December 6, 2016

Environmental Protection Agency
Office of Brownfields and Land Revitalization
Mail Code 5105 T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Re: DRAFT Proposal for FY 2016 Brownfields Site-Specific Cleanup Grant
Green Line Extension (GLX) Vehicle Maintenance Facility Site 2
44-48 Third Avenue
Somerville, Massachusetts

The MBTA has acquired a parcel of land located at 44-48 Third Avenue in the Inner Belt area of Somerville, Massachusetts with the plans to develop a new light rail vehicle maintenance facility along the proposed Green Line Extension (GLX) project. The 4.3-mile extension is intended in order to improve mobility and regional access for residents in the densely populated municipalities of Somerville and Medford, two cities currently underserved by the MBTA relative to their population densities, commercial importance, and proximity to Boston.

The parcel was most recently used as an industrial equipment supply facility. The parcel and surrounding land has over 100 years of commercial and industrial history, including use as a railroad yard. These types of industrial uses are typical in the Inner Belt area which has lagged behind other "urban villages" in Somerville like Davis Square. The cleanup and redevelopment of a GLX Vehicle Maintenance and Storage Facility (VMSF) will be part of a larger project that will revitalize this area of East Somerville.

a. Applicant Identification
Massachusetts Bay Transportation Authority
10 Park Plaza
Boston, MA 02116

b. DUNS Number: 176621

c. Funding Requested:
i. Grant Type: Cleanup
ii. Federal Funds Requested: $200,000. No cost share waiver is requested.
iii. Contamination: Hazardous Substances
iv. Site-Specific

d. Location:

City of Somerville, Middlesex County, Massachusetts

e. Property information:
Vacant Facility, 44-48 Third Avenue, Somerville, Massachusetts, 02143

f. Contacts:

i. Project Director:
Andrew D. Brennan
Director of Environmental Affairs
Massachusetts Bay Transportation Authority
10 Park Plaza, Boston, Massachusetts 02116
Phone: 617-222-3126
Email: ABrennan@MBTA.com

ii. Chief Executive:
Stephanie Pollack

g. Date Submitted: December 20, 2015

h. Project Period: 18-24 Months

i. Population: The population of Somerville is 78,901. The population of the Inner Belt Census Tract is 2,505. The MBTA Service District population is estimated as 4,663,565.

j. Regional Priorities Form/Other Factors Checklist: Please see attached.

The MBTA is excited about the opportunity that this grant will provide to our organization and our community, which includes the ridership of our regional transit system and revitalization of the Cities of Somerville and Medford.

Sincerely,

Brian Shortsleeve
Chief Administrator &
Acting General Manager

CC: Frank Gardner, Regional Brownfields Coordinator, EPA Region 1

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
US ENVIRONMENTAL PROTECTION AGENCY
DRAFT SITE-SPECIFIC CLEANUP GRANT PROPOSAL
GREEN LINE EXTENSION (GLX) VEHICLE MAINTENANCE AND STORAGE FACILITY (VMSF) SITE 2
44-48 Third Avenue, Somerville, Massachusetts
December 6, 2016

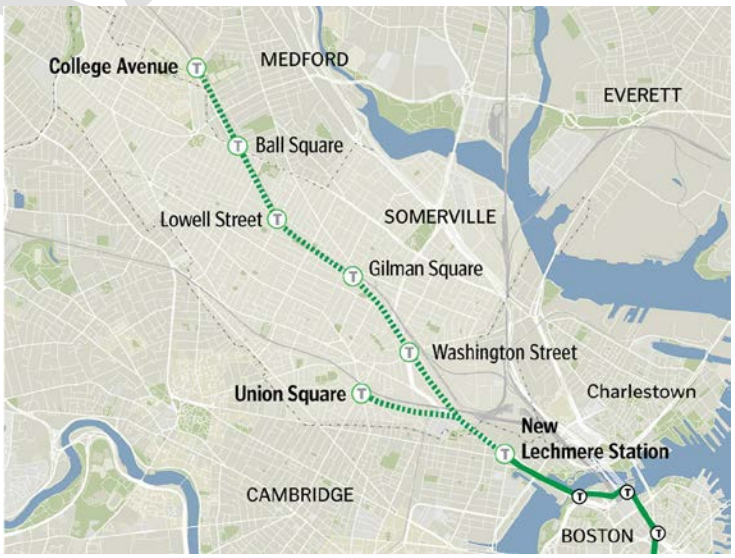
The Green Line Extension (GLX) Vehicle Maintenance and Storage Facility (VMSF) Site 2 project is located at 44-48 Third Avenue, Somerville, Massachusetts (the Site). This industrial parcel has been acquired by the Massachusetts Bay Transportation Authority (MBTA) for redevelopment to support a planned 4.3-mile extension of their rapid transit system through Somerville and Medford.

1. Community Need

a. Targeted Community and Brownfields

i. Targeted Community Description: The Inner Belt area is a neighborhood in East Somerville, Massachusetts. The area is currently mostly commercial and industrial businesses located along Inner Belt Road. This area was historically occupied by a railroad yard and is currently located adjacent to a large commuter railroad maintenance facility. The aging industrial nature of the Inner Belt has limited the amount of new development and new businesses in the area. This area also lacks access to rapid transit public transportation, which lessens its desirability for businesses and residences (compared to other areas of Somerville).

The proposed cleanup activities will include the remediation of former and current commercial/industrial properties, including the former rail yard and the distillery. The properties will be redeveloped as a light rail train maintenance facility as part of a new GLX project. The GLX rail line will connect several new areas of Somerville with the rest of Greater Boston via the fourth largest rapid transit system in the U.S. This project is expected to attract redevelopment and drive the local economy and real estate market.



ii. Demographic Information:

	Inner Belt Area (Census Tract 3515)	Somerville	Massachusetts	National	Davis Square (Census Tract 3508)
Population	2,505[2]	78,901[1]	6,745,408[1]	318,857,056[1]	2,046[2]
Unemployment	2.1%[2]	5.3%[2]	6.0%[2]	6.0%[2]	5.5%[2]
Poverty Rate:	9.9%[2]	14.8%[2]	11.4%[2]	15.4%[2]	8.4%[2]
Percent Minority:	31.6%[2]	26.1%[3]	19.6%[3]	22.6%[3]	22.04%[2]
Median Household Income:	$46,930[2]	$67,118[2]	$66,866[2]	$53,046[2]	$94,531[2]
Use of Public Transportation to Work	20.0%[2]	31.0%[2]	9.3%[2]	5.0%[2]	48.6%[2]
Drove to Work	52.8%[2]	50.0%[2]	80.0%[2]	86.1%[2]	36.9%[2]

[1]Data are from the 2014 US Census Population Estimate available on American FactFinder at http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

[2] Data are from the 2009-2013 American Community Survey 5-year Estimates US Census data available on American FactFinder at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

[3]Data are from the USA State and County QuickFacts available on United States Census Bureau http://quickfacts.census.gov/qfd/states/00000.html?cssp=SERP

The table above summarizes the demographic information for the Inner Belt Census Tract as compared to the rest of the City, State, and Country. In addition, to provide a better apples-to-apples comparison, the Census Tract information for Davis Square is provided. As demonstrated above, the Inner Belt area has a higher poverty rate and **less than $^1/_2$** of the median household income than Davis Square. In addition, only about 20% of Inner Belt residents rely on public transportation to get to work, while Davis Square residents use of public transportation is significantly higher at approximately 50%.

iii. Description of Brownfields

This area, including 44-48 Third Avenue, has over 100 years of commercial and industrial use. The historical use of the Site has resulted in petroleum and hazardous substance contamination in soil and groundwater.

iv. Cumulative Environmental Issues

This area of Somerville was historically filled tidal lands. The material used to fill this land typically contained lead and polycyclic aromatic hydrocarbons (PAHs) as well as other metals and contaminants. Although this fill material is widespread and can be considered background, this fill material needs to be managed during redevelopment projects to mitigate risk exposure.

b. Impacts on Targeted Community

The historical commercial and industrial use (and the real and perceived contamination) of these brownfield properties have limited the redevelopment of this area. The shallow historical fill material typically limits the use of these areas to commercial and industrial. Significant remediation is typically required to reuse the properties as mixed-use residential or other uses with high-frequency and high-intensity use by children (i.e. yards, schools and playgrounds).

As discussed in section **1.a.ii.** the demographics of this area are generally more economically depressed than other areas of Somerville that are more inland and that have less brownfield impacts.

c. Financial Need

i. Economic Conditions:

While GLX was first planned in 1990, the project has proceeded in fits and starts. Construction finally broke ground in 2012, with service targeted to begin in 2020. In August 2015, the MBTA disclosed that the project would cost approximately $3 billion, a $1.08 billion increase from previous estimates. These increased costs were related to several factors, including; increased construction costs and the acquisition and remediation of redevelopment properties. Since that time, the MBTA has considered scaling back the project to meet budget constraints. The possible cuts include reducing the size of stations and reducing other ancillary benefits, such as a planned extension of the Somerville Community Path.

The MBTA is seeking this brownfields funding (as well as other sources of funding) in an effort to maintain the scope of the GLX project. Specifically, these funds will be used to remediate the 44-48 Third Avenue parcel for the redevelopment of the property as the VMSF. Savings to the overall project budget could be applied to the Community Path and/or other community benefits.

ii. Economic Effects of Brownfields:

The economic development of the Inner Belt area has lagged behind other neighborhoods in Somerville, such as Davis Square. One of the reasons that Inner Belt has not prospered is the historical use of the area as a rail yard and the real and perceived (stigma) of contaminated properties. One of the reasons that Davis Square has prospered is that the MBTA Red Line station was built in this neighborhood in 1983.

As demonstrated in the demographic table above, Inner Belt has a higher poverty rate and a lower median household income (less than half) than Davis Square. The remediation and redevelopment of the brownfields parcels in the Inner Belt area would likely improve the economy of this area including: decreasing poverty; increasing household median income, and; increasing property values.

2. Project Description and Feasibility of Success

a. Project Description

i. Existing Conditions: The MBTA has acquired the 121,539 square foot parcel located at 44-48 Third Avenue in Somerville, Massachusetts (the Site). This property was acquired for the purposes of developing a new light rail maintenance facility as part of the MBTA GLX Project. The Site is a rectangular property located between Third Avenue and the commuter rail maintenance facility. The 44-48 Third Avenue parcel was first developed in the late 1800s as a railroad yard which operated at the property until approximately 1963. The property was then vacant between 1963 and approximately 1978 when it was developed with the current industrial facility. The facility reportedly operated as Atlantic Tracy Company, a wholesale industrial equipment company, from the time of facility construction to at least 2001. The facility also operated as a printing facility and/or copy center since at least 1985. Current businesses are being relocated to make the property available to the MBTA for the GLX project.

In 2010 and 2011, the MBTA worked with an environmental consultant to collect soil and groundwater samples on the 48 Third Avenue property as part of the GLX project assessment. Concentrations of PCBs, lead, antimony and benzo(a)pyrene we found in soil above RCs. Fluorene was detected in groundwater above RCs. Coal and ash were also identified in the upper fill soils. At the time, these concentrations were not reported to the property owner, nor the MassDEP (required only after owner obtains knowledge). In 2014, the MBTA worked with another environmental consultant to advance an additional four environmental/geotechnical borings at the property. Concentrations of PCBs, lead, antimony and benzo(a)pyrene above RCs in the top 7-feet of soil were confirmed. The MBTA became obligated to notify the MassDEP once they became the property owner on March 25, 2014. The MassDEP was notified and they assigned Release Tracking Number (RTN) 3-30628 to the Site. The notification linked this release to a Special Project Designation (SPD) RTN (3-30620) that covers multiple Massachusetts Contingency Plan (MCP) release sites along the GLX project.

Prior to taking ownership of the parcel, the MBTA hired Kleinfelder, Inc. to prepare an ASTM Phase I Report for the property, dated July 19, 2013. The ASTM Phase I Report identified the following Recognized Environmental Concerns (RECs) for the Site: 1) the presence of PCBs, lead, antimony and benzo(a)pyrene in soil and fluorene in groundwater; 2) the historical use of the property and surrounding properties as a rail yard, 3) historical industrial property use; 4) a documented release of PCBs and arsenic at an abutting property; 5) three, 30,000-gallon ASTs reportedly used for the storage of 190-proof alcohol at an abutting property; 6) storage of 11,500 gallons of diesel fuel for emergency generators at an abutting property; 7) use of an abutting property as a commuter rail vehicle maintenance facility and associated releases; and 8) nearby historical releases of 13,000 gallons of phosphorous trichloride (1980) and PCBs and petroleum (1993) both reported at the abutting rail road yard location known as “Yard 8”.

The MBTA hired Kennedy/Jenks Consultants (K/J) to continue with a Release Abatement Measure (RAM) Plan that was initially implemented by Kleinfelder. This

RAM Plan is associated with the management of soils impacted by historic railroad operations at this parcel and throughout the GLX project limits in the City of Somerville. The MassDEP recognizes the RAM in the GLX corridor as a SPD under RTN 3-30620. RAM activities conducted between November 2015 and May 2016 under this RTN included the excavation, characterization, and off-site disposal related to drainage improvements along the GLX corridor. The redevelopment of the 44-48 Third Ave parcel with the VMSF will require the remediation of PCBs, lead, antimony and benzo(a)pyrene in soil at the property.

The redevelopment of this property would include the management of displaced, impacted soils and potentially the installation of clean material and/or engineered barriers to be consistent with the exposure scenarios assumed in the AUL.

The cleanup of this parcel will make possible the redevelopment of the property as a light rail VMSF as part of the GLX Project. GLX will provide fast, reliable, and affordable transportation for area residents to get to work and other places. The train station will also lead to the revitalization of the area with new planned Transit Oriented Development (TOD) projects. These TOD projects provide the extended benefit of a sustainable work, live, and play community that is interconnected to other communities. Additional benefits of a TOD project typically include improved quality of life and increased economic vitality and jobs. New light rail service will also provide direct environmental benefits by reducing the number of buses and cars on the road. In addition, the GLX Project is planning to extend the Somerville Community Path to facilitate additional use of non-automobile travel through coordination of transit and bicycle pedestrian facilities.

The MBTA will work with our local, state, and federal partners to clean-up the Site and redevelop a light rail maintenance facility. These partners include the Massachusetts Department of Environmental Protection (MassDEP) and the U.S. Environmental Protection Agency (USEPA). The MBTA will also competitively select strategic consultants and contractors, including a Massachusetts Licensed Site Professional (LSP), to manage and oversee the clean-up efforts.

ii. <u>Proposed Cleanup Plan:</u>

The proposed Site cleanup will include the delineation and removal of PCB, lead, and PAH contaminated soil at the parcel. The cleanup will also involve the removal of other contaminated fill material to support the installation of subsurface foundations, piles, and/or utilities.

To address subsurface impacts, a comprehensive subsurface drilling program will identify the lateral and vertical extents of related soil and groundwater contamination. The data from these assessments will be used to prepare a soil excavation plan. The excavation of soils will be performed under applicable state laws (MassDEP), most likely as a RAM Plan.

In addition to the PCB, lead, and PAH impacted soil removal, the characterization and removal of contaminated fill will be performed during the subsurface excavation to support redevelopment activities. The contaminated fill will be excavated to a depth of approximately 3-feet in future landscaped areas that may pose an unacceptable risk of exposure to adults and children at the future train station.

During the excavation activities, institutional controls such as dust suppression and temporary fencing will be used to protect the public. Residual contamination in soil and groundwater will be managed under the MCP and may include the placement of clean soil, pavement, and/or a vapor barrier to reduce future exposure. In addition, an activity and use limitation (AUL) property deed restriction will be required to maintain the conditions of limiting exposure to residual impacted soils in the future.

b. Task Descriptions and Budget Table

i. Task Description:

Task 1: Program Management, Planning and Design: Includes costs for the planning, engineering, design, procurement and oversight of cleanup activities as well as programmatic management of the grant. The budget of this task is broken down as follows:

- $2,000 for programmatic management of the grant, including reporting.
- $25,000 for the planning, design, and procurement support of the cleanup activities.
- $15,000 for oversight and documentation of cleanup activities and reporting.

Task 2: Community Involvement: Includes the development of a Community Relations Plan (CRP) and refining an Analysis of Brownfields Cleanup Alternatives (ABCA), submitting a Quality Assurance Project Plan (QAPP) and preparing and submitting an MCP RAM Plan to the MassDEP. The budget for this task breaks down as follows:

- $17,000 for preparation of the ABCA, CRP, QAPP, and RAM Plan.
- $3,000 for the advertising and attending public meetings

The deliverables for this task include the final ABCA, CRP, QAPP, and RAM Plan.

Task 3: Cleanup Activities: The initial cleanup activities will include the GPR survey of the undeveloped portions of the five parcels to identify/confirm the location of USTs and other subsurface structures. In addition to the GPR survey, a subsurface drilling program will be performed to evaluate the nature and extent of contamination in support of the remedial planning and design. The cleanup activities will also include the assessment and removal of the aboveground petroleum-filled equipment including the heating oil AST, the hydraulic lifts, and the oil/water separator(s). The excavation of USTs and related petroleum-impacted soils will also be included in this task. Post-excavation confirmatory sampling will be performed to document the results of the cleanup. The budget breakdown for this task includes the following:

- $25,000 for subsurface pre-characterization program
- $60,000 for excavation of PCB impacted soil, including confirmatory sampling and analytical testing
- $90,000 for targeted excavation of impacted-fill material to support development

Deliverables for this task include the waste disposal manifests and laboratory reports. These documents will be included in the final reports prepared in Task 4.

Task 4: Coordination and Final Reporting: Includes consultant costs for ongoing coordination with the EPA Brownfields Program and the MassDEP. This subtask includes communications, submittal of status reports, and remediation summary report (RAM Completion Report). A Permanent Solution Statement Report will also be prepared to close out the Site under the MassDEP MCP Program. The costs associated with this task are budgeted as $30,000. The AUL deed restriction including a land survey of the AUL limits will be an additional $20,000.

ii. Budget Table:

Budget Categories	Project Tasks ($)				
	Task 1	**Task 2**	**Task 3**	**Task 4**	**Total**
Personnel	$3,000	$3,000	$4,000	$1,000	$10,000
Fringe Benefits					
Travel[1]	$500		$1,000		$1,500
Equipment[2]					
Supplies	$1,000		$2,000		$3,000
Contractual	$37,500	$17,000	$168,000	$49,000	$271,500
Other (Specify)					
Total Federal Funding (not to exceed $200,000)	$32,000	$15,000	$115,000	$38,000	$200,000
Cost Share[3]	$10,000	$5,000	$60,000	$12,000	$87,000
Total Budget	$42,000	$20,000	$175,000	$50,000	$287,000

[1]Travel to brownfields-related training conferences is an acceptable use of these grant funds.
[2]EPA defines equipment as items that cost $5,000 or more with a useful life of more than one year. Items costing less than $5,000 are considered supplies. Generally, equipment is not required for grants.
[3]Applicants must include the cost share in the budget even if applying for a cost share waiver. If the applicant is successful and the cost share waiver is approved, it will be removed in pre-award negotiation.

c. Ability to Leverage

The current cost estimate for the GLX project is $2.3 billion. In January 2015, the Federal Transit Administration issued a Full Funding Grant Agreement (FFGA) in which it agreed to pay $996 million towards the project. The balance of the costs will be paid by a combination of sources:

- $158 million in federal highway funds (via the CMAQ program)
- $75 million from the cities of Cambridge and Somerville
- Available grants and funds (like this brownfield cleanup grant); and
- the balance from Commonwealth Revenue Bonds, provided to the MBTA via MassDOT.

3. Community Engagement and Partnerships

The MBTA has a dedicated website for the GLX project (http://greenlineextension.org) in order to keep the community engaged and informed. In addition to the website, the MBTA holds regular public meetings to inform the community and solicit feedback and comments. The MBTA is working closely with the Cities of Somerville and Medford in partnership to develop this important project.

a. Plan for Involving Targeted Community & Other Stakeholders; and Communicating Project Progress

As discussed above, the MBTA has already set up a structure for engaging stakeholders and communicating GLX project updates, including; a website, email distribution lists, and regular public meetings. The MBTA proposes to communicate brownfield project updates through this existing structure. Specifically, MBTA will use the public meeting forum to seek out and consider concerns that local residents may have with regard to health, safety, and community disruption potentially posed by the proposed cleanup activities. By soliciting public comments and stakeholder feedback, the MBTA can ensure that the proposed cleanup activities are conducted in a manner that is protective of sensitive populations and nearby residents.

b. Partnerships with Government Agencies

The MassDEP is the state agency that will regulate the remediation of the Site under the MCP regulations. The MCP relies on a privatized LSP program to remediate sites similar to the Ball Square Station parcels. The required RAM Plan will be prepared to meet the requirements of the MCP and to be protective of human-health and the environment. The MBTA will provide regular updates to the Cities of Somerville and Medford during the remediation of these properties. In certain cases where the property involves a City-owned property, the City of Somerville will be engaged during the remediation activities.

c. Partnerships with Community Organizations

i. Community Organization Description & Role: The MBTA is working closely with the Cities of Somerville and Medford on the GLX Project and the brownfields cleanup and redevelopment efforts will be part of the coordination.

ii. Letters of Commitment: Attached are commitment letters from the City of Somerville in support of the MBTA GLX VMSF brownfield cleanup grant proposal. These letters should discuss their support for the project, and describe and affirm their roles and commitments to the planning and implementation of the project. More broadly, these municipalities recognize the benefits that the GLX project will bring to their communities, including improved public transportation and new investment in the form of mixed-use redevelopment.

4. Project Benefits

a. Health and/or Welfare and Environmental Benefits

i. Health and/or Welfare Benefits: The cleanup and redevelopment in the Inner Belt area will provide a reduction in potential exposure to Site soil contamination, which includes carcinogens. These protections will be provided long-term with the application of a land use deed restriction (AUL). As discussed below in Section 4.b.i., the redevelopment as a light rail train station and community path will have the additional health benefits of a more walkable community and less automobiles on the road.

ii. Environmental Benefits: The cleanup and redevelopment in the Inner Belt area will reduce the existing and potential soil contamination resulting from over 100 years of commercial and industrial use. By removing contaminated soil, the existing and potential groundwater contamination will be mitigated, thereby limiting the potential migration of contamination offsite.

b. Environmental Benefits from Infrastructure Reuse/Sustainable Reuse

Policies, Planning, and Other Tools: The MBTA is working closely with the municipalities to foster and implement sustainable development outcomes, including the reuse of existing infrastructure and promoting redevelopment of TOD projects. These TOD projects provide the extended benefit of a sustainable work, live, and play community that is interconnected to other communities. Additional benefits of a TOD project typically include improved quality of life and increased economic vitality and jobs.

i. Integrating Equitable Development or Livability Principles: The new GLX light rail service will also provide direct environmental benefits by reducing the number of buses and cars on the road. In addition, the GLX project design is integrated into the planned Somerville Community Path to facilitate additional use of non-automobile travel through coordination of transit and bicycle pedestrian facilities.

c. Economic and Community Benefits (long-term benefits)

i. Economic or Other Benefits: As discussed, the proposed GLX project will provide an economic benefit to the areas of Somerville and Medford in the form of increased development, more businesses and jobs, increased property values. The rapid transit will provide an alternative mode of transportation and will reduce personal vehicle emissions and traffic congestion in these areas. The GLX will also promote walking with the expansion of the Community Path.

ii. Job Creation Potential: Partnerships with Workforce Development Programs:
The MBTA will work to promote local hiring and procurement or link members of the community to potential employment opportunities related to brownfield cleanup or redevelopment.

5. Programmatic Capability and Past Performance

a. Programmatic Capability

The MBTA has both the administrative capacity to implement the project and the technical capacity to manage it. The MBTA staff's capability will be supplemented through the assistance of professional design and construction management services of the type that are typically brought under the contract for a specific project. Alternatively, the MBTA may use the design experience of an on-call consultant. The MBTA is an

experienced Federal grantee and has the systems and internal controls needed in place to separately track and report on the funding under this grant.

b. Audit Findings

The MBTA participates in the Triennial Reviews conducted by the Federal Transit Administration. The Triennial Review is one of the Federal Transit Administration's (FTA) management tools for examining grantee performance and adherence to current FTA requirements and policies. Mandated by Congress in 1982, the Triennial Review occurs once every three years. It examines how recipients of Urbanized Area Formula Program funds meet statutory and administrative requirements. The review currently examines 17 areas. The last Triennial Review of the MBTA occurred in FY 2016. All findings have been successfully closed out by the MBTA.

c. Past Performance and Accomplishments

i. Currently or Has Ever Received an EPA Brownfields Grant:
This section is not applicable to the MBTA.

ii. Has Not Received an EPA Brownfields Grant but has Received Other Federal or Non-Federal Assistance Agreements:

1. Purpose and Accomplishments:

The MBTA has been awarded Federal Grants in the past, including the following:

In April 2009, the United States Department of Environmental Protection Agency (USEPA) awarded the Massachusetts Department of Environmental Protection (MADEP) with a grant from the State Clean Diesel Grant Program. With this $1.1 Million Dollars in grant funding the MBTA with to repower 11 MBTA locomotives with new Head End Power (HEP) Units.

Also in 2009, the MBTA received $2.5 Million in grant award from the Federal Transit Administration (FTA) in Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) funds for the development of wind turbine projects.

2. Compliance with Grant Requirements:

The MBTA routinely complies with the work plan, schedule and terms and conditions of grant funded projects. The MBTA has a history of timely and acceptable reporting, as required by the awarding agency/organization.

iii. Has Never Received Any Type of Federal or Non-Federal Assistance Agreements:
This section is not applicable to the MBTA.