

**PORT NEWARK REDEVELOPMENT PROJECT:
A Vision, Challenges, & Strategies to Overcome Them**

**Urban Environmental Planning (EPS 638)
NJIT – Fall 2007**

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Executive Summary

This report is the product of the New Jersey Institute of Technology's Urban Environmental Planning class (EPS 638) during the fall 2007 semester. The report focuses on the redevelopment of Port Newark, a major portion of the larger New York Port managed by the New York/New Jersey Port Authority (NY/NJ Port Authority). It is the busiest Port on the East Coast and vital to the economy of the tri-state region as well as an important gateway affecting the State of New Jersey and U.S. economies.

Initially, the student researchers identified numerous factors to be considered for an effective revitalization of Port Newark. These factors include a baseline assessment, current vision, transportation infrastructure concerns, land use challenges, environmental protection issues, environmental justice and social equity concerns, financing sources and homeland security issues. The research began modestly with the City of Newark identifying four sites within the Port district that it felt were strategically located and important to the Port's redevelopment. One student took responsibility for characterizing the sites, but the class quickly became aware that the redevelopment of the sites would hinge on some wider vision for the Port's redevelopment. In addition, the students examined relevant documents, engaged numerous stakeholders in lengthy interviews, completed a field visit, benefited from in-class panel discussions and deliberated amongst themselves throughout the bulk of the semester.

Attempting to define a vision for Port Newark, the students learned that there may be different visions that at times overlapped and did not necessarily coincide. The students identified three visions as depicted by 1) the City of Newark; 2) Nationsport, speaking for the logistics industry; and 3) the students who developed a vision for a "more sustainable Port."

A compelling concern emerged, i.e., a recognition that if institutional barriers were not overcome, the probability of achieving any of these visions would be difficult, if not impossible.

A disclaimer was also offered in that contacts with the NY/NJ Port Authority did not provide the type of information necessary to describe and explain its vision. Therefore, the class relied heavily upon the Nationsport vision, presuming that the two coincided, but also acknowledging that this was a position which concededly involved some risk.

Nevertheless, the report includes the three visions, a set of goals tied to each of those visions along with challenges likely to be experienced in attempting to achieve those goals. One set of strategies emerged to address all three visions, but especially the more comprehensive, preferred vision of a "more sustainable Port."

Included among the recommended strategies for Port Newark's redevelopment are the following: 1) establishing sustainable development as a standard; 2) devise ways to overcome the institutional barriers; 3) develop a Port Strategic Action Plan based upon a unified vision and standards of sustainable development; 4) identify and address multiple

transportation infrastructure issues; 5) develop and implement effective environmental strategies, including both site-specific and more comprehensive strategies; 6) employ a community benefits agreement to address environmental justice and social equity concerns; 7) devise innovative public/private partnerships as a financial strategy; and 8) engage in a comprehensive homeland security strategy.

In conclusion, the students identified nine valuable lessons learned that applied to both the research study as well as to Port Newark's redevelopment more generally.

Introduction

New Jersey Institute of Technology's Urban Environmental Planning class (EPS 638) concentrated on a term project suggested by the City of Newark during the Fall 2007 semester. The project included defining a vision with goals, identifying challenges associated with achieving that vision and its goals, and fashioning strategies to overcome those challenges related to the redevelopment of Port Newark.

Port Newark is a major portion of the larger New York Port managed by the New York/New Jersey Port Authority (NY/NJ PA). It is the busiest Port on the United States east coast. It is vital to the economy of the Tri-State Region as well as an important gateway affecting the tri-state New York Metropolitan region, the State of New Jersey and the United States national economies.

Although this Port currently dominates the east coast as a major gateway to the North American continent, East Coast Port competition is significant and affected by dynamic global trading patterns. More than 95% of all international goods transported into the United States come through one of the nation's 361 Ports. Of these goods, approximately 13% of the volume of cargo and goods enter the Port of New York/New Jersey. Yet, recently, there has been significant and growing competition from other East Coast Ports, particularly those in Virginia and South Carolina. The competitive position of Port Newark may also change by improvements taking place in far away and distant places around the world. The improvements currently underway to the Panama Canal may be just one example.

Port Newark currently receives and distributes goods amounting to nearly an estimated three million containers each year. Significantly, this number is expected to double over the next twenty years. However, in its current condition, the Port is confronted by significant growth constraints. Those constraints will hamper the achievement of its growth potential and may erode its competitive position absent attention to major improvements both within the Port Newark district and logistics concerns that fall beyond the immediate Port Newark district.

It is important to note that currently it has been estimated that the Port of New York/New Jersey accounts for approximately the following:

- 230,000 jobs
- \$12.6 billion in regional wages

- \$2.1 billion in state/local taxes and \$3.8 billion in federal tax, and accounted for \$24.4 billion dollars to the US Gross Domestic Product.
- \$150 billion in annual cargo serving over 80 million people in the metropolitan region and extended periphery.

In addition, in 2005, physically, the Port handled the following:

- 5,500 ships
- 86 million tons of cargo
- 850,000 automobiles
- 2.9 million containers (approximately 8,200 per day) (1; 2)

Methodology

The EPS 638 course was designed to challenge students with a real life urban planning problem, providing them with considerable latitude in devising strategies that might lead to feasible policy recommendations and program solutions. Students conducted research in a variety of ways, including literature reviews, stakeholder interviews and on-site windshield surveys. In addition, students exchanged views through class discussion throughout the semester. Class sessions were supplemented by panel discussions with invited guests knowledgeable about different aspects of Port Newark conditions.

The research identified many factors to be considered for an effective revitalization of Port Newark. These aspects include a baseline assessment, current vision, transportation infrastructure concerns, land use challenges, environmental protection issues, environmental justice and social equity concerns, financing concerns and homeland security issues.

The project began rather modestly with the identification of four sites within the Port Newark Area by the City of Newark. These sites were identified as likely in need of remediation as they were thought to be contaminated. There were also indications by the City of Newark's planner that the four sites might have strategic value in terms of future Port Newark redevelopment.

One student took on the primary responsibility for the characterization of the four sites identified by the City of Newark. Other students identified tasks related to more macro Port redevelopment issues. Through the exchange of views, it became obvious to the class that a site-by-site approach to the Port's redevelopment absent a larger, overarching vision would prove inadequate. A vision was necessary to provide a broader context to potential redevelopment alternatives.

Through stakeholder interviews and class discussion, visions with specific goals, the challenges to achieving those visions, and feasible strategies to overcome those challenges began to emerge and were defined and refined throughout the semester.

The Overlapping, Sometimes Competing Visions

As a result of this methodology, not one, but three different visions emerged from stakeholder interviews and class discussions. Each vision included a set of goals and challenges. The visions overlapped, but were not coincidental. They were at times

presented as competing views. The strategies developed by the students sought to address a synthesized view of the first two visions, but were then posed as a single set of strategies to move the Port's redevelopment in the direction of "sustainability."

Vision #1 – The City of Newark's Vision

The first vision that emerged was from the viewpoint of the City of Newark. Discussions with representatives of the City of Newark emphasized the importance of a viable and functioning Port district that would restore the district as an economic engine for the City of Newark. Contaminated sites would need to be cleaned up, and properties would need to be assembled for redevelopment and restored to the tax rolls. The Port would become a center for economic activity and employment opportunities for local residents.

Vision #2 – The Industry's Vision

The second vision was one that stemmed from interviews and discussions with representatives of the logistics industry. The industry was in fact largely represented by a recently formed advocacy group that calls itself "Nationsport." Its vision overlapped with the City of Newark's vision. However, it was more concerned with the redevelopment of Port Newark as a world-class Port. This vision included more attention to global trade and Port competition. Port Newark's operations were compared to other Port operations around the world. Expectedly, this vision was less local in its orientation than the City of Newark's vision. It was more industry-focused. Frustrations were expressed in what was perceived to be the City of Newark's slow pace and focus on making improvements on a site-by-site basis absent a broader vision or strategic plan.

Vision #3 – Vision for a More Sustainable Port

A third vision that emerged from class discussion took into account the articulated concerns of the City of Newark and Nationsport, but attempted to augment these views. This third vision recognized the importance of the economic viability of the redeveloping Port, but also sought to strike a balance by paying close attention to environmental, public health and social equity concerns, including conditions of port employment. This vision was labeled as a "Vision for a More Sustainable Port." It attempted to draw upon a growing body of literature characterizing "More Sustainable Ports" in this country and in other parts of the world.

A Compelling Concern: Institutional Barriers to Port Redevelopment

A compelling concern that emerged from class deliberations was that Port Newark's redevelopment faced a major institutional challenge in attempting to achieve any of these visions. There appeared to be no one institution sufficiently in charge of what needed to be done. The City of Newark could not address transportation and environmental issues that transcended its municipal borders. It also seemed to have difficulty in giving the Port's redevelopment the attention that it required in light of the city's many other competing priorities. The NY/NJ Port Authority, established to manage Port concerns across multiple jurisdictions, also did not seem to have sufficient control of all the necessary parts. For example, transportation infrastructure improvements needed to be addressed that fell far beyond the immediate Port district, rather stretching out along the Interstate Highway system throughout New York and New Jersey and beyond.

In addition, the NY/NJ Port Authority seemed to suffer from its own internal institutional challenges in developing a vision and setting its priorities in terms of Port Newark redevelopment. It was an entity that had to bridge the differences not only across two states, but also within its numerous functional divisions within its own organization. How would this challenge be overcome?

The students posed a call to action if this compelling concern, i.e., jurisdictional fragmentation and the institutional barriers to coherent action that resulted from it. If these barriers were not overcome, the City of Newark may lose its opportunity to redevelop its Port in a way that will serve as the city's economic engine to support its future economic prosperity. The impact from that lost opportunity will ripple throughout the greater New York, tri-state metropolitan area, the State of New Jersey and may also carry national economic implications.

A Necessary Disclaimer

The NY/NJ Port Authority was contacted for its input about Port redevelopment on a number of occasions. However, its response was mainly to convey materials prepared for the general public that described a broad vision, general goals, and for the most part lacked sufficient detail as to either the challenges or strategies required to overcome them. Consequently, the NY/NJ Port Authority's vision may be less than adequately depicted in this document. It was presumed to be close to the Nationsport vision. However, that is a presumption concededly taken with some risk. As a disclaimer, it is important to note that this project is a continuing work in progress, a snapshot, hopefully advancing a number of valuable insights, rather than providing a complete portrait at this time. Continuing consultation with the NY/NJ Port Authority should take place if this study continues.

The View from the City of Newark

I. Vision

Port Newark will be restored to an economically viable and well-functioning Port district that will serve as an economic engine for the remainder of the City of Newark and the region. Contaminated sites will be remediated. Properties will be assembled for redevelopment. The sites once redeveloped will augment the City's tax rolls. Port Newark will become a major center for local residents' employment opportunities.

II. Goals

- To engage in land assembly in ways that will encourage economically sustainable redevelopment
- To clean-up and redevelop contaminated sites to acceptable environmental and public health standards
- To enhance the municipal tax revenue base
- To finance redevelopment through innovative external public and private funding arrangements at minimal cost to the city
- To create meaningful employment opportunities for Newark residents

III. Challenges

A. Political Will & Planning Capacity Over the Long-term

The City of Newark is one of the largest and oldest cities in New Jersey, with a population of approximately 265,000 residents. As with many large urban areas across the United States, Newark faces persistent social challenges each year including those related to public safety, poverty and education. One of the biggest challenges for Newark with respect to the redevelopment of the Port is whether the City can maintain focus and provide the redevelopment of the Port with sufficient priority over an extended period of time. The city's public officials are often distracted. As those public officials are distracted by multiple priorities and local politics, it will also be difficult for the city to develop adequate planning capacity to address its multiple priorities. Crisis management often becomes the norm. Efforts at long-term planning and implementation strategies associated with Port redevelopment become obscured. Yet to fail in this endeavor will deny the City of Newark an important economic opportunity that may bear on the City's fortunes for the remainder of this century.

B. Transcending Newark's Boundaries

Many issues important to Port Newark's redevelopment and future viability transcend the City of Newark's boundaries. Perhaps the most obvious are those related to transportation infrastructure. How will the City of Newark address these issues in a coordinated fashion? This is a major and obvious challenge. It will require extraordinary coordination and integration of activities with the NY/NJ Port Authority, the State of New Jersey and even Federal government agencies.

C. Land Use Challenges

Property in Port Newark is of extremely high value, estimates run as high as \$100 million per acre. Historically, the entire Port was developed as a result of filling in wetlands with contaminated fill. According to the Ironbound Community Corporation, there are current land practices in the Port that are not environmentally protective including the storage of salt piles, stream encroachments, and environmental hazards (1). Many decades after the industrial revolution and after years of persistent environmental neglect, these sites remain vacant, abandoned and often contaminated. Others may be used, but in ways that may interfere with future Port operations, serving as reminders of what Newark once was. The role that such uses will play as part of Port Newark's preferred future is yet unclear. In addition, many of these properties do not have active businesses and are not zoned appropriately. The challenge is to redevelop these sites into functional land uses occupied by companies that are directly related to future expanding Port activities that will lead to increased tax revenues for the City. Unfortunately, sites are often comprised of multiple small parcels with numerous owners. Land assembly under these circumstances is rarely easy. Currently, many sites are being employed for the storage of empty containers. This may not be the most efficient use of this land. It also serves as an impediment to future Port redevelopment activities. In addition, the employment of the city's use of its eminent domain powers may not be politically feasible or practical at this

time in light of controversies that have stirred in other locations both in New Jersey and in other states.

The Four Identified Sites as Illustrations of the Land Use Challenges

The City of Newark identified four sites for the class to characterize as an important aspect of this project. These specific sites were chosen due to their strategic value and location within the Port, current operations, land ownership and information from a previous blight assessment. Sites were characterized utilizing Geographic Information Systems (GIS) technology. GIS tools provided detailed information such as aerial photographs, current tax information, lot size, current owner of the lots and assessed property values. Students also conducted a windshield survey to note the current condition, infrastructure issues and the logistical concerns.

Site #1 -- Hess Tank Farm

This property is listed as Block 5074, Lots 25 and 25.01, according to the Newark Tax Assessor. The land is owned by Hess Realty Corporation. The land is on the Newark Bay, off Delancy Street, which is a prime location for shipping and receiving in the Port. This area is approximately 62 acres and is worth approximately \$18,000,000. The property is currently used as a tank farm for storage and distribution of petroleum products. According to the NJDEP, remedial action has taken place on this property (most likely due to petroleum contamination), although the information was not specific.

Site # 2 -- The Sideways T

These properties are listed as 13 lots in block 2068, two lots in block 2083, and five lots in block 2085 according to the Newark Tax Assessor. The land is owned by several different parties, however, 17 of 21 lots are owned by Dyes & Chemical Corporation of Middlebury, Connecticut. These properties are located in the central section of the east ward, close to US Route 1 and rail lines. The area is approximately 6.05 acres and is worth approximately \$4,850,000. The property is currently or was formerly used either for chemical manufacturing, distribution, or as a storage facility. Based on the use of the property, soil and groundwater contamination are likely to be environmental issues.

Site #3 -- The Beak

These properties are listed as block 5020, lots 69.01, 69.03, 69.04, 69.05, 69.06 according to the Newark Tax Assessor. The land is owned by the Newark Housing Authority, T Fiore Demolition, Inc., and Industry Land Urban Renewal. These properties are located in the eastern section of the east ward, in between the New Jersey Turnpike and major rail lines. The area is approximately 45 acres and is worth approximately \$10,000,000. The property is currently used to store and recycle construction materials, and as a landfill for these materials. The materials are stored in a large pile which encompasses the majority of the property and can be viewed easily from the New Jersey Turnpike. Based on the use of the property, soil and groundwater contamination are likely environmental issues at this property.

Site # 4 -- Passaic Riverfront Sites

These properties are listed as 14 lots in block 5011, 13 lots in block 5014, and four lots in block 5070 according to the Newark Tax Assessor. The land is owned by several different parties, however the major owners are, Chemical Leaman Tank Lines, Inc., Lehigh Portland Cement Co., Nimco Shredding, and Elan Chemical Company. These properties are located along the Passaic River, off Doremus Avenue. The area is approximately 42 acres and is worth approximately \$16,900,000. The current property uses are as follows: trucking distribution facility, a tank farm, a former tank farm, a used truck parts facility, a cement manufacturer, a metal recycling facility, and a chemical manufacturing/distribution/storage facility. Based on information provided by the NJDEP, at least a portion of the property is in a historic land fill area. Due to the nature of the multiple uses of the property, contamination of soil and groundwater are likely environmental issues.

While these site characterizations may be instructive in pointing to the challenges involved in Port Newark's redevelopment, learning more about them also served to underline the limits of a site-by-site approach absent a broader vision for Port Newark's future. Optimizing their potential necessarily involves relating these sites to some wider vision and plan for the Port's redevelopment.

D. Labor Challenges

According to the United States Department of Labor, Bureau of Labor Statistics October 2007, Newark has approximately 41,400 unemployed residents and an unemployment rate of 3.8% (2). The issue of developing good quality Port jobs is important to assisting the City's revitalization. However, the City needs to ensure that the types of jobs generated through the redevelopment of the Port will suit the residents' needs, including long-term employment, and positions at adequate salary levels that also include health care benefits. Many of the developments discussed as the Portfields Initiative include large warehousing and distribution facilities. While these developments are crucial to Port logistics and growth, they may not yield employment opportunities of sufficient quality and quantity for local residents. This situation may be exacerbated as the logistics industry continues to automate and make entry level opportunities tied to higher skills requirements. Additional education and training may be required to overcome entry level barriers to Newark residents. Union obstacles may also be an issue. Homeland Security concerns may raise additional hurdles to providing entry-level employment opportunities as prospective employees will be required to undergo more stringent security scrutiny.

E. Financial Challenges

No single public-sector approach fits the financing needs of the numerous brownfields projects that characterize Port Newark. Brownfield sites are unique and have varying levels of contamination. Nevertheless, governments at all levels can find creative ways to help enterprises overcome reuse challenges with policies ranging from regulatory clarification for loan workouts to direct financial program assistance. Financing the redevelopment of these sites is an evolving topic that combines the use of public and

private financing tools, and includes a variety of funding sources to ensure that public and private dollars are spent wisely. Public and private partnerships, perhaps led by non-profit corporations or the NY/NJ Port Authority, may take the lead in securing financial assistance for these activities. The City, the State and the Federal government, along with the Bi-State agency are potential sources of funding. However, the future economic viability and the perceived future profitability of the Port and the opportunities that it may create will ultimately influence the ability of Port Newark to attract adequate financing from multiple sources.

The Industry's Vision (Nationsport)

I. Vision

The industry's vision for the future is shaped by the idea of the redevelopment of Port Newark as a world-class Port. Comparisons are drawn to U.S. Ports like Los Angeles/Long Beach or and international ports, such as Rotterdam and Singapore. Mention of an array of Port-support services are part of this vision including the idea of a "global freight village," a concept more common to Europe than what has evolved in North America. This vision requires attention to global Port competition and the development of Port Newark to meet that competition. Port Newark's future operations are compared with rival Port operations on the East and West Coasts of the North American continent. Understandably, this vision is less local in its orientation than the City of Newark's vision. It is industry-focused. Its concerns require addressing issues affecting the Port that stretch far beyond the boundaries of the City of Newark. It also takes into account the more recent changes to a highly dynamic logistics industry throughout the world.

II. Goals

- Take a comprehensive Port redevelopment approach that will succeed in overcoming the multiple institutional barriers.
- Compete successfully with changing patterns of global trade and industry.
- Clean-up brownfields to expedite and expand Port-related redevelopment opportunities.
- Increase "throughput" of goods by promoting "Port-support" functions.
- Reduce existing uses that are not "Port-supportive."
- Create a "global freight village" that provides an array of Port-supportive services.
- Address critical land-side challenges, especially transportation-related, that may fall far beyond the immediate confines of Port Newark.
- Ensure adequate Port redevelopment financing by employing a range of innovative public/private partnership financing mechanisms.
- Achieve public safety and security by understanding and balancing threat, risk and homeland security issues.

III. Challenges

A. Unique Institutional Challenges

The pressure for Port Newark to compete globally with other Ports around the world creates the pressing need for the Port's redevelopment. To meet these competitive needs there must be improved communications among the multiple and diverse stakeholders. This will require the establishment of an institutional mechanism to overcome the many existing institutional barriers.

Yet the institutional "silos" experienced in researching this project seemed daunting. Questions were raised about just who was in charge of the Port's redevelopment. Was it the City? The NY/NJ Port Authority? The State of New Jersey? The State of New York? The private sector? All were identified as important players, but none seemed to have adequate authority to provide a single point of contact. Who might be prepared to act on these overlapping and sometimes competing visions?

The difficulty of dealing with multiple municipal jurisdictions was identified. Port Newark involves both the cities of Newark and Elizabeth. Perhaps even more daunting is the fact that Port Newark also involves two states—New York and New Jersey. Hudson County and its multiple municipal players are also involved in Port functioning.

Concerns were raised in trying to understand the role of the NY/NJ Port Authority as an organization. As an authority established to govern and manage on behalf of the functioning Port, from the outside, students found it difficult to identify just where responsibility was in terms of this multi-functional bureaucracy. The NY/NJ Port Authority is engaged in much more than just Port activities, but also in running multiple airports, the PATH system, bridges and tunnels, and far-flung real estate activities.

Is there an institutional mechanism to overcome the obvious jurisdictional fragmentation? Is there a way to create and promote a common vision for Port Newark that will work to the benefit of its multiple stakeholders? These are challenges that need to be addressed.

B. A Common Vision Leading to a Port Strategic Plan

The development of a Port Newark Strategic Plan that might reflect the interests and concerns of the various stakeholders based upon a unified vision appears as an essential first step in bringing the disparate parties together. This Strategic Plan and its eventual implementation might position Port Newark to compete more effectively on the global stage.

The Port Newark Strategic Plan should address not only development issues, but also the range of environmental clean-up of contaminated sites, flooding and stormwater concerns along with historic geo-technic issues that plague development within the Port district. Critical transportation infrastructure issues that fall within the Port district and those that may be far beyond the immediate confines of that district also need to be addressed by such a plan.

The Strategic Plan also needs to address land assembly and land use issues as well as provide for a wide array of Port-supportive services that will be required of a 21st century Port capable of competing on a global stage.

C. Transportation Infrastructure and Other Infrastructure Investment Needs

The condition of transportation infrastructure in and around Port Newark provides challenges to the velocity of goods movement. The Port cannot be competitive if it is significantly impaired by the condition of the roads, the depth and width of the waterways, and the condition and location of the railway system currently in place. Utility challenges also appear as an important infrastructure need. These include energy supply, water supply, flooding, storm water run off and waste water infrastructure needs. The over-reliance on truck transportation as the predominant means of transportation for Port Newark creates special concerns that raise questions about the Port's future competitiveness with other Ports. To what extent should rail and barge traffic infrastructure be restored and/or developed to ensure that Port Newark is competitive with other East Coast Ports?

D. Hours of Operations

The Port does not currently operate on a 24-hour schedule. The Port's limited hours of operation have a dramatic impact on street traffic everyday. This decreases the velocity of goods movement. There are labor issues at play here due to the local unions that operate at the Port. Homeland security is also a challenge when the Port has only limited hours to move goods.

E. Financing Challenges

In light of the financial risks and liability currently related to environmental clean-ups, land assembly and infrastructure costs, the existence and degree of support by private financing absent innovative public partnerships remains a serious obstacle with respect to the redevelopment of the Port. This situation may be overcome once the risk/reward relationships change as Port Newark redevelopment continues to evolve.

F. Homeland Security Challenges

Port Newark "is physically located within the two most dangerous miles of the country" (3). Geographically, the Ports are located within the "chemical corridor," consisting of some of the most "at risk" series of chemical manufacturing installations in the United States. In addition, the Newark Airport, the cities of Newark, Elizabeth and New York City are located within the influential boundaries of the Port. Because of their proximity, security issues cannot be easily separated from similar functions and duties of these surrounding communities. Product and personnel are moved to and from the Port via rail, local streets, county roads and state highways. Historically, protective measures were centered on reducing cargo by theft and smuggling. In the post 9/11 era, the face of this

risk has changed substantially to concerns with direct threats of harm and mayhem (4). Adjusting the global vision to better match stakeholders' expectations with respect to public safety and homeland security, three principal and high-level goals must be vetted to identify the commonalities and gaps in Homeland Security. Principally, these are related to economic threats and direct and indirect threats related to harm and mayhem that may cause death and destruction.

A More Sustainable Port Vision—A View from EPS 638

I. Vision

This vision, emanating from class discussion and review of the concept of “Sustainable Ports,” recognizes the importance of the future economic viability of Port Newark, while it simultaneously seeks to strike an effective balance by paying increased attention to environmental, public health and social equity issues. This vision was labeled as a “Vision for a More Sustainable Port.”

II. Goals

- To redevelop Port Newark in ways that promote beneficial economic redevelopment, but simultaneously acknowledge the importance of balancing environmental and social equity considerations.
- To promote environmental remediation, restoration and maintenance to meet regulatory standards of both environmental and public health.
- To address environmental justice and social equity concerns so that Newark residents and Port Newark employees garner sufficient benefits from Port redevelopment without bearing an inordinate share of the redevelopment's costs.

III. Challenges

A. The Port as an Economic Engine

Port Newark is a major gateway, not only to Newark, the New York metropolitan area, the tri-state region, and the State of New Jersey, but to the entire east coast of the North American continent. As such, the Port and its future economic viability represent a huge asset as the city's potential economic engine and a major source of employment. Its value as a resource to bolster the City of Newark's future prosperity should not be obscured. However, the constraints facing the redevelopment of Port Newark also need to be identified and addressed. How might adequate focus be developed and maintained so as to avoid short-term distractions? How might the numerous institutional barriers be overcome so that the Port's redevelopment can achieve its economic potential? Can the requisite planning capacity be developed and maintained to address the redevelopment needs of a major, 21st century Port facility?

B. The Port's Industrial Age Legacy & Port Activities as a Continuing Source of Pollution

Port Newark suffers from a historic legacy of environmental degradation. In addition to the contaminated fill used in proximity to the Port, the Port was also downstream from or the actual site of numerous industrial activities that represent a century or more of toxic contamination to the area's soils, ground water and surface water resources.

In addition, international Ports are growing as the world economy and international trade expand. Many of the activities inherent to Port operations are sources of significant pollution. Consequently, there is an accelerated threat to natural resources as well as the potential for additional environmental degradation and public health concerns to the population either working and/or residing in the immediate vicinity. For example, many Port activities discharge considerable amounts of pollution into the environment and damage natural ecosystems. These problems are exacerbated when a Port is located in a densely populated and already environmentally degraded area such as Port Newark.

1. Air Quality Issues

The current air quality in Port Newark is among the worst in the nation and does not meet the Federal air quality standards for ozone and particulate matter. According to studies, New Jersey has the second greatest cancer risk from diesel soot in the nation (5). Air pollution is a primary area of concern for environmental justice as it is directly related to adverse health impacts in areas of low-income communities of color. Numerous health-related impacts to people living and working in this area include an increased risk of asthma and premature deaths in children, increased risk of cancer (specifically lung cancer) and other respiratory related diseases as well as increased risk for heart disease, stress and depression levels. Another alarming statistic is that one in every four children in Newark has asthma (6). While these city-wide concerns cannot be attributed exclusively to conditions in the Port area, they are still cause for concern and ought to be defined and addressed.

These health impacts tend to be a result of emissions of particulate matter (PM), nitrogen oxides (NOx) and sulfur oxides (SOx), mostly stemming from diesel emissions. Large quantities of these pollutants are being emitted every day due to inefficiency within the Port. Large cargo ships must continue to run and burn bunker fuel for long periods of time while being unloaded. Trucks wait in cue to be loaded and sit idling for extended periods.

In addition to the shipping industry's emissions, there are other emission sources in the immediate area including Newark's Liberty International Airport, with its heavy machinery for loading and unloading aircraft and from other mobile sources.

2. Water Quality Issues

Major Ports in the United States are often characterized by impaired water bodies with pollution contaminants such as VOCs (volatile organic compounds), PHC (petroleum

hydrocarbons), heavy metals and other known carcinogens, including PCBs (polychlorinated biphenyls). Water pollution enters Port Newark from multiple sources including fuel spills, stormwater runoff from industrial areas and regulated industrial discharges including Newark's combined sanitary sewer system. Cumulatively, these sources contribute to the Newark Bay's inability to meet surface water quality standards.

In addition to impairing surface waters, these contaminants are found at high levels in the sediment. Consequently, concerns have been raised with respect to the deepening of the Port from 45 feet to 50 feet for fear that dredging will release toxic pollutants into the water.

3. Land Use Concerns

Port Newark has been known for its vast amount of dormant containers it has accumulated, as easily seen from Route 1 and the New Jersey Turnpike. Local residents tend to view containers as an eye sore and they are antithetical to sound land use planning. While containers are part of the global trade equation, the community has suffered from land use abuse and lack of enforcement of City ordinances in these regards. Examples of these include stacking containers greater than four stories high and encroaching within fifty feet of housing. Numerous studies and recommendations have been offered as alternative uses or to tax income per container. The Ironbound Community Corporation feels that there has to be better use of land for the city to collect appropriate tax revenue while improving aesthetics and not degrading the environment.

4. Additional Known Site Specific Challenges

The four sites identified by the City for characterization and redevelopment consideration highlighted a number of challenges. In addition to what was learned from an examination of those four sites, a number of additional sites in the Port Newark area are known to be contaminated with hazardous substances. A report prepared by the NJDEP Site Remediation and Waste Management (SRWM) Program lists the sites in New Jersey where contaminated soil and/or ground water have been confirmed (39). The list includes some sites around Port Newark where contamination is either uncontrolled or the source is unidentified (Remediation level C3), for example: Amerada Hess property (148 182 Doremus Ave), Central Steel Drum Co. (704-738 Doremus Ave & 843-871 Delancy Street). In addition, groundwater is not used for potable supplies. Most of the contaminated sites typically exhibit such toxic substances as arsenic, lead, zinc and VOC's in the shallow and deeper aquifer (27).

The Port Newark area has witnessed industrial activity since the mid-19th century. Hundreds of chemical, paint and pigment manufacturing plants have been located along the banks of Hackensack River and Passaic River basins and Newark Bay (42). Most of these industries have been shut down but their legacy of contaminants remains in the sediment. The identified contaminants of concern in the Passaic River and Newark Bay include dioxins (2, 3, 7, 8-tetrachlordibenzo-p-dioxin [TCDD]), mercury, lead, polychlorinated dibenzofurans (PCDF), polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs), and dichlorodiphenyltrichloroethane (DDT) (29; 42). The water

quality is also impaired by pathogenic microbes, excessive levels of water borne nutrients and other contaminants from non point sources of pollution (42).

Industrial activities have also produced major changes to the shoreline and severely altered riparian habitat. A significant loss of fresh and tidal wetlands has been reported. The remaining have also been reported to be degraded due to pollution and invasive species (42). An estimated 88 percent of all wetlands in the lower Passaic River and Newark Bay have been lost (33). Fish, shellfish, birds, and mammal populations have also been severely affected. Approximately 85% of fish species in the Passaic River have been lost. A number of historical tributaries have been filled or converted to storm sewer drains. Filling of these tributaries reduced the amount of spawning and nursery habitat available to fish. Human uses (e.g., fishing, rowing, boating, swimming, picnicking and wildlife observation) have been severely limited or lost (42).

The Lower Passaic River and Newark Bay are under fish and shellfish consumption advisories, issued by NJDEP based on polychlorinated biphenyl (PCB), dioxin and/or mercury contamination. EPA and NJDEP have posted fishing advisory signs.

Most of the NY/NJ Port's facilities are located in Newark Bay. Navigation channels in Newark Bay must be dredged recurrently to maintain depths of 40 – 50 ft (41). In the past, the dredged material from NY/NJ harbor was disposed in a designated ocean dump site. However, in 1992 new sediment testing procedures were put in place by USEPA and USACE, and most of the sediment was found to be unsuitable for ocean disposal. Sediment management has since been a challenging issue that must be addressed.

5. Other Quality of Life Concerns: Noise & Vibration

Two additional quality of life issues that have been identified are noise and vibration. Noise and vibration have adverse effects on humans because they are disruptive and associated with stress. While numerous measures are in place related to rock blasting and dredging, trucks and other heavy machinery impacts have not generally received the same attention. Truck traffic is a public health burden on numerous levels generating poor air quality, noise, vibration and congestion. Truck routes have not been updated for years. As a result of ongoing construction activities, at times trucks are directed through residential areas. This creates an unsafe environment for children, causes road conditions to worsen and produces additional traffic congestion, leading to additional noise and vibration.

6. Additional Environmental/Public Health/Social Justice Concerns

The East Ward area, most commonly referred to as the “Ironbound,” is approximately four square miles, surrounded by railroad lines. At one time the neighborhood was primarily industrial. The Ironbound is one of the most vocal and active communities in Newark as well as geographically the closest in proximity to the Port Newark. The community is extremely diverse. The predominant ethnic populations in the Ironbound are Brazilian and Portuguese. The Ironbound community is unlikely to welcome Port

redevelopment if the authorities ostensibly in charge have not acknowledged or begun to address their concerns. In many states, community groups are an integral part of visioning and redevelopment processes.

In addition to the obvious environmental and public health concerns already identified, social equity considerations will also extend to workers, commuters and other visitors to the New York, New Jersey Port Region, especially the truck drivers. These drivers are subject to extensive waiting hours and holding times, health and highway hazards, substantial idling time, unclean air and few employment benefits. Typically, drivers are not employees receiving attractive wage and fringe benefits packages, but instead are more likely to be independent contractors having to absorb the multiple costs and pressures of small business people. The recent precipitous rise in fuel energy costs has likely taken its toll on this group. Typically, drivers' salaries are small when taking into account that a good majority do not have health care benefits and must accommodate for the expenses of maintaining and operating their trucks. The consequence is often that such drivers will defer maintenance on their equipment including any diesel retrofits, upgrades or potential to purchase newer technology trucks. In addition to the personal health impacts that this group is likely to experience, the situation also produces additional environmental degradation in the Port Newark area and the areas immediately adjacent to it.

Strategies for a More Sustainable Port Newark

I. Establishing Sustainability as a Standard for Port Redevelopment

The question of “sustainability” is becoming a term within the popular vernacular most recently. Newark has an opportunity by posing questions and moving in the direction of “sustainability,” particularly with respect to Port Newark’s redevelopment. In this way, Port Newark has an opportunity to redevelop with the future very much in mind. The concept includes application of the “triple bottom line”, or taking into account economics, environmental and equity concerns.

Port Newark could redevelop and ultimately benefit from huge cost savings, reductions of energy consumption and improved environmental quality leading to a better quality of life for the citizens of Newark, while also advancing Port Newark operations as a world class Port for the 21st Century. Other major cities and Ports across the country are encouraging and even mandating sustainability approaches.

Green buildings, bio-fuels, low/no emission vehicles, electrification of diesel ships also referred to as “cold ironing,” and investing in “green infrastructure” are examples of actions that might be encouraged with respect to the redevelopment of Port Newark.

There is already evidence that the NY/NJ Port Authority has been successful in embracing environmental initiatives including development of a Green Port Task Force, replacement of diesel-powered cranes, and installation of truck gates for improved efficiency, beneficial reuse of dredge material for landfill capping and providing funding

for ongoing water quality monitoring studies. Other initiatives along these lines ought to be identified and pursued, and included in the vision of a Port Newark Strategic Plan.

II. Devise Ways to Overcome the Institutional Barriers

The question of overcoming the challenge of jurisdictional fragmentation and institutional barriers is a serious one and one defying easy answer. The question of “who is in charge” of the Port’s redevelopment was a recurrent one. Some type of inclusive forum needs to be convened to adequately represent the diverse and multiple stakeholder interests involved in the Port’s redevelopment. It may be necessary to stage a collaborative stakeholder process to solicit input from stakeholders for the entire region. Such an effort will move this process beyond the site-by-site approach now evident. As part of the visioning process leading to the strategic plan, it will be beneficial to identify areas for specific Port functions, including container storage, warehousing and distribution centers, and the needs of the various transportation corridors. Stakeholder representatives who will address the critical environmental and public health concerns also need to be included. Employment opportunities for entry-level employment, on-the-job training and adequate benefits packages for local residents and Port employees should also be included. Financial considerations and Homeland Security issues will also need to be addressed.

III. Develop a Port Strategic Action Plan Based Upon a Unified Vision and Standards of Sustainability

A strategic action plan will need to be devised. The three different visions identified as part of this research present problems. At minimum, an attempt needs to be made to coordinate, integrate and eventually unify these three different visions. From that common vision a strategic plan needs to be developed to guide the future redevelopment of Port Newark.

At the present time, there are multiple interest-based visions for the Port. The focus appears to be primarily on economics, either local or industry-based, not quality of life issues and as a result, there may be competing interests that will lead to conflict. In visioning a world class Port and considering the anticipated annual Port growth of 2%, the City of Newark should develop an element of its Master Plan that applies to the Newark Port Area. However, that element needs to also be part of a much larger, strategic plan that will address the Port-related concerns that fall far beyond the City of Newark’s purview and jurisdictional boundaries.

The city’s Port Newark Plan Element should utilize this opportunity to develop a land use inventory and then focus on prioritizing future land uses and redevelopments specific to Port supportive activities. It may include the powers of rezoning and eminent domain. The city should address the issues important to the Port reaching its economic potential, but it also needs to take into account the well-being of persons in neighborhoods immediately adjacent to the Port district.

If the City employs its authority to raise important questions and to fashion the answers to those questions for the future of the Port, residents may begin to gain confidence and trust in city leaders, eventually believing that decisions will not be based on narrow economic interests alone.

The City of Newark is approaching a critical time where it will have an opportunity to work with the NY/NJ Port Authority to establish payment for the leasing of the Port properties. This is a vital point for the City to negotiate funding to help establish its Port vision with a careful eye on future land uses, labor issues and environmental impacts. To take advantage of this opportunity, Newark and the NY/NJ Port Authority should agree on the major elements including the vision and goals of a strategic action plan, otherwise major opportunities may be missed.

IV. Identify & Address the Multiple Transportation Infrastructure Needs

Land use issues and freight transportation issues are very closely linked. This relationship became even more evident in the interviews conducted and the conversations that took place in researching this paper. Both land use issues and the conditions and capacity of freight transportation infrastructure have an impact on freight-related businesses and local economies. Land use strategies can focus freight-related development where it may be best accommodated by the transportation system and discourage development from where it poses a burden to the transportation system. The point was frequently made with respect to the four collections of properties identified by the City of Newark for consideration in this study, that they are only as valuable as their location and context within the larger freight transportation system. It is important that these properties be examined in this larger context to avoid a piecemeal approach.

Transportation experts interviewed for this study expressed the belief that there is a need to triple the Port's throughput over the next several years. A number of essential actions for that purpose were identified. The responsibility of the City of Newark in terms of its ability to affect land use was also emphasized in this regard.

The following transportation infrastructure-related actions were recommended as key steps toward fostering a sustainable economic future for the Port district:

- Take a visible and meaningful leadership role with respect to the redevelopment of Port Newark, with special attention paid to the expectations and needs of the goods movement industry;
- Designate qualified and appropriate staff to act as liaison between the City of Newark and key stakeholders including the multiple government departments and agencies, and non-governmental stakeholders necessarily involved in planning and implementing Port Newark improvements;
- Investigate and prepare a Port Newark land inventory with parcel ownership information, additional characterizations, and land use plans that may or may not

- fit with future redevelopment scenarios to establish an information baseline to eventually improve the understanding of the ways that the City of Newark might begin to develop a strategic goods movement framework;
- Take the necessary steps to remove barriers to land assembly of large land parcels to better accommodate the transportation-related requirements and expectations of contemporary warehouse and distribution centers;
 - Identify and attempt to relocate non-Port related operations in the Port Support District wherever possible;
 - Identify and facilitate the development and redevelopment of additional interchange points or nodes, e.g., truck-stops and transfer stations, to facilitate locations where freight may be exchanged between modes, or undergoes processing or handling activity to take up less space, improve efficiency and increase velocity of freight movement. As part of this consideration, there should also be a focus upon the mix and balance of multi-modal transportation alternatives;
 - Coordinate activities among the City of Newark, NJTPA, NJDOT, NJDEP, and NY/NJ Port Authority to ensure that freight infrastructure improvement initiatives, such as Liberty Corridor and Portway, are given appropriate priority to transportation projects serving freight-related uses;
 - Identify and address the needs at Transportation Infrastructure “hot spots” both within the confines of the Port District, the City of Newark, and far beyond its boundaries. Otherwise these “hot spots” are likely to become bottlenecks interfering with the future economic viability of Port Newark operations.

V. *Develop & Implement Effective Environmental Strategies including both Site-specific and more Comprehensive Strategies*

The location of Ports between sea and land makes them a unique and dynamic system that is threatened by pollution from Port activity and operation, ships’ activities and the Port’s hinterland. At the same time Ports are intimately linked to a region’s economy as they are gateways to the regional and national marketplaces.

Port Newark’s redevelopment will require an understanding of the symbiosis between the Port’s environment and its economy so that both components can grow and develop in a mutually beneficial way. It will require a comprehensive environmental strategy to address the multiple and complicated environmental challenges the Port is likely to face both currently and throughout and after its redevelopment.

Decontamination of land around the Port is an important element of an environmentally sound vision. Cleaner sediment and water in Newark Bay is vital for this vision to not only harbor healthy natural ecosystems but also reduce the cost of managing dredged sediment. The present use and level of industrial activity in the Port area may restrict

restoration of ecosystems, but concerted efforts should be made to clean-up existing contamination and simultaneously to control the on-going pollution

A. Brownfields Redevelopment

Brownfields redevelopment should be an important aspect of the Port's Strategic Plan. This is necessary because of the Port area's industrial legacy. The City of Newark has long been an advocate of brownfields redevelopment, placing developments that yield the highest and best use of land for Port functions. Brownfields redevelopment can offer many benefits to the local government, business and community. A business would take on the initial burden of coordinating clean up and oversight, and eventually the investment would be of benefit by allowing for improvements to the existing infrastructure, including roads and major hubs of transportation in the immediate area. The community would benefit from the site being cleaned up to a livable standard and the City will eventually receive increased tax rates.

The Site Remediation Program within the New Jersey Department of Environmental Protection (NJDEP) created the Brownfields Development Area (BDA). This initiative works with communities affected by brownfields to design and implement remediation plans simultaneously in a coordinated fashion. During 2003, twenty five acres along Lister Avenue in Newark were classified as a BDA. As a result, warehouses, riverfront walkway and retail were redeveloped. There are numerous Federal, State and local government initiatives and sources of funding for redevelopment of brownfields. The New Jersey Department of Community Affairs (NJDEA) - Office of Smart Growth (OSG) has developed a Brownfields Redevelopment Resource Kit (4). The kit is a resource guide that includes different categories for addressing issues pertaining to planning, environmental concerns, financing and infrastructure needs.

As a result of the increased perceived need to address concerns around the Port, NY/NJ Port Authority and New Jersey Economic Development Authority (NJEDA) created the "Portfields Initiative." The importance of this initiative was mentioned by those interviewed. This initiative operates to assist private developers and municipalities to convert brownfields sites into productive uses to facilitate Port needs, including warehousing and distribution functions. The Portfields Initiative operates beyond just the boundaries of the City of Newark, acknowledging the regional nature of this enterprise. The project has identified at least four sites adjacent to the Ironbound community within Newark that are key locations for redevelopment attention. These efforts also should be included as part of the Port's Strategic Action Plan.

B. Baseline & Monitoring Protocols

Ongoing monitoring is necessary to determine base line data and track ambient degradations and improvements. This recommendation will be especially critical as the Port's projected growth is expected to accelerate. A comprehensive monitoring program should be developed and implemented in and around Port Newark. The establishment of targets and milestones will eventually grow from it. Expertise could be drawn from local

colleges and universities, local health care agencies, NJDEP and the U.S. Environmental Protection Agency (USEPA). Ports are often under-regulated considering the massive operations and discharges of pollution. Measures should and can be implemented to clean up the discharges. Examples of these measures are installing diesel retrofits, utilizing cleaner burning fuels with low sulfur content, and providing opportunities for electric power options for cargo ships and locomotives. There are many active enforcement programs and regulations at the state level including strict anti-idling laws, municipal storm water permits and wetlands and waterfront development oversight.

C. Site Specific Strategies

Identification and remediation of “hotspots” and capping of contaminated sites may be used as a remediation strategy to mitigate and control risk. For treatment of contamination, *in-situ* remediation technologies should be given preference. *In-situ* technologies are proving to be more sustainable compared to the *ex-situ* technologies. They cause relatively less disturbance to surrounding area, minimize waste generation and reduce worker exposure to contaminants (32; 38).

Capping is an attractive remediation alternative at sites where contamination is not highly toxic (37). Capping prevents direct exposure while also controlling leaching of contamination to groundwater. Considering the most likely future development to be warehousing facilities, capping can not only return the land to productive use relatively quickly, but it is also relatively low in cost and less resource intensive. Some authors (48) have cautioned that although capping can be a viable option for some urban sites, funds for monitoring and maintenance of the cap are only available for a limited period. Adequate funds must be set aside by the responsible parties in a “dedicated trust” to ensure long-term monitoring and maintenance.

Monitored natural attenuation (MNA) of groundwater is being practiced at some sites around the Port area (1; 3). It is a process of contaminant degradation that takes place through naturally occurring physical, chemical and biological processes in soil and groundwater (4). Where applicable, MNA may be a sound and attractive option because energy and resources are not required for contaminant treatment (30). It is also relatively economical (4). MNA can be applied in specific areas along with the development of groundwater classification exception area (CEA).

Volatile organic compounds (VOCs) are known to be present in the soil and groundwater at many sites (1; 2; 3). Vapor intrusion, a process of migration of volatile compounds from subsurface into overlying buildings is a likely problem that can be faced with future development of the area. Mitigation steps like passive barriers or vents can be incorporated in the development plan to address these concerns (40).

For managing dredged sediment, development of “beneficial uses” while also implementing pollution prevention has been suggested by some authors as an important element of a “comprehensive management strategy” (49). Much work has already been done to identify beneficial use for the dredged sediment, such as use in construction, cover for landfills, artificial reefs, etc. (50). Another study by Keith et al. 2001, presented

a number of remedial approaches to treat the contaminated sediment such as thermal desorption, soil washing, solidification/stabilization.

Dinkin et al. 1998, have suggested that remediation of contaminated sites under the CERCLA model may not be the most effective solution to the problem of contamination, particularly in Passaic River and Newark bay. CERCLA was developed to address hazardous substances at and from specific commercial, industrial and municipal facilities (10). Newark bay is not a part of an identifiable source of contamination that CERCLA is designed to address. Also, numerous sources in the past have contributed to its degradation and have created a “muddle” of contaminants. A remedy of the bay involving hundreds of PRPs would be extremely complex and time consuming. An alternate public works/public management program has been suggested as a practicable and cost effective approach. This tool can be used to help restore the area while also serving the interest of freight industry and addressing issues like non – point source and the on going point source pollution. Such a tool has also been suggested by the USEPA (43) in addressing contaminated sediment in rivers and estuaries through watershed management programs - by coordinating efforts of federal, state and local agencies.

Historical development and industrialization have severely reduced the local ecological habitat. Natural resource damage assessment to address environmental issues would be complex and time consuming as determining the “baseline” environmental conditions can be much debatable and the subject of litigation.

VI. Employ a Community Benefits Agreement to Address Environmental Justice and Social Equity Concerns

Through class discussions, the potential importance and advantages of a “community benefits agreement” was briefly examined. Such agreements have been effectively employed in other locations around the country to ensure representation of interests that are often under-represented as related to local community environmental, public health and social equity issues.

As a first step towards developing a “community benefits agreement,” it is essential that impact analyses be conducted with respect to future redevelopment that would take into account likely local community impacts that may be experienced as a result of the Port’s redevelopment, including both potential positive and negative impacts. Through the development of a strategic action plan, many of these impacts may become more obvious. Others may emerge from more specific impact analyses required of investors and firms involved in the Port’s redevelopment.

With these analyses, a “community benefits agreement” may be employed as a useful tool to ensure the redevelopment of a more sustainable Port. Those involved in the Port’s redevelopment might be required to contribute to environmental, public health and employee benefits either on-site or within the City. Adequate funding might be accumulated and eventually employed to develop additional urban amenities especially along the riverfront.

VII. Devise Innovative Public/Private Partnerships as a Financial Strategy

A wide variety of potential sources of funding related to Port redevelopment were identified and reviewed for purposes of this study. The emphasis was placed on those that seemed to encourage a range of public, private and non-traditional groups to make capital investments at this time and in the foreseeable future. In hearing from representatives from private industry, it seems as though once a “tipping point” is reached, funding will become more readily available from private sources based on their calculations on the future.

Among the likely sources of public/private funding to underwrite the costs of Port Newark’s redevelopment including brownfields redevelopment and infrastructure investments are the following:

- The New Jersey Economic Development Authority (NJEDA) is a financial resource that was established by the New Jersey Legislature in 1974 to foster and promote the economy of the State. The NJEDA is financially self-supported in its economic development activities through the products it offers to New Jersey businesses. It is involved in finance and real estate development and seeks to forge partnerships between the public and private sectors:
- New Jersey Redevelopment Authority (NJRA) is a financing authority committed to the redevelopment of urban New Jersey. It’s defined as a comprehensive resource center that customizes project financing for redevelopment projects that enhance New Jersey's cities including the City of Newark;
- New Jersey Environmental Infrastructure Trust (NJEIT) was established by the State of New Jersey to underwrite the cost of infrastructure improvements designed to improve water quality. This funding may also be employed to purchase land when a positive water quality impact may be demonstrated.
- New Jersey Transportation Trust Fund (NJTTF) may be used to invest in transportation improvements.
- The United States government may have a variety of funding sources including the United State Economic Development Authority and through such agencies as the United States Environmental Protection Agency (USEPA), the United States Department of Transportation (USDOT), and the United States Department of Commerce.
- The NY/NJ Port Authority may also be a source of independent funding to finance aspects of the Port’s redevelopment through that agencies own bonding authority. The NY/NJ Port Authority may be instrumental in leveraging private investment with public subsidies and investment related to land assembly and infrastructure investments including investments in local roads, bridges and water and wastewater systems that are connected to Port development.

Redevelopment of an area like Port Newark often requires considerable funds from private financiers. Private financing sources such as private lenders and investors include commercial banks, insurance companies, pension funds, savings and loan institutions, mortgage companies, individuals, and private or corporate venture capitalists.

Private investors can provide capital to cover land acquisition costs, land development costs, operating costs, and other costs associated with Brownfields redevelopment. With these options for private funding many lenders may view environmental liabilities as a matter of perspective and taken into account as a business risk. Many traditional lenders still view the risk associated with quantifying clean-up costs and, consequently, the gap between collateral value and clean-up cost, to be insurmountable. It is incumbent upon the City of Newark to make potential developers aware as to the size of the gap and potential differential in value between the value associated with a brownfields site and that site's value associated with the Port activities as real estate absent contingent environmental liabilities.

The importance of the redevelopment of the City of Newark's Port is significant to the viability and economic health of the local, state and national economies. Federal and State funds may currently play a key role not only in initiating state and local projects, but also in leveraging financial investments from the private sector to increase the level of redevelopment activity. Future growth should lead to innovative financial packages. Federal and state grants, low interest loans, tax incentives, in combination with local tax increment financing may spur activity to revitalize Port Newark, along with the replacement and renovation of its existing infrastructure.

VIII. Engage in a Comprehensive Homeland Security Strategy

In this post 9/11 era, there is general agreement on the need to address homeland security concerns. With respect to Port areas, there is also consensus that this should be a high priority concern.

The universal vision is a global statement of protection of people, physical installations and economic worth. However, with more than 86 million tons of cargo, and close to 1 million vehicles moving through Port Newark/Elizabeth annually, direct missions of security and threat mitigation in Port management and development begin to lose focus. Managing expectations in these regards is a difficult task often times with each community or organization having a specific security agenda.

The Port is physically located "within the two most dangerous miles of the country" (14). Geographically, the Ports are located within the "Chemical Corridor," consisting of some of the most "at risk" series of chemical manufacturing installations in the United States. In addition, Newark's Liberty Airport, the Cities of Newark, Elizabeth and New York City are located within the influential boundaries of the Port. Port security issues cannot be inextricably separated from similar functions and duties of the surrounding communities.

Product and personnel are moved to and from the Port via rail, local streets, county roads and state highways. They also come in by barge. Historically, protective measures were centered on reducing cargo theft and smuggling. However, in the post 9/11 era, this risk has changed to direct threats of harm and mayhem (15). Three principal and high-level goals must be vetted to identify the commonalities and gaps. Principally, these areas are economics, direct and indirect threat management.

In 2007, NY/NJ Port Authority produced a document entitled, “Port Security Task Force.” This report was a distillation of findings “identifying and promoting critical Port and supply chain security initiatives that still need to be addressed.” In understanding the findings, several pertinent recommendations may be drawn from this document leading to recommendations for further planning including the following:

- Establish a Presidential appointee, a single-point of contact, reporting to the Secretary of the Department of Homeland Security (DHS) to have “ultimate responsibility and accountability” for Port and cargo initiatives;
- Establish a Port Security User fee, to be levied on all national Ports to offset the costs of enhanced security programs and to thereby alleviate localized financial cost burdens and instead impose those costs on the Port users;
- Establish response and recovery plans unique to the regional environment and through these plans increase stakeholder investment in the security process, as well as allow for cross-functional understanding and input from previously underserved interests, specifically involving local planners as well as larger area long-term planners;
- Establish the use of comprehensive risk management tools for allocation spending, employing codified risk management techniques to allow for improved budget development, spending and planning, as well as supporting spending programs with un-biased reasoning as opposed to bias as a result of multiple private agendas (15).

Port security will be an enduring theme into the foreseeable future. Historically, approaches have been applied at the local levels, at the direct action level. By addressing security at the vision level - economy, direct threat and indirect threat - and by bringing multiple stakeholders together to devise a comprehensive and unified plan, greater success may be achieved in overcoming anticipated and typical resistance. A comprehensive, better planned approach, employing federal government and even international agency participation may evolve as a better way to secure safe cargo transit in this post 9/11 era.

In Conclusion ...

In concluding and as a result of this study, the class identified numerous lessons learned. Among those lessons should be counted the following:

➤ ***There is a Need for a More Systematic, Multi-disciplinary Approach to Port Newark's Redevelopment***

Port Newark as a system must not be studied in isolation, rather its redevelopment requires an understanding of the way its environment interfaces with economic development, land use and transportation issues. This is especially demonstrated by the need for the City of Newark to move beyond a site-by-site approach to the Port's redevelopment. In addition, a number of transportation planning experts interviewed for this study reported that regardless of freight-transportation investments, if contaminated sites in proximity to Port Newark were not expeditiously remediated, assembled and redeveloped, Port Newark will not be able to compete with other Ports on the east coast.

➤ ***Port Newark's Redevelopment Should Be, but Does Not Often Seem to Be a High Priority***

The redevelopment of Port Newark so that it can compete on a global stage and provide the economic engine to the City of Newark as well as the region should be a high priority for the city, region, the NY/NJ Port Authority, state, and even the US government. Yet in researching this study, it was at times difficult to identify who was in charge in establishing and promoting this project as a high priority only further underlining an important institutional challenge to the Port's redevelopment.

➤ ***An Understanding of Institutional Barriers, Group Dynamics & Collaborative Effort is Important to Achieving Outcomes***

It is always interesting and also a challenge to work as a group towards one goal. One of the lessons learned in conducting a large-scale group project such as this one is that it is not so easy. Similarly to a company or other organizations, collaborative working as a whole has its challenges. The dynamic of trying to meld 10 different opinions and streamlining information for a clear, concise product can be difficult. The lessons learned in this way were also instrumental in providing insight in terms of the difficulties in bringing together the many different jurisdictions and overcoming the institutional barriers in addressing the issues associated with the Port's redevelopment.

➤ ***Communication Obstacles are Real and May Impede the Attainment of Goals Including Those Associated with Port Newark's Redevelopment***

It was difficult to identify appropriate sources of information, to gain access to them, and to obtain information essential in researching this study. Yet, it was striking that there were knowledgeable experts related to Port redevelopment scattered throughout various agencies and organizations, e.g., the City of Newark, NJTPA, NY/NJ Port Authority, Nationsport, NJIT, expressing similar frustrations in not being consulted or offered the opportunity to contribute to the process.

- **Field Survey Research Was an Important Aspect of This Research**
The field surveys not only provided an insight of likely future redevelopment and existing problems, but it was also realized that the publicly available information on the internet may not be the most accurate and updated information available.
- **Time Constraints Impose Difficulties in Overcoming Obstacles**
Time constraints are real. Time was a real constraint in doing this project. The class ran out of time. It is likely to be a real world constraint as well as it is experienced by professionals working on this project.
- **Environmental Justice & Social Equity Issues are Complicated, But Should be Addressed in Redeveloping a More Sustainable Port for the 21st Century**
The complexity of environmental justice and social equity issues, including contaminated soils, air pollution, water pollution, improper land uses, obsolete and inadequate infrastructure, the distribution of benefits including environmental and public health impacts, employment opportunities and working conditions need to be addressed sooner rather than later as aspects of Port Newark's redevelopment.
- **Resident Employment Opportunities May Not Be What They Appear to Be**
Port-related employment opportunities may include increasing barriers to entry-level positions due to the changing nature of logistics operations with increased automation and Homeland Security requirements. This concern may be an important social equity issue that will need to be addressed.
- **Port Newark's Redevelopment Process May be Informed By Other Port Experiences in this Country and from Around the Globe**
There is value in learning from other Ports within the United States as well as from Ports in other countries. The internet may prove a valuable tool in this regard. Despite the fact that the Long Beach Port is on the west coast, is a larger operation, and involves the employment of multi-modal transportation alternatives, it has experienced similar growing pains as a result of globalization. The Long Beach Port has made tremendous strides in regard to diesel retrofits for air quality standards and is currently gaining momentum on labor rights for Port workers. National labor and environmental groups from New Jersey have conducted trips to the Long Beach Port to learn from them. Similarly, there are other lessons to be drawn from other places around the world. Best Port practices ought to be benchmarked and applied to Port Newark's redevelopment. More information in this regard needs to be developed.

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