



**Region 2**

**UNIVERSITY TRANSPORTATION RESEARCH CENTER**

# **NYSDOT Consideration of Potential Intermodal Sites for Long Island**

**Submitted by**

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16. Abstract This Study was prepared in response to the Governor's directive to conduct an extensive analysis of the feasibility of a truck/rail facility on Long Island. It was designed to answer three questions:					
<ul style="list-style-type: none"> <li>• Is an intermodal truck/rail transfer facility needed to respond to the current and anticipated volume of goods movement in Nassau and Suffolk County?</li> <li>• Where should such a facility be located?</li> <li>• What are the economic, social, and environmental effects of such a facility and can any adverse effects be mitigated?</li> </ul> <p>The research showed that there is a demand for increased freight delivery on Long Island as a result of population and employment gains and such increased delivery could reduce the number of trucks currently required to deliver freight to area businesses and industrial parks. Increased rail-freight deliveries would, in all likelihood, reduce the costs of these local freight deliveries. Industry experts consulted for this study agree that there is a likely market for delivery of freight by rail to Nassau and Suffolk Counties, but that the demand for bulk freight yards may be more immediate than is the demand for container yards and that the demand for containerized rail freight would be significantly increased if a cross-harbor tunnel were built. Experts generally agree that a significant demand for containerized freight will also depend upon the availability of conveniently accessible warehouse facilities.</p> <p>The study team identified potential sites for the facility and assessed the “pros” and “cons” of each and reviewed the previous work on the LITRIM project. Some recommendations for future action included:</p> <p>The Pilgrim FEIS site evaluation should rigorously address a number of significant environmental, legal, public-health, and environmental justice issues that were identified in the Study Team’s interviews with project stakeholders such as mitigating the potential adverse impacts of light and noise on the patients of Pilgrim State Hospital, some of whom live as close as 350 feet from the proposed site; the impact of the transfer facility site on the adjacent Edgewood State Preserve; and the site’s location within the Oak Brush Plains Special Groundwater Protection Area.</p> <p>The Study Team distinguished between the two major types of truck-rail transfer facilities, bulk and containerized, and found that: while there might be some short-term advantages to combining bulk and container operations, as rail-freight markets develop in the near-term, there is neither any compelling long-term need to combine these operations nor any significant near-term demand for container operations. There is a need for multiple yards on Long Island both for bulk traffic and (with the development of a double-stack cross-harbor rail-freight tunnel) for containers and that there is an immediate demand for at least one major bulk transfer yard on Long Island. In addition, if a double-stack rail-freight tunnel is built across New York harbor, at least two major containers (or bulk-and-container) yards will be required.</p>					
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**NYSDOT**

**Consideration of Potential Intermodal Sites for  
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## Acknowledgements

It takes an extensive team effort to complete a project as complex as the Potential Long Island Intermodal Sites Study. Robert Paaswell, Principal Investigator, and Penny Eickemeyer, Project Coordinator for UTRC, would like to recognize the hard work of the entire Study Team, including Allison L. C. de Cerreño and three research assistants, Radhameris Gómez, Martha Kenton, and Lin Zeng. Their contributions were invaluable to the project.

Allison's skill in interviewing and reporting the concerns of representatives of many of the stakeholder groups, along with the work of Allen Zerkin, contributed significantly to our understanding of the issues discussed in this report. Their efforts were further enhanced by Martha Kenton, a student at NYU, who scheduled over 20 meetings in approximately one month's time.

Lin Zeng of Hunter College ably served the Team through her assistance to Harry Schwartz in analyzing the 13 potential sites that were identified for truck/rail yard use. Her work included reviewing and producing quality air photos and land use maps and assisting Ben Miller and Herb Levinson with geographic specific data.

Radhameris Gómez a Civil Engineering student at RPI enthusiastically helped with many varied tasks that were crucial to the Study's completion including assisting with research and presentations and organizing voluminous email discussions.

# Consideration of Potential Intermodal Sites for Long Island

## Table of Contents

<i>Chapter 1: Introduction</i> -----	3
<i>Chapter 2: The Need for One or More Truck/Rail Transfer Facilities on Geographic Long Island</i> -----	12
<i>Chapter 3: Community Consultation</i> -----	23
<i>Chapter 4: Defining Site Needs for a Truck/Rail Facility</i> -----	33
<i>Chapter 5: Environmental and Traffic Issues</i> -----	41
<i>Chapter 6: Conclusions and Next Steps</i> -----	50

# Consideration of Potential Intermodal Sites for Long Island Study

## Chapter 1: Introduction

In 2008 the NYS legislature passed a bill transferring property from Pilgrim State Hospital (currently publicly owned) to the Oak Brush Plain State Reserve. In his message vetoing the bill Governor Paterson said that “Neither I nor DOT has made any determinations as to whether a LITRIM [Long Island Truck Rail Intermodal] facility of any size is appropriate on surplus property at Pilgrim. The best way for this determination to be made is to continue with the environmental impact analysis of LITRIM, with public participation in the process.”

Concurrent with this veto, the Governor ordered several agencies, with the New York State Department of Transportation in the lead, to undertake the development of a comprehensive regional traffic plan and to include as part of this plan, “an exhaustive analysis of the pros and cons for developing an intermodal at Pilgrim, as well as at potential sites elsewhere in Suffolk County.” Subsequently, NYSDOT invited members of the University Transportation Research Center to submit proposals to analyze the pros and cons of building a Long Island Truck/Rail Intermodal (LITRIM) facility at Pilgrim and other sites in Long Island. In response to this request, this study has been prepared by the CUNY Institute for Urban Systems (CIUS). The work included a review of documents previously prepared concerning the LITRIM, additional technical documents, extensive meetings with stakeholder groups and public agencies and an evaluation of alternative sites for the transfer facility. (See Figure 1.1, Potential Sites)

The study addresses three major questions:

1. Is an intermodal truck/rail facility needed to respond to the current and anticipated volume of goods movement in Nassau and Suffolk County?
2. Where should such a transfer facility be located?

3. What are the economic, social, and environmental effects of such a facility and can any adverse effects be mitigated?

The following chapters demonstrate that:

- While the NYC region moves an extraordinary amount of goods each year, those goods are moved predominately by truck. Lack of good and adequate rail freight service to the NYC metropolitan region and all regions east of the Hudson River has created economic and environmental penalties. At this time (2009), there is a resurgence of rail planning in the US; this must also take place in NY State and its most populous regions, including Long Island. Overcoming the historical impediments to rail freight east of the Hudson River is essential to the economic growth and quality of life of Long Island.
- There is a current and growing need for rail-truck transfer facilities, based both on a growing demand for commodities on Long Island and the need to reduce the number of motor vehicles, particularly trucks, on the roads because of air quality and congestion concerns.
- Given the shortage of available rail-truck transfer facilities on the Island, which prevents existing latent demand for rail-freight service from being met--and hence prevents additional diversion from trucking--no action should be taken that would foreclose the development of any potentially feasible truck-rail yards. The Pilgrim State site is one such potentially feasible facility; it is particularly well-suited to bulk freight service for shippers who are concentrated in nearby centers (e.g., the Heartland and Hauppauge Industrial Parks). However, Pilgrim is not ideal: potential environmental adverse impacts, possible environmental justice issues, potential effects on the resident and out-patient populations at the Hospital, and limitations on space for future intermodal-related development all warrant further study. Other sites may also be appropriate for truck/rail transfer operations.



- The traffic and other potential adverse environmental impacts the Pilgrim site would pose need to be weighed against the significant environmental benefits it would produce. It should also be noted that the negative impacts it might produce—especially regarding traffic—would be far outweighed by the negative impacts that would be associated with the Heartland Town Center that is proposed to be built a short distance from the rail yard.
- In addition to the Pilgrim site, there are other sites that might be well-suited to truck-rail use. One of these is a considerably larger private site that private investors are interested in developing; another is the Calverton site which the Town of Riverhead is considering for truck-rail use. Either of these sites might offer advantages over the Pilgrim site for container service, since containerized freight requires the intermediate handling and storage services of nearby warehousing/distribution centers, and sites such as these offer greater availability of nearby parcels on which such ancillary facilities could be developed.
- While there is an immediate demand for bulk service, it is not likely that there will be significant demand for container service in the absence of significantly improved cross-harbor rail-freight connections. Since such improvements--e.g., a tunnel under the Hudson River which would connect New York City with New Jersey and the rest of the country--will require some years to be developed, a rational development sequence might involve the Pilgrim site or other suitable sites for immediate bulk purposes while also taking steps to develop an additional site that would be available for container service when it is needed. Since the development of a cross-harbor tunnel would also require at least one truck-rail container yard within the general orbit of the Bay-Ridge/Fremont line in Brooklyn and Queens (to handle distribution within New York City), a container-yard location in Central/Eastern Suffolk County might best minimize overall dray distances on geographic Long Island.
- Increased truck traffic would be associated with any site selected for a truck-rail facility. Long Island is highly developed; existing traffic levels as well as other environmental concerns are issues not only at Pilgrim but at other potential sites as well.

- If a separate container yard were not available by the time it is needed, the Pilgrim yard could be turned to container use.

This year, 2009, is a unique year for examining a traditional transfer facility. National and local economic activity, including the demand for goods, is depressed. Nevertheless, this study assumes that the upward economic trend of the past several decades will continue supporting the activities of the 2.9 million people who live and work on Long Island. Continued sustained levels of growth on Long Island have created motor vehicle congestion and associated economic, social and environmental costs. The rapidly accelerating movement of goods by truck – whether local deliveries or long-distance shipments to commercial establishments--have exacerbated the effect of trucks on congestion and the environment.

One solution to the problem is to move goods by rail. Outside the Northeast, east of the Hudson River, the significant proportion of goods moved by rail dwarfs the volume carried in New York State. Using modern, green logistics, moving goods by rail where it is appropriate saves money, is more environmentally friendly, lessens pollution and stimulates economic growth.

An intermodal facility on Long Island will be an early-21<sup>st</sup> Century necessity. When the cross-harbor rail tunnel is completed, at least one intermodal facility will be needed in Nassau/Suffolk to accommodate containerized freight. This study recognizes the real and growing need to address the movement of freight, not only on Long Island but in New York State and its neighbors. Any type of development on Long Island is complicated since it is so densely settled and its transportation infrastructure, particularly its highways and local roads, is so crowded. Space for new development is at a premium and determining the best and highest use of limited underdeveloped land is often a contentious process. Yet developing adequate capacity for the transfer of goods between truck and rail is critical to the continuing economic growth of Long Island.

The report that follows is divided into brief chapters, each of which responds to the three questions previously cited regarding the demand for and appropriate location of a truck-

rail facility. An additional chapter is devoted to the concerns and ideas of the many stakeholders groups whom team members interviewed between January and April 2009. (See Table 1.1) While stakeholders are frequently concerned about complex facilities in their regions, the study team found that those involved with the proposed LITRM facility at the Pilgrim State Hospital site contributed many positive ideas regarding location, access, and mitigation of environmental effects.

# NYS DOT Potential Long Island Intermodal Sites Study Potential Sites

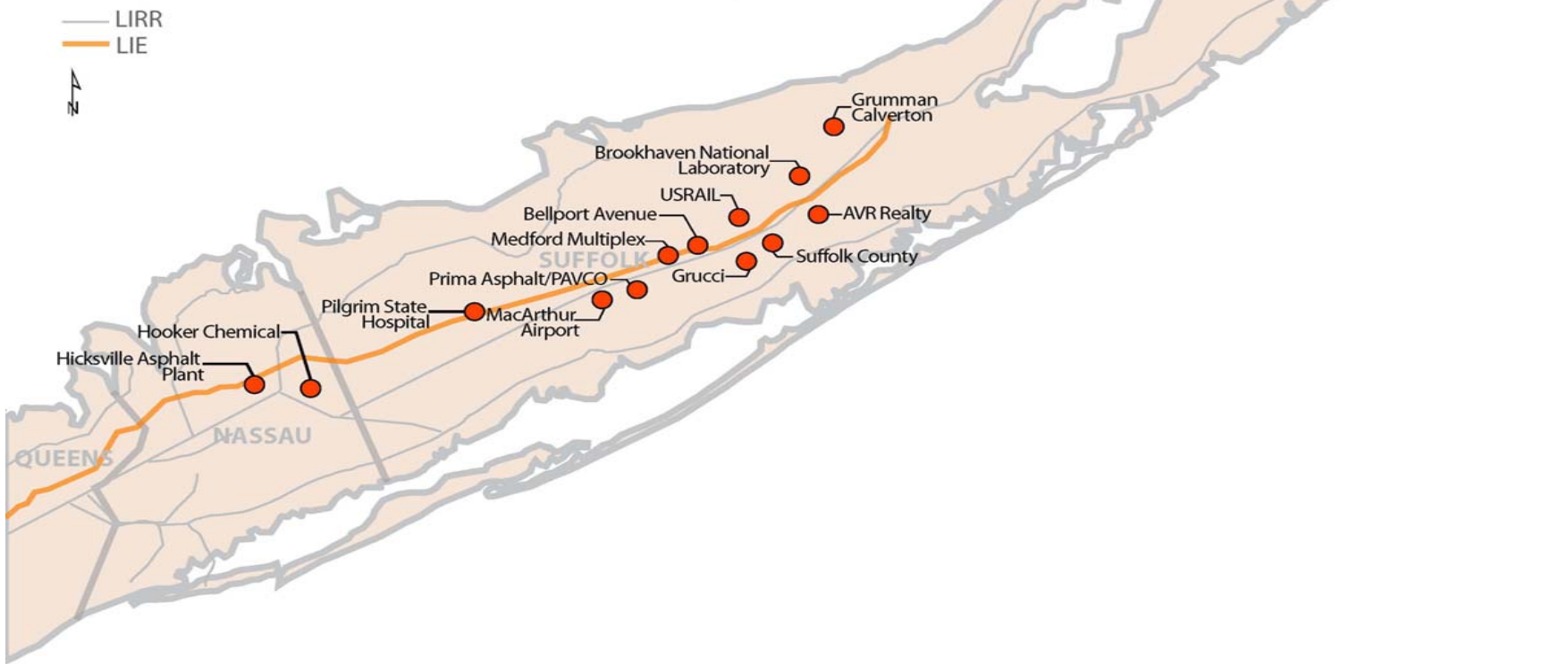


Figure 1.1 Long Island showing Several Candidate Intermodal Sites

## Table 1.1 Stakeholder Groups

### Community Institutions and Long Island Environmental Organizations

2/03/09	Friends of Edgewood Preserve (they also provided a tour on 2/17/09)
2/10/09	Four Towns Civic Association <sup>1</sup>
2/13/09	Long Island Greenbelt Trail Conference Long Island Pine Barrens Society Sierra Club, Long Island Chapter
2/24/09	Citizens Campaign for the Environment
2/26/09	Affiliated Brookhaven Civic Organizations Brentwood Civic Association Medford Taxpayers & Civic Association PRONTO George and Roberta Pettingill, residents of Dix Hills** Nicholas Zuba, legislative aide to Babylon Town Supervisor** Matthew Ferdon, aide to Assemblyman Andrew Raia, 9 <sup>th</sup> District** Angela Meyer, legislative aide to Senator John Flanagan, 2 <sup>nd</sup> District**
2/27/09	Brentwood Summit Council
3/02/09	Islip Town Branch NAACP
3/19/09	Enrico Nardone, Executive Director, Seatuck Environmental Association, Islip

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<sup>1</sup> James Ptucha from Four Towns was ill the day we initially met with Laura Mansi. A phone conversation was held with him separately on 2/27/09.

\*\* Added to list at their own request

### **Long Island Business and Planning Organizations**

2/13/09 Vision Long Island  
2/13/09 Heartland Business Center Long Island Association  
2/24/09 Long Island Association  
Long Island Regional Planning Council

### **Government Entities**

2/12/09 Pilgrim Psychiatric Center, NYS Office of Mental Health  
2/17/09 Suffolk County Planning Department  
2/18/09 US EPA-Region 2  
2/25/09 PANYNJ<sup>2</sup>  
2/27/09 Nassau County Planning Department

### **Railroads and Other Interested Parties**

2/18/09 Kelvin MacKavanagh, (NJ Short Line Railroad Association, speaking as consultant)  
2/18/09 William Galligan (E. of Hudson Rail Freight Task Force, speaking as subject expert)  
2/19/09 Anacostia & Pacific  
2/19/09 Peter Cohen (Amtrak, but spoke as a former Conrail person)  
2/23/09 CSX  
2/26/09 NY & Atlantic Railway  
3/9/09 John McHugh (E. of Hudson Rail Freight Task Force, speaking as subject expert)

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<sup>2</sup> The first meeting with the PANYNJ did not involve all who needed/desired to attend so a follow up meeting was held. The notes incorporate both discussions.

3/18/09	Norfolk Southern
3/20/09	LIRR
3/30/09	Ron Klempner, railroad consultant

**Carriers, Shippers, Warehousing**

2/10/09	NY Freight Users Association
2/18/09	NYS Motor Truck Association
2/19/09	NYPort Terminal Company

## Chapter 2: The Need for One or More Truck/Rail Transfer Facilities on Geographic Long Island

- There is an immediate need for one or more additional truck-rail facilities on geographic Long Island.
- The current need is for bulk transfer facilities, the lack of which prevents potential customers from being able to receive shipments by rail; ideally there would be multiple yards located as close as possible to existing and potential shippers/receivers.
- Although there is not a current demand for a containerized truck-rail facility (an “intermodal” facility in the conventional sense), one or more such yards would be needed if a rail-freight tunnel were built across the Hudson; to be viable, such a yard or yards would require space in the immediate vicinity for the development of the ancillary warehousing/wholesaling facilities needed for the storage, processing, and distribution of containerized goods.



## Chapter 2: The Need for Truck/Rail Transfer Facilities on Geographic Long Island

Over the past several decades, the volume of freight hauled in the US has nearly doubled and, despite the current recession, freight levels are expected to increase significantly in the coming decades. Truck traffic on the nation's highways increased by 62 percent between 1987 and 2002;<sup>3</sup> congestion attributed to trucks is expected to continue to rise in the years ahead. In Nassau and Suffolk Counties, the problems caused by truck-related congestion--the costs of delay, roadway maintenance, air pollution, energy usage, and accidents-- are more severe than they are in the rest of the nation due to the East-of-Hudson region's unusually low level of rail freight traffic.

The population of Nassau and Suffolk is 2.9 million; by 2035 it is projected to reach 3.3 million. While the level of industry on the Island is relatively low, it does support a potential demand for freight movement. (And, given global economic and technological developments affecting the form and location of manufacturing/assembly activities, this base may increase in the years ahead.) According to the most recent NYMTC figures, the two counties received 56 million tons of inbound freight in 2004, a level that is expected to rise to 98 million tons in 2030.<sup>4</sup>

Since the primary land use in Long Island is residential, the greatest demand for freight is for the goods that sustain human life: food, clothing and shelter. Long Island residents consume on the order of 16,000 tons of food and beverages a day.<sup>5</sup> An even greater number of tons of "removables" are sent out every day: construction and demolition debris, municipal solid waste, recyclable scrap commodities, and sewage sludge.<sup>6</sup> Both inbound and outbound flows typically travel many hundreds (or thousands) of miles to the hinterlands from which they originate or terminate and are therefore well suited to rail movement. In addition, the more than 20,000 tons of construction materials that enter the Island each day to be converted into shelter and the rest of the built environment are also suited for rail transport.

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<sup>3</sup> FHWA, Freight Facts and Figures 2008, Table 3-3, [http://ops.fhwa.dot.gov/freight/freight\\_analysis/nat\\_freight\\_stats/docs/08factsfigures/table3\\_3.htm](http://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/08factsfigures/table3_3.htm), accessed 3-31-09.

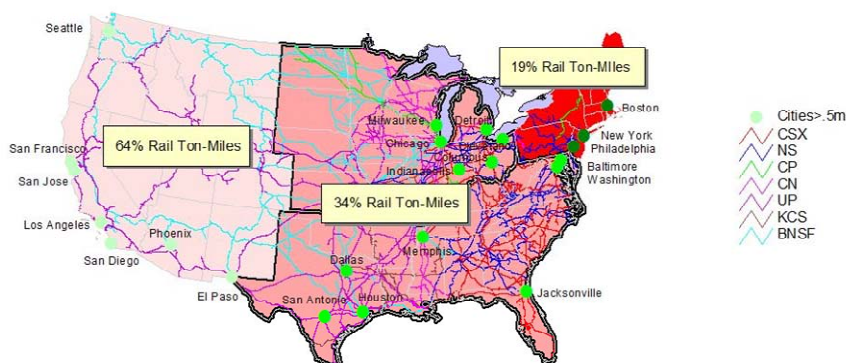
<sup>4</sup> NYMTC, "Feasibility of Freight Villages in the NYMTC Region," Preliminary Draft, 1-20-2009, p. 38.

<sup>5</sup> Derived from *ibid.*, p. 230.

<sup>6</sup> Aggregate figures of removables exported from Nassau and Suffolk are not available, but extrapolating on a per-capita basis from known figures for New York City (which is believed to be similar from a waste-generation perspective), the daily rate would be expected to be nearly 19,000 tons.

Although Long Island was once a world-scale rail-freight market, this volume—on the order of a million carloads a year—dwindled to a negligible level when cross-harbor traffic by barge float came to a virtual end with the formation of Conrail. Since then, the Island’s rail-freight picture has been much different than that for the rest of North America. In the West, 64 percent of all freight ton-miles are on railroad tracks. Everywhere else in the country, except in the nine Northeastern states, 34 percent of all ton-miles move by rail. Only in the Northeast—largely because of the historical barrier posed by the Hudson River— only 19 percent of ton-miles by rail. But Long Island has only about a twentieth of even this rate: fewer than one percent of all the ton-miles of freight on the island are moved along Long Island Railroad tracks.

## US Rail Demand by Census Region



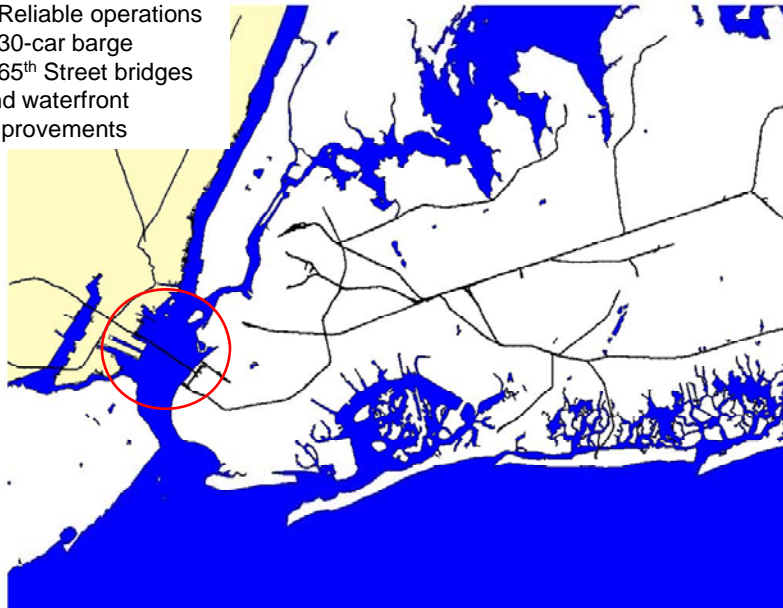
*Source: Environmental Policy Services, LLC; percentages calculated from US Department of Commerce, Commodity Flow Survey, 2002*

Instead of coming directly to Long Island on rails, the trains that carry the goods consumed on Long Island are unloaded on the Hudson’s western shore and then trucked across the George Washington or Verrazano-Narrows Bridges to the Long Island Expressway (LIE). But recent developments suggest that this situation may change. Among these is the recent purchase by the Port Authority of New York and New Jersey (PA) of the one remaining cross-harbor float system. Another is the

progress, also under the PA, in advancing final environmental studies for a cross-harbor rail freight tunnel that would provide a solid connection for rail freight between Long Island and the rest of the continent to the West. Another is that, after more-than-\$375 million in infrastructural investments by New York State, New York City, and the Port Authority, it is finally possible to get some of the newer types of railroad equipment used in the rest of the country down the Hudson Line between Albany and the Bronx and on out to Long Island.<sup>7</sup> The issues noted above--the limited capacity of the region's roadway system and the economic and environmental problems posed by ever-increasing volumes of truck traffic—will supply the context in which these developments are likely to be leveraged in the years ahead to achieve a larger market share for rail freight on Long Island.

### PA Float

- Reliable operations
- 30-car barge
- 65<sup>th</sup> Street bridges and waterfront improvements



*The proposed Cross-Harbor Tunnel would follow a similar alignment between Bayonne, NJ, and 65<sup>th</sup> Street, Brooklyn.*

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<sup>7</sup> The bridge across the Hudson is at Castleton (Selkirk).

Given the discrepancies between the national picture and that in the Northeast (where Long Island and the rest of the East-of-Hudson region stand out as the most extreme case), the following commodities appear to offer the greatest market opportunities for rail freight on Long Island:

- Prepared foodstuffs, fats, oils (18-41% ton-miles by rail elsewhere in the US, 0.1% in the Northeast)
- Alcoholic beverages (12-47% elsewhere, minimal volumes in the Northeast)
- Plastics and rubber (22 and 44% in South and Midwest, 2.1% in the Northeast)
- Wood products (18-61% elsewhere, 1% in the Northeast)
- Pulp, newsprint, paper, and paperboard (31-56% elsewhere, 22% in the Northeast)
- Vehicles and parts (21 to 35% in South and Midwest, 10% in the Northeast—and 0% on LI)

Other significant market opportunities on Long Island include (inbound) fresh produce, rice, flour, canned and frozen goods; bricks, lumber, dry wall, cement and aggregates; and (outbound) all categories of “removables.”

The major railroads serving Long Island, as well as the rail-industry experts interviewed for this study, were unanimous in their view that the most critical factor in moving more of these commodities by rail was the availability of railheads—i.e., truck-rail transfer yards—that would enable the railroads to get their goods to potential customers.

The current and future aggregate capacity that these truck-rail transfer yards would have to supply can be estimated by assuming that, if they could be accessed by the types of conventional equipment that are now used on the rest of the continent without substantially increasing shipment times or costs or decreasing the reliability of deliveries, the specific types of commodities already carried to the western edge of the Hudson River barrier would be carried at the same level into Nassau and Suffolk counties. As the table in Appendix 6.4.1 shows, in 2004 the two counties received over 40 million tons of the types of bulk commodities that, in the rest of the nation, depending on the specific commodity, have a rail market share of between 3 and 25 percent.

Using the conservative assumption that the rail-market shares by commodity would be the same as they are in the adjoining Northeastern states (which includes rail-starved portions of New England as well as New Jersey and Pennsylvania, where rail shares

range only between .02 and 10 percent for these commodities), this would translate into 1.7 million tons of freight a year—or the equivalent, at the average carload loading rates currently found on Long Island, of about 75 carloads of bulk commodities a day. These 75 railcars would keep at least 250 trucks per day off the highways between New Jersey and Long Island. By 2030, the inbound tonnages of the major commodities will increase to 54 million tons, which, at typical Northeastern rail-share rates would still translate into 75 carloads a day. (The increased tonnage is not reflected in increased carloads because the average weight of each car load car is expected to be closer to national averages and because electronics—a product that would require containers, and which is currently not hauled by rail to any appreciable level in the Northeast—would displace metal products in the mix of inbound commodities.)

Before rail traffic declined with the 2008 economic downturn, 9,500 carloads of inbound bulk commodities were hauled by rail on Long Island each year. Although figures that could be used to apportion this inbound traffic between Brooklyn-Queens and Nassau-Suffolk are not publicly available, since the ratio of Nassau-Suffolk’s population to that of Brooklyn-Queens is roughly three-to-five, it is likely that some 3,500 carloads were delivered to Nassau-Suffolk, either to private sidings or to team tracks—or assuming 300 delivery days a year, about 12 cars a day. According to the railroads serving Long Island, the lack of additional truck-rail yards constrains their ability to deliver appreciably more than this volume. The current (and projected) incremental demand for Nassau-Suffolk yard capacity, then, is on the order of 65 carloads per day inbound.

This figure does not include the demand for outbound traffic—most of which will continue to be, albeit at higher volumes, the types of “removables” noted earlier. The 2007 outbound removables traffic was about 9,500 carloads from all of Long Island. Again assuming a Brooklyn-Queens/Nassau-Suffolk ratio of 5/3, this translates into about 3,500 carloads from Nassau-Suffolk. Since there is no overlap between the current rail shippers of removables from Nassau-Suffolk and those who send waste to distant landfills in OH, PA, and VA (See Appendix 6.5), there is a current demand for another 760,000 tons a year of municipal solid waste alone, (not including additional construction and demolition debris, scrap commodities, or dewatered sewage sludge). This would translate into some 8,000 additional carloads per year<sup>8</sup> (or about 25 per

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<sup>8</sup> Containerized MSW leaving the Harlem River Yard in 2005 averaged 92 tons/carload. Benjamin Miller, *An Evaluation of New York’s Full Freight Access Program and Harlem River Intermodal Rail Yard Project*, CUNY Institute for Urban Systems, 11-2005, p. 14, <http://www.cunyurbansystems.org/media/Miller-FFAP.pdf>.

day—a volume that could be accommodated on a few acres). This figure does not include expected increases in waste volume, related to projected increases in Nassau-Suffolk’s population (see Appendix 6.5.1)

In addition to new truck-rail transfer facilities—since very few Long Island businesses will be willing or able to accept full-carload shipments—an ancillary logistical system (i.e., warehouses) will need to be developed to take full advantage of the potential growth in rail-market share. To shift Long Island from its current truck-based freight system, in which a significant share of what Long Islanders consume is transferred from trains to warehouses in Pennsylvania and New Jersey before being trucked to retail outlets on Long Island, a network of warehousing/wholesaling distribution facilities will need to be developed on Long Island. Rail freight market share on Long Island will only grow if the entire logistical system on which it depends also grows up around it. This will require land and new facilities as well as, perhaps, public-private partnerships between railroads, businesses and the State to provide capital and operating funds, at least during start-up phases. To capture really significant market shares, national retailers such as Wal-Mart, Home Depot, or Tropicana will need to be involved. On the rest of the continent, major new rail yards are generally accompanied by surrounding distribution facilities for major national firms.

With a strategic focus on nurturing the overall distribution/ logistical system, new rail yards would satisfy a latent demand for moving bulk commodities. Is there a similar existing and potential demand for containerized rail freight service? This situation is more complicated.

Over the past three decades, public agencies have focused on issues related to vertical clearances and the bearing-weight of rails so that the publicly-owned rail infrastructure east of the Hudson River could accommodate the types of rail equipment commonly used elsewhere in the US. However, while these efforts are still underway, the bar is continually being raised. As a result, trailers-on-flatcars (TOFC) and high-cube boxcars<sup>9</sup> (Plate F/17’6”) can now reach many parts of Long Island. However, since the NYS “Full Freight Access Program” to achieve a 19’6” clearance between Castleton (Albany) and the Bronx was completed, railroads in the rest of the country have begun double-stacking their container trains—thus achieving a 40 percent increase in efficiency<sup>10</sup> but

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<sup>9</sup> See glossary, Appendix 8

<sup>10</sup> US container line-haul costs in 2005 were 70-80 cents/mile for single-stack and 40-50 cents for double-stack, Global Insight, Economic Development Research Group, *Guidebook for Assessing Rail Freight Solutions to Roadway Congestion*,

requiring a 20'6" clearance. Trains that formerly had a maximum gross-weight-on-rails of 263,000 pounds per car now, in the rest of the country, typically weigh 286,000 pounds—a weight that has not yet been determined to be safe for most of Long Island's trackage. (Although 286,000-pound-cars can cross the Hell Gate Bridge from the Bronx into Queens to reach the Fresh Pond Yard, they are not currently allowed farther east.)<sup>11</sup>



Trailer-on-Flatcar (TOFC)

Source: [http://www.greenlightintermodal.info/images/tofc\\_cofc\\_cars\\_23\\_santa\\_fe.jpg](http://www.greenlightintermodal.info/images/tofc_cofc_cars_23_santa_fe.jpg), accessed 3-10-09

But while public agencies have focused their attention on weight and vertical clearance issues, the major long-term impediments to containerized traffic in Nassau and Suffolk counties (in the electrified portions of the LIRR beyond Jamaica Center, Queens) are the horizontal, ground-level clearance problems associated with the third rail in conjunction with the outward-flaring well-cars in which double-stacked containers (or single-stacked containers after filleting) are almost always carried. Achieving horizontal

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10-2006, pp. 102-3.

<sup>11</sup> 315,000 gross-weight-on-rails is starting to be used in some places in the US, but this is not likely to be a major constraint on the future growth of Long Island's rail-freight share since the Island is not likely either to be shipping or receiving the heaviest products of mines, fields, or forests that such cars typically carry.

clearance for this equipment in Nassau and Suffolk would be extremely costly and difficult. A more practicable solution would be the use of specialized equipment to serve the Long Island market. It is possible to conceive of such equipment in operation (e.g., special Long Island-bound trains bound from West Coast ports), but it is difficult to foresee such operations in the absence of a tunnel across New York Harbor that would permit direct, non-delayed delivery to the final destination.<sup>12</sup>



Double-stack containers in well cars

*The wide well cars that cannot clear the LIRR's third rail. Source: [http://www.freefoto.com/images/25/62/25\\_62\\_50---Double-Stack-Container-Train\\_web.jpg](http://www.freefoto.com/images/25/62/25_62_50---Double-Stack-Container-Train_web.jpg), accessed 3-10-05*

For this reason as well as for others (e.g. the fact that the kinds of consumer goods typically carried in containers -- unlike bulk commodities such as cement and aggregates, plastic pellets, lumber and other construction materials, or flour -- *must* go to warehouses for breakdown, repackaging, or other operations, and the fact that relatively expensive containerized equipment is more costly to ship to Long Island because it takes longer to get back into service from a “stub-end” location), it seems

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<sup>12</sup> Bulk freight in conventional 263,000-pound-gross-weight-on-rail cars can now reach all of Long Island and high-cube box cars can reach most of Long Island; all of the access issues (weight and horizontal clearance) pertain only to well cars for *containers* and *heavy-weight* (286,000-pound-gross-weight-on-rail) equipment.



unlikely that there would be any appreciable demand for containerized traffic on Long Island in the absence of a tunnel. The fact that the Harlem River Yard, which was designed and built to accommodate container traffic, and which opened in 1998, has never had a container lifted there supports this assertion, as do the statements of the great majority of railroad-industry personnel consulted for this study.

The only standard containerized equipment other than Trailer-on-Flatcar currently capable of serving central Long Island is a technology such as the RoadRailer or the Iron Highway, which are narrow, have low clearances and low weights. One company has proposed to the Port Authority that it carry marine containers from Port Newark/Elizabeth to central Long Island on RoadRailers. Unless such a venture is successfully implemented, it seems unlikely that there would be appreciable demand for a containerized truck-rail facility on Long Island in the absence of a double-stack tunnel.



RoadRailer



*Source: <http://www.triplecrownsvc.com/Bimodal.html>, accessed 3-10-09*

With a double-stack tunnel and appropriate equipment however, it would be reasonable to expect that many of the double-stacked containers whose contents are destined for the East-of-Hudson region, but which are currently lifted onto trucks on the New Jersey side of the Hudson, would instead enter geographic Long Island by train, and that this volume would increase due to time- and cost-savings from avoiding the congested roadway harbor crossings and metropolitan traffic-jams.

Our review of freight traffic data and projections and our discussions with industry experts suggest that there is a need for one or more new truck-rail transfer facilities on geographic Long Island. There is current demand for increased rail freight, which is not being met because of the insufficient supply of rail-truck transfer facilities accessible to potential shippers/receivers who do not have their own rail sidings. This demand, which is projected to increase in the future, is largely for commodities that would be carried by bulk equipment. Although it would be possible to reach central Long Island with single-stack containers, TOFC, or RoadRailer-type equipment via the Hudson line, the Amtrak tunnels, or the New York/New Jersey float (provided that longer barges were available for RoadRailer equipment or that RoadRailers were routed through the Amtrak Hudson/East River tunnels), no current demand for a containerized truck-rail facility has yet been demonstrated. With a cross-harbor rail freight tunnel, however, it is likely that there would be a demand for such a facility.

There is a current demand for multiple *bulk* truck-rail transload facilities, in addition to the current network of small-scale public team tracks and private sidings. And with a cross-harbor tunnel, it is expected that there would be a demand for at least two truck-rail *container* facilities: one or more within the general vicinity of the Bay Ridge-Hell Gate Line, to manage flows north to New England and distribution within New York City, and at least one farther east, to serve as a distribution center for the nearly three million inhabitants of Nassau and Suffolk counties. Given the expectation that in the event of a cross-harbor tunnel there would be at least one container yard in Brooklyn/Queens, and given that open land available for new warehouse development is relatively more available toward Eastern Long Island, overall dray distances on geographic Long Island would be likely to be minimized if the more-eastern yard were located somewhere in Central/Eastern Suffolk rather than in western Suffolk.

A Central/Eastern Suffolk container yard would be well-positioned to serve Suffolk's population, which at 1.5 million is already bigger than Nassau's and is projected to grow more quickly by 2035 (See Appendix 6.5.1) as well as to serve Suffolk's concentration of rail-freight-relevant industries (warehousing and wholesaling); as shown in Appendix 6.6 the numbers of establishments and employees in these industries are already greater in Suffolk than in Nassau.<sup>13</sup>

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<sup>13</sup> There are 3,993 wholesale establishments in Suffolk v. 3,162 in Nassau, with 47,450 employees v. Nassau's 36,308. There are 1,586 warehousing and storage employees in Suffolk v. 872 in Nassau.

## Chapter 3: Community Consultation

- Approximately 30 stakeholder groups and organizations were interviewed.
- The rail stakeholders and experts generally agree that there is a market that could be expanded, but they differ in how they would grow it. It was the predominant view that it is important to distinguish between bulk and TOFC (Trailer on Flat Car)/COFC (Container on Flat Car) when thinking about growing rail freight on Long Island.
- A number of technical issues were identified with respect to the capacity of the existing rail system to move TOFC/COFC rail freight on Long Island.
- About the Pilgrim Location:
  - Several freight rail experts consider Pilgrim to be a good site, especially if there were to be only one site, since it is near the LIE, has reasonably good secondary access roads around it, and is central to both Nassau and Suffolk end points.
  - Community stakeholder groups have many concerns, including possible negative impacts from light and noise on residents of the high-rise Pilgrim Psychiatric Center, located as close as 350' from the site, and on animal life in and around the Edgewood Preserve, which is contiguous to the site; from site development and use on Long Island's sole-source aquifers; from site-related mobile source emissions on air quality and the health of surrounding and already impacted, communities; and from additional truck traffic worsening traffic conditions on local roads.

## **Chapter 3: Community Consultation**

This chapter outlines the key points distilled from extensive outreach to a wide variety of stakeholders regarding the need and market for truck/rail transfer facilities on Long Island, the operation of a viable truck/rail transfer system, and the pros and cons of the proposed Pilgrim site. A list included in this report identifies each outreach meeting.

It is important to note that the reporting below reflects the beliefs and concerns raised during the interview sessions; technical analysis of significant issues are discussed in the other chapters of this report. Study Team recommendations that respond to these community groups concerns are presented in Chapter 6, Conclusions and Next Steps. The FEIS should address all of these recommended actions.

### **The Desirability of Rail Freight on Long Island**

It is important to note that there was consensus among the stakeholders, including community groups, that truck traffic is a growing problem on Long Island and that a rail freight system that will remove trucks from the roads is a desirable objective.

### **The Viability of Rail Freight on Long Island**

A number of different views were expressed regarding the market for rail freight on Long Island. Rail stakeholders and experts generally agree that there is a market and that it could be expanded but they differ on how the market should be developed. The predominant view is that it is important to separate bulk and TOFC (Trailer on Flat Car)/COFC<sup>14</sup> (Container on Flat Car) in considering expanded rail freight on Long Island. The consensus was that inbound bulk commodities would consist of construction aggregates, building materials, lumber, sand and road salt, while TOFC/COFC would include appliances and high-end products such as electronics, certain retail items, and perhaps automobiles. Outbound commodities would be “removables,” including recycling and scrap metal, construction and demolition debris, ash, and municipal solid waste.

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<sup>14</sup> See glossary, Appendix 8

We note that there are disagreements pertaining to the vitality of “intermodal” traffic. One industry stakeholder stated that with or without a cross-harbor tunnel, there will never be double-stack container traffic on Long Island, even though this is the norm elsewhere, others averred that without such a tunnel, there will not be a market even for TOFC and COFC. Yet, some believe that there is a potential market for COFC/TOFC given the large and relatively wealthy population on Long Island. The key is developing the demand for rail/freight; many saw value in first broadening bulk freight rail and then introducing TOFC/COFC in steps. They advocate first focusing on products that do not require substantial logistics, and then creating a market for premium service over time.

### ***Financial aspects of rail freight***

The viability of rail-truck transfer facilities for bulk and for COFC/TOFC depends on different factors, regardless of what type of freight rail is pursued. Several industry experts stressed the necessity for making a business case for growing bulk freight or encouraging COFC/TOFC, noting that it is difficult for rail freight operators to initiate a project since the profit margins are so slim. Bulk generally receives a sufficient volume to be cost-effective. While volume is also important for COFC/TOFC operations, speed and reliability are equally important, if not more so.

Given the speed at which TOFC/COFC needs to move, and the importance of reliability, it was noted that the Port Authority float will be too slow to compete with the Kearny, NJ, yards for this premium service CSX and Norfolk Southern Railroad “unit trains<sup>15</sup>” typically arrive during the night; whereas a truck can pick up a trailer in New Jersey and deliver it by 8:00am. However, if a 30-car train is assembled for the float and then transported when there is a window in the LIRR schedule, it probably would not be available for pick up on Long Island until the following morning. Thus, in the absence of a cross-harbor tunnel, containers on Long Island may prove problematical in the short-run, though several experts believe that there is a potential market over the longer-term.

Several experts proposed another study that would analyze the actual cost (not the charged price) of reassembling a train destined for Long Island at, say, Kearny, having the reassembled train go to a Long Island transfer facility, and then having a container drayed to an end point such as Hauppauge; versus the actual cost (not the charged

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<sup>15</sup> See glossary, Appendix 8

price) to the trucker of picking up a container at Kearny and bringing it to the same end point.

However, one freight industry representative suggested that competing with Kearny is not the issue and that the market on Long Island is sufficiently different to develop its own market with its own products.

Several rail industry experts suggested that it would make sense to begin by nurturing the bulk service on Long Island. Then, over time, as the use of rail freight expands, simple TOFC/COFC or other higher-end products with simple logistics (e.g., automobiles) could be introduced. If it is reliable and efficient, demand for this service will grow and the market will expand into products requiring more challenging logistics.

### ***Market factors supporting rail shipments***

Several operating factors, may lead to more opportunities for rail freight, such as the costs of enhanced enforcement of highway weight limits and New York City's length restrictions as well as frequent delays and the costs of multiple local truck safety inspections.

The vast majority of truckers are in the short haul business, and they are not opposed to truck/rail transfer facilities.

One industry representative also noted that, notwithstanding the current economy, rail is experiencing a renaissance. Given the concerns over energy, the environment, and compact development, the public's understanding of the positive role the movement of goods by rail can and should play is now even stronger.

### ***System capacity issues***

A number of issues were raised regarding the capacity of the rail freight system and the ability (or lack of it) to develop.

- Infrastructure, e.g. the lack of track and siding capacity to support growth, the insufficient number of yards, and the very high LIRR charges for installing new switches.
- Technical constraints, such as remaining vertical clearance limits for TOFC/COFC as well as weight limitations that must still be remedied to allow fully-loaded 286 thousand -pound cars along the entire LIRR mainline; and the incompatibility of double-stack well cars with tracks having a third-rail.
- Operational constraints, such as the need for a dedicated slot(s) in the LIRR schedule for TOFC/COFC service to ensure a reliable premium service, and the tendency of freight cars to cause misaligned tracks over time, undermining the quality of passenger train service and imposing additional costs on the LIRR.

### ***Siting rail-truck transfer facilities***

Many rail experts suggest that all potential sites should be reserved before they are lost. However, when considering space needs, the discussion is more complex. Transfer facilities located as close as possible to clusters of users should maximize the demand for rail freight competition between rail and trucks. Size of the facility needs to be considered *together* with the type of freight service product and site configuration, a point that was overlooked in previous discussions. A facility for bulk could be relatively small. While typical small bulk facilities are less than 15 acres, several experts suggested they could be even smaller, *with the qualification* that, depending upon configuration and what the products being carried, there must be to be sufficient room for equipment (e.g., lumber needs different equipment than ethanol), truck turning radii, and appropriate buffers from neighboring communities.

TOFC/COFC facilities require significantly more space given the kinds of equipment and storage space needed, as well as the necessity for moving unit trains in and out to speed up transfers. One Class 1 railroad noted that their smallest modern intermodal facilities are roughly 150-200 acres. However, several experts suggested that intermodal yards could be significantly smaller, and that 30 acres was sufficient for a container yard (which is why a 50-acre minimum was initially set in the DEIS for an intermodal yard at the Pilgrim State Hospital site, so that it could handle both bulk and containers). Although automobiles need space for parking while awaiting transfer to dealers, it can be provided off-site since the cars can be driven there. Bulk and TOFC/COFC, may entail different levels on site personnel, which, in turn, will determine the types of shelter service facilities that will be needed on site.

Long and rectangular properties are preferred since they allow trains to be brought in and serviced in units and the rail tracks to be cleaned quickly. Parcels with other shapes may require different layouts and may need to be larger or smaller. Buffers for the surrounding community must also be considered when in conjunction with needs for operational space.

It is desirable to have as much space as possible—hundreds of acres ideally—*around* the actual container transfer operations, so that warehousing, wholesaling, and industry can grow. Nearby industrialized warehouse concentrations can complement transfer facilities.

Significantly, no expert said that it was necessary to combine bulk and TOFC/COFC in the same yard. However, in the short-term, it may make sense to combine them to provide sufficient volumes for a cost-efficient system. In the long-term, if volumes grew sufficiently, bulk and TOFC/COFC would be located in separate yards.

### **Pilgrim as the Site for the Truck/Rail Transfer Facility**

The reader is reminded again that recommended actions to be addressed by NYSDOT in the FEIS to further evaluate these issues are available in Chapter 6 of this report. A variety of opinions were expressed regarding the use of the Pilgrim for a truck-rail transfer facility. Stakeholders/experts and county governments indicated the following:

- It might be feasible to develop linear facilities within the existing LIRR right-of-way (ROW) to handle small-scale bulk transload facilities for specific customers.
- Pilgrim is considered a good site by several industry experts, especially if there were to be only one site, since it is near the LIE and has reasonably good secondary access roads around it, and is central to both Nassau and eastern Suffolk transportation end points.

A number of problems with the Pilgrim site were also identified, primarily by community and environmental stakeholder groups, but also by several government entities:



***Air quality impacts on nearby residents, particularly vulnerable populations of special concern***

- **Significant residential populations nearby.** The DEIS, using 2000 Census data, found that the area has less than a 10 percent poverty rate, the threshold for triggering environmental justice issues. More recent, but unofficial, data from 2007 indicates that the share is now over 11 percent. The population of Brentwood is over 50 percent minority. Within one mile of the site, there are 30,000 residents, 11 schools, the Suffolk County Community College and Brentwood North Middle School and their respective athletic fields. Community groups are concerned about the potential impact of exhausts from operating or idling diesel trucks and locomotives (A railroad expert noted that the emissions from a truck/rail facility are not significant.) According to the Friends of the Edgewood Preserve, particulate matter from diesel fumes is a contributor to asthma and cancer, among other serious health effects, and stays in the air for hours and days. Children are especially vulnerable, so schools, playgrounds and ball fields are of special concern. Two neighborhoods are within one-quarter mile of the site – one off the northwest corner of the site, and Brentwood, on the eastern side of the Sagtikos Parkway. Community groups said that Brentwood already has the highest rate of asthma on Long Island and any additional impact may raise environmental justice issues. Contrary to the DEIS' assertion that the Pilgrim site is in a "wholly non-residential area" and that there would be *no* impact, the Pilgrim Psychiatric Center houses 800+ residents in buildings within a few hundred feet of the site. Hospital officials noted that the buildings are closed, with little air circulation from the outside, so that any fumes entering the air intake systems would circulate through the facility, where patients would be exposed to them.

***Light and noise impacts***

- **Residents of the Pilgrim Psychiatric Center.** Hospital staff and others expressed concern that light and noise could have a negative impact on the mentally unstable residents of the high-rise Pilgrim Psychiatric Center.
- **Proximity to the Edgewood-Oak Brush Plains State Preserve.** The Edgewood Preserve is almost the size of Manhattan's Central Park. It is a rare oak brush habitat that provides a home and migratory refuge for many species of birds and animals, including many on the state's Species of Special Concern list. The Friends

of the Preserve believe that the integrity of the preserve could be compromised by light and noise generated by a transfer facility. Although the extent of the impacts has not been studied, the Friends of Edgewood Preserve do not believe that these impacts can be mitigated. (By contrast, a railroad expert noted that noise isn't a significant factor and that "there are lots of strategies to address these issues. A bulk transfer terminal is really just a parking lot for the trains and the equipment, so the issues are fairly minimal." He also noted that lighting can be focused into the facility to reduce external light pollution. Also, while an intermodal (container) facility contains trucks and heavy lifting equipment, noise can be reduced by using certain types of equipment.)

### ***Environmental impact on the sole- source aquifers that supply water to Long Island***

***As previously mentioned, all points in this chapter, including those identified below, represent specific concerns raised by community groups (see chapter 1 for the list of interviewees) expressed during interviews taken by the Study Team.***

- Community groups provided information to the Study Team which called attention to the LITRIM site's location within the Oak Brush Plains Special Groundwater Protection Area (SGPA), one of only two small SGPAs in Western Suffolk County.
- One of the criteria for designating SGPAs is the location of hydrologic zones in which water is able to percolate through semi-impermeable soil that lies above a water source. Community groups pointed out that this occurs at Pilgrim as water percolates into the Raritan clay layer that lies above the deepest and purest of the Long Island aquifers, the Lloyd, and thereby recharges it. Friends of Edgewood Preserve and others therefore expressed concern about the impact of a truck/rail facility at Pilgrim because the Lloyd is viewed as the reserve of last resort on Long Island and is believed to be increasing in importance as other aquifers such as the Magothy, which lies closer to the surface, may be deteriorating..
- Community groups expressed awareness and concern that the SGPA designation is advisory only and therefore the towns and villages that control zoning and land use are not obligated legally to address this consideration, yet the groups feel strongly due to the concern cited above that consideration is necessary. The community groups indicated that the remaining open lands are of particular significance since much of the SGPA is already developed. Some contend that any use of the Pilgrim site may compromise the quality of groundwater percolating down to the aquifers, to some degree, and perhaps diminish its quantity.

- The Friends of Edgewood Preserve called attention to an EPA letter of July 25, 2007 to the FHWA commenting on the DEIS, stating that it “[did] not anticipate that this project will result in significant adverse impacts to ground water quality” and therefore “satisfies the requirements of ... the Safe Drinking Water Act.” Further explanation was provided to the Team by an EPA representative who explained that the EPA did not take any cognizance of the SPGA designation since it is advisory only, but rather conducted its review in accordance with provisions of the Safe Drinking Water Act, which addresses water sources currently in use. The community groups are concerned that the EPA’s assessment may not have taken the special issue of the Lloyd Aquifer into account because the Lloyd Aquifer is not currently in use.

***Environmental impact from constructing a truck/rail transfer facility at the Pilgrim site***

- Portions of the LITRIM site that border the Preserve’s edge include a stand of tall Eastern white pines that the study team was told is unique to Long Island and is home to hawks and owls. Friends of Edgewood Preserve expressed concern that leveling or damaging these areas would eradicate or diminish this significant habitat.

***Traffic congestion on local roads***

- Commack Road (a designated federal access highway), Crooked Hill Road, and their intersections with the LIE and Northern State Parkway already experience Level-of-Service conditions of D, E, and F ( Level of service A is the best and F is the worst.) These conditions are expected to worsen when the Tanger Mall is fully occupied. The DEIS road improvements called for in the Pilgrim DEIS would alleviate some of these problems.
- Four Towns Civic Association is now opposed to a transfer facility at Pilgrim even if there are road mitigation efforts because of other issues, such as groundwater impacts.

### ***Legal issues***

- **1987 law establishing the Oak Brush Plain State Preserve.** Local groups assert that the law requires that lands “not necessary for use by Pilgrim State Hospital and where native foliage may reasonably be reestablished” shall be transferred to the Preserve. The OMH also asserts that it has not declared this LITRIM site “surplus,” and says that it uses a catch basin on it at this time.

As previously mentioned, the Team recommends that all of the above concerns be thoroughly reviewed as part of the FEIS process.

## Chapter 4: Defining Site Needs for a Truck/Rail Facility

- The 13 sites considered in this Study include five sites from the DEIS, plus eight other sites suggested by the Friends of the Edgewood-Oak Brush Plains State Preserve, the Suffolk County Planning Department and other sources.
- The 13 sites were subject to a two-step review process. In the first step they were screened using five essential criteria that are very similar to those used in the DEIS. Sites that satisfied these criteria were then analyzed in terms of four additional elements. The first five screening criteria are sufficient land available, access to the Long Island Railroad, access to truck routes, suitability of the site, and proximity to users of the truck/rail transfer facility.
- The four elements of the second level analysis are current use of the site, immediate surroundings of the site, potential for expanding truck/rail transfer operations and supportive warehousing, and regulatory requirements.

## Chapter 4: Defining the Site Needs for a Truck/Rail Facility

Chapter 4 assesses the appropriate sites for a truck/rail transfer facility on Long Island. The May 2007 DEIS for the Long Island Truck- Rail Intermodal Facility identified 19 sites, including Pilgrim State Hospital, which the DEIS eventually determined was the most suitable site. The 13 sites considered in this Study include five sites from the DEIS, plus eight other sites suggested by the Friends of the Edgewood-Oak Brush Plains State Preserve, the Suffolk County Planning Department and other sources.

The 13 sites and their acreages are listed in Table 4-1 and their locations in relation to the Long Island Expressway and LIRR lines are shown on the accompanying map. The sites retained from the DEIS are the first five listed in the Table. Eight sites were eliminated from further consideration for essentially the same reasons cited in the DEIS: insufficient land, unsuitability for a transfer facility and lack of access to major east -west truck routes and rail lines.

### Screening of Sites by Essential Criteria

CIUS developed a two step review process to assess suitability of each potential site as a truck/rail facility. Each of the 13 sites was subject to this process. In the first step they were screened using five essential criteria pertaining to the locational and physical aspects of the sites. Sites that satisfied these criteria were then analyzed in terms of four additional elements. The five essential criteria are in effect the same as those used in the DEIS. The main changes are that in addition to east-west truck routes, north-south routes are considered and “central location” is redefined as “proximity to users of the facility”. The aerial photographs and land use maps in Appendix 4 support the narrative report. The five essential criteria are:

Sufficient Land Available: Interviews with rail/freight experts revealed that although truck/rail transfer facilities for handling bulk freight can be as small as a few acres, a yard capable of handling a significant share of geographic Long Island’s truck-rail transfer bulk needs should be at least 15 to 20 acres. An “intermodal” facility for transferring containerized freight between railcars and trucks would ideally be somewhat larger, on the order of 30 acres or more. They noted that for containers,

larger yards and/or sites with developable space on-site or in the immediate vicinity are preferable, as they permit expanded transfer operations, warehouses and buffering from nearby sensitive land uses.

Access to the Long Island Railroad (LIRR): This criterion refers to access to LIRR lines that carry freight. Ideally a freight-carrying rail line, a spur line or a siding should be directly adjacent to the site and there should be a minimum number of grade crossings of significantly traveled roads between the Railroad and the site.

Access to Truck Routes: The primary requirement is proximity to an east—west bound interchange of the Long Island Expressway (LIE), the main east-west route on the Island, or to the Sunrise Highway, or to separate east and west bound interchanges. Access by trucks to through north-south roads is also important. Access to the LIE or Sunrise should be on through streets to minimize disruptions to residential neighborhoods.

Suitability of the Site: Suitability refers to the functional appropriateness of a site for operating the truck/rail transfer facility, notwithstanding the impact that it might have on its environment. A rectangular site with a long side along the rail line is preferable for truck/rail transfer operations and to enable trains to quickly clear the LIRR tracks. It should not present major physical obstacles to developing the transfer facility, such as highly uneven topography.

Proximity to Users of the Facility: Even though a facility in central Suffolk County will be favorably located in regard to markets, research conducted for this Study concluded that one further to the east would also serve a significant customer base. For example, 60% of the industrial space in the two counties is in Suffolk as is two-thirds of the commercial space proposed for development.

Table 4-1 summarizes the application of the five essential criteria to the 13 sites, and Appendix 5 discusses the application of the criteria to individual sites. The 13 sites present a wide variety of conditions. Four are publicly owned and nine are in private hands. The two small ones in Nassau County—7 and 18 acres—are suitable for bulk freight; the 11 in Nassau County, ranging from 47 to 660 acres, are appropriate for bulk

and container operations. All of the sites are located directly on the LIRR or close enough to be served by spur lines. All are less than 3.5 miles from the LIE for east-west travel (the DEIS uses a maximum of four miles), along routes that do not disrupt residential neighborhoods and are reasonably convenient to north-south County roads. Some will require improved rail access, usually spur lines, and most need improved road access.

In addition to being convenient to many users of a truck/rail transfer facility, sites in central and near eastern Suffolk County, between LIE exits 64 and 71 of the LIE, have much to commend them. They are large, usually with room for expanded operations, on-site warehousing or buffering and tend to be held by a few owners. They are usually adjacent to the LIRR and for the most part are proximate to the LIE. Local roads connecting the sites to the LIE are not heavily traveled and do not disrupt residential areas. The sites are more likely to be at a distance from neighbors, thereby lessening their adverse environmental effects on residents or public facilities. (Chapter 5 provides information on the characteristics of people living within one-half mile of each site.)

It should be noted that other apparently suitable sites near the 60s exits of the LIE were identified. However, these sites require rail spurs through private property and across roadways, in one case the LIE, to gain access to the LIRR. Generally, it is much easier to improve roadway than rail connections to potential sites.

Given the wide range of present conditions and opportunities for truck/rail transfer facilities, all 13 sites are considered appropriate for such a facility at this time and are included in the second level of analysis.

Since issues pertaining to the site at Pilgrim State Hospital are the motivating forces for this Study, its “pros” and “cons” are discussed in some detail in light of the essential locational and physical criteria

From the perspective of the screening criteria the advantages of the Pilgrim State Hospital site are that it is sufficiently large, 105 acres; suitable for bulk and container freight operations; and does not have any physical impediments. Furthermore, it is served by an unused LIRR rail spur that would have to be rebuilt and extended into the



site, enabling trains to be rapidly cleared from the main tracks. The site itself is well — shaped for transfer operations. It is 1.8 miles from the east-west exit 53 of the LIE, from which this Study believes two-thirds to three quarters of the truck traffic would come. The remaining truck traffic is estimated to come from northern and southern locations— such as the Heartlands warehouse and Sunrise Highway areas to the south and the Hauppauge vicinity to the north. All truck traffic would enter and leave the Pilgrim site via G Road. The planned ramp improvements along the LIE will divert trucks using the expressway to Crooked Hill Road and there would be no additional trucks along heavily-traveled Commack Road in the Pilgrim site environs. There are few residences just south of the LIE interchange, especially adjacent to Crooked Hill Road. Therefore, trucks going to and from the Pilgrim site would have minimum impact on these areas.

Commack road is heavily traveled, and truck traffic to and from the site would not add to this though more traffic may result from future population growth and economic development. Accordingly, consideration should be given to additional north—south access improvements.

## **Evaluation of Sites by Elements of Analysis**

Given the wide range of present conditions and opportunities for truck/rail transfer facilities, all 13 sites are considered appropriate for a truck/rail transfer facility at this point and were included in the second level of analysis. The four elements of the second level analysis are:

Current Use of the Site: Extent to which the present use of the site may affect intermodal operations and any required displacement of current uses.

Immediate Surroundings of the Site: The land uses immediately surrounding the site that may be most affected by the operation of the facility. (The maps in Appendix 4 show the land uses for about one-half mile around each site.)

Potential for Expanding Truck/Rail Transfer Operations and Supportive Warehousing: The extent to which the transfer facility can be expanded on the site. Since warehousing is a vital adjunct of such operations, the availability of existing warehousing or opportunities to develop it on the site or at other convenient locations is an important factor.

Regulatory Requirements: The extent to which non-local government regulations may affect development of the freight transfer facility. Chief among these are development restrictions in the Pine Barrens, Special Groundwater Protection Areas (SPGA) and possible limitations on using land at airports or federal installations.

The results of the second level of evaluation are summarized on Table 4-2 and described in detail in Appendix 5. Of the 13 sites, nine are undeveloped and four will require relocation of current activities. Except for the two small sites in Nassau County, they can accommodate expanded transfer operations and some warehousing. In several cases warehouses are being or can be developed in the vicinity of the site. The immediate surroundings are such that the effects of freight transfer operations will not be severe or they can be buffered or mitigated. Five of the sites will be subject to some type of regulatory control.

As with the essential criteria, application of the four second-level criteria to the Pilgrim State Hospital site is discussed in some detail. The rail spur serving the Pilgrim site would enable trains to be easily cleared from the LIRR tracks and the site's long southern edge is suitable for truck/rail transfer operations. The site is large enough for expanded operations and some on-site warehousing. It is adjacent to the warehouses in the Heartland Business Center, which could be directly connected to the facility by rail sidings. The nearby Hauppauge Industrial Park, with 14 million square feet of space, could also be an important adjunct.

Pilgrim has potential legislative and regulatory drawbacks, exemplified by the issues raised by local community organizations, notably the Friends of the Edgewood – Oak Brush Plains State Preserve. The Friends question the legality of using Pilgrim for the facility, stating that the 1987 legislation establishing the Preserve provided that land not required by the Hospital become part of the Preserve if native foliage can be regenerated on the site. The Friends also contend that the traffic, lighting and noise from the facility will harm the natural life of the Preserve and that it will compromise air quality in a wide area around the site. Another potential regulatory issue is that the site lies in the Oak Brush Plains Special Groundwater Protection Area (SGPA).

As can be seen from the above analysis, Pilgrim would work from a transportation standpoint, but there are stakeholder concerns that require further assessment. In addition, some of the remaining sites show promise as well, either individually or in combination. These sites also deserve further review.

**Table 4-1****Essential Selection Criteria Applied to Potential Sites for  
Long Island Truck/Rail Transfer Facility**

<b>Site</b>	<b>Acres</b>	<b>Sufficient Land Available</b>	<b>Access to LIRR</b>	<b>Access to Truck Routes</b>	<b>Suitability of Site</b>	<b>Proximity to Users of Facility</b>
<b>Hooker Chemical</b>	17	Bulk	On-site spur	LIE Exit 45 3.5 mi	Yes	Yes
<b>Hicksville Asphalt</b>	18	Bulk	Adjacent	LIE Exit 41 2.5 mi	Yes	Yes
<b>Prima Asphalt/PAVCO</b>	47	Bulk/cont	Adjacent	LIE Exit 62 1.2 mi	Yes	Yes
<b>Grumman Calverton</b>	51	Bulk/cont	On-site spur	LIE Exit 71 3.3 mi	Yes	Yes
<b>Grucci</b>	89	Bulk/cont	.5 mi Need spur	LIE Exit 66 2.5 mi	Yes	Yes
<b>Medford Multiplex</b>	92	Bulk/cont	Adjacent Grade X-ing	LIE Exit 64 2.0 mi	Yes	Yes
<b>MacArthur Airport</b>	94	Bulk/cont	Need spur Grade X-ing	LIE Exit 59 1.5 mi	Yes	Yes
<b>Pilgrim State Hospital</b>	105	Bulk/cont	Need spur .2 mi Grade X-ing	LIE Exit 53 1.8 mi	Yes	Yes
<b>Bellport Avenue</b>	109	Bulk/cont	Adjacent	LIE Exit 66 1.5 mi	Yes	Yes
<b>Brookhaven Nat'l Laboratory</b>	137	Bulk/cont	On-site spur	LIE Exit 69 3.5 mi	Yes	Yes
<b>Suffolk County</b>	158	Bulk/cont	On-site	LIE Exit 66 1.0 mi	Yes	Yes
<b>USRail Expanded</b>	240	Bulk/cont	On-site	LIE Exit 66 .5 mi	Yes	Yes
<b>AVR</b>	660	Bulk/cont	Adjacent Need spur Grade X-ing	New LIE Exit 68A .5 mi	Yes	Yes

Note: Sites listed in size order, bulk facilities first, followed by bulk/container facilities

**Table 4-2****Elements of Analysis Applied to Potential Sites for  
Long Island Truck/Rail Transfer Facility**

<b>Site</b>	<b>Current Use of Site</b>	<b>Immediate Surroundings</b>	<b>Potential for Expansion</b>	<b>Regulatory Requirements</b>
<b>Hooker Chemical</b>	Undeveloped	Industry, commercial	None	Brownfield's designation
<b>Hicksville Asphalt</b>	Asphalt mfg	Housing, industry	None	None known
<b>Prima Asphalt/PAVCO</b>	Mfg bldg prods	Utility (gas storage), housing	None	None known
<b>Grumman Calverton</b>	Undeveloped	Vacant land, open space	On-site Off-site	None
<b>Grucci</b>	Undeveloped, sand mining	Undeveloped	On-site Off-site	None
<b>Medford Multiplex</b>	Comm. recreation, bldg materials dist	Industry, undeveloped commercial, housing	On-site Off-site	None
<b>MacArthur Airport</b>	Undeveloped, Compost facility	Housing, airport, LIRR parking	On-site	Airport land
<b>Pilgrim State Hospital</b>	Undeveloped	Open space, inst., housing, industry	On-site	SGPA
<b>Bellport Avenue</b>	Undeveloped	Open space, industry, housing	On-site Off -site	None
<b>Brookhaven Nat'l Laboratory</b>	Undeveloped (Brookhaven Lab)	Vacant land, inst.	On-Site Off-site	Federal DOE Regulations
<b>Suffolk County</b>	Undeveloped	Undeveloped	On-site Off-site	Owned by Suffolk Co.
<b>USRail Expanded</b>	Undeveloped	Undeveloped, industry	On-site Off-site	None
<b>AVR</b>	Undeveloped	Undeveloped, housing	On-site Off-site	Pine Barrens SGPA

## Chapter 5: Environmental and Traffic Issues

- A value of 600 truck trips per day (total both in and out) has been cited in the DEIS for the proposed facility and 60 trips (30 in and 30 out) were estimated to occur during each peak hour. For reference, this compares to the total vehicle trips for a 12,000 square foot supermarket.
- The determination of the threshold for environmental justice issues centers on an accurate reading of census and other population statistics. Due to community concerns over the level of poverty in Brentwood, the FEIS should re-examine this issue. Environmental analyses, if undertaken for any of the other potential sites should thoroughly examine this issue as well.

## **Chapter 5: Environmental and Traffic Impacts**

### **Environmental Issues**

Chapter 3 outlines stakeholder concerns about environmental impacts that could result from the development of a truck/rail facility at Pilgrim. The reader should refer to Chapter 6, “Conclusions and Next Steps,” for recommendations as to how these concerns should be addressed in subsequent environmental analyses. One concern, the assessment of whether the area meets the federal threshold for consideration of environmental justice issues is of particular note. The determination of whether an area meets the threshold of 10% of population below the poverty level centers on an accurate reading of census and other population statistics. The data source for the Pilgrim DEIS evaluation was the 2000 U.S. Census. The geographic boundaries included neighborhoods within one-half mile from the site location, which is the commonly used basis for measuring social and economic effects in environmental impact statements in New York State. The results showed that the percent of population living in poverty (in year 2000) was under 10%, the legal limit for giving consideration to environmental justice issues. The issue in this case is that the community groups are concerned with the negative impacts on the Brentwood location, which has a heavily minority and low income population. These groups utilized a different data source, the 2007 American Community Survey, and concluded that the poverty level was over 10%. It should be noted that only a portion of Brentwood is within a half mile of the Pilgrim site. Therefore, the Team’s recommendation in Chapter 6 is to re-assess appropriate data sources to evaluate the poverty level issue for this area and accordingly, the impacts (negative and positive, i.e. increased employment opportunities) of a truck/rail facility. Data on socio-economic characteristics of Pilgrim and the 12 other potential sites are included in the appendices.

### **Traffic and Transportation**

The Long Island Railroad Main Line and the Long Island Expressway, (LIE) form the east-west transportation axis of Nassau and Suffolk Counties. They are complemented by a series of north-south expressways, parkways and arterial roads. The study team reviewed issues of impact and access at the Pilgrim Site by assessing information in the DEIS and site visits. Through maps and site visits, the Team also addressed transportation issues at the 12 alternate sites discussed in Chapter 4. Some key general characteristics of the LIE are listed below. Characteristics of the Long Island Rail Road are noted in Appendix 5.1

- From west to east, the LIE extends from the Queens Midtown Tunnel to Riverhead in Suffolk County
- There are three travel lanes each way. Peak- period high occupancy vehicle lanes extend from the New York City line to Yaphank in Suffolk County.
- Daily traffic volumes approximate 180,000 vehicles in Nassau County. Volumes are about 160 thousand vehicles at Commack Road and 123,000 at the Sagtikos Parkway, in the vicinity of the Pilgrim site. Further east, near several of the alternate sites, traffic volumes on the LIE are at about 60 thousand to 75 thousand per day. The lower volumes along the eastern sections of the Expressway result in better levels of service during peak travel periods.
- There is recurrent peak period congestion on sections of the LIE in western Suffolk and in Nassau Counties.
- Daily traffic volumes on north-south roadways crossing the LIE range upward of 10 thousand vehicles per day on Yaphank Avenue to 54 thousand and 80 thousand on Route 110 and the Sagtikos Parkway, respectively.

### ***Traffic of a Truck/Rail Transfer Facility***

- A truck-rail transfer facility on Long Island will reduce truck volumes on most sections of major east-west highways by shifting freight from road to rail. At the same time, it will increase truck volumes in the immediate environs of the center. These dual effects are illustrated with hypothetical values in Figure 1, *Conceptual Example of Traffic Impacts*.
- The DEIS for the Pilgrim site used a value of 600 truck trips per day (total both in and out) for the proposed transfer facility. The DEIS also assumed a value of 60 peak hour trips (30 in and 30 out).
- Expressed in passenger- car equivalents, each truck is equal to two passenger cars. Thus, a truck-rail facility would generate 1200 passenger car equivalents per day. For reference, this compares to the total vehicle trips for a 12,000 square foot supermarket.
- The Pilgrim DEIS estimate assumed that every truck traveling to and from the facility would be fully loaded. Making allowance for empty or partially loaded trucks could increase daily and peak hour volumes by an estimated 25%. Even then, a truck-rail transfer facility would not be a major traffic generator.

## Traffic Impacts at the Pilgrim Site

- The DEIS assumed that the Pilgrim site would be used for an intermodal (combined container/bulk) facility.
- Based on the above assumption, the traffic analysis for the DEIS involved an assessment of traffic conditions and level of service analyses for a number of scenarios. To develop these, the 30 inbound and outbound peak hour truck trips were superimposed on the anticipated 2010 background traffic volumes. The various roadway capacities were assessed to determine if they were adequate for the projected level of traffic. The assessment showed that the proposed improved road system would work.
- If *all* the projected 600 additional truck trips to and from the proposed facility used the portion of Crooked Hill Road between the LIE and the facility entrance at G Road, it would represent a 5.2% increase of total traffic on that section of the road, based on data prepared by Parsons a few years ago
- Though this study agrees with the above, it is important to note, however, that the analysis assumed that all intermodal truck trips would be distributed equally to the Long Island Expressway to the east and west of the Pilgrim site. It did not allocate any trips to north-south roadways such as Commack and Wicks Roads. It is likely that some truck trips would go to or from the Hauppauge and Heartland Industrial Parks, as well as communities on the north and south shores of Long Island.
- The access treatments set forth in the DEIS are generally well thought out, would alleviate existing and future access problems along the LIE interchanges, improve general traffic flow, and remove truck traffic from the local streets. These proposals included three ramp improvements along the LIE, Sagtikos State Parkway and Crooked Hill Road. They also included improvements to G Road.
- However, the study concluded that some additional improvements are needed for safety and traffic flow needs, including connecting Suffolk and Long Island Avenues on the south end and improving ramps and roadways at the LIE Commack Road interchange. The Commack



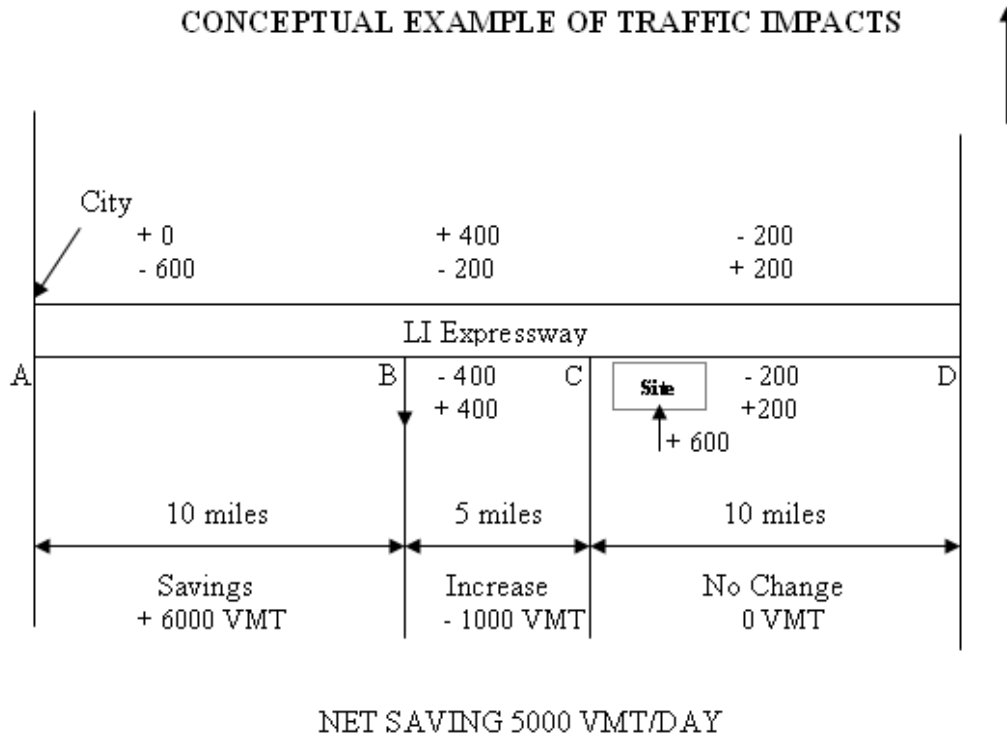
Road improvement would further improve truck access, but would also improve the current traffic flow patterns that appear to be somewhat hazardous.

### ***Site Access Considerations***

- Rail and road access improvements will be necessary wherever a truck-rail facility is built on Long Island. They will depend on where the facility is located in relation to the LIRR and the LIE, as noted in Chapter 4.
- Traffic volumes along the LIE are generally lower east of the Sagtikos State Parkway as compared with western sections of the Expressway. This translates into more reserve capacity in the environs of eastern candidate sites. As shown in Table 1, *Long Island Expressway Volumes, 2004*, in Appendix 7.0, daily volume on the LIE at the Nassau County Line is 180,000 and East of William Floyd Parkway in East Yaphank is approximately 62,000.
- The preferred access plan is one where the site is located between the LIRR on one side and the LIE on the other. The axis of the site should be parallel to both tracks and highway. (See Figure 2, *Site Location Concept*.)
- Rail spurs should be as short as possible on approaches to the site and grade crossings should be minimized.
- Road access should use existing or new LIE service roads for right turn entry and exit
- Left turn access can be made via new bridges or interchanges (See Figure 3 a, b, *Service Roads Close to Expressway and Service Roads Removed From Expressway*)
- Ideally, truck access routes to and from the LIE should be located away from built up and environmentally sensitive areas. This is possible for several eastern-central Suffolk County sites.

In summary, while the Team's review of traffic impacts due to a truck/rail facility at Pilgrim agreed with many of the recommendations presented in the Pilgrim DEIS, other needs are identified including additional ramp improvements and a re-allocation of intermodal truck trips by direction of travel. The Team recommends that the new issues identified within be included as part of the FEIS traffic evaluation.

# SKETCHES SHOWING TRAFFIC ACCESS DETAIL



**Figure 1**

SITE LOCATION CONCEPT

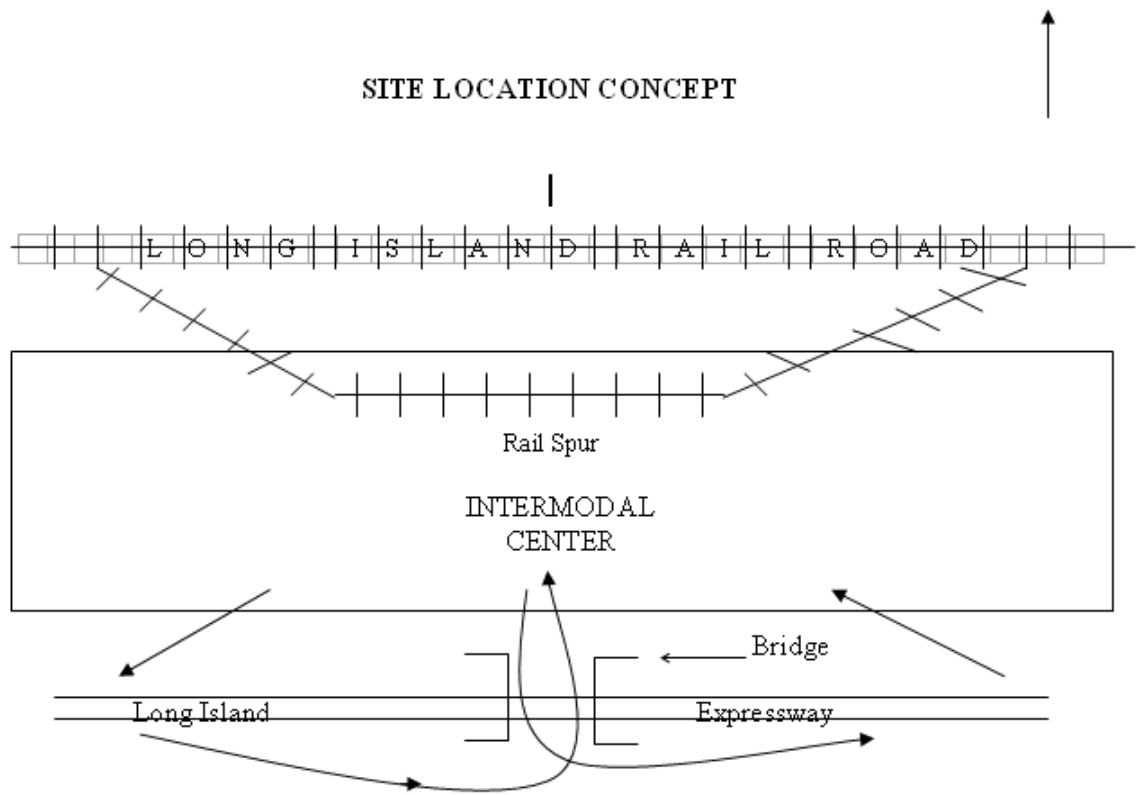


Figure 2

ACCESS CONCEPT - Service Roads Close to Expressway

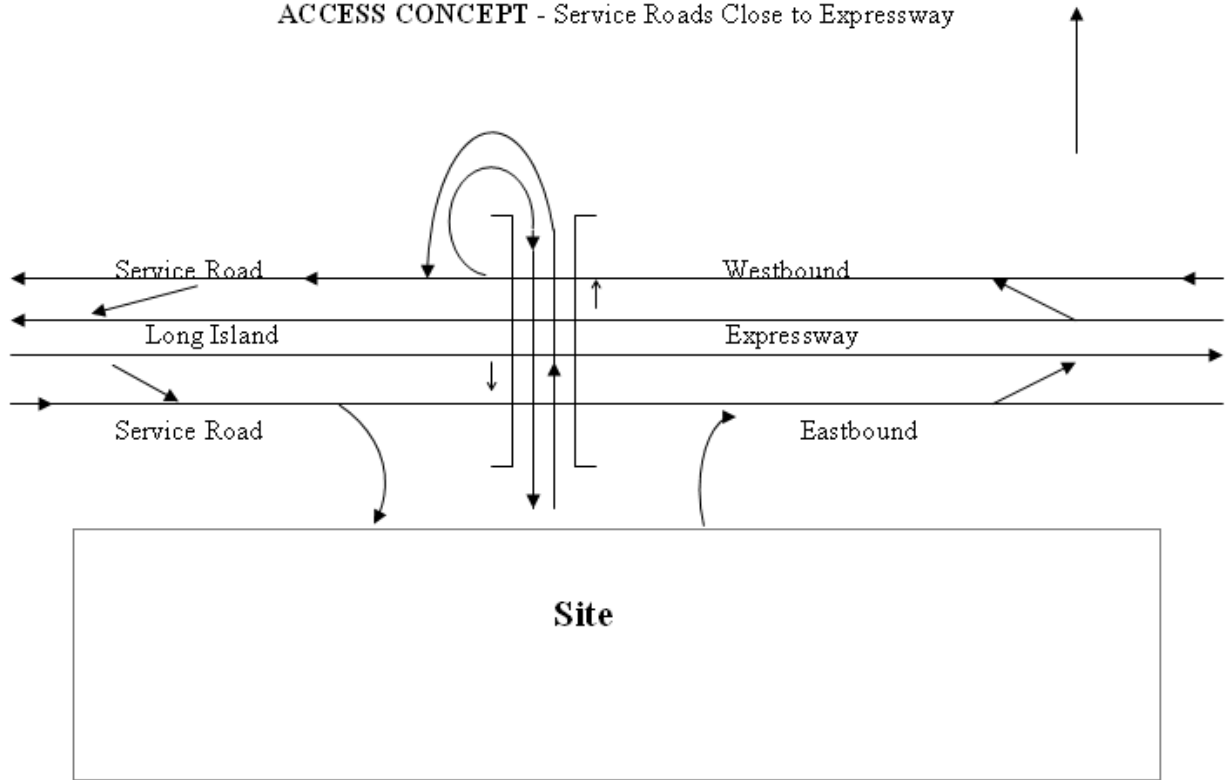


Figure 3A

ACCESS CONCEPT - Service Roads Removed from Expressway

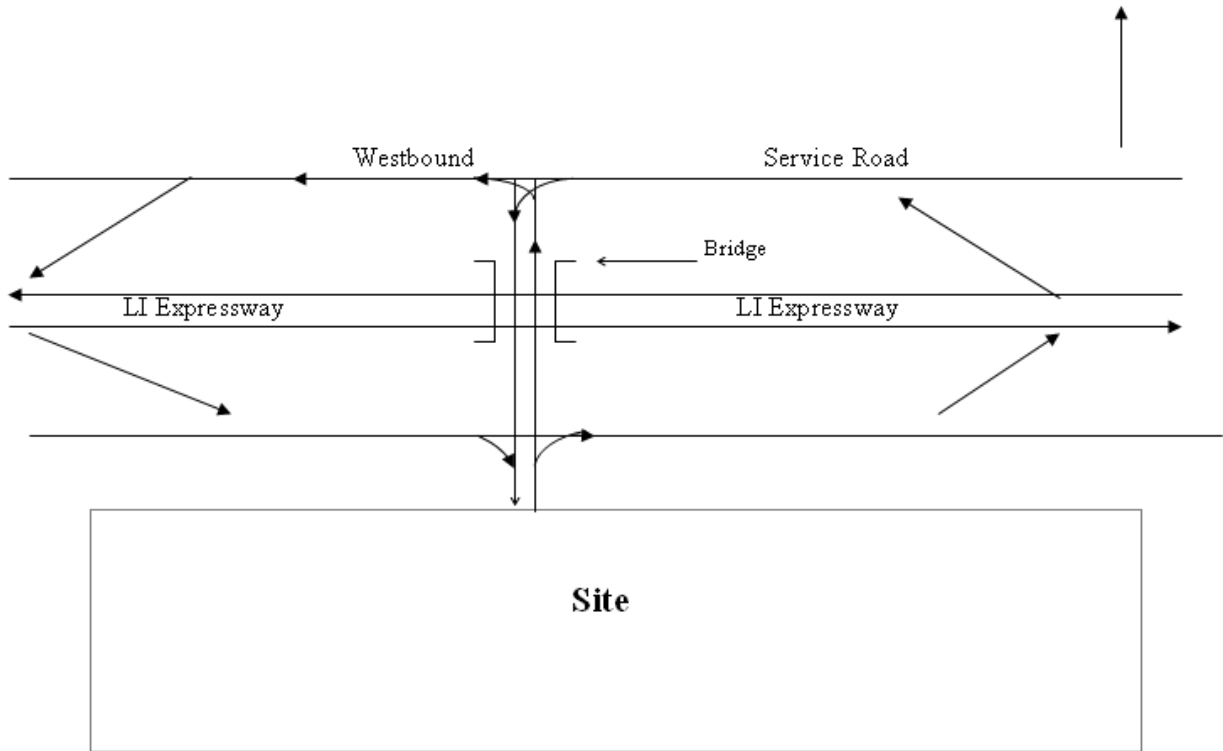


Figure 3B

## Chapter 6: Conclusions and Next Steps

- Growth on Long Island is generating a need for increased freight deliveries by rail.
- There is an immediate need for delivery of bulk freight by rail; there may be further increases in demand in the future due to better cross harbor access. This would create demand for freight delivery by container cars.
- The Pilgrim site works from a transportation standpoint, but there are significant stakeholder concerns.
- The team explored 13 alternative sites, **some** of which show promise, either individually or collectively. Many are in eastern Suffolk County where land is more readily available and traffic volumes are less.

## Chapter 6: Conclusions and Next Steps

This Study was prepared in response to the Governor's directive to conduct an extensive analysis of the feasibility of a truck/rail facility on Long Island. It was designed to answer three questions:

- Is an intermodal truck/rail transfer facility needed to respond to the current and anticipated volume of goods movement in Nassau and Suffolk County?
- Where should such a facility be located?
- What are the economic, social, and environmental effects of such a facility and can any adverse effects be mitigated?

Research for the study showed that there is a demand for increased freight delivery on Long Island as a result of population and employment gains. Moreover, the demands of the global economy and 21<sup>st</sup> Century technological and environmental imperatives are likely to require truck/rail freight delivery if the Long Island region is to remain economically competitive.

If the option of rail freight delivery were more readily available, it could reduce the number of trucks currently required to deliver freight to area businesses and industrial parks such as the Tanger Mall and the Heartland and Hauppauge industrial parks. Increased rail-freight deliveries would, in all likelihood, reduce the costs of these local freight deliveries. Other cost-savings might be achieved if the delivery of raw materials to Nassau and Suffolk manufacturers enabled more of the goods consumed in this area to be produced locally.

As previously discussed in the transportation chapter, truck traffic related to a new truck-rail yard is expected to be minimal (60 truck trips per peak hour, 600 truck trips per day). And since trucks are already delivering freight to area businesses, a significant portion of these truck trips would not be new trips, but simply shorter truck trips between the local rail yard and local businesses, rather than between the businesses and rail yards in New Jersey or Pennsylvania or between the businesses and more-distant locations. Truck miles might be even further reduced if businesses in the adjacent Heartland Industrial Park could be served with their own direct rail sidings. The feasibility of this option should be assessed by business owners, rail service providers, and the relevant governmental agencies.

Until now, for reasons mentioned in this report, the boom in rail delivery nation-wide has, for the most part, missed Long Island, depriving its residents of the related opportunities for environmental and public-health benefits, cost savings, and economic development. Nevertheless, industry experts consulted for this study agree that there is a likely market for delivery of freight by rail to Nassau and Suffolk Counties. The demand for bulk freight yards may be more immediate than is the demand for container yards. The demand for containerized rail freight, however, would be significantly increased if a cross-harbor tunnel were built to enable faster and more-reliable service to the Island.

Experts generally agree that a significant demand for containerized freight will also depend upon the availability of conveniently accessible warehouse facilities. Such facilities provide well-paying jobs. Their development should be encouraged.

After concluding that there is demand for at least one or possibly more truck/rail transfer facilities in Nassau/Suffolk, the study team identified potential sites for the facility and assessed the “pros” and “cons” of each. The Team also reviewed the previous work on the LITRIM project (e.g., the Pilgrim DEIS and related studies) and conducted a literature review (see the Appendix for a list of documents consulted). The methodology and criteria for selecting sites was presented in Chapter 4 and is detailed in Appendix 5.

The DEIS recommended the Pilgrim site on the basis of five primary criteria: it is large enough (105 acres) to allow a joint bulk/container transfer facility; it is physically and operationally suitable for such a facility; it is centrally located in regard to existing market demand; and it is conveniently accessible to both the LIE and the LIRR.

- The Pilgrim FEIS site evaluation should rigorously address a number of significant environmental, legal, public-health, and environmental justice issues that were identified in the Study Team’s interviews with project stakeholders. Among these are: mitigating the potential adverse impacts of light and noise on the 800 resident patients and over 1,300 out-patients of Pilgrim State Hospital, some of whom live as close as 350 feet from the proposed site; the impact of the transfer facility site on the adjacent Edgewood State Preserve; and the site’s location within the Oak Brush Plains Special Groundwater Protection Area, an area designated to safeguard the



Magothy and Lloyd Aquifers that provide drinking water to Long Island. The Study Team recommends that these issues be thoroughly assessed in the Final Environmental Impact Statement.

#### Significant Nearby Populations:

- The issue of environmental justice is of concern to the community groups who were interviewed. A specific question is whether the minority and low-income population of Brentwood meets the federally defined threshold for consideration of environmental justice issues. The Study Team therefore recommends a review of the population data to resolve the data discrepancy previously discussed. The analysis of environmental justice issues should also account for any positive benefits, such as the potential for increased employment that might affect minority and low-income residents of local neighborhoods. Such an assessment should also be undertaken for all potential sites recommended by this Study.
- Concerns about asthma and cancer resulting from negative air quality due to the operation of diesel equipment were expressed by stakeholders. Since research has shown that emission of particulate matter from diesel fumes can have an impact on asthma, and because it has been noted that many facilities in the area cater to children, a population group vulnerable to asthmatic conditions, this issue must be further assessed to determine the extent to which asthma rates might be affected by the projected level of emissions from the facility. Also, claims of abnormally high asthma rates in the vicinity should be reviewed to determine whether they can be substantiated.

#### Light and Noise Impacts

The potential effects of light and noise, both on Hospital patients and staff and on the Edgewood Preserve, must be rigorously assessed to determine (a) their substantive impact and (b) what practicable alternatives may be available for mitigating any significant impacts.

- Any potential negative impacts on the residents and staff of the near-by Pilgrim Psychiatric Center, who were not specifically mentioned in the Pilgrim EIS, must be considered.

- The potential exposure of building residents and staff to air emissions from the facility must also be addressed. If the likelihood of any such exposure is found, the full range of practicable measures to effectively mitigate such exposures must be identified and evaluated.
- The potential impacts of light and noise on the birds and animals in the Edgewood-Oak Brush Plains State Preserve, some of which are listed in New York State's Species of Special Concern list, must also be considered. If any such significant impacts are identified, the full range of potentially practicable mitigation measures must be addressed.

#### Other Impacts on the Preserve Inhabitants

- The Team recommends an updated review of any other issues that could have a negative impact on life in the Preserve, such as any potential impacts on plant life, particularly on any species, such as the Eastern white pines at the edge of the Preserve, that may be unique to Long Island. This review should also consider any potential impacts on animals, such as hawks and owls, which inhabit the Preserve and may be negatively affected by the removal of plants. Again, the full range of potentially practicable mitigation measures should be considered to address any significant impacts that may be identified.

#### Environmental Impact on the sole-source aquifers that supply water to Long Island

- Several community groups referred to the possibility of adverse impacts on the quality and quantity of the water supply that might be due to a truck-rail facility at Pilgrim, since the site sits entirely within the Special Groundwater Protection Area. Since by nature of its "stub-end" geographic position Long Island will be a final destination for inbound goods rather than an intermediate link in a longer transportation network, it may be practicable, if it is deemed necessary to adequately protect this sensitive groundwater area, to prohibit the delivery of certain materials to the facility. The Study

Team recommends that New York State assess the types of materials and products that could pose a substantial threat to water quality in order to make appropriate decisions about the kinds of goods that should be allowed to move in and out of the Pilgrim site.

In developing its recommended siting criteria, the Study Team distinguished between the two major types of truck-rail transfer facilities: bulk and containerized. The Team's independent analysis of the market demand for truck-transfer facilities and of their operational requirements found that:

- While there might be some short-term advantages to combining bulk and container operations, as rail-freight markets develop in the near-term, there is neither any compelling long-term need to combine these operations nor any significant near-term demand for container operations, particularly for the kind of lift-on lift-off operations that require significant operating or storage space.
- There is a need for multiple yards on Long Island both for bulk traffic and (with the development of a double-stack cross-harbor rail-freight tunnel) for containers.

In order for a major yard (whether for bulk or containers) to support the growth of rail-freight demand, it will need to be complemented by adequate distribution facilities at the transfer facility or easily accessible by truck. It is also desirable to have adequate buffer space to shield residential populations and other sensitive land uses from traffic and other adverse environmental impacts.

There is an immediate demand for at least one major bulk transfer yard on Long Island. In addition, if a double-stack rail-freight tunnel is built across New York harbor, at least two major container (or bulk-and-container) yards will be required. One or more of these yards should accommodate the freight needs of the western-to-central end of geographic Long Island, and be located within the five boroughs of New York City. One or more should satisfy the freight distribution needs of the eastern-to-central end of Long Island, and be located within Suffolk County.

In addition to these multiple large-scale yards, a number of smaller-scale bulk transfer facilities would also be desirable. Given their relatively smaller size, which would allow them to be sited near local shippers, each of them would generate relatively fewer truck trips and, cumulatively, they would reduce overall truck miles on Long Island.

While a major advantage of the Pilgrim site is its close proximity to the Heartland Industrial Park and the Hauppauge Industrial Park, disadvantages are the large traffic volumes generated by new shopping malls and the anticipated traffic volumes from a huge proposed high-density residential and commercial complex adjacent to the site, the Heartland Town Center.

Conversely, the relative advantages of potentially available larger sites farther east are lower existing and projected traffic volumes and the availability of land for ancillary warehouse and distribution activities and for buffering from nearby residents. These factors suggest that a multi-site solution might be most appropriate: a western site developed in the immediate future for bulk freight (and perhaps for containerized traffic as well) and, in the mid-term,<sup>16</sup> a site farther east for containers (or for a combined bulk/container facility).

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<sup>16</sup> Note that while demand for a container rail yard is expected in the mid-term rather than immediately, the development of major transfer facilities can take a significant amount of lead-time. In order to have such a facility available by the time it is needed, it would be prudent to begin now to take the steps necessary to secure its development.