SEAPORT MODERNIZATION:
REHABILITATING PORT INFRASTRUCTURE
AT THE SOUTH BROOKLYN MARINE TERMINAL IN BROOKLYN, NY

Location: Sunset Park, Brooklyn, NY
8th District of New York – Urban

Funding requested: $35,000,000

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1. PROJECT DESCRIPTION

In an effort to further maritime commerce as part of a comprehensive port investment strategy, the New York City Economic Development Corporation (NYCEDC), acting on behalf of the City of New York, is rehabilitating a long-dormant freight distribution facility at the South Brooklyn Marine Terminal (SBMT). TIGER grants are sought to complete this initiative through the restoration of critical utility systems (water, storm/sanitary sewer, and fire control systems) as well as fully restoring paving throughout the marine terminal complex. This work will complete efforts that are already underway to bring the entire SBMT complex up to a state of good repair.

The proposed project is fully designed, has all the necessary approvals, and construction can begin immediately following grant award and public bidding. The project compliments improvements that are already under construction and would complete a comprehensive restoration of a major marine terminal in the Port of New York, the largest port complex on the U.S. Atlantic Coast.

SBMT, which occupies a potentially strategic location in Upper New York Bay, has been inactive since the mid-1980s mainly as a result of the dominance of containerization, which favored seaports away from population centers with large back-up land area for cargo storage. This pattern dominated investments in port infrastructure for more than 30 years. More recent trends in freight logistics, higher fuel and road tolls, increased demand for imported goods and concerns about global warming and air quality have begun to favor water and rail transportation. In New York City, the perpetual daily need to handle solid waste in a sustainable manner is also driving public policy efforts to substitute waterborne transportation as an alternative to trucking through congested urban streets.

The proposed seaport improvement project will help return an 88-acre marine facility in the middle of New York Harbor to active use. The project has two main components: the first is the creation of a deep-sea port facility focusing on roll-on/roll-off and break bulk cargoes; the second is the creation of a materials recovery facility for the City’s resident-generated metal, glass, plastic, and paper waste. Taken together, these two initiatives will result in the following significant public benefits:

1. New capacity for ocean-going vessels to discharge cargoes mainly destined for the New York City market;
2. Shorter travel time to New York City area businesses;
3. Air quality, congestion and safety improvements realized through reductions of truck-related vehicle miles traveled (VMTs);
4. Creation of new job opportunities in an area suffering from high unemployment;
5. Improved stormwater control resulting in less untreated stormwater entering local waterbodies;
6. Support federal, state and local coastal zone management programs by promoting the use of the nation’s waterways for goods movement; and
7. Transportation cost savings to local customers.
Figure 2. South Brooklyn Marine Terminal

County: Kings
Borough: Brooklyn
Neighborhood: Sunset Park
(a) Context
South Brooklyn Marine Terminal is located in a New York City-designated Industrial Business Zone (IBZ), one of 16 zones throughout the City that are focused on the promotion of industrial, manufacturing, and goods distribution activities. The Sunset Park IBZ is strategically located on Upper New York Bay, a 40-foot deep federally maintained channel with access to the national rail network via the New York New Jersey Railroad and New York & Atlantic Railway. The eastern boundary of the district is defined by Interstate-278, providing the district with good roadway links to eastern Long Island, New England, and points west. Over 36,000 industrial jobs are supported in the IBZ and the surrounding residential community is 20% walk-to-work, a significantly high number even in walkable New York City. In this regard, the Sunset Park waterfront is a vital economic support anchor for residents living in the surrounding community.

(b) SBMT Market Opportunities

Introduction
The New York/New Jersey (NY/NJ) region is heavily dependent on marine transportation for the movement of inbound domestic cargo and for imported and exported international goods. This includes high-value manufactured goods shipped in containers; automobiles shipped on roll-on/roll-off vessels; “break bulk” commodities such as lumber, paper, iron and steel, and fruits and other agricultural products; and bulk commodities such as cement, sand and gravel, ores, petroleum and petroleum products, etc.

The region has a limited number of marine transportation facilities and a finite amount of current capacity. Expansion of current capacity will be necessary to meet future needs. In particular, because most of the region’s maritime transportation capacity is located west of the Hudson River, there is a critical shortfall of capacity to serve freight shippers and receivers east of the Hudson River in Kings, Queens, Nassau and Suffolk counties. Serving these counties via marine transportation facilities located west of the Hudson River increases freight traffic and congestion on the region’s bridge and tunnel crossings.

To provide needed additional capacity for the region, and to specifically meet the needs of east of Hudson shippers and receivers, the City of New York is investing in its limited east of Hudson marine transportation assets. The City has only two east of Hudson marine terminal complexes – the Red Hook Container Terminal, which is currently operating, and the South Brooklyn Marine Terminal (SBMT), which is undergoing extensive rehabilitation after a period of dormancy so that it can be reactivated and returned to productive use.

The SBMT improvements are designed specifically to accommodate automobiles (handled as roll-on/roll-off cargo) and break bulk (lumber and other building materials, agricultural and food products, etc. that are handled on pallets, bags, boxes, or other units) in covered or open storage. The intent is to provide a flexible multipurpose facility that is responsive to market demand and customer needs.
Regional demand for these target commodities was estimated from two sources: first the forecasts from the region’s Comprehensive Port Improvement Plan (CPIP), a multi-agency regional marine transportation planning effort completed in 2004, and second, from revised forecasts prepared in 2008 reflecting actual historical growth since the CPIP. It should be noted that since the revised forecasts were prepared last year, national maritime trade has slackened somewhat as a result of the recession. Trade volumes are expected to rebound, but the net effect is likely to be a 3 to 5 year delay in achieving the volumes shown in the revised forecasts.

**Auto Market Demand**

The revised vehicle demand forecast used actual NY/NJ vehicle throughput from 2007 as a base, and applied compounded growth rates thereafter. Because actual traffic substantially exceeded the CPIP forecast between 2000 and 2007, the revised forecast is considered more reliable than the CPIP forecast for planning purposes.

The analysis also considered the region’s currently available capacity for handling vehicles, including Foreign Auto Preparation Service (FAPS), Toyota Logistics Services, WWL Vehicle Services Americas (formerly DAS), Northeast Auto Marine Terminal (NEAT), and BMW of North America. In March 2008, PANYNJ announced it acquired 119 acres from NEAT, and the land will be redeveloped into a container terminal, resulting in a loss of vehicle capacity.

SBMT is planned to provide capacity for approximately **137,300 vehicles per year**, which would generally offset the loss of NEAT – in other words, developing SBMT will enable the “capacity” line shown in Figure 1 to remain constant. Even so, under the revised forecast, there is substantially more demand than capacity. In 2007, actual vehicle throughput reached 99.7 percent of region’s capacity, as shown by Point A in Figure 1. If the revised forecast is delayed by three to five years from today, it means the region will have sufficient capacity through 2012-2014, but beyond 2012-2014 more capacity will be needed. In short, the analysis suggests there will be more than enough demand to utilize the capacity provided by SBMT.

**Figure 1: NY / NJ Market Demand, Vehicles. Source: TranSystems Corporation.**

![Figure 1: NY / NJ Market Demand, Vehicles. Source: TranSystems Corporation.](image)
**Break Bulk and Neo-Bulk Market Demand**

The CPIP forecast and the revised forecast do not differ significantly. Both are considered reliable for planning purposes, with CPIP representing an upper bound and the revised forecast representing a lower bound.

Much of the region’s break bulk and neo-bulk demand is met by private facilities, rather than public terminals. Figure 2 estimates the region’s capacity including both public and private facilities, along with future expansion at Red Hook and reactivation of SBMT. SBMT is planned to accommodate **360,000 tons of break bulk per year**.

As shown in Figure 2, it is expected that the region’s break bulk and neo-bulk demand will exceed its capacity in year 2013 under the CPIP forecast (Point A) and 2019 under the revised forecast (Point B). Extending these forecasts by three years to reflect economic recovery means the region will reach capacity somewhere between 2016 and 2022.

**Figure 2: NY / NJ Market Demand, Break Bulk and Neo-Bulk**

SBMT has four specific near-term opportunities that could allow it to outpace growth in the overall regional market: potential relocation and consolidation of the region’s banana import traffic, which represented 166,000 tons for the NY/NJ region in 2006; increased handling of other imported food products (fruits, beverages, etc.) due to ocean carrier service relocation (one carrier has recently re-routed fruit traffic from Philadelphia to Red Hook); potential relocation and consolidation of lumber traffic currently handled at Red Hook; and increased service to South Brooklyn shippers proximate to the facility, for whom SBMT will be the lowest-cost service option compared to other ports.

Overall, the four counties for which SBMT is likely to be the lowest-cost option – Kings, Nassau, Queens and Suffolk – import and export a wide variety of commodities through
the region’s port facilities. Many of these commodities are handled primarily as break bulk and neo-bulk, including heavy commodities such as cut stone and stone products, iron and steel, metal products, and project cargos (e.g., generators, wind turbines) that will particularly benefit from high weight-bearing pavement at SBMT, which would be funded by TIGER.

(c) The South Brooklyn Marine Terminal
Opened in 1960 and expanded in the 1970s, the 88-acre South Brooklyn Marine Terminal formerly handled both containerized and break bulk cargos into the mid-1980s. The diminishment in break bulk operations that began in the 1960s limited SBMT’s market potential and after 1985 most major deep-sea vessel operations ceased. Some limited maritime operations continued mostly related to the importation of cocoa beans, but those operations ceased in 2002 when structural problems at the terminal’s bulkheads precluded maritime service. Since that time, the City, in an effort to return the facility to a state of good repair, has been making capital improvements to the facility, which are described below.

In 2002, the western face of the 39th Street Pier (the southernmost finger) was repaired to allow docking for deep sea vessels. Additional improvements are underway to allow future docking of small vessels at the north side of the 39th Street Pier as well as at the south side of the 29th Street Pier.

Currently, most of SBMT is a paved, unimproved platform primarily used for vehicle processing and storage, or surface parking for adjacent commercial development. Once current rehabilitation efforts are completed, SBMT will contain three warehouses, one 50,000 square feet, one 190,000 square feet, and one 100,000 square feet. These warehouses will primarily be used as transit sheds for commodities brought to the site by water or rail. The southernmost shed will have direct rail access via a spur currently under construction. Dredging to create a 33-foot deep berth at the western face of the 39th Street Pier was completed in 2008.

TIGER funds would restore utility systems at SBMT, including water lines for potable water and fire safety, sewer lines for sanitary and stormwater control. In addition, the TIGER funds would provide a smooth, well-draining paved area for cargo handling. At the 39th Street Pier, the TIGER funds would be used to provide a heavy-duty platform that would allow for heavy-lift activities to take place, thus addressing the lack of general purpose piers in New York Harbor.

1. Axis Automotive Processing Facility
In 1999, NYCEDC completed a Strategic Plan for the Redevelopment of the Port of New York. The Strategic Plan recommended reconfiguring SBMT to position it for cargoes that are destined for the local market but that might be undeserved in other port facilities in the region. An analysis of the local freight market demonstrated that automobiles handled by roll-on/roll-off vessels and break bulk commodities such as lumber, plywood, steel, project cargos, among others, was the right market niche for SBMT. A subsequent request for proposals to potential private developers resulted in the long-term leasing of 74 acres of SBMT to the Axis Group, a major logistics provider.
to the automotive industry. Axis proposed use, detailed below, closely follows the recommendations under the Strategic Plan.

Under its development plan, Axis will offload vessels carrying new automobiles from vessels docked at the 39th Street Pier. Autos will then be inspected for damages during the voyage and either directed to a processing center for minor repairs or be sent to a holding yard. Similarly, autos requiring additional work, such as application of dealer options (sound systems, sun roofs, other customizations) will go to the processing center. From the holding yard, autos will either be loaded onto barges or rail carriers for delivery to distant locations or trucked to local dealerships.

As part of its lease, Axis will also be engaging with a stevedoring company to handle not only its own needs, but also to handle break bulk cargos that are discharged using ship’s cranes. These cargoes will be handled within the three warehouse sheds on the 39th Street Pier. These cargoes can either leave by truck if they are destined to local destinations within New York City or by rail or barge if the final destination of the commodity is more distant.

The improved pavement that would result from TIGER support would greatly enhance Axis’ business by providing what most other competing port facilities already have – smooth, pothole-free, well-draining paved surface areas.

2. SIMS Municipal Recycling Facility

Another opportunity for maritime development at SBMT arose in response to the City’s Solid Waste Management Plan (SWMP) adopted by the City Council and the State of New York in 2006. Since the 1960s, no new waste disposal facilities have been constructed in New York City. In July 1989, with the passage of Local Law 19, recycling became mandatory. All residents, schools, institutions, agencies, and commercial businesses must recycle. New York City residents and certain institutions receive municipal trash collection and curbside recyclables collection. Once collected, the City delivers metal, glass, plastic and paper to private companies and pays them to process and market these materials.

In September 2004, New York City announced an agreement in principle with Sims Municipal Recycling of New York, LLC (SIMS) to build a modern recycling facility in the City in return for a commitment from the City to deliver all of the MGP, and a portion of the mixed paper that DSNY currently collects for the next 20 years. This long-term contract allows Sims to make the capital investment necessary to develop better markets for the city’s recyclable materials and to provide a waterborne network for movement of discarded materials designated for recycling.

SIMS will occupy the northernmost finger of SBMT, the 29th Street Pier, an approximately 11-acre site. Barges would be brought into an enclosed unloading facility and unloaded by crane into the MGP tipping area. The MGP that arrives by barge would have already had bulky metal objects removed. A front-end loader or crane would move MGP from the tipping area into the processing system located in the MGP process area. DSNY trucks that deliver MGP directly to the SBMT MRF would be weighed and directed to tip their loads in the MGP tipping area. Bulky metal would be taken to the
The balance of the MGP, along with MGP that has been delivered by barge, would be
moved with a crane or front-end loader into the processing system.

(d) Current Redevelopment Program

Four principal construction projects are underway or in design for SBMT through a
coodinated program.

The first project ($28 million; 67% City-funded; 21% federal; 2% NYS), underway since
November 2008, involves reconstruction of SBMT’s electrical systems, installation of
high-mast light poles, dredging of the 39th Street Pier berth to 33 feet (completed),
removal of portions of a shed structure to create a wider apron alongside the west face
of the 39th Street Pier, and reconstruction of a rail spur at the 39th Street Pier.  The
project is expected to be completed during the summer of 2010.

The second project ($16 million; 100% City-funded), recently underway, is the
reconstruction of the bulkhead along the north side of the 39th Street Pier.  This project
will result in a second berth for smaller ships and barges. This project will be completed
by spring 2011.

The third project relates to the construction of the SIMS facility.  The site must be
graded and paved to managed stormwater, and additional fill material will be used to
elevate the site based on anticipated sea level rise. “Tipping” floors where DSNY trucks
can discharge will be enclosed in buildings to control noise, odors, dust and litter and to
protect workers from the elements. Inbound and outbound scales and a scale house are
required to weigh DSNY trucks delivering recyclables and trucks exporting processed
commodities. The project will involve significant waterfront construction, including
dredging, and bulkhead and dock construction. The total project cost is $85 million
funded with both SIMS and the City each funding half.

The last project involves the restoration of modern rail service to SBMT.  This project,
which is partly funded, involves construction of new rail connection between SBMT and
the First Avenue Rail Yard at Bush Terminal. New rail will enter SBMT at 39th Street
and First Avenue then extend north to the SIMS facility along the terminal’s eastern
boundary. A small yard serving the auto processing facility will be constructed
approximately midway between the SIMS facility and 39th Street and a switch will be
constructed to connect with a rail spur that will run alongside the 39th Street pier shed.
The total cost is expected to be $32 million.  The project is currently in design and
construction bids will go out in the spring of 2010, with construction completed in late
2012.

(e) The Project
NYCEDC, in public-private partnerships with Axis Group and SIMS, is taking enormous
steps to modernize SBMT, as described in the preceding section. However, this work is
not enough to bring SBMT into a full state of good repair. Chief among the unmet
needs are new water, fire protection, and sewer utility lines to replace aging and
unreliable infrastructure. The current systems were installed when the terminal opened
and was expanded in the 1960s and 1970s. Additional work is also needed to provide stronger and more uniform pavement throughout the terminal and provide improved stormwater control and filtration. SBMT’s infrastructure is past its useful life. As previously stated, the paved areas are severely potholed and rutted, drainage is poor, and underground water and sewer lines are not reliable. Diagrams and written summary of the projects to be funded under the TIGER program are found in Appendix A.

**(f) Cost and Amount of TIGER grant request**
The total proposed additional infrastructure work is estimated at $35,438,400 and represents approximately 40 percent of the overall multi-million dollar project to redevelop SBMT into a modern port facility.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount ($)</th>
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<tbody>
<tr>
<td><strong>Area A</strong></td>
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<tr>
<td>Stormwater and utility upgrade</td>
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<tr>
<td>Heavy duty pavement system</td>
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<tr>
<td>Stormwater treatment system</td>
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<td>New underdrain system</td>
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<td>Heavy duty drop inlet</td>
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<td>Heavy duty junction box – Area A</td>
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<td>New 12” concrete filled pipe bollards</td>
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<td><strong>Area B</strong></td>
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<td>Pavement improvements – Area B</td>
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<td><strong>Area C</strong></td>
<td></td>
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<tr>
<td>Stormwater and utility upgrades – Area C</td>
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<tr>
<td>Pavement resurfacing – Area C</td>
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<td><strong>Area D</strong></td>
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<td>Pavement resurfacing</td>
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<tr>
<td>Soft Costs (Bid documents)</td>
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<td><strong>Hard and soft cost subtotal</strong></td>
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<tr>
<td>Contingency (20%)</td>
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<tr>
<td>Escalation to mid-point of construction (7%)</td>
<td>2,318,400</td>
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<td><strong>Total</strong></td>
<td>$35,438,400</td>
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2. **PROJECT PARTIES**

The SBMT modernization project is a collaboration between the New York City Economic Development Corporation (NYCEDC), the City of New York, Axis Group, and SIMS Municipal Recycling, LLC.
NYCEDC is New York City’s primary vehicle for promoting economic growth and development. NYCEDC is responsible for comprehensive economic and industrial real estate development services throughout the five boroughs.¹ NYCEDC is a 501(c)3, not-for-profit, economic development corporation that works alongside the New York City Department of Small Business Services (SBS) to stimulate investment in New York and broaden the City’s tax and employment base, while meeting the needs of businesses large and small. To realize these objectives, NYCEDC uses its real estate and financing tools to help companies that are expanding or relocating anywhere within the city while simultaneously designing and implementing capital projects that stimulate economic growth of the City’s economy.

Examples of recently completed NYCEDC capital projects include the $158 million construction of Manhattan’s Whitehall Ferry Terminal for the Staten Island Ferry, the $80 million rehabilitation and reopening of freight rail operations on the Staten Island Railroad and the completion of the $86.2 million Section One of the High Line, an innovative new public park built on a 1930s-era elevated freight rail line. More information on NYCEDC projects can be found at www.nycedc.com.

NYCEDC promotes the improvement, maintenance, and development of the City’s marine terminals, rail freight facilities, airports, heliports and ferry network.

NYCEDC is applying for this TIGER grant on behalf of the City of New York in support of the seaport improvement project. Under this proposal, NYCEDC would be responsible for the design, construction and maintenance of the aforementioned freight rail assets.

3. SHOVEL READY CRITERIA

(a) Project schedule

In keeping with the Recovery Act’s priority for “shovel-ready” projects, NYCEDC is prepared to move the proposed SBMT modernization project toward construction immediately. Final designs are already approved and all governmental approvals have been secured, allowing for a Request for Proposals to be prepared and issued by the first quarter of 2010 (see below). Review of the proposals and selection of a preferred contractor would take place in the second quarter of 2010, followed by contract award. Construction could begin in the fourth quarter of 2010.

¹ In 1991, two agencies within New York City government, namely the Financial Services Corporation and the Public Development Corporation, were merged to form NYCEDC, which also took over certain functions from the former Department of Ports and Trade, specifically the management of key waterfront and aviation properties, freight rail infrastructure, and the City’s wholesale and public food markets. NYCEDC conducts work on behalf of the City of New York although it is not technically a City agency. It operates under contract with the City and is accountable to the Mayor, who appoints the NYCEDC president.
Table 3. Seaport Modernization Project Schedule

<table>
<thead>
<tr>
<th>Year/Quarters</th>
<th>Project Tasks</th>
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<tr>
<td>2010/Q1</td>
<td>Construction RFP preparation and contractor selection</td>
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<tr>
<td>2010/Q4</td>
<td>Construction commences</td>
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<tr>
<td>2012/Q4</td>
<td>Construction completed</td>
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</table>

Within New York State, the spending of TIGER funds is expected to create 439 jobs over the lifetime of the project. Direct construction employment is expected to be 239 and an additional 200 indirect off-site jobs also would be created.

(b) Environmental approvals

Both the Axis auto processing facility and the SIMS recycling facility received Negative Declarations the State Environmental Quality Review Act and City Environmental Quality Review 2006. The utility and paving programs represent replacement-in-kind type improvements that would not result in significant adverse impacts.

(c) Legislative approvals

No legislative approvals are required for the proposed project to proceed to construction.

(d) State and local planning

The proposed project is included on the Transportation Improvement Program (TIP) and State TIP (STIP).

(e) Technical feasibility

Final design has been completed for the project and the project can proceed immediately once a contractor is selected.

(f) Financial feasibility

Upon receipt of a TIGER grant, the proposed project will be fully funded and may proceed to completion. A contingency reserve has been built into the overall project budget.
4. **GRANT FUNDS**

<table>
<thead>
<tr>
<th></th>
<th>TIGER funds requested</th>
<th>State Funds (source)</th>
<th>Fed funds (source)</th>
<th>Local Funds (source)</th>
<th>TOTAL FUNDS</th>
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<tbody>
<tr>
<td>Project Approval/Env. Document</td>
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<td>N/A</td>
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<tr>
<td>Plans, Specs, and Estimate</td>
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<td>$0</td>
<td>$0</td>
<td>$200,000</td>
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<tr>
<td>ROW (capital and support)</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Construction (capital and support)</td>
<td>$35,200,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$35,200,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$35,400,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$35,400,000</td>
</tr>
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</table>

5. **LONG TERM OUTCOMES**

(a) State of good repair
Achieving a state of good repair is the intrinsic goal of the project. New deep-sea maritime facilities are difficult to permit and construct in the current regulatory and fiscal environment, so maintaining already existing facilities in a state of good repair is a public policy imperative for the City and region.

Portions of SBMT were constructed between 40 and 50 years ago and the utility and pavement systems are beyond their useful life. It is estimated that maintenance of these systems is at least fifty percent more costly because of more frequent maintenance. The proposed infrastructure improvements would replace these aging systems and reduce the City’s maintenance costs from approximately $200,000 annually to approximately $75,000 per year. Over the past ten years, EDC has spent $1M in sprinkler/fire Alarm system repairs. Six water main breaks have occurred over the past decade resulting in about $200,000 in repair costs.

The project, as stated previously, is consistent with several public policy initiatives, including the regional Comprehensive Port Improvement Plan (CPIP), a bi-state, multi-agency planning project conducted in 2004. SBMT reactivation as an automobile and break bulk facilities was one of the projects called for in the CPIP to address regional needs.

The project also is consistent with Coastal Zone Management policies established by the State of New York and the City of New York’s Local Waterfront Revitalization Program. SBMT is located in a Significant Maritime Industrial Area under the approved

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2 For more information, please go to http://www.panynj.gov/DoingBusinessWith/seaport/html/cpip.html
CZM/LWRP programs and the project would directly further waterborne commerce in the Port of New York.³

The proposed project also supports the goals of the City’s Solid Waste Management Plan by reducing trucking related to municipal solid waste export. It also supports the City’s efforts to create a self-sufficient recycling system so that the City does not have to rely on processing capacity in other locations to guarantee that 100% of the City’s metal, glass, plastic, and paper can be recycled efficiently.

In July 2009, Mayor Bloomberg released a Sunset Park Waterfront Vision Plan, which recommended four goals:

1) Maximize the efficient movement of goods
2) Protect and grow industrial employment
3) Promote Green practices
4) Balance neighborhood needs⁴

Each of these goals is met by the project: through the reactivation of a dormant marine terminal, the region and local business will realize new transportation options and the logistic chain serving the nation’s largest consumer region will be shortened; new industrial jobs will be created, more sustainable transportation modes will be promoted; stormwater control will be improved; air quality improved, and a new public park will be supported through the revenue stream generated by Axis’ lease.

The project is appropriately capitalized up front and will be subject to good management practices undertaken both by NYCEDC and its tenants. Both the Axis and SIMS projects have demonstrated financial capacity to carry out their program goals. NYCEDC, acting as the City’s steward of maritime infrastructure has a strong track record in maintaining these types of transportation facilities.

If TIGER funds are granted, the project will be fully funded. Asset management approaches and best practices applied by NYCEDC at similar facilities will ensure that the improvements are properly maintained. Through its leases, private tenants at SBMT will be legally required to maintain these systems “in a condition the quality of which is not less than that existing”… at the completion of the work. Revenue received through the leases negotiated by NYCEDC as well as the fees imposed on the private tenants will provide the funding needed to cover the City’s remaining maintenance burden.

NYCEDC has ample capacity to ensure that it will protect the improved assets assisted by this grant program. NYCEDC’s Property Management Department oversees the entire property portfolio to both solve and prevent facility problems. An assigned property manager regularly inspects all corporation facilities to ensure that all building systems are in working order. When the inspector finds a problem, he immediately

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³ For more information on the LWRP, please see http://www.nyc.gov/html/dcp/html/wrp/wrp.shtml
⁴ The Sunset Park can be found at http://www.nycedc.com/Pages/SearchResults.aspx?key=sunset%20park
opens a work order in the facilities management database. The database tracks these orders, which remain open until the building's issue has been resolved.

To complement these regular inspections, NYCEDC also has a preventive maintenance system to stop many facility issues from arising in the first place. This system generates monthly-maintenance work orders. These front-end work orders require our property managers to preserve and enhance equipment reliability and better stop problems before they start.5

(b) Economic competitiveness
Federal guidelines define an Economically Distressed Area (EDA) as a municipality with a per capita income that is more than 80 percent lower than the national average. Sunset Park, although not a municipality by itself, as a neighborhood has a 2007 per capita income of $18,000 -- well below the $30,892 threshold that defines EDAs, and would therefore qualify as an Economically Distressed Area (EDA) according to federal guidelines.6

Additionally, the area is within a New York State Empire Zone. Empire Zones were created to provide tax incentives, regulatory relief, job training programs, and other public policy programs to spur economic development in areas within the state with high poverty rates and an unemployment rate of at least 1.25 times the statewide unemployment rate7.

The proposed port improvement project is estimated to improve long-term efficiency and cost-competitiveness in the movement of vehicles, construction materials, and recyclables because it will reduce transportation costs within the largest consumer market in the U.S. It is estimated that the Axis operation may realize savings of up to $30 per vehicle annually in transportation costs by utilizing waterborne transportation rather than trucking. The proposed project will add needed capacity for Roll-on/Roll-off and break bulk maritime operations in the Port of New York and New Jersey and will shorten distance between port facility and end users. Several local businesses, including auto dealerships, lumber yards, plastic processing facilities, and others could be directly served by Axis and SIMS from SBMT instead of more distant ports by truck.

The reactivation of a major maritime facility in New York Harbor will result in a combined total of 257 jobs that are high-paying, quality union jobs comprising longshoremen, warehousemen, truckers, clerks, maintenance, porters, technicians as well as management employees; the average annual salary is $47,000.8 Axis has made a commitment to hire all of its new employees from the surrounding communities (see Community Board 7 resolution in Appendix B.

5 NYCEDC manages a large portfolio of properties throughout the five boroughs of New York City. These properties include industrial parks, marine terminals, rail yards, and heliports. Some examples include four million square feet of light industrial and back office space at the Brooklyn Army Terminal, the 105-acre Hunts Point Terminal Market, and the Brooklyn and Manhattan Cruise Ship Terminals.
7 http://www.empire.state.ny.us/tax_and_Financial_Incentives/Empire_Zones/zoneRegs082409.pdf
8 Axis Group correspondence, August 20, 2009.
(a) Livability

The proposed project supports the maintenance of the Bush Terminal Park at an adjacent site by providing a steady revenue stream (up to 3% of total lease revenues from Axis). Therefore, increased activity that generates increased revenue will also be captured by the City in increased throughput fees imposed under the lease, providing additional funding for Bush Terminal Park.

The open space created at Bush Terminal will address a lack of public parkland in the Sunset Park community. Sunset Park’s open space ratio is 0.45 acres per 1,000 residents ranking it 33 out of 52 community districts within the City.9

Improving basic infrastructure systems including reliable utility connections, heavy-duty pavement, will result in a port that is less expensive to maintain and more attractive to potential customers (i.e., auto manufacturers, ocean carriers), thus increasing discretionary revenues derived from cargo throughput (dockage and wharfage fees), which are based on weight and volume.

(b) Sustainability

The proposed seaport modernization is expected to reduce greenhouse gas emissions by replacing truck trips with more efficient water trips. This will be accomplished by increasing direct vessel calls into New York City thus shortening the trip length for cargos that otherwise would have been offloaded at other ports then trucked into Brooklyn. Currently, automobiles and break bulk commodities enter the region from more distant ports, primarily Baltimore and Philadelphia. By introducing water and rail use at the reactivated SBMT, approximately 6.9 million truck vehicle miles traveled (VMTs) will be avoided on a net basis10 (see Appendix C for VMT calculation methodology). This number of reduced VMTs translates into 2.25 million fewer gallons of fuel consumed annually.

Avoiding truck miles also translates into fewer emissions and improved air quality. On an annual basis, the project-generated avoided truck VMTs will reduce nitrogen oxide emissions by 137.81 tons, PM_{10} by 4.48 tons, PM_{2.5} by 4.12 tons, VOCs by 6.88 tons; carbon monoxide by 38.15 tons, and carbon dioxide by 24,922 tons per year.

The TIGER funds would also be used to support a new stormwater control system, including the installation of a filtration system that will reduce contaminants that currently flow into New York Harbor during rain events, thereby improving water quality goals by reducing total suspended solids and biological oxygen demand in harbor water. This will help the City meet water quality goals as mandated in the federal Clean Water Act.

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9 For more information, see New Yorkers For Parks, http://www.ny4p.org/media/38.pdf
10 This is based on hypothetical trips between the project site and Baltimore, MD (200 one-way miles) for automobiles, the next largest automobile port; and Philadelphia, (120 one-way miles), the next largest break bulk port.
The project also will support expansion of the acceptance and processing facility infrastructure that supports the NYC curbside recycling program. Specifically, this entails construction of a new, strategically located facility in Brooklyn to supplement existing SMR facilities in Queens, the Bronx and New Jersey. DSNY, using its transportation model, projects that the addition of the Brooklyn acceptance and processing facility will result in DSNY collection truck VMT reductions of approximately 230,000 per year.

(e) Safety
Reducing truck trip miles will also result in safer driving conditions on the nation’s highways. See Section 6 for a quantification of the avoided costs of crashes and fatalities resulting from VMT reductions.

6. Benefit/Cost Analysis (BCA)

Benefit/Cost Analysis (BCA)

Benefits of the port rehabilitation project can be categorized into four components: (1) maintenance cost savings once the port facility is brought up to a state of good repair; (2) traditional transportation benefits, such as reduced VMT and fuel savings; (3) social benefits, including improvements to safety and the reduction of pollutants; and (4) increased regional economic output due to increased firm sales in the automobile trade. A more detailed methodology for this analysis of project benefits can be found in Appendix D.

The most direct benefit of TIGER spending is that improved underground utilities and paving will reduce the City’s maintenance costs at the port facility by over $2.6 million (net present value) over the 20 years following project completion. This represents a 56% savings over maintenance costs in the absence of TIGER-funded improvements.

In addition to bringing the port facility into a state of good repair and thus reducing maintenance costs over the life of the asset, the pavement and underground utility work to be completed with TIGER money is expected to increase the attractiveness of the facility to auto manufacturers, thereby increasing the volume and value of autos coming through the port facility. The “base case” or worst case scenario for auto volumes is 60,000 autos per year, which is the minimum guaranteed volume agreed to in Axis’s lease with the City. With the full port rehabilitation project, however, Axis projects annual throughput of 137,300 autos. Therefore, we estimate that the incremental volume of autos coming through SBMT, 77,300 units or 56% of the projected total, is attributable to the overall port rehabilitation project.

The overall port rehabilitation cost is approximately $100 million, about 40% of which is funded by TIGER. Instead of making an “all or nothing” argument, and claiming that the entire port rehabilitation project is contingent upon TIGER funds, we have chosen to be more conservative by attributing only 40% of the overall benefits of the port rehabilitation to the TIGER funding. Therefore, in order to quantify the VMT reductions, fuel savings, social costs, and economic activity benefits of the TIGER portion of the
overall port rehabilitation project, we have applied a discount of 56% to estimate the amount of auto trade activity due to the port rehabilitation, and a discount of 40% to quantify the benefits due specifically to the TIGER investment.

In addition to basic underground utility improvements and general paving, the TIGER portion of the project includes heavy duty pavement which will facilitate the movement of heavy break bulk goods through the facility, such as steel, lumber, and copper. There is no guaranteed minimum break bulk throughput so we assume that the base case scenario without the port rehabilitation is zero tons of break bulk goods. After port rehabilitation, the facility is expected to handle 360,000 tons of break bulk materials annually. To be conservative, we estimate that 40% of the VMT reductions, fuel savings, and social costs are attributable to the expenditure of TIGER funds.

Traditional transportation benefits include reduced VMTs and fuel savings. In each year following the completion of the project, we estimate that TIGER spending towards rehabilitating the port facility will result in 3 million fewer VMTs annually. Over the 20 year period of analysis, this is equivalent to over 60 million fewer large truck VMTs each year. This VMT reduction equates to almost 590,000 gallons of fuel savings annually, or almost 11.8 million gallons of fuel savings over the 20-year period of analysis. The 20-year value of fuel savings is $28.4 million dollars. This value is net of the value of federal and state taxes on fuel, but includes the costs imposed by monopsony and oil supply disruption externalities, as estimated by the Federal Highway Administration’s analysis of Corporate Average Fuel Economy Standards.

Social benefits of the TIGER portion of the port rehabilitation project include avoided costs of wear and tear on highways, a reduction of costs caused by congestion, noise pollution, and crashes, and a reduced number of fatal accidents. We estimate that by taking trucks off the roads, the project will reduce the cost of wear and tear on highways by $17 million (NPV) over the 20-year period of analysis. The net present value of reduced congestion, noise, and crashes over the same time period is $8.3 million, $1.2 million, and $0.5 million, respectively. We are also able to estimate the value of reduced fatalities based on the statistical frequency of fatal accidents per 100 million large truck vehicle miles traveled. We estimate that over the course of twenty years following the completion of the project, the region will realize a benefit of $5.1 million worth of fatalities avoided.

11 Overall reduced VMTs due to reduced auto transportation and reduced breakbulk transportation is almost 11.5 million annually, described in Appendix C. Here we are estimating only the portion of reduced VMTs attributable to TIGER spending.

12 See a discussion of the externalities of fuel consumption in Chapter VIII of the Final Regulatory Impact Analysis of the National Highway Traffic Safety Administration’s rulemaking on Corporate Average Fuel Economics (CAFE) for Model Year 2011.

13 See Section 5 of Appendix D for information about how these parameters are measured.

14 Information on the methodology behind the avoided fatalities calculation can be found in Section 6 of Appendix D.

15 There may be some overlap between the benefits of reduced crashes and avoided fatalities. However, the cents per mile value of avoided crashes measures factors such as increased traffic without regard to the seriousness of the crash or the incidence of injury or fatality, while the value of avoided fatalities counts the value of human lives saved by removing large trucks from the roads.
Based on the reduced VMTs attributable to TIGER spending, we have estimated the dollar value of reduced emissions of pollutants such as Carbon Dioxide (CO2), Nitrogen Oxides (NOX), Particulate Matter (PM 2.5 and PM10), and Volatile Organic Compounds (VOC). The combined net present value benefit of reduced CO2, NOX, Particulate Matter, and VOC attributable to TIGER spending is $6.7 million over the 20 year time period following completion of the project.

The port rehabilitation project is expected to stimulate the local economy by increasing regional firm sales in the auto trade. We assume that of the 137,300 autos expected to pass through SBMT, 39,000 will be foreign imports,16 of which 56% would be new to the New York City region. In other words, we assume that slightly less than half of those cars would enter the New York City market via Baltimore or other ports along the eastern seaboard regardless of the rehabilitation of SBMT.

Using Regional Economic Models, Inc. (REMI) software, we input the increased firm sales of foreign imports attributable to the port rehabilitation to understand how the new auto trade activity will affect the New York City economy. We then apply a discount of 40% to estimate how much of the increased regional economic output is due to TIGER funding.

Our estimate is that City output, defined as increased production in the regional economy, including all intermediate goods purchased as well as value-added to the economy (compensation and profit), will increase as a result of the TIGER investment by approximately $55.6 million over the period considered.

When added together, the benefits attributable to the TIGER portion of the port rehabilitation project total $123 million, a sum that vastly outweighs the approximately $40 million investment. The overall sum is probably double-counting some of the project’s benefits (for instance, the benefit of fewer crashes may overlap with fatalities avoided, and the benefit of avoided emissions may overlap with fuel savings) but even so, the regional impact of the additional auto trade activity over the next 20 years alone more than pays back the initial $40 million TIGER investment.

7. Job Creation & Economic Stimulus

The proposed project will inject $35 million into the American economy in the next three years. Nearly all of this amount will be spent on the purchase and construction of utility pipes, paving materials, and associated hardware. Approximately $100,000 will be spent on preparing documents for the construction contract solicitation. As a result, the project will likely create 439 direct and indirect jobs related to the project, 239 of which will be temporary construction-related jobs and 200 of which will be off-site indirect or induced jobs in other industries (See Appendix D for methodology).

16 Axis projection of annual foreign imports.
SBMT currently employs approximately 50 workers, many of whom reside in the Sunset Park community board in Kings County, which would qualify as an Economically Distressed Area and is a recognized Empire Zone, qualifying for public aid to spur economic development. The proposed seaport modernization improvements, as well as the hiring commitments made by Axis, will also assure job opportunities for local residents.

The project’s procurement plan will involve a competitive public bid process to award the contracts for design and construction. This process will create follow-on jobs and economic stimulus for the construction industry and related project parties.

9. Evaluation of Project Performance

NYCEDC will seek to evaluate the success of the proposed project by measuring short- and long-term performance of the new utility and pavement systems, including frequency of maintenance and system failures. These metrics will be measured against SBMT’s current utility performance as expressed by number, type of maintenance service calls and repairs.

10. Certifications

NYCEDC is in compliance with all certification requirements as outlined in the Federal Register with respect to the TIGER grant application.
APPENDIX A: Project Summary

The project is organized around four areas at SBMT – identified as Area A (39th Street Pier), Area B (former 33rd Street Pier), Area C (southern upland), and Area D (northern upland). Each area is approximately 20 acres, except for Area B that is about 12 acres in size. It should be noted that these areas are within a single industrial campus, all of the work is integrated and there is overlap in the construction program.

Area A is the most critical portion of the facility because it is where ship and barge calls will take place. It is also where a new rail siding is being constructed. TIGER funds would be used to construct heavy duty pavement, and install new stormwater control systems (including stormwater filtration system), potable water lines, sanitary sewer lines, and fire lines. The heavy duty pavement section would consist of a new subdrain network would be constructed below the heavy duty pavement to stabilize and protect this very active part of the terminal.

Area B improvements consist of two-foot pavement resurfacing and installation of new water lines for fire protection.

Area C would be improved with two-foot pavement resurfacing creating positive drainage, pavement wedging, fire lines and new stormwater control systems that would feed into the new filter system constructed within Area A.

Area D will be improved with a 2-inch pavement overlay and new fire lines.
Pavement Improvements – Area A and Area C1 Heavy-Duty Pavement System

Area A and Area C1: Stormwater and Utility Upgrades
Stormwater and Utility Upgrades

Area C2 and Area C3: Stormwater and Utility Upgrades
Area B: Pavement Improvements

- Regular-Duty Pavement
- Pavement Resurfacing
- Pavement Wedging

Area C2 and Area C3: Stormwater and Utility Upgrades

- Fire
- Water
SEAPORT MODERNIZATION: REHABILITATING PORT INFRASTRUCTURE AT THE SOUTH BROOKLYN MARINE TERMINAL

Area C2 and Area C3 Pavement Improvements

Area D: Stormwater and Utility Upgrades
APPENDIX B. Brooklyn Community Board 7 Resolution: Axis Group Lease

Axis Auto Resolution: March 20, 2005 Board Meeting

Community Board 7 and its Economic Development Committee resolves to give the Axis Group Community Board 7’s whole support in obtaining this lease to use the South Brooklyn Marine Terminal facilities, based upon it’s commitment to reach out to the community and seek 100% Sunset Park resident work force, and to reduce truck traffic by the use of barges over the waterways, and for it’s commitment to use environmentally friendly vehicles and it’s support of the greenway along the waterfront.

Time: 8:00pm

Roll Call Vote: 28-In Favor, 2-Opposed, 0-Abstention
Appendix C. Vehicle Miles Traveled Calculation Methodology

Freight shippers and receivers in New York City and the east of Hudson region are currently served primarily by marine terminals located in Northern New Jersey (for containers and petroleum), but are also served by many out-of-region ports located at considerable distances (Baltimore, Wilmington, Philadelphia, Davisville RI, etc.) for auto and break bulk traffic. Ports in Northern New Jersey region do not plan to add new capacity for auto and break bulk handling – on the contrary, they are reducing capacity – so future expansion for these commodities will have to be at out-of-region ports, unless capacity is added at SBMT.

Without SBMT, service to auto and break bulk freight shippers and receivers in the New York City and east of Hudson regions will generate significant truck vehicle miles of travel (VMT), based on the total tonnage and distances that must be traveled. Alternatively, providing the same cargo capacity at SBMT will significantly reduce the travel distances required to serve customers in the New York City and east of Hudson regions, resulting in lower truck VMT. This effect can be quantified.

For auto traffic, SBMT is planned to handle 137,300 units annually. That means 137,300 units entering the facility via ocean vessel, regional barge, truck, or railcar; and 137,000 units exiting the facility via one of these modes. Slightly more than half (75,776) of the exiting traffic is via truck. Around 60% of the end-user recipients would be in the NYC/east of Hudson region; around 20% are in the Southeastern US, around 10% are in the Mid-Atlantic, and around 10% are in New England. Based on this geographic distribution, if the planned auto capacity is not provided at SBMT, the logical alternative location is Baltimore MD, which is the largest auto port on the Atlantic coast and has significant expansion potential. Compared to SBMT, a Baltimore facility would be around 240 miles closer to customers in the Southeast, 240 miles further from customers in NYC and New England, and roughly equidistant from customers in the Mid Atlantic. Truck VMT from a facility in Baltimore was estimated (based on total volume by service market times travel distance by service market), as was truck VMT from an equivalent facility in SBMT. The SBMT location generates more VMT to Southeastern markets, equivalent VMT to Mid-Atlantic markets, and substantially less VMT to NY and New England markets. Given that NY and New England represent 70% of the customer base, SBMT provides an overall reduction of 9,093,120 truck VMT annually compared to an alternative facility elsewhere.

For break-bulk traffic, a similar analysis was undertaken. SBMT is anticipated to handle approximately 360,000 tons of break-bulk cargo; at 18 tons per truck, this represents around 20,000 loaded truck trips annually. In recent years, Philadelphia has succeeded in attracting much of the break bulk business that had historically called in New York – fruit, coffee, cocoa, etc. – and if break bulk capacity is not provided at SBMT, Philadelphia is the logical alternative port. The customer base for break bulk through SBMT is all local. Shifting that capacity to Philadelphia, which is approximately 120 miles further from this customer base, would add 2,400,000 loaded truck VMT annually (120 miles times 20,000 loaded truck trips).

Once VMTs were calculated, emissions were then derived by taking the trip information
Appendix D. Benefit Cost Methodology

1. Period of analysis
The portion of the overall port rehabilitation project to be funded by TIGER funds is expected to begin in the first quarter of 2010, and be complete by the fourth quarter of 2011. The period of analysis for the benefits attributable to TIGER funding is 20 years following completion of construction, 2012-2031. The 20-year net present value (NPV) is discounted at a rate of 7%, except in the case of carbon dioxide (see Section 2 below), and reported in 2009 dollars.

2. Discount Rates
As recommended by the Federal Register Notice, a 7% discount rate is applied to the future value of benefits and costs in all cases, except in the case of carbon dioxide. The discount rate applied to future benefits of reduced carbon dioxide emissions is 3%, as recommended in the Highway Traffic Safety Administration’s rulemaking on Corporate Average Fuel Economics (CAFE).\(^\text{17}\)

3. Inflation Rates
Annual inflation of most dollar values is tied to the Consumer Price Index, forecast to be 2.5% in the New York City area in the coming years.\(^\text{18}\) However, the annual increase in damage cost caused by carbon dioxide emissions is 2.4%, as recommended by the CAFE rulemaking analysis cited above. We estimate that the value of a statistical life is inflated at the rate of 3.0% per year, the average of expected wage inflation (3.5%) and CPI inflation (2.5%).\(^\text{19}\)

4. Regional Economic Output
The analysis of the regional economic impact of the port rehabilitation effect on sales in the auto trade was carried out using Regional Economic Models, Inc (REMI) Policy Insight Plus software tailored for analysis of the New York City economy. REMI incorporates elements of input-output, general equilibrium, econometric, and geographic modeling. REMI therefore captures interactions between industries in a region, the long run balance of supply and demand, the effects of changes in prices on regional

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\(^{17}\) Chapter VIII of the National Highway Traffic Safety Administration’s Final Regulatory Impact Analysis of the Corporate Average Fuel Economy (CAFE) for Model Year 2011.

\(^{18}\) The 2.5% inflation rate is based on an average of the CPI estimates for New York City used in the NYC Office of Management and Budget FY09 Executive Budget for the following calendar years:

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<th>CY08</th>
<th>CY09</th>
<th>CY10</th>
<th>CY11</th>
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<tr>
<td>CPI</td>
<td>3.6</td>
<td>2.1</td>
<td>2.2</td>
<td>2.2</td>
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</tbody>
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\(^{19}\) The reference value for the increase in the value of a statistical life is 3.4% for 2008-2009 as discussed in Treatment of the Economic Value of a Statistical Life in Departmental Analyses, U.S. Dept. of Transportation, Office of the Assistant Secretary for Transportation Policy. 

competitiveness, the speed of economic responses, and the effect of agglomeration economies.\textsuperscript{20}

The input to our REMI analysis is the expected increase in New York City firm sales of imported autos due to the port rehabilitation. Axis has estimated 39,000 auto imports per year, and has suggested that these imports would mainly be from Chinese and Indian auto manufacturers. Axis has guaranteed a minimum throughput of 60,000 new and used cars at the facility regardless of port rehabilitation, and estimates annual throughput of 137,300 cars if the port is rehabilitated. We therefore assume that only the incremental portion of auto activity (56\%) is due to port rehabilitation. The annual increase in New York City firm sales in the auto industry are entered into the REMI model as the expected incremental volume of auto imports (56\% of 39,000) multiplied by an average mark-up value,\textsuperscript{21} beginning in 2012 and continuing in each subsequent year through 2031, and inflated at CPI (2.5\% annually).

The measure of total output on which our estimated benefits are based is the amount of increased production in the New York City economy, including all intermediate goods purchased as well as value-added (compensation and profit). The components of output are self-supply, or sales within the City, and exports, or products that leave the City for the rest of the Nation and the rest of the world. From an aggregate perspective, the benefits to the New York City economy may be offset by a decrease in the relative firm sales of autos in other locations in the Nation.

REMI reports Output in constant 2000 dollars, and we inflated these values at 2.5\% annually to reflect CPI.

5. Value of Social Costs

A 1997 FHWA study identified marginal cost factors associated with the operation of specific vehicle classes over portions of rural and urban interstates.\textsuperscript{22} It is the only study of its kind that attempts to calculate national average costs per vehicle miles traveled.\textsuperscript{23} The study assigns a social cost factor (cents per mile) of congestion, noise, wear and tear on pavement, and crashes to each mile traveled. Because the reduced VMTs associated with the port rehabilitation project are mainly over interstate highways between either Baltimore and New York City or Philadelphia and New York City, we have estimated that 90\% of the miles should be assigned “urban” cost figures while 10\% of the miles are assigned “rural” cost figures. The following table identifies the costs associated with 80 kip 5-axle combination trucks.

\textsuperscript{20} More information on the REMI model can be found on the REMI website: \url{http://www.remi.com/}.
\textsuperscript{21} Axis estimates the average mark-up value on new car imports to be 7\%, with an average new car value of $26,000 in 2009 dollars.
<table>
<thead>
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<th>Vehicle/Highway Class</th>
<th>Marginal Cost (cents per mile, 2000 dollars)</th>
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<tr>
<td></td>
<td>Pavement</td>
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<tr>
<td>80 kip 5-axle Comb/Rural Interstate</td>
<td>12.7</td>
</tr>
<tr>
<td>80 kip 5-axle Comb/Urban Interstate</td>
<td>40.9</td>
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</tbody>
</table>


The social cost benefit of the port rehabilitation project is calculated by applying the appropriate urban or rural marginal costs to the number of urban VMTs reduced (2.7 million annually) or rural VMTs (300,000 annually). It is assumed that these benefits are realized in each year of the analysis period, 2012-2031. The benefits are inflated at CPI (2.5% annually).

6. Value of Fatalities Avoided
The U.S. Department of Transportation Performance and Accountability Report FY 2007 estimates 2.24 fatalities involving large trucks per 100 million VMT. We have discounted the estimate of total reduced annual VMTs in Appendix C to reflect the benefits we believe to be attributable to TIGER funding alone. Using the discounted estimate of 3,000,000 reduced large truck VMTs annually, we estimate 0.7 fatalities avoided each year. The number of avoided fatalities is then multiplied by the statistical value of a life, $6 million in $2009, as outlined in the U.S. DOT’s Treatment of the Economic Value of a Statistical Life in Departmental Analyses. As mentioned above, the value of a statistical life is assumed to increase by 3% annually.

7. Fuel Savings
Fuel savings were calculated based on the methodology described in the Highway Traffic Safety Administration’s rulemaking on Corporate Average Fuel Economics (CAFE). Gallons of fuel savings are estimated based on 5.1 miles per gallon for Combination Trucks. The social benefit of each gallon of fuel saved is the Energy Information Administration (EIA) projected retail price of diesel minus federal and state

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24 This is consistent with this study’s assumption that approximately 56% of the auto trade business at the port is attributable to the port rehabilitation project. Therefore, 56% of the VMT reductions due to auto transportation can be counted as a result of the overall project.


25 This estimate of VMTs assumes 56% of VMT reductions from the transportation of autos and 100% of VMT reductions from the transportation of break bulk goods are due to port rehabilitation, and that 40% of the effect of the port rehabilitation is due to TIGER funding.


27 See Footnote 1 of Appendix D.

8. Value of Avoided Emissions

The methodology of assigning a dollar benefit per ton of avoided emissions is also from the CAFE rulemaking analysis. The annual emissions benefit (gross of any additional ship, rail or barge trips) of the port rehabilitation project is based on the VMT reduction estimates (see Appendix C) and emissions factors (grams per mile) from an emissions inventory by The Port Authority of New York and New Jersey. A ton of avoided Volatile Organic Compounds is assigned a value of $1,700; a ton of avoided Nitrogen Oxides is assigned a value of $4,000; and a ton of avoided Particulate Matter is assigned a value of $168,000. As recommended in the Federal Register Notice, this analysis uses a mean global value of $33 per metric ton as the benefit of an avoided metric ton of Carbon Dioxide. All dollar values in the CAFE rulemaking document are in 2007 dollars. As mentioned above, the annual increase in value for all emissions benefits except Carbon Dioxide is linked to CPI (2.5%). The annual increase in CO2 damage cost is 2.4%, as recommended by the CAFE rulemaking analysis.

9. Job Creation & Economic Stimulus

Construction jobs reported in the Job Creation & Economic Stimulus section of this analysis are estimated using the 2006 multipliers developed by the U.S. Bureau of Economic Analysis Regional Input-Output Modeling System (RIMS II) for New York State. The number of jobs reported represents the number of full-time equivalent job-years expected to be created by approximately $41 million worth of spending in the construction industry (this includes hard plus soft costs). The total number of jobs includes both direct, on-site construction jobs and indirect and induced jobs created throughout the State in other sectors due to spending in the construction industry. The construction budget is in 2009 dollars and it is discounted to 2006 dollars using the increase in construction costs from the Producer Price Index 2006-2008 and 3% thereafter.

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31 The externality cost is based on the costs to society of monopsony and oil supply disruptions. See Table VIII-4 and pages VIII-21 to VIII-26 of the CAFE rulemaking analysis cited above for a detailed discussion of this methodology and the analysis of fuel consumption externalities.
32 See Table VIII-5 on page VIII-60 of the CAFE rulemaking.
33 Port Authority of New York & New Jersey (2008), 2006 Baseline Multi-Facility Emissions Inventory of Cargo Handling Equipment, Heavy-Duty Diesel Vehicles, Railroad Locomotives and Commercial Marine Vessels, p. 87, Table 3.20
September 11, 2009

Liza Kent
NYC Economic Development Corporation
110 Williams Street
NY, NY 10038

Re: Certification of Metropolitan Planning Organization Criteria for TIGER Applications

Dear Potential Tiger Grant Applicant:

This letter is in response to the June 17, 2009 Federal Register Notice of Funding Availability for TIGER grants, pages 28760-61, http://edocket.access.gpo.gov/2009/pdf/E9-14262.pdf, which indicates that awarded TIGER applications must be included in all relevant metropolitan planning documents. The New York Metropolitan Transportation Council (NYMTC) which is the Metropolitan Planning Organization (MPO) for New York City, Long Island and the lower Hudson Valley will take all of the steps necessary to incorporate Seaport Modernization: Rehabilitating Port Infrastructure at the South Brooklyn Marine Terminal in Brooklyn, NY in the metropolitan planning process if the United States Department of Transportation (USDOT) selects it to receive TIGER funding. Specifically, NYMTC will amend its Regional Transportation Plan, Transportation Improvement Program and review Seaport Modernization: Rehabilitating Port Infrastructure at the South Brooklyn Marine Terminal in Brooklyn, NY for compliance with the United States Environmental Protection Agency’s Transportation Conformity Rule as necessary, prior to the project award. To further facilitate the alignment of Seaport Modernization: Rehabilitating Port Infrastructure at the South Brooklyn Marine Terminal in Brooklyn, NY with the MPO process, NYMTC will as necessary, conduct public review and interagency consultations for all potential TIGER projects within our planning boundaries during the USDOT selection process to ensure inclusion of all selected projects in the relevant planning documents prior to award.

If you need additional information, please contact Angelina Foster of my staff at, afoster1@dot.state.ny.us.

Sincerely,

Joel P. Ettinger
Executive Director
NYMTC