

NYMTC Regional Freight Plan Update 2015-2040 Interim Plan

Task 2.3
Freight Villages Market
Analysis



MAY 2014

technical memorandum

Task 2.3 Technical Memorandum

Freight Villages Market Analysis

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1.0 Introduction

The *Feasibility of Freight Villages in the NYMTC Region* study, completed by NYMTC in 2011, defined several types of freight village development patterns, their potential role in the region's logistics system, and evaluated six candidate freight village sites throughout the region. Following on the heels of that study, this task, as part of the *NYMTC Regional Freight Plan Update 2014-2040 Interim Plan*, sets out to better understand the types of shippers, receivers, and logistics services providers which might be attracted to a freight village in these locations, and for what reasons. The objective is to identify a "target audience" for marketing the concept.

This effort draws upon analysis of freight and business location data to identify origins, destinations, and commodities moved, and employment by industry in the portions of the NYMTC region surrounding each candidate freight village site. A two-stepped industry outreach effort consisting of a focus group and a business survey identified high-level issues and considerations with respect to the private sector's likelihood to support the freight village concept. Due to low participation in the survey, however, the outreach effort fell short of identifying whether support for the freight village concept varies by industry, and industry-specific support services and other needs that could be incorporated into plans for developing each candidate site into a freight village.

Based upon the findings of the *Feasibility of Freight Villages in the NYMTC Region* study, two of the sites analyzed in that study were selected for analysis in this task. The two selected sites are the South Brooklyn waterfront in Kings County and Canal Village in Mount Vernon, Westchester County. In addition, the development of Brookhaven Rail Terminal in Suffolk County, which opened in 2011, along with planned future development and expansion of that facility, presented an opportunity to consider the possibility of a freight village development at that site. Brookhaven Rail Terminal was proposed as a candidate freight village site in an addendum to the *Feasibility of Freight Villages in the NYMTC Region* study. Therefore, in sum, three sites for potential freight village development were considered in this analysis. The three sites are mapped in Figure 1.1.

Figure 1.1 Three Candidate Freight Village Sites in the NYMTC Region



Section 2 of this memorandum describes the research and analysis tasks which gauged the size of the market for each of the candidate freight village sites and assessed private sector reception of the freight village concept, including:

- Section 2.0, a re-introduction to the freight village concept, goals, and objectives;
- Section 2.1, a summary of freight flows, business locations, and employment surrounding each candidate freight village site; and
- Section 2.2, a summary of private-sector industry outreach activities, including a focus group and survey effort.

Section 3 discusses recommended next steps that will help NYMTC member agencies market the candidate sites to potential tenants and users.

2.0 Research and Analysis

A freight village, as defined by the *Feasibility of Freight Villages in the NYMTC Region* study is:

“a fusion of land use and transportation planning which clusters freight-dependent companies around a concentration of shared transportation infrastructure. To the extent that freight village development patterns allow rail or waterborne transportation to serve major industries more effectively, the general public benefits from reduced truck traffic and cost of goods and services.”¹

The objective of a freight village, therefore, is to co-locate operators of two or more links in a logistics chain, in order to create efficient movement of freight in the region, better accommodate current and future freight volumes, promote economic development. Further, co-locating freight handling and receiving facilities can facilitate load consolidation, resulting in more efficient loading of trucks, thereby reducing the number of truck trips.

An essential goal to implementing a freight village is to develop a facility that provides or builds upon existing community aesthetics. The freight village is intended to provide a net benefit to the surrounding area by bringing in responsible economic development. Freight villages intend to seamlessly provide the same amenities that one would expect in most communities and to do this with added features such as enhanced landscaping. These amenities include banks, restaurants, and various general retail options in addition to the multimodal access and industrial activities. From an economic development perspective, urban freight villages may offer an opportunity to transform derelict industrial sites or brownfields, typically having rail access, into high value-added employment and commercial centers.²

The freight village objectives are critically important in the NYMTC Region, especially in the counties located east of the Hudson River, where shippers and receivers depend, in large part, upon warehouses and distribution centers located in northern New Jersey, Pennsylvania, and other areas west of the Hudson. In this East-of-Hudson subregion, consisting of the five New York City boroughs, Nassau and Suffolk counties on Long Island, and Westchester and Putnam counties in the Hudson Valley, 280 million tons of freight were moved in 2007. This includes freight moving to or from shippers or receivers in the East-of-Hudson subregion, and does not include through traffic. Of this freight, 51

¹ Feasibility of Freight Villages in the NYMTC Region, NYMTC, 2011, available from: http://www.nymtc.org/project/freight_planning/freight_village.html.

² Ibid.

percent moved inbound, 25 percent moved outbound, and 24 percent moved within these counties. About 249 million tons moved in 23 million trucks, close to 4 million tons moved in 83,000 railcars or containers by rail, 22 million tons moved by water, 420,000 tons by air, and 4 million tons by other modes.³

According to NYSDOT's BLAT business location database, more than 531,000 business establishments are located in the East-of-Hudson counties, as Table 2.1 shows.⁴ These businesses employ more than 6.8 million people and generate an estimated \$1.6 trillion in annual sales. About 214,000, or 40 percent, of these business establishments are in industries that generate significant volumes of freight, including: accommodation and food services; agriculture, forestry, fishing, and hunting; construction; manufacturing; mining; retail trade; transportation and warehousing; utilities; and wholesale trade. These 214,000 businesses employ 2.8 million people and generate \$722 billion in annual sales, and represent a population of businesses that contain the likely tenants and users of services that a freight village in the region can offer.

³IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

⁴BLAT database, New York State Department of Transportation, 2013.

Table 2.1: Business Establishments, Employment, and Sales by Industry, East-of-Hudson Subregion, 2013

Industries	Establishments	Employees	Sales (in millions)
Accommodation and Food Services	30,231	468,920	\$21,332
Administrative, Support, Waste Management and Remediation Services	45,347	423,394	\$39,142
Agriculture, Forestry, Fishing, and Hunting	2,050	25,674	\$2,895
Arts, Entertainment, and Recreation	8,723	83,793	\$7,433
Construction	37,644	309,661	\$61,941
Educational Services	10,804	402,458	\$34,591
Finance, Insurance, and Real Estate	41,399	698,643	\$394,889
Health Care and Social Assistance	49,168	878,634	\$118,326
Information	12,057	255,248	\$68,645
Management of Companies	1,176	32,922	\$19,766
Manufacturing	18,180	595,614	\$176,991
Mining	429	11,117	\$4,556
Missing	2,267	14,310	\$1,331
Other Services (except Public Administration)	60,833	390,856	\$38,646
Professional, Scientific, and Technical Services	82,603	689,640	\$86,092
Public Administration	3,418	121,788	\$21,458
Retail Trade	90,647	903,012	\$168,057
Transportation and Warehousing	11,213	177,894	\$23,115
Utilities	536	17,293	\$9,728
Wholesale Trade	23,059	304,178	\$253,745
Total	531,784	6,805,049	\$1,552,676

Source: BLAT, NYSDOT, 2013.

In the data analysis summarized in Section 2.1, the share of the East-of-Hudson subregion's freight and target industries that are located in close proximity to each of the three candidate freight villages sites are quantified. In Section 2.2, an industry outreach effort aimed at identifying industry-specific needs and the potential for businesses in specific industries to locate or relocate within a freight village or to use services located in any of the candidate freight village sites, is attempted.

2.1 FREIGHT AND BUSINESS LOCATION ANALYSIS

Within this section, highlights of the freight commodity flows are presented for each county where candidate freight village sites are located. These highlights

establish the volumes, commodities, modes, and origins and destinations of freight moving into, out of, and within the vicinity of each candidate site. The source of the commodity flow information is the enhanced version of the TRANSEARCH database, which has been used to prepare the “Commodity Flow Analysis Technical Memorandum” (Task 2.2.2) and other deliverables prepared for the NYMTC Regional Freight Plan Update, 2015-2040 Interim Plan.

In addition, business location and employment data are analyzed within 1-mile and 5 mile radii of each candidate freight village site, and compared to the total number of businesses in the East-of-Hudson portion of the NYMTC region, which could, directly or indirectly, benefit from a freight village development East-of-Hudson. This analysis reveals the share of the population of freight-generating businesses located within and surrounding the candidate sites, which may be targets for (re)location into the freight villages, or which could potentially use services offered in the freight villages. The objective of this exercise is not to rank or screen out sites by comparing the number of businesses site-to-site. Instead, the objective is to determine the size and the composition of the population of freight-generating businesses in and surrounding the sites. The source of the business location and employment data is the 2013 BLAT database, supplied by NYSDOT. The East-of-Hudson portion of the NYMTC region includes Bronx, Kings, Nassau, New York, Putnam, Queens, Suffolk, and Westchester counties.

South Brooklyn Waterfront, Kings County

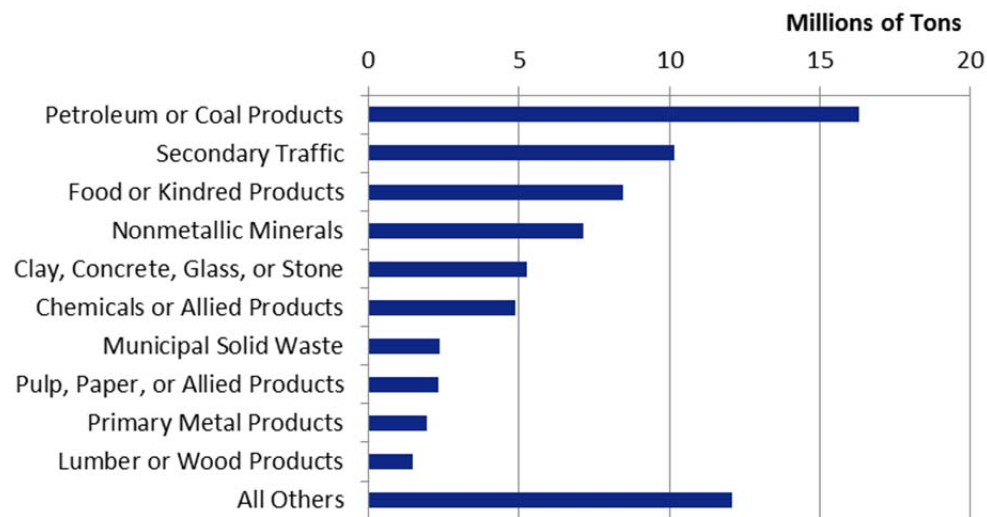
The South Brooklyn Waterfront site includes 95 acres of waterfront land in the Sunset Park area of Kings County, with the Brooklyn Army Terminal at the center of the site. The site is owned by the City of New York and consists of piers, docks, cranes, and two industrial buildings containing a total of 4 million square feet. Since the completion of the *Feasibility of Freight Villages in the NYMTC Region* study in 2011, a recycling facility and automobile import/export facility at South Brooklyn Marine Terminal, north of the candidate freight village site, has opened. In addition, a rail connection to the South Brooklyn Marine Terminal via the First Avenue line has been established. The South Brooklyn waterfront therefore offers water, rail, and truck access. The Feasibility of Freight Villages in the NYMTC Region study proposed an “Evolved Industrial Park Freight Village” on the site, consisting of 70 percent light warehousing, 10 percent crossdocking facilities, and 20 percent industrial park activities. The commodity flow and business location analysis that follows reveals some of the goods movements and industries that could potentially benefit from the development of this type of freight village on the South Brooklyn waterfront.

Commodity Flow Analysis Highlights, Kings County

In 2007, 72.3 million tons of freight moved in Kings County. About 56 percent of that freight moved inbound from origins outside Kings County, 41 percent originated in Kings County and moved outbound, and 3 percent moved between

origins and destinations inside the county. Top commodities moved include petroleum and coal products (16 million tons), secondary traffic (10 million tons), food and kindred products (8 million tons), nonmetallic minerals (7 million tons), and clay, concrete, glass or stone products (5 million tons), as Figure 2.1 shows.

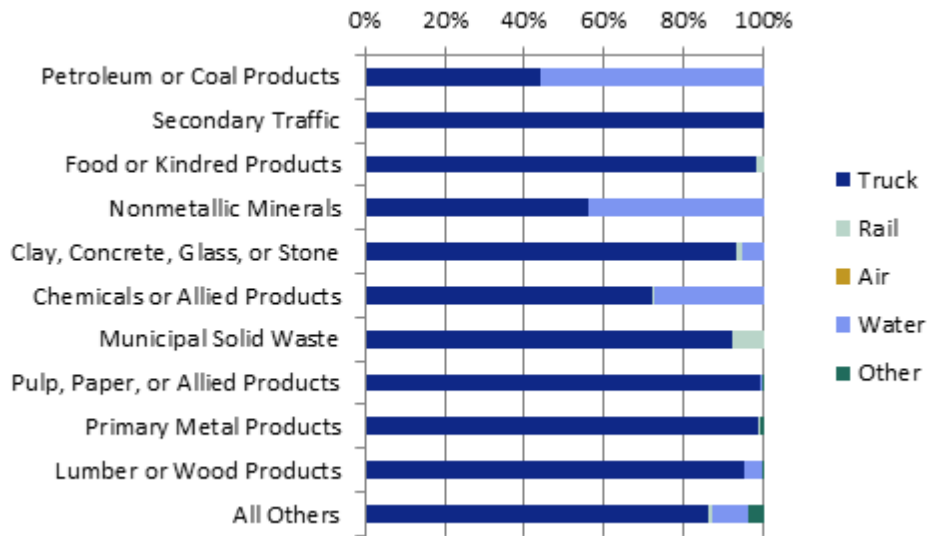
Figure 2.1 Top Kings County Commodities, 2007



Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

About 56 percent of the petroleum and coal products moving into, out of, or within Kings County moved by water, as Figure 2.2 shows. A greater share of inbound petroleum and coal products moved by water (62 percent) than outbound petroleum and coal products (29 percent). The majority of outbound petroleum and coal products (71 percent) and all of the intra-county petroleum and coal products (100 percent) moved by truck. Trucks moved 56 percent of nonmetallic minerals, including 57 percent of inbound nonmetallic minerals and 55 percent of outbound nonmetallic minerals, with the balance moving by water. All of the secondary traffic moved by truck, and truck moved more than 90 percent of food and clay, concrete, glass and stone products. Among the top commodities moving to and from Kings County, truck and water were the primary modes used, and therefore a freight village that serves industries reliant on truck and waterborne freight shipments could generate significant interest among businesses in Kings County.

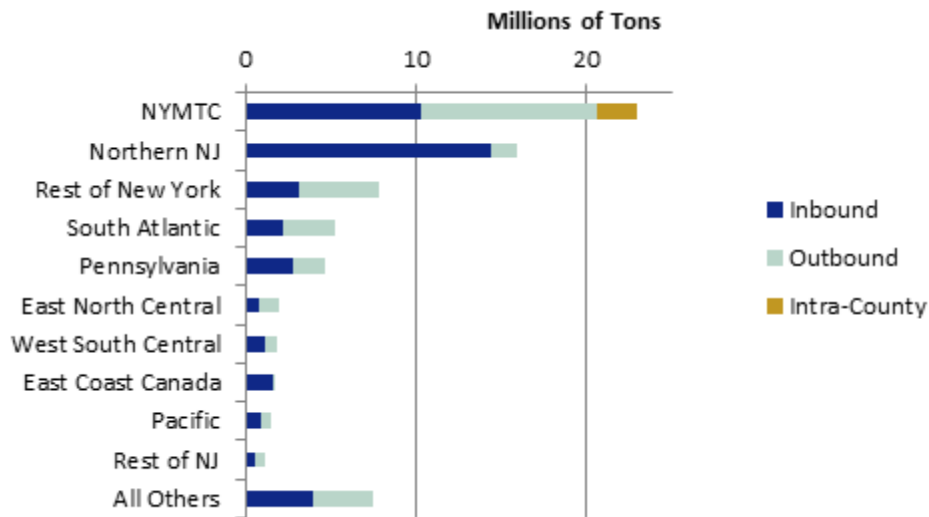
Figure 2.2 Mode Split by Commodity, Kings County, 2007



Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

As shown in Figure 2.3., the primary origins of freight coming into Kings County include Northern New Jersey (14 million tons), other NYMTC counties (10 million tons), Upstate New York (3 million tons), the South Atlantic states (2 million tons), and the Canadian Maritime provinces (2 million tons). The major destinations for outbound freight include other NYMTC counties (10 million tons), Upstate New York (5 million tons), Pennsylvania and the South Atlantic states (3 million tons each), and Northern New Jersey (1 million tons).

Figure 2.3 Top Origins and Destinations for Kings County Freight, 2007 and 2040



Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

South Brooklyn Waterfront Area Business Profile

One-Mile Radius. According to the BLAT database, 2,703 businesses are located within one mile of the South Brooklyn Waterfront site, as Figure 2.4 shows and Table 2.2 details. These businesses employ more than 40,000 workers and generate nearly \$10 billion in annual sales. These businesses represent 0.5 percent of all businesses, employ 0.6 percent of all employees, and generate 0.6 percent of all sales in the East-of-Hudson subregion. The share of East-of-Hudson establishments and employees in the wholesale trade, manufacturing, transportation and warehousing, retail trade, construction, accommodation and food services, and other services industries located within one mile of the South Brooklyn Waterfront site exceeds the share of establishments and employees across all industries combined, suggesting a greater concentration of these industries is located in this area compared to the East-of-Hudson subregion as a whole. Wholesale trade and retail trade account for one-third of all businesses and one-quarter of all employees within the one-mile radius.

The business profile within one mile of the South Brooklyn Waterfront site is consistent with the industrial character of the site described in the *Feasibility of Freight Villages in the NYMTC Region* study. The freight moving into and out of the one-mile analysis area consists largely of consumer goods to supply the wholesale trade and retail trade industries, inbound raw materials and outbound finished products and consumer goods generated by the manufacturing industry, construction materials, and transportation equipment to support the

construction and transportation and warehousing industries, respectively. Commodities represented in these moves include: secondary traffic, food products, apparel, furniture, instruments, and containers, which move in intermodal containers and are transported almost exclusively by truck in the East-of-Hudson region today; and nonmetallic minerals, clay/concrete/glass/stone, petroleum and coal products, and machinery, which move into and from Kings County by truck, rail, and water.

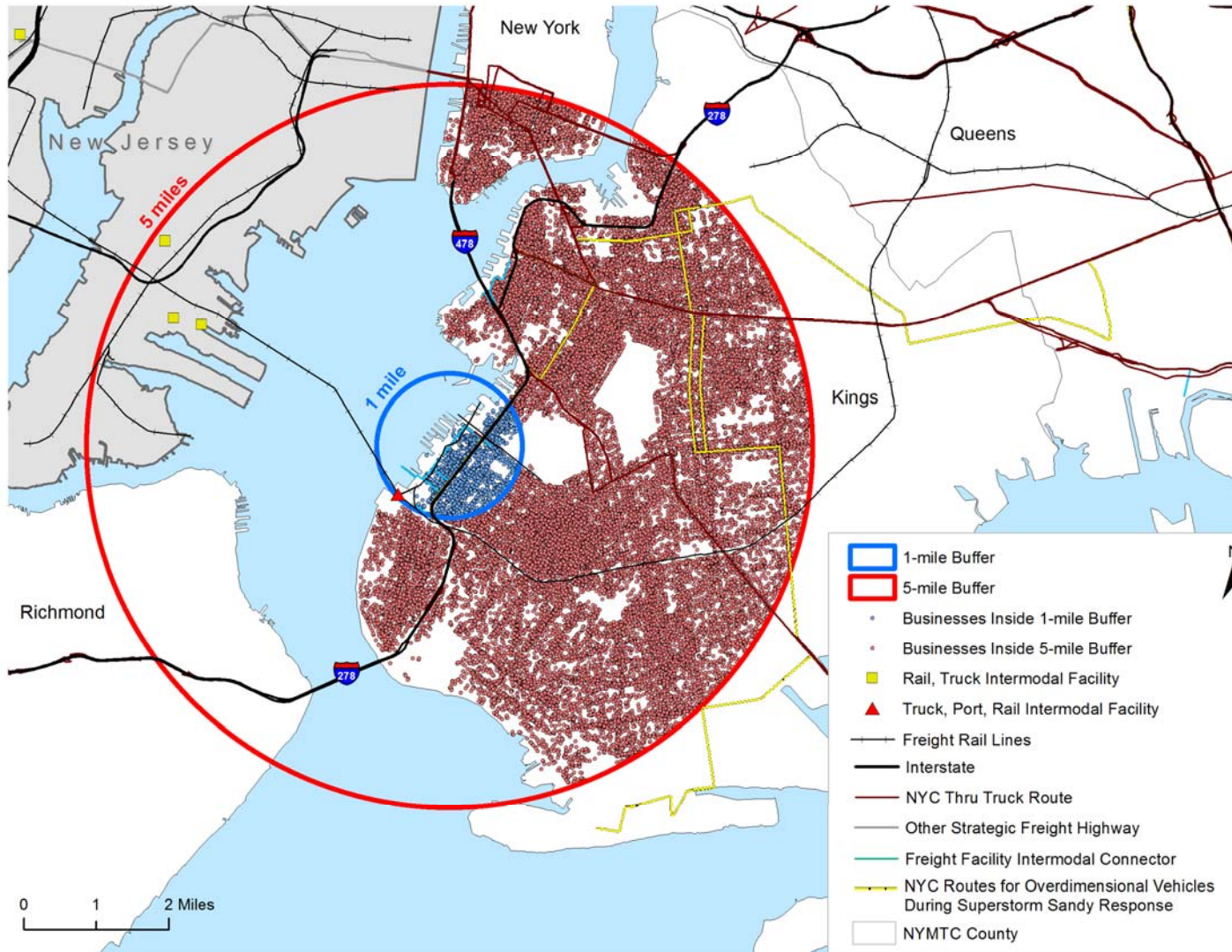
In sum, about 1,600 (59 percent) of the businesses located within one mile of the South Brooklyn Waterfront are in “freight generating” industries, including accommodation and food services, agriculture et al, construction, manufacturing, mining, retail trade, transportation and warehousing, utilities, and wholesale trade. These businesses are shippers, receivers, carriers, and other participants in the logistics chain of intermodal commodities that supply the wholesale and retail trade industries and a mix of bulk and intermodal commodities that support manufacturing and construction. These businesses employ 22,000 employees and generate \$7 billion in sales, and include many of the potential occupants or users of a freight village.

Five-Mile Radius. Nearly 77,000 business establishments employing nearly 972,000 people and generating \$216 billion in annual sales are located within 5 miles of the South Brooklyn Waterfront site on the east side of the Hudson River, as Table 2.2 shows. As Figure 2.4 illustrates, businesses within 5 miles of the site that are located in Richmond County or New Jersey are not included in this summary. The 5-mile circle includes most of Kings County and a portion of Lower Manhattan in New York County. About 14 percent of all businesses and all employees in the East-of-Hudson subregion are located within 5 miles of the South Brooklyn Waterfront site. The share of businesses and employees located within 5 miles of the site found in other services, retail trade, accommodation and food services, educational services, finance/insurance/real estate, information, and professional services exceed the share of all establishments and employees in the East-of-Hudson subregion, suggesting a greater concentration of these industries within the 5-mile analysis area relative to the subregion as a whole.

Compared to the immediate vicinity of the South Brooklyn Waterfront, businesses within a five-mile radius include a greater share of administrative and “knowledge” industries, which typically generate lower volumes of freight than freight-generating industries. The number of establishments in freight-generating industries is quite large compared to other parts of the region, however. Nearly 31,000 establishments (40 percent of all establishments) in freight-generating industries employing close to 360,000 people and generating \$91 billion in sales are found within five miles of the South Brooklyn Waterfront candidate freight village site. About half of the employees in these industries are engaged in retail trade and accommodation and food services. An additional 21 percent work in the manufacturing industry.

Compared to the one-mile radius analysis area, within five miles, there is a greater concentration of businesses that ship or receive commodities that move by truck, either in dry vans or intermodal containers, than bulk commodities. A freight village developed to serve these industries could include rail-to-truck transfer (assuming other facilities are developed to move intermodal rail services onto geographic Long Island) or transloading, warehousing and distribution center space for consumer goods, truck parking and truck services.

Figure 2.4 Businesses And Freight Infrastructure Within 1-Mile and 5-Mile Radii of South Brooklyn Waterfront Site



Sources: I-95 Corridor Coalition ICAT Rail Network, Bureau of Transportation Statistics National Transportation Atlas Database, 2012; US Census Bureau; NYDOT BLAT, 2013; NYCDOT; Cambridge Systematics, Inc.

Table 2.2: Business Establishments, Employment, and Sales by Industry, South Brooklyn Waterfront Analysis Area, 2013

Industry	Within 1 Mile			Within 5 Miles			East of Hudson Counties		
	Establishments	Employees	Sales (in millions)	Establishments	Employees	Sales (in millions)	Establishments	Employees	Sales (in millions)
Accommodation and Food Services	192	2,388	\$98	4,763	62,361	\$2,656	30,231	468,920	\$21,332
Administrative, Support, Waste Management and Remediation Services	178	2,018	\$215	6,067	58,701	\$5,758	45,347	423,394	\$39,142
Agriculture, Forestry, Fishing, and Hunting	1	10	\$2	165	1,374	\$177	2,050	25,674	\$2,895
Arts, Entertainment, and Recreation	25	194	\$20	1,111	9,509	\$718	8,723	83,793	\$7,433
Construction	241	2,107	\$415	3,967	34,721	\$7,308	37,644	309,661	\$61,941
Educational Services	41	1,252	\$107	1,603	63,259	\$5,459	10,804	402,458	\$34,591
Finance, Insurance, and Real Estate	115	1,253	\$532	6,001	128,723	\$64,344	41,399	698,643	\$394,889
Health Care and Social Assistance	157	7,283	\$862	6,291	117,751	\$14,184	49,168	878,634	\$118,326
Information	42	633	\$189	1,801	30,907	\$8,659	12,057	255,248	\$68,645
Management of Companies	6	129	\$75	155	3,942	\$2,285	1,176	32,922	\$19,766
Manufacturing	169	5,913	\$1,314	2,290	65,658	\$18,515	18,180	595,614	\$176,991
Mining	1	241	\$34	59	2,451	\$1,295	429	11,117	\$4,556
Missing	10	45	\$4	375	1,815	\$169	2,267	14,310	\$1,331
Other Services (except Public Administration)	325	2,552	\$328	9,965	60,644	\$6,340	60,833	390,856	\$38,646
Professional, Scientific, and Technical Services	194	2,683	\$272	12,194	112,280	\$12,594	82,603	689,640	\$86,092
Public Administration	14	534	\$48	518	26,525	\$4,744	3,418	121,788	\$21,458
Retail Trade	639	5,926	\$953	14,928	126,244	\$22,261	90,647	903,012	\$168,057
Transportation and Warehousing	80	1,161	\$147	1,342	22,958	\$2,763	11,213	177,894	\$23,115
Utilities	1	15	\$3	60	3,062	\$1,869	536	17,293	\$9,728
Wholesale Trade	272	4,159	\$4,037	3,112	38,868	\$33,862	23,059	304,178	\$253,745
Total	2,703	40,496	\$9,657	76,767	971,753	\$215,960	531,784	6,805,049	\$1,552,676

Source: BLAT, NYSDOT, 2013.

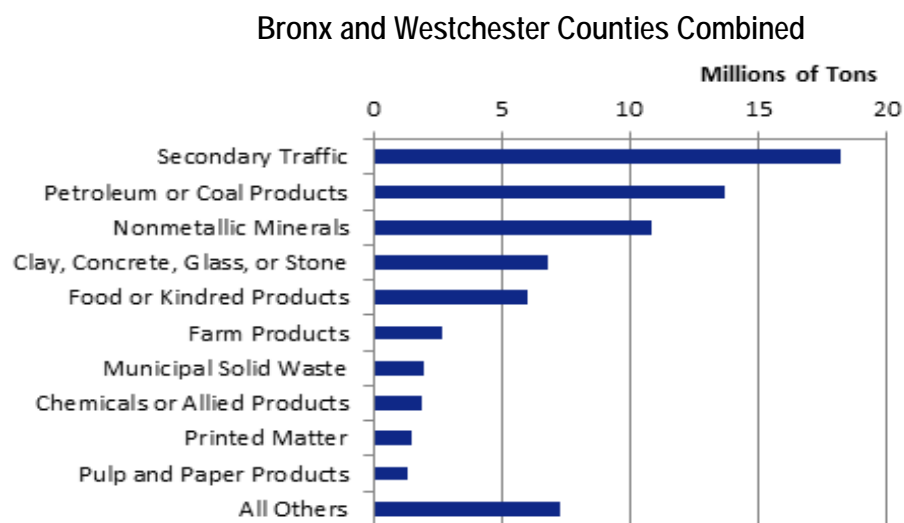
Canal Village, Westchester County

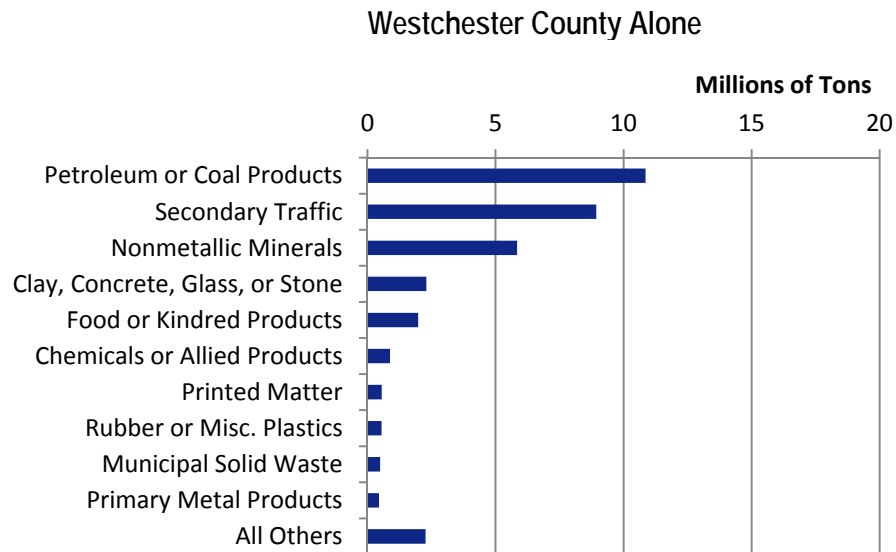
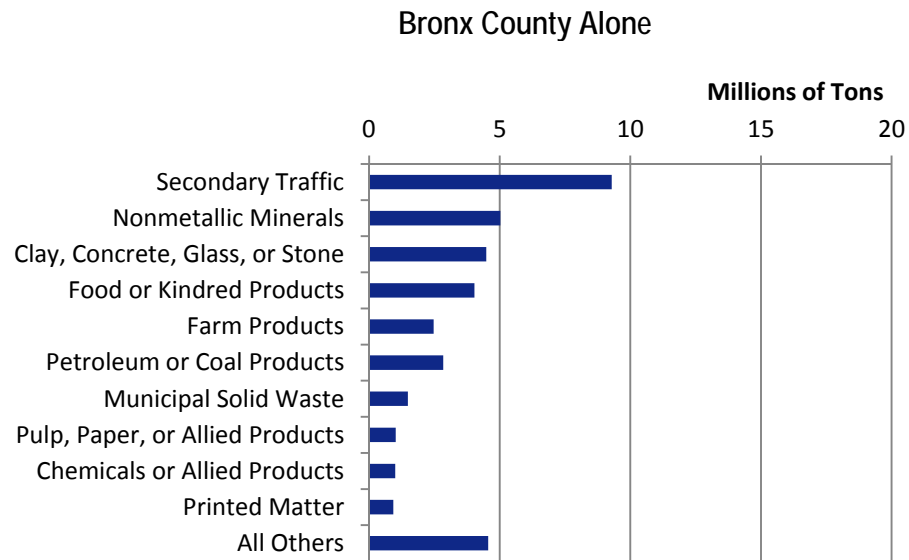
The Canal Village site includes up to 230 acres located adjacent to Eastchester Creek in Mount Vernon, Westchester County. The site borders Bronx County. The site is filled primarily with industrial uses and offers the potential for waterborne access, though dredging of the creek may be required in order to fully realize that potential. The *Feasibility of Freight Villages in the NYMTC Region* study suggested that the Canal Village site may be suitable for a potential development that would consist of 50 percent light warehousing, 20 percent crossdocking, and 30 percent mixed industrial park activities. The commodity flow and business location analysis that follows reveals some of the industries and goods movements that could potentially benefit from the development of this type of freight village at Canal Village.

Commodity Flow Analysis Highlights, Westchester and Bronx Counties

Because Canal Village is on the Westchester County-Bronx County border, the freight statistics for both counties, in sum, are summarized here. In 2007, 72.2 million tons moved into, out of, or within Westchester and Bronx counties. About 64 percent moved inbound, 35 percent moved outbound, and 1 percent moved within each of the counties. The top commodities, shown in Figure 2.5, included secondary traffic (18 million tons), petroleum and coal products (14 million tons), nonmetallic minerals (11 million tons), clay, concrete, glass, and stone products (7 million tons), and food (6 million tons). Figure 2.5 contains three graphs: one illustrating the top commodities in Westchester and Bronx counties combined; the second showing the top commodities in Bronx County alone; and the third showing the top commodities in Westchester County alone; by weight, in 2007.

Figure 2.5 Top Commodities, Bronx County, Westchester County, and Bronx and Westchester Counties Combined, 2007



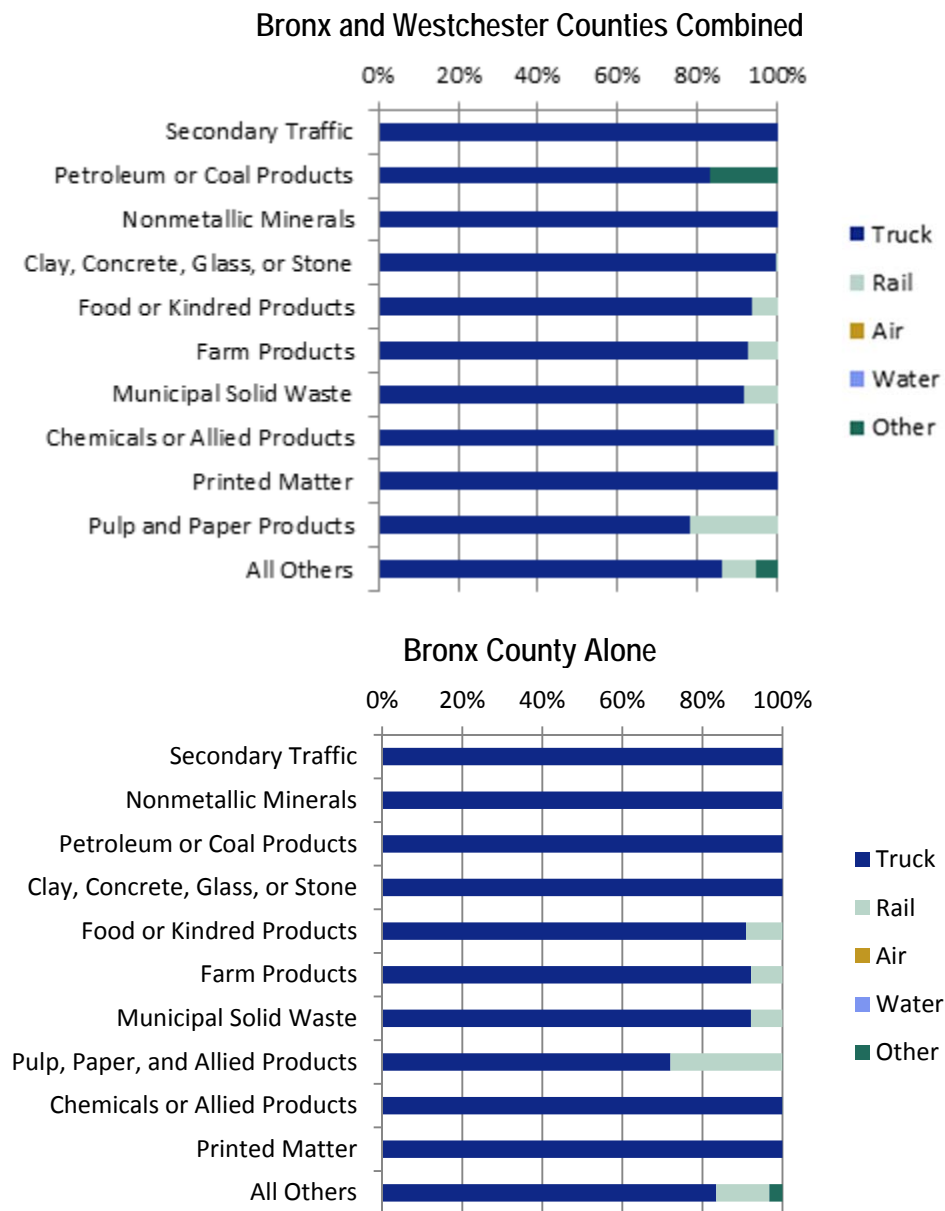


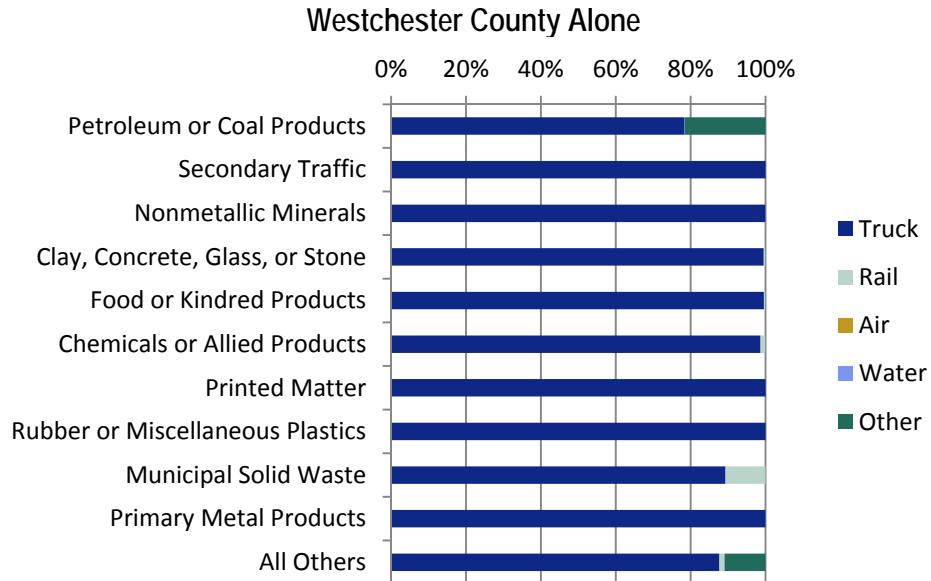
Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

All of the secondary traffic moving into, out of, and within Westchester and Bronx counties moved by truck, as Figure 2.6 shows. About 83 percent of petroleum and coal products moved by truck, and 17 percent moved by water. When analyzed by direction of movement, 58 percent of inbound petroleum and coal products moved by truck, while 42 percent moved by “other” modes, including multiple modes, pipeline, or unknown modes. Outbound and intra-county petroleum moved almost entirely by truck. Rail carried about 6 percent of food products in Bronx and Westchester counties, including 9 percent of inbound food products. Outbound and intra-county food moved almost 100 percent by truck. Modes other than truck moved less than 1 percent of nonmetallic minerals, clay, concrete, glass, and stone. Among the top

commodities moving into, out of, and within Westchester and Bronx counties, truck was the primary mode presently used, with “other modes” and rail carrying statistically significant volumes of niche commodities. Figure 2.6 contains three graphs: one illustrating the mode split by commodity in Westchester and Bronx counties combined; the second showing the mode split by commodity in Bronx County alone; and the third showing the mode split by commodity in Westchester County alone; by weight, in 2007.

Figure 2.6 Mode Split by Commodity, Bronx and Westchester Counties Combined, Bronx County Alone, and Westchester County Alone, 2007



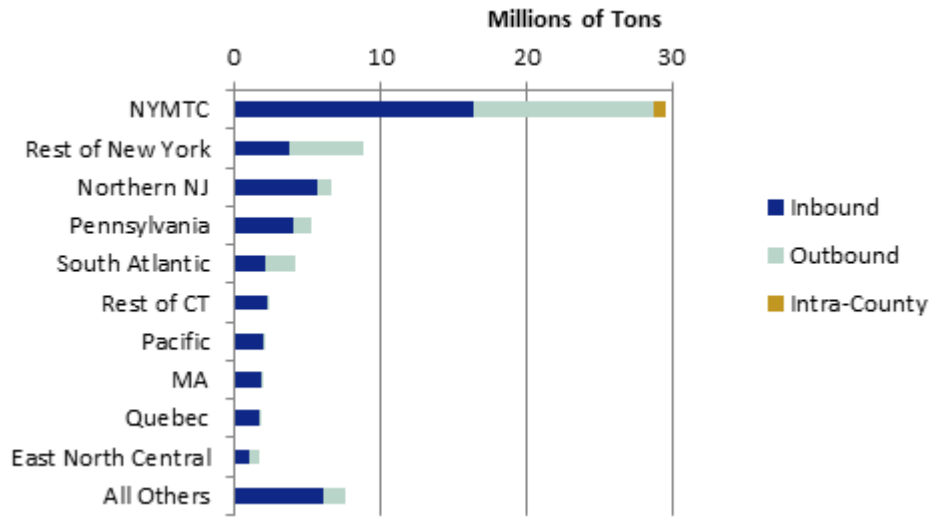


Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

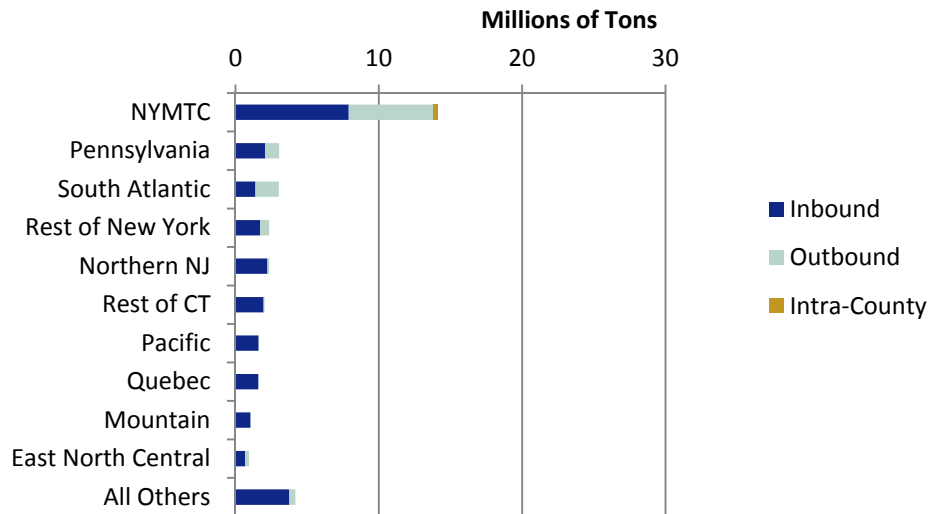
The primary origins of freight traveling into Westchester and Bronx counties are shown in Figure 2.7 and include other NYMTC counties (16 million tons), Northern New Jersey (6 million tons), Upstate New York (4 million tons), Connecticut (2 million tons), and the South Atlantic states (2 million tons). The top destinations for outbound freight include other NYMTC counties (6 million tons), Upstate New York (nearly 5 million tons), Pennsylvania and Northern New Jersey (approximately 1 million tons each), and the West South Central states (500,000 tons). Figure 2.7 contains three graphs: one illustrating the top origins and destinations for freight in Westchester and Bronx counties combined; the second showing the top origins and destinations for freight in Bronx County alone; and the third showing the top origins and destinations for freight in Westchester County alone; by weight, in 2007.

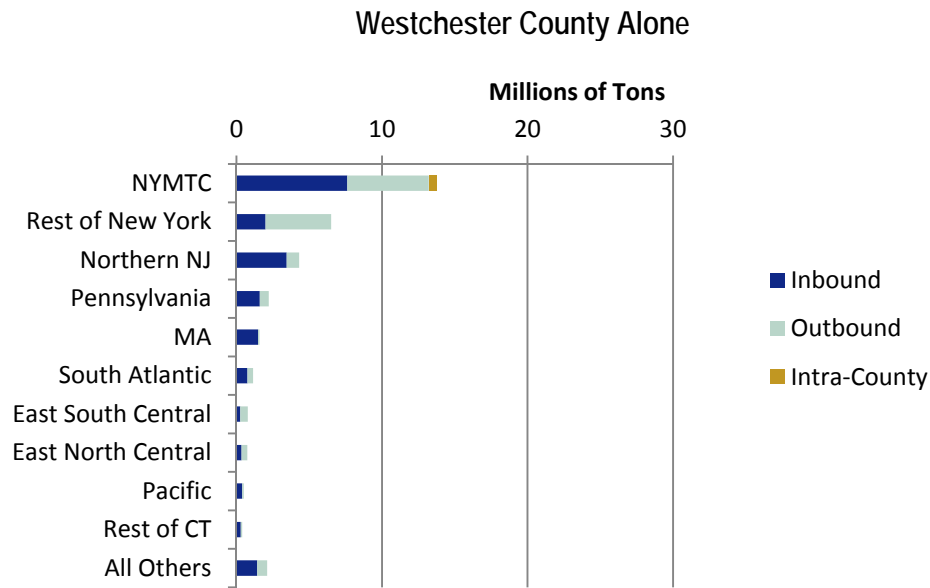
Figure 2.7 Top Origins and Destinations for Westchester and Bronx County Freight, 2007

Bronx and Westchester Counties Combined



Bronx County Alone





Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

Canal Village Area Business Profile

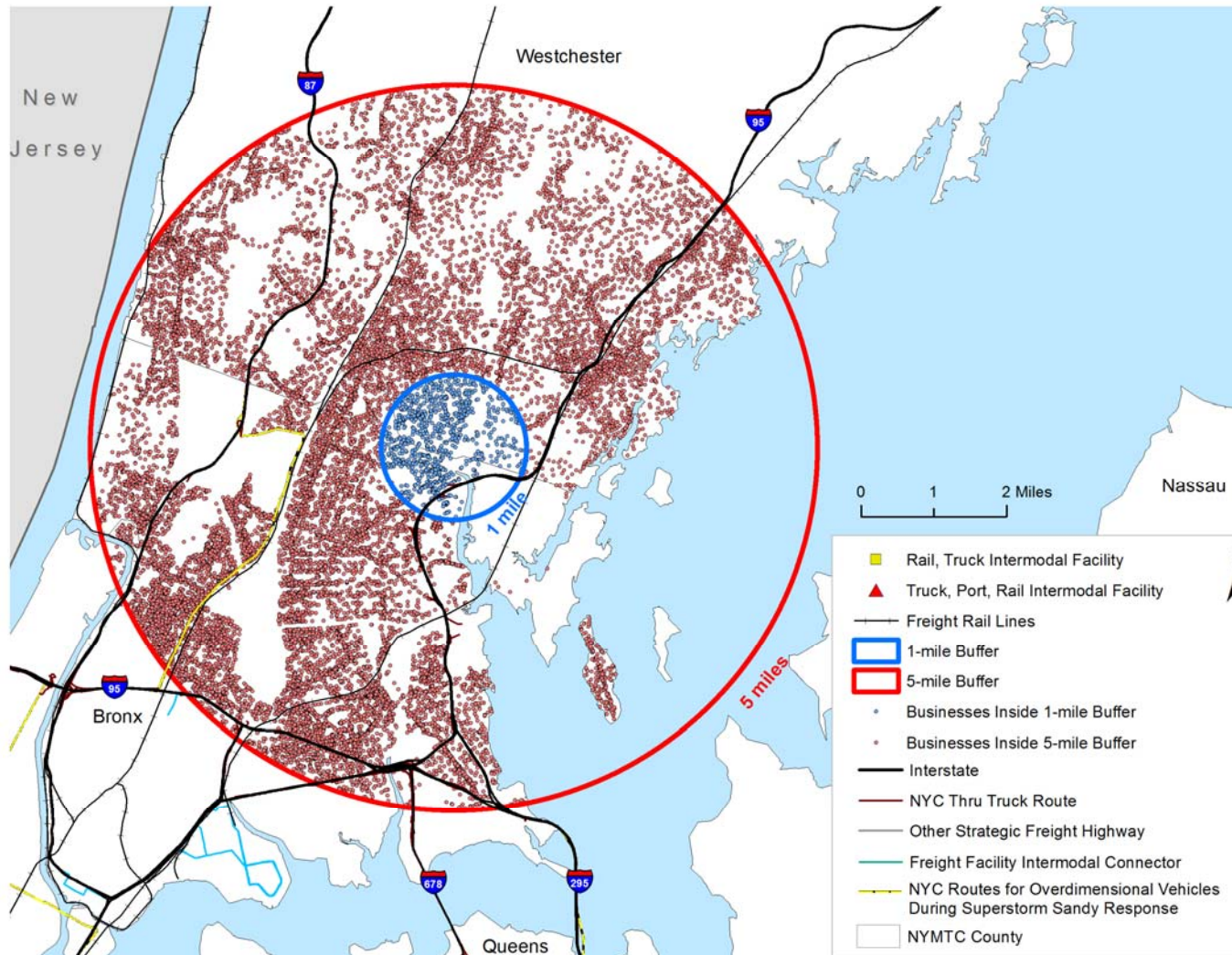
One-Mile Radius. Within the one-mile radius of the Canal Village site, as drawn in Figure 2.8, there are 1,322 businesses employing nearly 17,000 people and generating \$3.4 billion in annual sales, as Table 2.3 shows. About 0.25 percent of all businesses and employees in the East-of-Hudson subregion are located within one mile of the Canal Village site. Industries in which the share of establishments and employees exceeds 0.25 percent include: mining; management of companies; transportation and warehousing; construction; utilities; manufacturing; arts, entertainment, and recreation; wholesale trade; and retail trade. Half of all businesses and 57 percent of employees working within one mile of the Canal Village site are in freight-generating industries, which include accommodation and food services, agriculture et al, construction, manufacturing, mining, retail trade, transportation and warehousing, utilities, and wholesale trade. About 42 percent of the freight-generating industry jobs are in wholesale or retail trade, and 37 percent are in manufacturing or construction.

Five-Mile Radius. More than 14,000 businesses employing 171,000 people and generating \$39 billion in annual sales are located within 5 miles of the Canal Village site, as Figure 2.8 shows and Table 2.3 details. About 6 percent of all businesses and employees in the East-of-Hudson subregion are located within the five-mile radius area. Industries in which employment exceeds 6 percent of the East-of-Hudson total include agriculture, mining, public administration, health care and social assistance, educational services, other services, and accommodation and food services. Approximately 40 percent of the

establishments and employees within 5 miles of the Canal Village site are in freight-generating industries. About 53 percent of the establishments and 46 percent of the employees in freight generating industries are in retail trade or wholesale trade, specifically.

The Canal Village site provides shippers and receivers in the vicinity with access to roads and waterways. The potential exists to handle some of the bulk commodities supporting the construction and manufacturing industries, such as nonmetallic minerals, petroleum or coal products, and clay/concrete/glass/stone, 26 million tons of which move into or out of Westchester and Bronx counties, on the site. Wholesale and retail establishments could be targeted as well, and a share of the 25 million tons of commodities such as secondary traffic, apparel, furniture, food products, instruments, products of manufacturing, which travel into Westchester and Bronx counties almost exclusively by truck, could be handled on site. Truck parking and services, warehousing and distribution for commodities that support the wholesale and retail industries located in this area represent other amenities a freight village on this site can offer to local businesses.

Figure 2.8 Businesses And Freight Infrastructure Within 1-Mile and 5-Mile Radii of Canal Village Site



Sources: I-95 Corridor Coalition ICAT Rail Network, Bureau of Transportation Statistics National Transportation Atlas Database, 2012; US Census Bureau; NYDOT BLAT, 2013; NYCDOT; Cambridge Systematics, Inc.

Table 2.3: Business Establishments, Employment, and Sales by Industry, Canal Village Analysis Area, 2013

Industry	Within 1 Mile			Within 5 Miles			East of Hudson Counties		
	Establishments	Employees	Sales (in millions)	Establishments	Employees	Sales (in millions)	Establishments	Employees	Sales (in millions)
Accommodation and Food Services	50	639	\$29	2,192	30,342	\$1,342	30,231	468,920	\$21,332
Administrative, Support, Waste Management and Remediation Services	90	711	\$64	2,528	25,929	\$2,332	45,347	423,394	\$39,142
Agriculture, Forestry, Fishing, and Hunting	2	42	\$4	102	2,994	\$167	2,050	25,674	\$2,895
Arts, Entertainment, and Recreation	26	241	\$27	448	4,382	\$377	8,723	83,793	\$7,433
Construction	164	1,750	\$344	2,821	21,342	\$4,175	37,644	309,661	\$61,941
Educational Services	24	696	\$60	727	30,637	\$2,660	10,804	402,458	\$34,591
Finance, Insurance, and Real Estate	79	834	\$209	2,689	32,265	\$15,678	41,399	698,643	\$394,889
Health Care and Social Assistance	68	1,838	\$117	3,302	84,627	\$10,230	49,168	878,634	\$118,326
Information	22	267	\$53	568	8,751	\$2,224	12,057	255,248	\$68,645
Management of Companies	7	244	\$158	55	1,539	\$948	1,176	32,922	\$19,766
Manufacturing	63	1,783	\$519	773	24,521	\$7,594	18,180	595,614	\$176,991
Mining	3	69	\$17	31	1,193	\$259	429	11,117	\$4,556
Missing	4	25	\$2	119	593	\$55	2,267	14,310	\$1,331
Other Services (except Public Administration)	215	1,548	\$168	5,075	29,406	\$2,693	60,833	390,856	\$38,646
Professional, Scientific, and Technical Services	124	885	\$100	3,849	26,534	\$3,006	82,603	689,640	\$86,092
Public Administration	3	47	\$8	230	13,052	\$2,842	3,418	121,788	\$21,458
Retail Trade	257	2,868	\$673	6,400	64,831	\$12,340	90,647	903,012	\$168,057
Transportation and Warehousing	55	1,321	\$115	725	11,657	\$1,199	11,213	177,894	\$23,115
Utilities	2	39	\$19	18	361	\$161	536	17,293	\$9,728
Wholesale Trade	64	1,136	\$747	1,113	13,903	\$11,888	23,059	304,178	\$253,745
Total	1,322	16,983	\$3,434	33,765	428,859	\$82,171	531,784	6,805,049	\$1,552,676

Source: BLAT, NYSDOT, 2013.

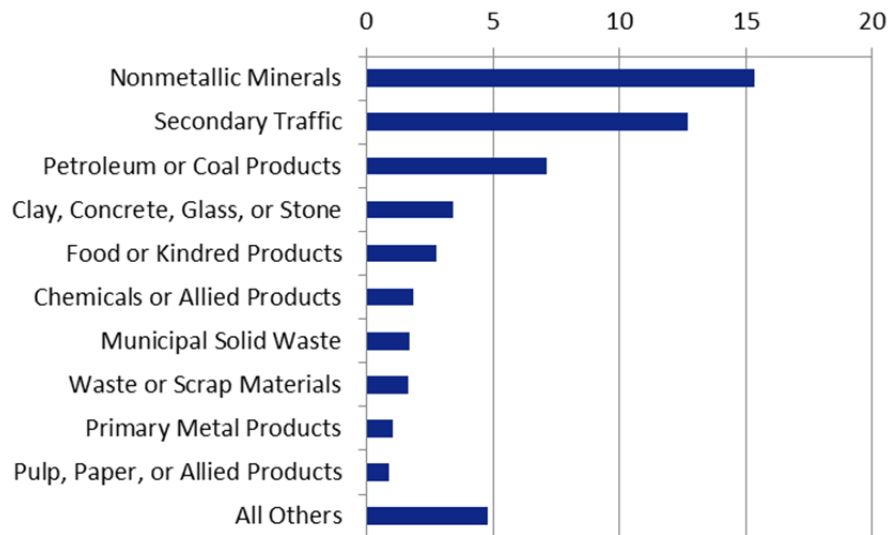
Brookhaven Rail Terminal, Suffolk County

Brookhaven Rail Terminal is a freight rail facility located in the Yaphank area of the Town of Brookhaven in Suffolk County. The facility opened in 2011 and handles commodities such as stone, biodiesel, flour, and consumer products for a major hardware store chain. The site consists of 28 acres currently developed, and an additional 100 acres of developable land for warehousing and distribution center or other types of industrial support uses. Brookhaven Rail Terminal has access to the Long Island Rail Road Main Line and highway access to the Long Island Expressway via Sills Road, a designated freight intermodal connector.

Commodity Flow Analysis Highlights, Suffolk County

In 2007, 53.3 million tons of freight moved into, out of, or within Suffolk County. About 47 percent of this freight moved inbound, 40 percent moved outbound, and 13 percent moved between origins and destinations in Suffolk County. The top commodities moved in Suffolk County include nonmetallic minerals (15 million tons), secondary traffic (13 million tons), petroleum and coal products (7 million tons), clay, concrete, glass, and stone products (3 million tons), and food (3 million tons), as Figure 2.9 shows.

Figure 2.9 Top Suffolk County Commodities, 2007

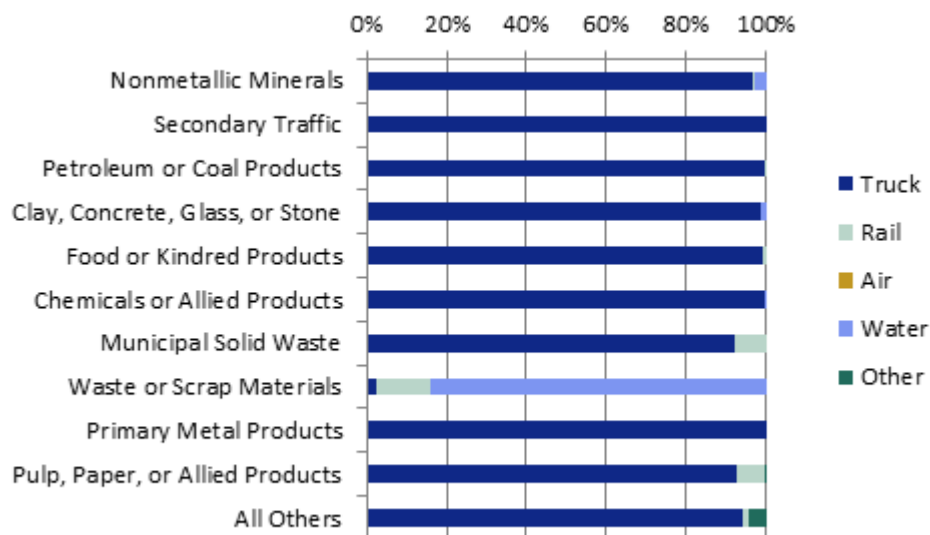


Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

As the mode split by commodity information illustrated in Figure 2.10 shows, nearly 97 percent of nonmetallic minerals moving into, out of, or within Suffolk County traveled by truck, and close to 3 percent traveled by water. Rail carried under 0.5 percent. Analyzed by direction of travel, water carried 8 percent of

inbound nonmetallic minerals and 0 percent of outbound or intra-county nonmetallic minerals. Rail carried 1 percent of inbound and 0 percent of outbound or intra-county nonmetallic minerals. Truck also carries 100 percent of inbound, outbound, and intra-county secondary traffic. Rail moved about 3 percent of inbound petroleum and coal products, compared to 97 percent moved by truck, but carried 0 percent of outbound or intra-county petroleum and coal products, all of which moved by truck. Truck moved 97 percent of inbound clay, concrete, glass, and stone products, while water carried 3 percent; and nearly all outbound clay, concrete, glass, and stone products were moved by truck. Truck carried 99 percent of inbound and 100 percent of outbound food, while rail moved the remaining 1 percent of inbound food. Freight movement in Suffolk County moved primarily by truck, with water and rail carrying small shares of several key commodities. Developments such as Brookhaven Rail Terminal offer the potential to move more freight into out of Suffolk County by rail.

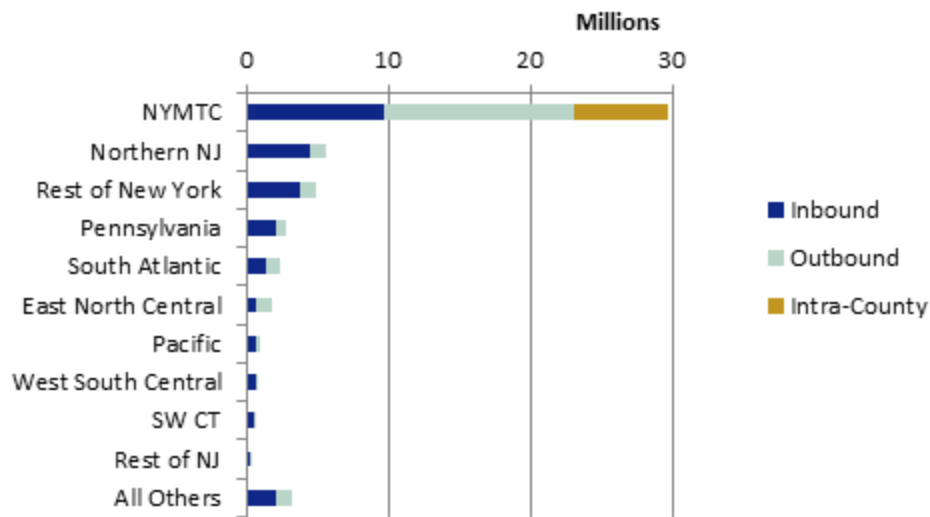
Figure 2.10 Mode Split by Commodity, Suffolk County, 2007



Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

Top origins of inbound freight include other NYMTC counties (10 million tons), Northern New Jersey (4 million tons), Upstate New York (4 million tons), the South Atlantic states (1 million tons), and Pennsylvania (900,000 tons), as shown in Figure 2.11. Top destinations for outbound freight include NYMTC counties (13 million tons), Pennsylvania (2 million tons), Upstate New York (1 million tons), the East North Central States (1 million tons), and Northern New Jersey (1 million tons).

Figure 2.11 Top Origins and Destinations for Suffolk County Freight, 2007



Source: IHS Global Insight TRANSEARCH database, enhanced by Cambridge Systematics using USDOT Freight Analysis Framework v.3.4.

Brookhaven Rail Terminal Area Business Profile

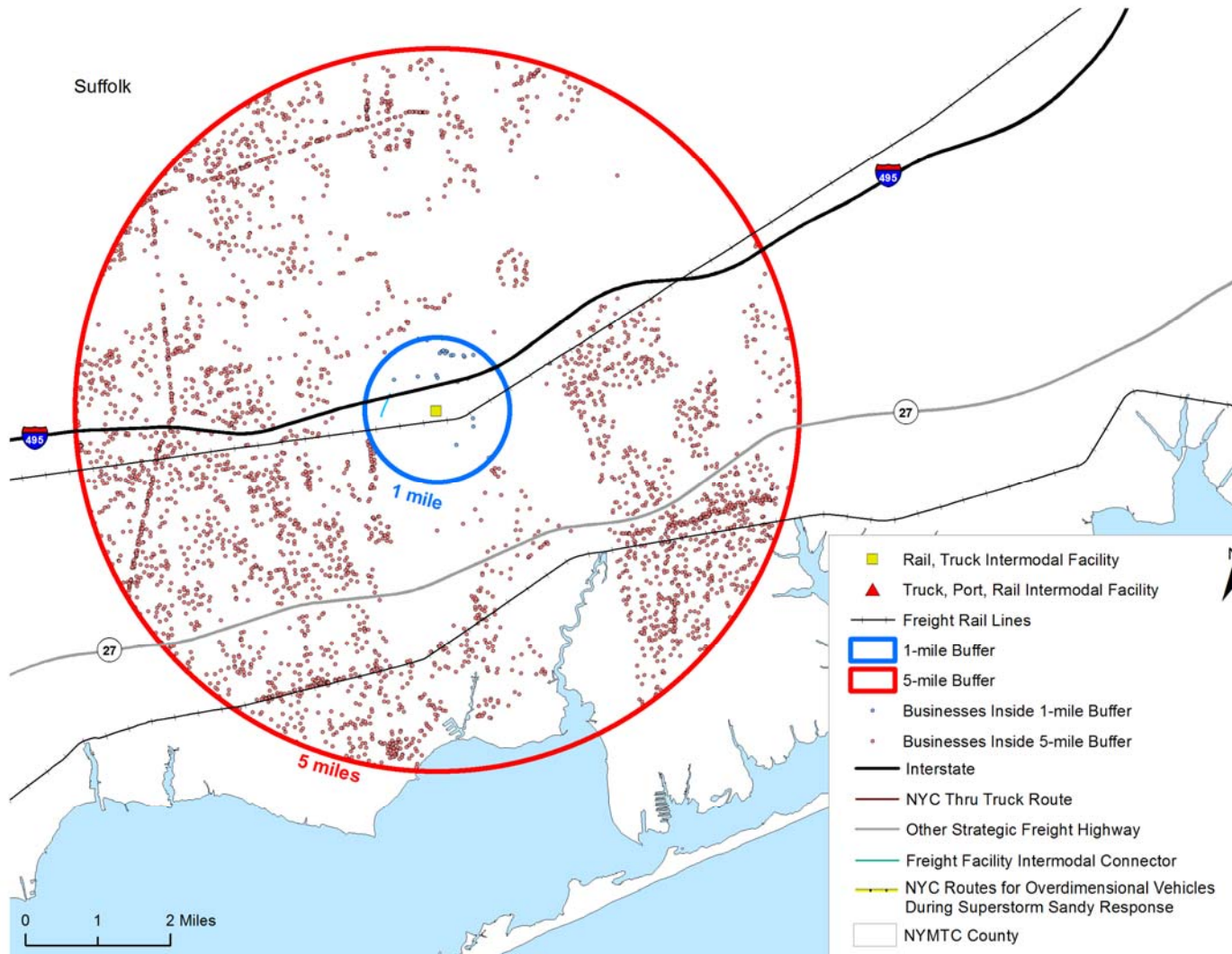
One-Mile Radius. Within the one-mile radius of the Brookhaven Rail Terminal Area site, as drawn in Figure 2.12, there are 33 businesses employing 1,445 people and generating \$245 million in annual sales, as Table 2.4 shows. About 0.01 percent of all businesses and employees in the East-of-Hudson subregion are located within one mile of the Brookhaven Rail Terminal Area site. Industries in which the share of employees exceeds 0.01 percent include administrative/support/waste management/remediation services, health care and social assistance, transportation and warehousing, and public administration. Just under 40 percent of all businesses and 9 percent of employees working within one mile of the Brookhaven Rail Terminal site are in freight-generating industries, which include accommodation and food services, agriculture et al, construction, manufacturing, mining, retail trade, transportation and warehousing, utilities, and wholesale trade. Thirty-nine percent of freight-generating industry jobs within one mile of Brookhaven Rail Terminal are in transportation and warehousing and 29 percent are in manufacturing.

Five-Mile Radius. More than 2,400 businesses employing more than 27,000 people and generating \$14 billion in annual sales are located within 5 miles of the Brookhaven Rail Terminal site, as Figure 2.12 shows and Table 2.4 details. About 1 percent of all businesses and employees in the East-of-Hudson subregion are located within the five-mile radius area. Industries in which employment exceeds 1 percent of the East-of-Hudson total include utilities, construction, administrative/support/waste management and remediation, health care and social assistance, retail trade, and transportation and warehousing.

Approximately 49 percent of the establishments and 46 percent of the employees within 5 miles of the Brookhaven Rail Terminal site are in freight-generating industries. About 43 percent of the employees in freight generating industries are in retail trade or wholesale trade, 19 percent work in the construction industry, and 18 percent work in manufacturing.

The Brookhaven Rail Terminal site provides shippers and receivers in the vicinity with access to roads and freight rail. A target market could be a share of the bulk commodities supporting the construction and manufacturing industries, such as nonmetallic minerals, petroleum or coal products, and clay/concrete/glass/stone, and lumber, 25 million tons of which move into, out of, or within Suffolk County by truck and more than 96,000 tons of which move by rail, could be handled on the site. Commodities such as secondary traffic, apparel, food products, manufactured products, instruments, and furniture, are higher-value goods that move by truck currently, but could shift to rail if the capability to handle intermodal containers is developed on or near the candidate freight village site. About 16 million tons of these commodities traveled into Suffolk County in 2007. Truck parking and services, warehousing and distribution for commodities that support the nearly 1,100 wholesale and retail businesses located in this area are key amenities a freight village can offer at this site.

Figure 2.12 Businesses And Freight Infrastructure Within 1-Mile and 5-Mile Radii of Brookhaven Rail Terminal Site



Sources: I-95 Corridor Coalition ICAT Rail Network, Bureau of Transportation Statistics National Transportation Atlas Database, 2012; US Census Bureau; NYDOT BLAT, 2013; NYCDOT; Cambridge Systematics, Inc.

Table 2.4: Business Establishments, Employment, and Sales by Industry, Brookhaven Rail Terminal Analysis Area, 2013

Industry	Within 1 Mile			Within 5 Miles			East of Hudson Counties		
	Establishments	Employees	Sales (in millions)	Establishments	Employees	Sales (in millions)	Establishments	Employees	Sales (in millions)
Accommodation and Food Services	0	0	\$0	188	3,080	\$130	30,231	468,920	\$21,332
Administrative, Support, Waste Management and Remediation Services	6	839	\$77	464	5,107	\$451	45,347	423,394	\$39,142
Agriculture, Forestry, Fishing, and Hunting	0	0	\$0	39	213	\$30	2,050	25,674	\$2,895
Arts, Entertainment, and Recreation	1	5	\$0	67	573	\$53	8,723	83,793	\$7,433
Construction	3	11	\$1	803	5,180	\$1,000	37,644	309,661	\$61,941
Educational Services	2	26	\$2	98	3,058	\$262	10,804	402,458	\$34,591
Finance, Insurance, and Real Estate	1	24	\$10	278	4,069	\$2,963	41,399	698,643	\$394,889
Health Care and Social Assistance	2	359	\$107	341	9,419	\$1,401	49,168	878,634	\$118,326
Information	0	0	\$0	77	1,671	\$367	12,057	255,248	\$68,645
Management of Companies	0	0	\$0	9	204	\$118	1,176	32,922	\$19,766
Manufacturing	2	36	\$14	182	4,813	\$1,386	18,180	595,614	\$176,991
Mining	0	0	\$0	3	19	\$3	429	11,117	\$4,556
Missing	0	0	\$0	10	32	\$3	2,267	14,310	\$1,331
Other Services (except Public Administration)	2	8	\$1	568	3,152	\$298	60,833	390,856	\$38,646
Professional, Scientific, and Technical Services	5	37	\$5	558	4,168	\$466	82,603	689,640	\$86,092
Public Administration	1	24	\$4	33	578	\$102	3,418	121,788	\$21,458
Retail Trade	3	13	\$2	894	9,525	\$2,013	90,647	903,012	\$168,057
Transportation and Warehousing	3	48	\$10	134	1,932	\$212	11,213	177,894	\$23,115
Utilities	0	0	\$0	11	310	\$172	536	17,293	\$9,728
Wholesale Trade	2	15	\$12	186	2,389	\$2,116	23,059	304,178	\$253,745
Total	33	1,445	\$245	4,943	59,492	\$13,544	531,784	6,805,049	\$1,552,676

Source: BLAT, NYSDOT, 2013.

2.2 INDUSTRY OUTREACH

The business location analysis revealed, generally, what the target industries are, how many businesses operate in those industries, and where clusters of businesses in those industries exist. The predisposition of business owners in those industries toward the freight village concept, the likelihood that a freight village could result in cost savings and other benefits for their businesses, and a comparison of the advantages and disadvantages of each candidate site from their perspective were sought in a private sector industry outreach effort. The effort also aimed to determine what services or conditions are required in order to generate private sector interest and participation in a program to develop freight villages in the NYMTC region. The focus group was attended by shippers, receivers, carriers, and other logistics professionals, and was used to gather information regarding the needs and behaviors that influence logistics decisions. The information collected during the focus group was used to develop appropriate questions for a survey, which was distributed to a larger sample of shippers, receivers, and logistics companies throughout the NYMTC region. The survey solicited input from shippers, receivers, logistics professionals, and industrial real estate professionals on the potential for freight villages to yield benefits to their businesses, whether demand for a freight village varies by industry, and other industry-specific needs and considerations.

Focus Group Summary

Focus group participants were recruited from a list of companies that are likely to send, receive, handle, or arrange the movement of freight shipments in the NYMTC Region. In order to encourage participation and achieve a diverse pool of participants for the freight focus group sessions, invitations were distributed to more than 500 individual freight industry businesses across the NYMTC region. The invitations contained information informing the potential participants of the focus group topic and the role they would play in the planning process. In addition, freight associations were contacted to enroll the associations in the effort to gain access to participation by a diverse stakeholder group.

The associations contacted include:

- New York State Motor Truck Association
- New Jersey Motor Truck Association
- New York Shipping Association
- National Tank Truck Carriers
- Railroads of New York
- New York/New Jersey Foreign Freight Forwarders & Brokers Association

As a result of these efforts, participation commitments from 15 industry stakeholders were secured. The focus group session was held in Manhattan on June 18, 2013. Nine of the 15 confirmed stakeholders attended. Focus group participants included, by title and company type:

- Traffic Manager, import/export shipper
- Assistant Traffic Manager, import/export shipper
- Vice President, freight forwarder and logistics company
- Associate, national workforce development company
- Regional Government Affairs, integrated logistics company
- Manager, vehicle service and repair company with multiple locations in the region
- President, motor carrier
- Executive Director, motor carrier association
- Regional Government Representative, freight railroad

Table 2.5 presents highlights of the focus group findings related to the issues private sector stakeholders consider most important when considering the potential for a freight village to serve the region (left column) and related considerations that the market analysis should take into account (right column). It is important to note that the opinions expressed by focus group participants do not necessarily reflect the viewpoints of the entire freight industry.

Table 2.5: Focus Group Findings and Related Market Analysis Considerations

Focus Group Finding	Market Analysis Consideration
Participants suggested that a “one-size-fits-all” approach, which tries to serve as a nexus or terminal for all transportation modes might not be viable.	A freight village in the NYMTC region should be designed to serve specific types of logistics chains, and/or seek to serve as an urban logistics hub, facilitating first-mile/last-mile moves.
Inclusion of intermodal and/or carload rail service would be most beneficial.	Consider sites which offer rail access. Two of the three candidate sites, South Brooklyn Waterfront and Brookhaven Rail Terminal, have rail access.
Participants noted the new Federal Motor Carrier Safety Administration Hours of Service regulations for commercial drivers as a potential catalyst for industry use of a freight village. The requirement for extended rest periods prompts a need for truck parking and rest areas, which are currently not generally available east of the Hudson River, which now forces drivers to cross the Hudson River into New Jersey to meet these requirements.	Inclusion of truck parking and rest area facilities is deemed a valuable service that a freight village in this region could provide.
It will be important to secure larger, recognizable freight companies as anchor tenants of the freight village, in order to encourage use by a large industry population.	Identify and seek the support of companies willing to be anchor tenants, which will in turn draw attention from other companies.
Real estate costs in the downstate area may translate to greater expense to freight village users.	Consider land acquisition and site development costs, and strategies to keep lease rates competitive with other industrial space in the region
Participants raised concerns that a freight village could add time to trips, due to the requirement to move goods to the closest freight village, adding a stop and thereby negating the potential benefit of a village. Additional time for delivery would not be tolerated by their customers.	The freight village will have to perform functions that save shippers, receivers, and logistics companies time and money. Introducing services such as Foreign Trade Zone, transloading, consolidation/deconsolidation, in a location close to businesses and customers can offer these savings to many businesses in the region.

The focus group discussion identified several other important issues, which should be considered as a freight village concept for the region is studied further. These issues include:

- **Cost versus time.** The respondents were all in agreement that their customers are their number one priority, and that cost is their customers' top priority. The respondents felt more confident they would be able to retain customers if a shipment took longer but cost less to ship. Respondents underscored the importance of understanding that there is little customer loyalty, and that the industry competes for their customers' business with small differences in efficiency and cost. If their prices increase, the customer will look for – and find – another supplier to move their goods – on time and on budget.
- **Public/private partnership.** When speaking about the possible management structure of freight villages, participants were informed that there is typically a blend between public and private partnership, and includes state and local governments. Participants were concerned that a freight village managed by public entities might result in increased taxes on the freight industry. They expressed concern about the credibility of public ownership or management of a freight village, and the potential imposition not only of additional taxes, but also fees and regulations pertaining to service hours, which could limit the efficient movement of goods. The governing bodies could also establish restrictions where the freight industry may not have many avenues of recourse and would have to accept it as a new cost of doing business, thereby increasing their fees to customers or reducing an already slim profit margin.
- **Improving Credibility of Government to the Freight Industry.** To improve their perception of credibility of government agencies, participants felt that government should make a long-term commitment to the industry that would address cost assurances and the long-term operation of a village. Limiting taxes and updating laws and regulatory restrictions that currently exist, would allow companies to use a freight village. For instance, some participants pointed out the 53' trailers are prohibited from driving into New York City, unless using the Qualifying and Access highway system to facilitate travel to Long Island. Services provided by the government that would be of interest to the freight industry would be the addition of Foreign Trade Zones that could be housed at a freight village. This could speed up distribution and reduce time waiting to be inspected, allowing more goods to come directly to the region and move more efficiently to their destination. Respondents also commented that government could play a more significant role in improving the condition of the roads, and in adding dedicated truck lanes and E-ZPass toll lanes, thus reducing congestion and increasing delivery times. The reduction or elimination of tolls for moving goods in the region was also raised and agreed upon by all participants.

The focus group findings show that a freight village concept should be targeted to facilitating specific types of freight moves or logistics chains, that rail connections and truck parking are significant needs that a freight village could potentially fulfill, that private sector stakeholders remain skeptical of the potential for a freight village to yield significant real estate and transportation cost savings, but that skepticism could be overcome if cost savings are demonstrated and/or if a high-profile tenant or champion commits to the freight village concept.

Freight Village Market Survey

The issues identified by focus group participants warrant further exploration among a broader representative sample of the freight community in the NYMTC region. Survey questions were tailored to identify the industries that may be attracted to a freight village, the bounds of cost and time savings and support services required to capture them, and feedback on the relative feasibility of satisfying these needs. Further, input on comparative advantages, disadvantages, or preferences for any or all of the three candidate sites, was sought. Finally, input for the development of a plan to advance the freight village concept and to target the concept to a market of appropriate businesses was pursued.

In order to encourage participation and achieve a diverse pool of participants for the survey, email invitations were distributed to more than 2,000 individual freight industry business owners across the NYMTC region. Invitees included firms engaged in manufacturing, transportation and warehousing, logistics services, industrial real estate, wholesale trade, and retail trade. The invitations contained brief background information on what a freight village is, the objectives a freight village aims to achieve, and why their role as a participant was important in the planning process. Industry associations were contacted and asked to distribute a link to the survey to their members and/or post the link in membership newsletters. The consultant team sent follow-up emails and made phone calls to survey recipients in order to emphasize the value of the survey and to encourage their participation. The phone calls indeed yielded several additional responses, however, they also yielded many complaints of weariness from receiving multiple requests for information from a litany of government agencies, market research companies, and other researchers not associated with this project.

Despite these efforts, the participation from only 20 industry stakeholders was achieved. The 20 responses collected do not constitute a representative sample of businesses in the region which generate or handle freight.⁵ A summary of the

⁵ A representative sample of the more than 213,000 freight-generating businesses in the East-of-Hudson subregion, with 5% error and 90% confidence interval would require 272 completed survey responses.

survey results is provided below for the purpose of disclosing the information collected, but it should not be considered to represent the opinions of the population of industries as a whole:

- Of the 20 participants, more than half primarily work within the Transportation Services sector;
- 30% of participants currently have 0-10 employees working at their primary location, closely followed by 25% of participants having 30-49 employees;
- 22.22% of participants receive a few parcel deliveries per week while an additional 22.22% receive 2-10 full trailer loads;
- 5 of the 18 respondents stated having more than 100 full trailer loads of outbound freight in a typical week;
- Half of respondents report that freight volumes fluctuate over the course of a year. Of those that do, 50% chose August as a peak season month, with the 4 months before and after August being selected as “ramp-up” and “ramp-down” periods;
- During peak season, it was agreed that volumes were 11-50% greater than normal by 50% of respondents, while an additional 30% of respondents see volumes at 1-10% greater than normal;
- 29.41% of respondents receive their shipments from throughout the Northeastern U.S.; Of these inbound shipments, 81.25% of respondents receive them by truck;
- Furthermore, 35.29% or 6 respondents ship to destinations within the Northeastern U.S.; Of these outbound shipments, 92.85% of respondents send them by truck;
- In addition, rail and water were the most common other modes of transportation for shipments to and from participant facilities;
- 68.75% or 11 respondents believed their business could benefit from a freight village in the NYMTC region. Of these, 4 said any of the three proposed locations would be of benefit, while 3 or 27.27% said the Canal Village location would be best;
 - Respondents agreed reduced travel time is the most important factor to their business and it would be the greatest advantage of a freight village to their company
 - Parcel delivery/pick up services and truck parking areas were selected as important support services a freight village could offer;
 - Demonstrated cost savings was agreed upon as the most important factor for locating within a freight village;

- While competitor's location made no difference, 6 of the 11 respondents would be more inclined to locate within a freight village if their customers were;
- Of those that felt a freight village would not benefit their business, 60% agreed they are satisfied with their existing business relationships;
- Truck parking areas and vehicle service/repair/fueling were selected as the support services that could provide value if offered;
- For those believing a freight village was not of benefit, 3 of 4 participants would also not be more inclined to locate within a freight village despite their customers being there; and
- 15 of the respondents would like to be informed and kept up to date as development continue, and 12 selected to be on the mailing list.

Conclusions of the Industry Outreach Effort

Although the industry survey failed to yield the results needed to cultivate recommendations targeted to specific industries that could take part in the development of freight villages in the NYMTC region, several important lessons have been gathered from this effort, including:

- First, it is recognized that a freight village is not a solution for all shippers and receivers. A strategy to market the freight village concept must identify the industries whose logistics chains are most likely to enjoy cost and time savings. This will require research and modeling tools that are beyond the scope of this task.
- More than two-thirds of the survey respondents believe a freight village offers the potential for cost savings to their own business, if, in fact, the freight village delivers the potential travel time and cost savings. These respondents, and likely most industry representatives, would need to see more data or react to an operational freight village in the region before committing to the concept themselves.
- Whether a freight village is located within one mile, five miles, or the same county as targeted businesses may not make much of a difference. Most survey respondents believed any of the three freight village sites could offer travel time and cost savings. Those who had a preference selected the Canal Village site due to its proximity to their customers and highways.
- Parcel pickup/delivery and consolidation, truck parking, and Foreign Trade Zone (FTZ) designation are among the most valuable support services a freight village could offer, based upon feedback received from both the focus group and survey.

- The private sector remains suspicious of a public sector-led effort to develop industrial real estate, including freight villages. They fear public sector ownership or management could leave them open to imposed taxes, fees, and other “strings” once they are invested in the site.
- More research must be completed to confirm that the sentiments shared in the focus group and survey are indeed representative of freight-generating industries throughout the region. There are likely variations of opinion based upon industry sector, business size, location, and other variables that are not detected in the small sample collected in this effort.

3.0 Next Steps

Recommended next steps include:

- Identify, as part of Task 4 of the Regional Freight Plan Update, changing logistics trends, which may open new market opportunities for a freight village in the region. For example, the current trend in the retail trade industry, fueled by ecommerce, in which the logistics chain is shifting from distribution center-to-store deliveries to fulfillment center-to-consumer's home, may generate demand for urban consolidation and logistics centers in the metropolitan area core. Also, the widening of the Panama Canal could potentially shift the port of entry for some Asian trade from West Coast to East Coast ports, such as the Port of New York and New Jersey. The potential for freight villages in the NYMTC region to facilitate the distribution of international freight by serving as an "inland port," where loaded international shipping containers can be sent for sorting, processing, and distribution.
- The Regional Freight Plan Update should coordinate with the pending Cross Harbor Freight Program EIS to identify opportunities for the Cross Harbor alternatives to introduce new freight flows and industry logistics patterns to the region, and incorporate those new markets into the freight village marketing strategy. Needs, potential projects, and strategies needed to capture this market should be identified and evaluated in the Regional Freight Plan Update.
- New, effective marketing and branding strategies should be considered in order to reach potential developers and tenants. One of the challenges to generating responses to the survey was in the necessary task of explaining what a freight village is and what it could do for industry. It is possible that many of the survey recipients did not recognize the term and/or did not take the time to read the brief explanation that was distributed with the survey link, and therefore did not opt to participate in the survey. Developing a name that is more descriptive of the activities occurring in a freight village may be more effective in generating interest.
- As the *Feasibility of Freight Villages in the NYMTC Region* study pointed out in its conclusions, demonstrating cost savings is critical to winning private sector stakeholders' support. The potential for cost savings associated with freight village development at each candidate site will vary company-by-company, based upon the vehicle miles traveled (VMT), travel time and travel time reliability savings, lease and maintenance costs, and labor costs compared to their current logistics chain. Owners and/or developers in control of each site could use the

commodity flow and industry location data presented in this memorandum, elsewhere in the *NYMTC Regional Freight Plan Update 2015-2040 Interim Plan* (i.e. Commodity Flow Analysis, Industry Logistics, and Truck Trips Analysis technical memoranda), and the *Feasibility of Freight Villages in the NYMTC Region* study to demonstrate the market potential and to use as inputs to private sector shippers, receivers, and logistics professionals' cost models in order to quantify the potential cost savings to locating, relocating, or making use of services offered in the candidate freight village sites. Able to recognize the potential savings, these private companies could be convinced to become "champions" in support of freight village developments at any of the candidate sites.

- A champion, whether it be NYMTC central staff, a NYMTC member agency, a private-sector industrial real estate developer, or consultant, should conduct a more targeted market research effort, using resources beyond the scope of the NYMTC Regional Freight Plan Update 2015-2040 Interim Plan, in order to model cost savings to specific types of shippers and receivers, conduct more targeted and thorough outreach in order to discover likely business partners and prospective tenants. Key considerations for such an effort include:
 - The need to invest in professional survey recruiting services. This effort relied upon targeted market research lists purchased from third-party vendors. The contacts provided were often not the appropriate point of contact for a survey on this topic. A recruiting effort that involves telephone screening interviews can lead a survey effort to the proper audience.
 - Incentivize survey participation. Land use strategies such as freight villages are unfamiliar to many professionals in the target market, making it difficult to yield a high participation rate for a survey on this topic. Giving participants a reason to want to learn about the freight village concept and to offer information to support the study is key, whether that be achieved through demonstrating the potential cost savings, or through offering small rewards for participants' time, can generate more cooperation.