic Development Authority**
- **NJ Redevelopment Authority**
 - Statewide Loan Pool For Business
 - SBA 504 Program
 - Revolving Lines of Credit
 - Fund For Community Economic Development
- **Camden County Comprehensive Economic Development Strategy**
 - Target Industry & Cluster: Value-Added Logistics and Distribution
- **PANY&NJ**
 - PIDN Incentive Program

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Potential public funding stakeholders include the NJDOT, NJ Economic Development Authority, NJ Redevelopment Authority, the Camden County Improvement Authority and the Port Authority of New York and New Jersey (PANYNJ).

The various State and Local Agencies have existing programs that provide low-interest financing, incentive grants, novel tax structures, taxable and tax-exempt bonds and other financial programs to support land acquisition, equipment costs and overall development costs. As stated by the New Jersey Redevelopment Authority's Mission Statement, "The goal of the NJRA is to invest in neighborhood redevelopment projects that will revitalize communities...The NJRA's primary interest is to ensure that projects developed are urban-focused, neighborhood-based and investment driven."

In addition the PANYNJ has established a strategy, in association with other potential PIDN locations similar to SJ, that identifies the Port Inland Distribution Network (PIDN) as a project of National Significance. If PIDN and its feeder port connections are designated as projects of national significance, TEA-21 reauthorization could provide federal assistance at some later date. Furthermore, if the SJ-PIDN entity can develop an economically and operationally viable Feeder Barge Operating and Business Plan, the PANYNJ is prepared to enter into a planning and service agreement with a feeder port sponsor (i.e. NJDOT and SJPC) whereby the PANYNJ could (1) assist with a joint marketing program and (2) could provide incentive payments during the feeder barge start-up process in an effort to maximize the potential for success.

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Next Steps

Commence Due-Diligence:

- Establish public partner(s)
- Confirm terminal/labor availability
- Identify specific throughput source(s)
 - Shipper, Trucker, Carrier
- Establish preliminary financial sources and uses
 - Federal, State, Local, Private
 - Infrastructure, Equipment, Operations
- Identify environmental benefits and commence community interaction
- Identify specific VA anchor tenant(s) and synergistic partnerships to enhance economic development opportunities

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- Handling your own warehousing
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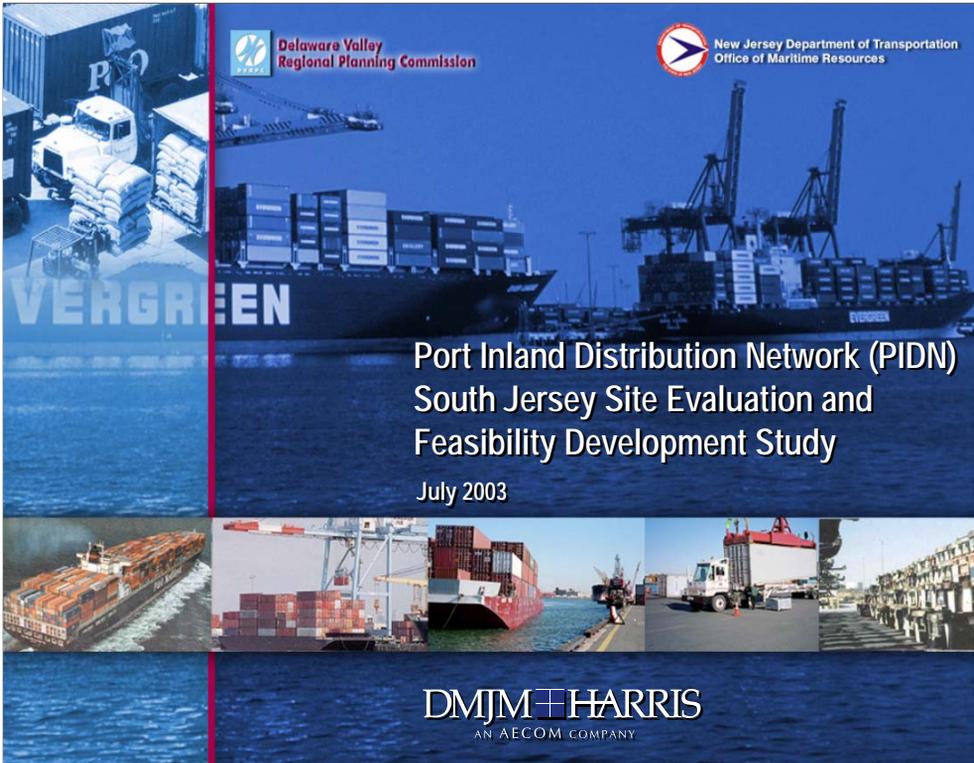
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A series of “Next Steps” have been developed in order to refine the economic considerations and potential for economic viability. The Next Steps include:

1. Establish public partner(s) and confirm terminal availability, labor relationships, service offerings and capability to provide cost-effective PIDN operations,
2. Identify specific throughput source(s) such as shippers, trucking companies and shipping lines and refine the boundaries of the SJ-PIDN geographically,
3. Work with local community to identify and incorporate concerns and ideas,
4. Based on the specific throughput, geographical boundaries and community issues, develop environmental benefits such as reduced over-the-road drayage requirements, corresponding air quality benefits and reduced roadway maintenance provisions,
5. Predicated on the defined public partners, terminal selection and throughput volume, establish preliminary public – sector financial sources including federal, state and local entities,
6. Based on the defined financial sources, establish preliminary financial uses including infrastructure development, capital equipment purchases and operational considerations,
7. Identify specific value-added anchor tenant(s) and other business requirements, such as synergistic partnerships with Pennsylvania and Delaware, as well as back-haul opportunities that will be critical to the viability of the SJ–PIDN feeder service, while enhancing economic development opportunities for local and regional communities.



END