

Executive Summary

Introduction

The Green Line Extension Project is an initiative of the Massachusetts Department of Transportation (MassDOT) and the Massachusetts Bay Transportation Authority (MBTA) to enhance transit services in order to improve mobility and regional access for residents in the communities of Cambridge, Somerville, and Medford, Massachusetts. The Project is required by the State Implementation Plan (SIP) and fulfills a longstanding commitment of the Central Artery/Tunnel project to increase public transit. The Massachusetts Air Pollution Control Regulations (310 CMR 7.36) require that MassDOT complete this Project by December 31, 2014.

On October 15, 2009, MassDOT filed the Green Line Extension Project *Draft Environmental Impact Report/Environmental Assessment* (DEIR/EA) with the Massachusetts Environmental Policy Act (MEPA) Office. The Secretary of the Executive Office of Energy and Environmental Affairs (EEA) issued a Certificate on the DEIR on January 15, 2010. The Secretary's Certificate stated that the DEIR adequately and properly complied with MEPA and with its implementing regulations, and required preparation of a Final Environmental Impact Report (FEIR) of limited scope for the Proposed Project.

MassDOT expects Project funding to come both from the Federal Transit Administration (FTA) and from Commonwealth bonding. Because MassDOT is seeking funding through the FTA, the Project also requires review under the National Environmental Policy Act (NEPA). At the request of the FTA, MassDOT is preparing a separate Final EA.

The Green Line Extension Project is proposed to be built in two phases, with an initial operating segment (the "Proposed Project") being constructed to College Avenue in Medford and a spur to Union Square in Somerville, as described and evaluated in the DEIR/EA as Alternative 1 (see FEIR Figure ES-1). The second phase of this Project, the "Future Full-Build Alternative" as described and evaluated in the DEIR/EA as Alternative 2, would include extending the Project from College

Avenue Station to Mystic Valley Parkway/Route 16 Station in the future. Although the extension to Mystic Valley Parkway/Route 16 was considered for the Green Line Extension Project, limitations on available funding prohibit the Commonwealth from extending the Green Line beyond College Avenue at this time. This second, future phase is not currently part of the Proposed Project and is not the subject of this FEIR.

As required by the Secretary's Certificate, the FEIR provides additional analyses of the Proposed Project, including:

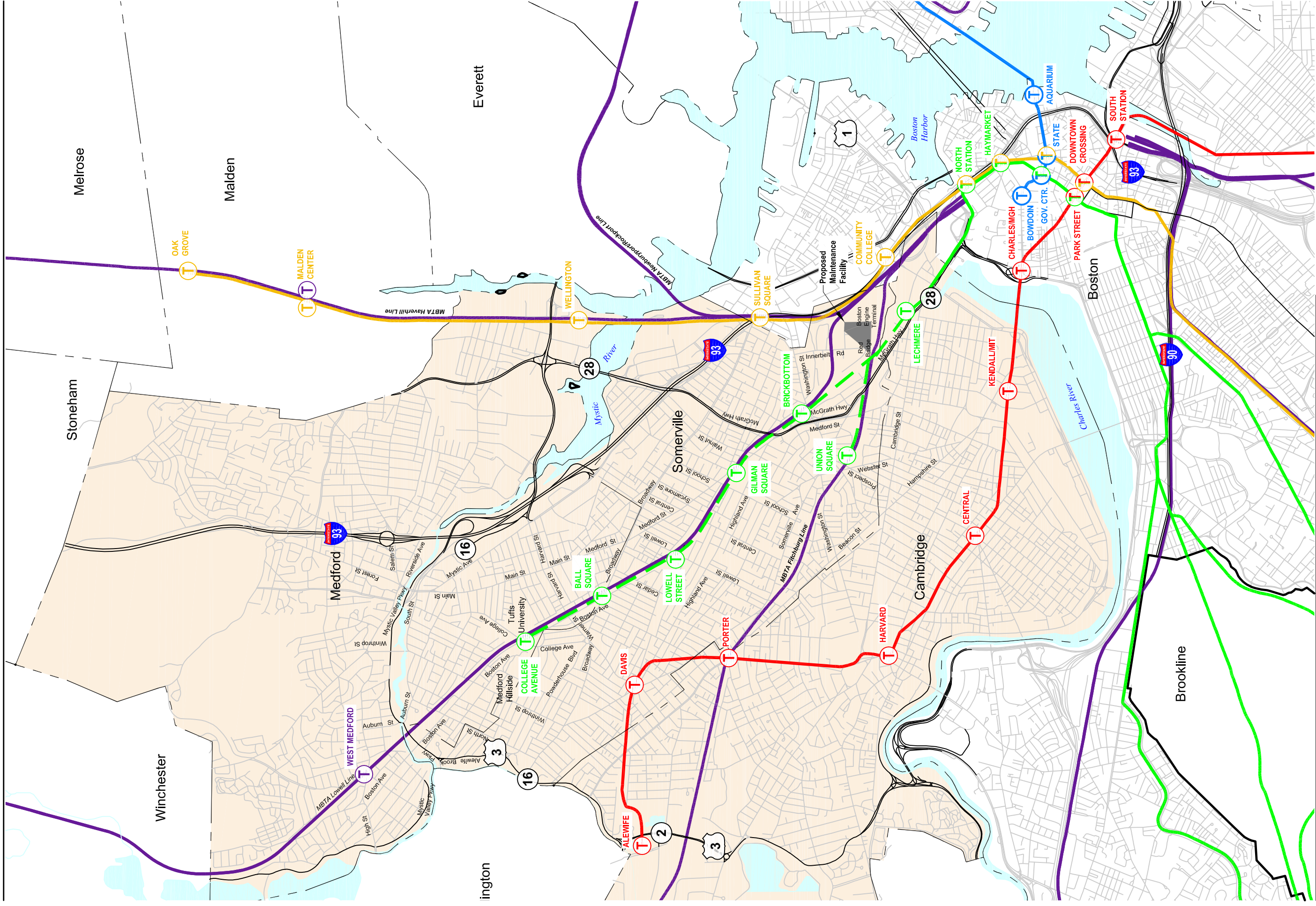
- Quantitative environmental analysis of both the Option L and Mirror H maintenance facility locations including, for comparative purposes, the prior analysis of Yard 8 (see Chapter 2);
- Narrative discussion clarifying air quality modeling (see Chapter 3);
- Impacts associated with College Avenue Station as a terminal station (see Chapter 4);
- Refined conceptual design of Lechmere Station (see Chapter 5);
- A Public Involvement Plan (PIP) for community participation beyond the environmental process (see Chapter 6);
- Summary of Proposed Project impacts (see Chapter 7); and
- Mitigation measures and draft Section 61 Findings for Project impacts (see Chapter 8).

The following sections summarize the FEIR chapters on these topics.

The DEIR/EA, available on the Project website, www.mass.gov/greenlineextension, provides the full description of existing conditions and environmental resources affected by the Green Line Extension, as well as the full impacts analysis, methodology assumptions and definitions of applicable terminology for each resource.

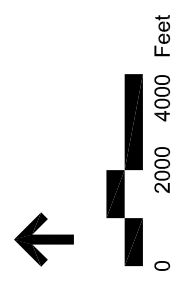
The Proposed Project

The Proposed Project is envisioned to provide Green Line Extension service to College Avenue in Medford and Union Square using a two-branch operation. The 3.4-mile Medford Branch would operate from relocated Lechmere Station to College Avenue in Medford along the MBTA Lowell Line commuter rail right-of-way, while the 0.9-mile Union Square Branch would operate along the MBTA Fitchburg Line commuter rail right-of-way to Union Square in Somerville.



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- Legend**
- MBTA Green Line
 - MBTA Orange Line
 - MBTA Red Line
 - MBTA Blue Line
 - MBTA Silver Line
 - MBTA Commuter Rail Line
 - Green Line Proposed Project
 - Proposed Station
 - Proposed Maintenance Facility



Green Line Extension Project
Figure ES-1
 Proposed Project

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Seven stations would be constructed for the Proposed Project:

- Relocated Lechmere Station, Cambridge (relocated to east side of O'Brien Highway/Route 28);
- Brickbottom Station, Somerville;
- Gilman Square Station, Somerville;
- Lowell Street Station, Somerville;
- Ball Square Station, Medford;
- College Avenue Station, Medford; and
- Union Square Station, Somerville.

The primary infrastructure improvements of the Proposed Project would include relocating existing commuter rail lines, constructing approximately four miles of new light rail track and systems, four multi-span viaducts, a vehicle maintenance and storage facility, and reconstructing 11 bridge structures to support the extended service.

The Proposed Project is expected to generate the MBTA's anticipated daily ridership at the Project's seven stations (boardings and alightings) by approximately 52,000 by the year 2030, with approximately 90 percent of these trips to take place in the Project's opening year of 2014. The Green Line would also see an increase of 30,700 boardings and the entire MBTA system would see an increase of 7,900 new daily linked transit trips as a result of the extension of the Green Line service. The Proposed Project would reduce vehicle miles travelled (VMTs) by 25,018 per day (projected to the year 2030).

Estimated travel time from Lechmere Station is 9.5 minutes to College Avenue Station and 4.5 minutes to Union Square. Headways, or service frequencies, on the branches would be five to six minutes in the morning and evening peak periods and would be nine to ten minutes during off-peak periods.

Fares for the Green Line Medford Branch and Union Square Branch would be \$1.70 for one-way adult trips, based on current MBTA subway fares.

Utilizing the projected ridership and proposed operating plan for the Proposed Project, as well as working with the MBTA, it was determined that 24 additional Green Line vehicles would be needed to accommodate the proposed headways and projected ridership for the Green Line Extension Project.

Based on 10-percent concept level design plans for the Proposed Project, the overall cost of the Proposed Project is currently estimated to be approximately \$844.5 million in 2009 dollars, including \$79.3 million for the 24 Green Line vehicles. Annual operating and maintenance costs would be approximately \$22.1 million in 2009 dollars. The total costs for the Proposed Project were increased to include inflation for the time period in which the Project is to be implemented. Therefore, the

“Year-of-Expenditure” (YOE) capital costs for the Proposed Project were calculated to be approximately \$953.7 million in YOE dollars.

Maintenance Facility Alternatives Analysis

A vehicle maintenance and storage facility is needed to support the operations of the Green Line Extension. The DEIR/EA stated that the area referred to as “Yard 8 with Adjacent Parcel” (Yard 8) was selected as the preferred location for the maintenance facility, based on a combination of factors such as size, configuration, and adjacency to the Green Line Extension tracks. However, selection of the Yard 8 site prompted local opposition from some municipal officials, elected representatives, and abutting residents.

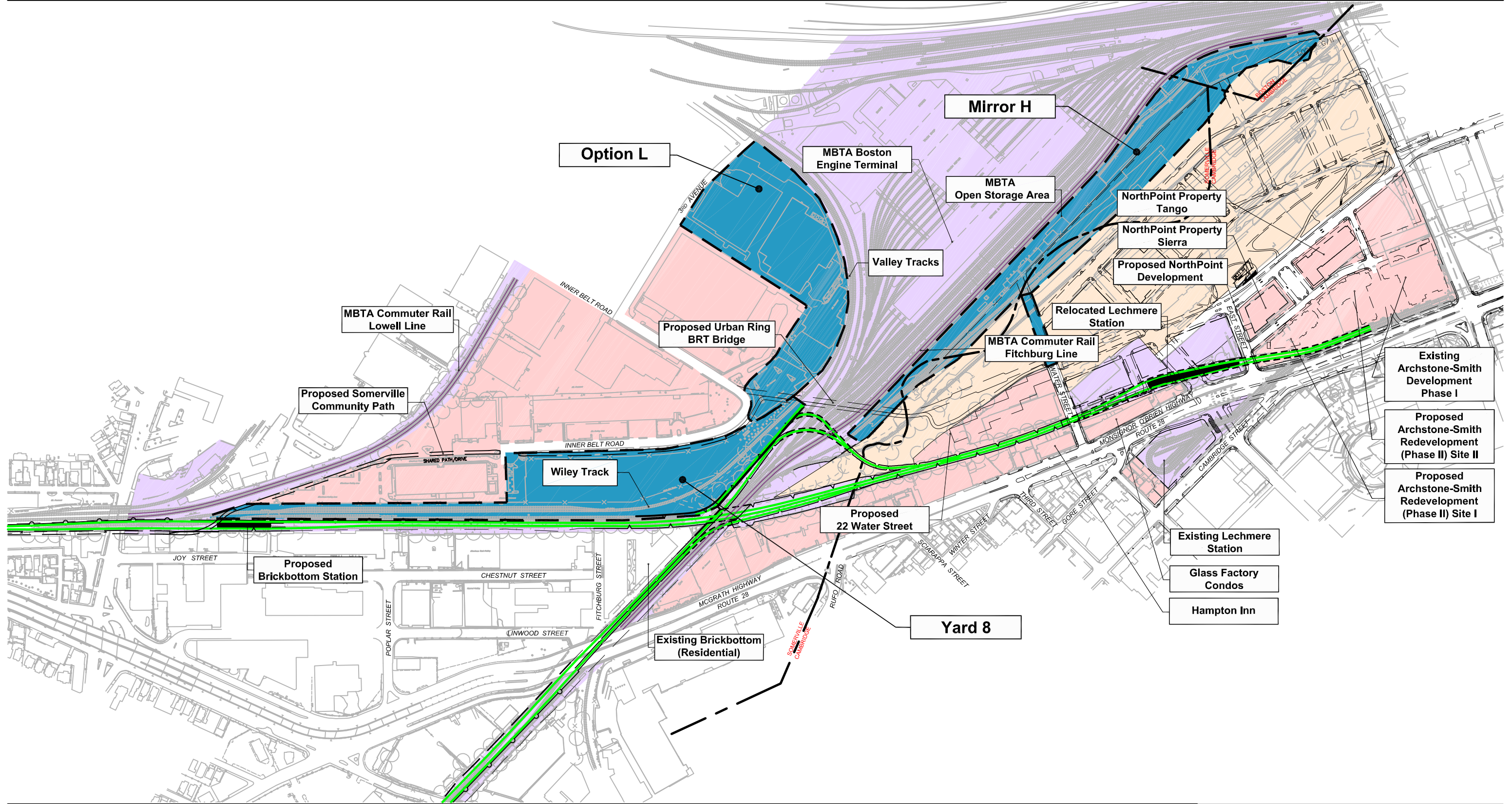
The Secretary’s Certificate required that MassDOT evaluate two additional sites in Somerville and Cambridge, known as Option L, a site within the Inner Belt area of Somerville and immediately adjacent to the MBTA’s Boston Engine Terminal (BET) Commuter Rail maintenance facility, and Mirror H, a site that occupies portions of the NorthPoint site in Cambridge, Somerville, and Boston and a portion of MBTA land. The three maintenance facility alternative sites are shown on Figure ES-2.

The FEIR provides a description and comparative assessment of these three sites (see Chapter 2). Based on this analysis, Option L was selected by MassDOT as the preferred site for the maintenance and storage facility for the following reasons:

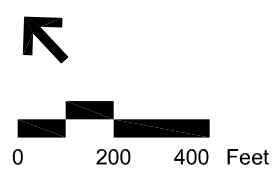
- Option L received the greatest support from the public and local municipal representatives.
- Option L met the MBTA’s program requirements for the Green Line maintenance and storage facility.
- Option L provides the most operational flexibility for the MBTA as it provides a direct connection to the Union Square Branch. Neither Yard 8 nor Mirror H would provide this operation.
- Option L is located adjacent to similar railroad land uses (the BET commuter rail maintenance facility).
- Option L would have more separation from existing and proposed residential areas than would Yard 8 or Mirror H.
- Option L would not preclude future development of the Inner Belt area and future roadway connections from the Brickbottom area to the Inner Belt area.

The City of Somerville supports this outcome.

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- LEGEND**
- M.B.T.A. Property
 - Pan Am Railways Property
 - Private Property
 - Alternative Sites
 - Proposed Green Line Extension



Green Line Extension Project

Figure ES-2
Additional Maintenance Facility Alternatives

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Option L includes storage for 80 Green Line vehicles, two pit tracks, two lift tracks, one wheel truer track, support shops, Green Line vehicle wash, administrative office space, and a parking lot for approximately 100 employee spaces. The maintenance building and associated trackwork are proposed on land adjacent to and northwest of the existing MBTA BET facility. Option L would require the complete acquisition of two parcels and partial acquisition of two other parcels, totaling 10.2 acres. The land required includes the building and parking at 44-48 Third Avenue; the building and parking lot at 20 Third Avenue; the isolated parking lot for 70 Inner Belt Road; and the undeveloped southern corner of 200 Inner Belt Road. Acquisition costs have been preliminarily estimated at approximately \$51 million (including building demolition and site cleanup).

Option L is compatible with existing commuter rail and freight rail operations, and would have minimal operational impacts on Green Line service.

Environmental Resource Analysis

An environmental resource analysis for the maintenance facility is presented in technical memorandum *Environmental Analysis of Additional Maintenance Facilities*,¹ provided as FEIR Appendix B and has been updated with additional data as described in Chapter 2 of this FEIR. The environmental resource impacts of the Option L maintenance facility site, including construction period impacts, are summarized in the following sections. The Option L site is not expected to impact air quality, parking or traffic operations, wetlands, historic or known archaeological resources, public parks, recreation areas, or conservation land. Impacts to affected resources for Option L are described in the following paragraphs.

Noise and Vibration

Two existing NorthPoint buildings (Tango and Sierra) would be moderately impacted by noise (prior to mitigation) resulting from the Green Line Extension Project, which includes the mainline tracks and the Option L maintenance and storage facility location. Three existing buildings (Brickbottom Artists Building, Hampton Inn Hotel, and Glass Factory Condominiums) and two proposed developments (at 22 Water Street and Archstone Phase II, Site 1) would be severely impacted by noise, prior to mitigation. Although these locations require mitigation for the Proposed Project even without the maintenance facility, the incremental contribution of noise from the Option L maintenance facility would only increase future noise levels one decibel or less over the mainline operations. The impacts at the existing buildings would be reduced by the proposed mitigation measures (barriers, soundproofing) to acceptable levels. Noise impacts to the proposed developments are anticipated to be mitigated by the developer. No additional noise

¹ Massachusetts Department of Transportation. Green Line Extension, *Environmental Analysis of Additional Maintenance Facilities*. April 21, 2010.

mitigation is required specifically due to the proposed Option L maintenance facility option.

There are no direct vibration impacts projected at any receptors from train movements at the Option L site.

Socioeconomics

The total estimated annual property tax value of the land and buildings to be acquired for Option L is \$322,440. These acquisitions would reduce annual property tax revenue by 0.33 percent in Somerville. Using the Option L site would displace approximately 74 jobs in Somerville. Many of the jobs displaced would likely be relocated or replaced within Somerville.

Visual Environment

Given the existing industrial and commercial buildings visible from this area, a maintenance facility at the Option L site would result in a minor change to the local landscape.

Stormwater

The Option L site stormwater system would be designed to ensure no net increase in peak flow to the existing MBTA drain line. Constructing a maintenance facility at Option L would reduce impervious area by approximately 3.2 acres, reducing peak stormwater discharges.

Hazardous Materials

Option L includes and is adjacent to sites of known and suspected contamination. The sites have likely been impacted by fill materials present throughout the area, the historic use of the properties for railroad operations, present industrial use of the properties, and several documented disposal sites. Because asbestos-containing materials and/or lead-based paint may be present in existing site structures or fill piles at Option L, a detailed survey would be undertaken prior to acquisition or demolition. On-site contamination encountered would be assessed and, if necessary, remediated prior to and during construction activities. Any necessary response actions would be performed in accordance with the Massachusetts Contingency Plan.

Land Use

The Option L site is a compatible location for the maintenance facility because it is in an industrial area and would be consistent with local development plans. Placing a maintenance facility in an existing industrial area would not result in any substantial changes to the local environment.

Construction Impacts

FEIR Table 2-17 provides a summary of anticipated construction impacts. Temporary, short-term impacts from construction activities would be mitigated to the extent feasible. Appropriate mitigation measures would be incorporated into the contract documents and specifications governing the activities of contractors and subcontractors constructing all elements of the Green Line Extension Project. On-site resident engineers and inspectors would be required to monitor construction activities to ensure that mitigation measures are properly implemented.

Air Quality Modeling

The Secretary's Certificate required clarification of the air quality modeling assumptions documented in the DEIR/EA, the challenges associated with the inherent evolution of modeling programs and input data, and confirmation that the air quality modeling results were conducted in a manner that sufficiently demonstrates consistency with the SIP. Chapter 3 of the FEIR addresses these requirements.

With respect to the Green Line Extension, the Project is included in the SIP and therefore conforms to the Federal Clean Air Act requirements. The Project also complies with the requirements of the Massachusetts Air Quality Regulations. The air quality analysis included in the DEIR/EA demonstrates that the Proposed Project meets the Transportation Conformity planning and project level requirements. The DEIR/EA also calculated the emissions reductions that would result from the proposed Green Line Extension to College Avenue and Union Square. This analysis showed that the emission reductions for the 2009 SIP package, which includes the Proposed Project as well as other transit projects, exceed the emission reductions established by the EPA for Massachusetts transit projects (the 2008 Federal Register SIP Approved Projects Plus Ten Percent Package).

Transportation Conformity and SIP air quality analyses utilize traffic data from the statewide traffic model and the EPA's emission factor model MOBILE6.2. The statewide traffic model is maintained by the Central Transportation Planning Staff (CTPS), the technical staff of the Boston Region Metropolitan Planning Organization (MPO), which is responsible for SIP air quality submissions.

The statewide traffic model is the basis for determining existing and future traffic data for Federal Clean Air Act and NEPA submissions. Statewide traffic models are periodically updated to include newly identified background projects, land use, and model enhancements. The model uses the most up-to-date information, transportation networks, and input data available to CTPS at the time of analysis. The statewide traffic model simulates existing travel modes for transit, automobiles, and walking/bicycling, and forecasts future year travel on the entire transportation

system, spanning, in this instance, the majority of eastern Massachusetts. It uses population, employment, number of households, automobile ownership, highway and transit levels of service, as well as downtown parking costs, auto operating costs and transit fares as important inputs in applying the model to real world conditions. As required by EPA, these inputs are constantly updated so that the model set simulates current travel patterns with as much accuracy as possible.

The air quality modeling presented in the DEIR/EA used an improved statewide traffic model with an updated roadway network, more current land use data, and a newer version of EPA's mobile source emissions factor model (MOBILE6.2). All of these measures result in improved accuracy to the present and future air quality estimates. These modeling assumptions and this real-time approach to air quality modeling results in emission values are considered appropriate for the SIP process. This air quality modeling approach is required by EPA for evaluating Transportation Plans, Transportation Improvement Programs, and projects for SIP and NEPA documents.

In 2009, at the request of MassDOT, CTPS conducted an updated air quality analysis of the currently-proposed Green Line Extension to College Avenue with Union Square Spur in combination with the proposed Fairmont Line improvements and additional MBTA parking, as required by 310 CMR 7.36(2).² The results of this analysis demonstrated that the emission reductions of carbon monoxide (CO), oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) are greater than the most recent SIP emission reductions presented in the 2008 Federal Register notice.³ The Massachusetts Department of Environmental Protection (MassDEP) reviewed the air quality analysis and stated in their January 8, 2010 DEIR/EA comment letter that the Green Line Extension Project meets the emission reductions for 310 CMR 7.36 (8) *Determination of Air Quality Emission Reductions*, which are the requirements of the SIP.

College Avenue Station

The College Avenue Station would be the terminal station for the first phase of the Project, the subject of this FEIR. Chapter 4 of the FEIR summarizes the impacts associated with College Avenue Station functioning as a terminus for the Green Line Extension. Potential permanent impacts resulting from College Avenue Station would be mitigated to the extent feasible, as summarized in FEIR Table 4-2. There have been no changes to the impacts analysis or mitigation commitments since the DEIR/EA.

² Central Transportation Planning Staff, 2009, State Implementation Plan Evaluation.

³ 2008 Federal Register (59 FR 50495-50498). *SIP Approved Projects Plus Ten Percent Package*, October 4, 1994, Table 1 - EOT Air Quality Analysis Comparison of Project Packages Benefits in the Year 2025.

Terminal Station Operations

As the terminus for the Green Line, the College Avenue Station would include an extension of tracks, known as tail tracks, 600 feet north of the station platform for short-term storage of vehicles for morning start-up of service (approximately one hour) and for operational flexibility (i.e., to reverse direction and provide temporary storage for disabled trains). This track area would be open-air, therefore no additional structures are proposed. MBTA train crews would start each day taking the trains from the Green Line maintenance and storage facility to College Avenue Station before the start of revenue service (approximately 5 AM). Similarly, at the end of each day trains would come out of service at the terminus and return to the storage facility after revenue service has ended (approximately 1 AM). Trains would not be stored overnight at the station and MBTA crews would not start or end their shift at this station.

During regular service, trains would operate on the Project's proposed operating schedule with five minute headways during peak periods, and 10 minutes during off-peak periods.

Ridership and Access

Daily ridership at College Avenue Station is anticipated to be 2,420 boardings (projected to the year 2030) for the Proposed Project with College Avenue functioning as a terminus. In order to meet accessibility requirements, the station provides two points of access. One access point would be provided from the eastern side of the College Avenue bridge; the second access point would be provided from the west side along Boston Avenue. Detailed station designs would be advanced during the next stage of Project development.

Based on projected ridership, approximately 800 boardings are anticipated at College Avenue Station during peak hour operations under the Proposed Project. Approximately 40 riders are expected to access the College Avenue Station by vehicular drop-off/pick-up hour. Approximately 40 riders are expected to access the station by bicycle daily. At a minimum, 40 bicycle parking spaces would be provided, based on the bicycle demand estimates. The remaining riders during the peak hour are assumed to access the station by walking or bus transfers. Local MBTA Bus Routes 80, 94, and 96 would provide service adjacent to the station with a bus stop located on College Avenue, approximately 300 feet from the station.

With College Avenue as the terminal station, there would be approximately 320 additional boardings per day at this station as compared to when the service is extended north to Mystic Valley Parkway/Route 16. This translates into approximately 100 additional boardings at College Avenue per peak hour. The majority of additional trips (about 90 percent) are expected to be pedestrian trips.

When the Green Line Extension is later advanced to Mystic Valley Parkway/Route 16, boardings at College Avenue Station are expected to be reduced by these values.

In the development of this FEIR, a study was conducted by the CTPS that demonstrates that the walk market area for College Avenue Station adequately serves the Medford Hillside neighborhood, which was identified as part of the SIP description. This analysis is provided in FEIR Appendix C.

Impacts to Traffic, Parking, Pedestrian, and Bicycle Operations

Traffic operation level of service (LOS) at two intersections would degrade due to activity at College Avenue Station. Intersection performance of Boston Avenue at Winthrop Street would degrade from LOS E to LOS F during the evening peak hour, and Boston Avenue at College Avenue would degrade from LOS E to LOS F in the morning peak hour.

Impacts at Boston Avenue and Winthrop Street would be mitigated by restriping the Boston Avenue northbound approach (currently a single lane approach) to provide an exclusive left-turn lane and a shared through/right-turn lane. The removal of approximately 12 parking spaces on the northbound side of Boston Avenue would be required to accommodate these lane modifications. Impacts to Boston Avenue at College Avenue would be mitigated by widening College Avenue westbound to provide an exclusive right-turn lane and a shared left-turn/through lane. To accommodate this improvement, the College Avenue bridge over the railroad tracks would be widened. Signal timing and phasing changes would also be implemented at both intersections. Mitigation measures that would be implemented to offset the adverse impacts are presented in FEIR Section 4.6, *Mitigation Measures*.

No new parking is proposed for College Avenue Station. Many of the parking areas near the proposed College Avenue Station already see parking violations throughout the day and the available parking supply is limited. Increased enforcement would be necessary to ensure that on-street and other parking areas would be used appropriately.

The Proposed Project would increase pedestrian activity in the vicinity of the College Avenue Station. Traffic signal timing and phasing changes at Study Area intersections would improve pedestrian LOS slightly by reducing the amount of time pedestrians would be required to wait for the walk signal. However, pedestrian levels of service are not expected to change. In the absence of mitigation measures, pedestrian levels of service at six intersections would be adversely impacted. Mitigation includes adjustments to traffic signal timings, installing warning signage to accommodate the expected increase in pedestrian volumes, and the potential of a new signalized crossing, as discussed in FEIR Section 4.6, *Mitigation Measures*.

Impacts to Sensitive Noise and Vibration Receptors

Noise impacts are the result of several elements of the Proposed Project: 1) commuter rail operations on the track shifted to the east, closer to residences; 2) Green Line operations on the new western tracks; 3) Green Line trains idling on the tail tracks north of the College Avenue Station; and 4) Green Line trains operating on the crossover (turnout) switch at the tail tracks. These noise sources are relatively minor, do not cause potential impacts and are less significant than the noise generated by the commuter trains.

An approximately 1,000 feet long noise barrier located north of College Avenue, approximately six feet in height on a retaining wall along the right-of-way, would be effective in mitigating potential noise impact at receptors on Burget Avenue and Brookings Street. This noise barrier is required whether or not College Avenue is a terminal station. Future noise levels from both commuter and Green Line trains are expected to be reduced nine to 11 decibels with this barrier, and future noise levels are expected to be lower than existing noise levels.

Temporary noise impacts could result from construction activities associated with utility relocation, grading, excavation, track work, and installation of systems components. Such impacts may occur in residential areas and at other noise-sensitive land uses located within several hundred feet of the track alignment. The potential for noise impact would be greatest at locations near pile driving operations for the College Avenue Station structure.

During Preliminary Engineering, MassDOT would consider opportunities to implement mitigation measures prior to construction, where feasible, to help mitigate construction impacts.

Potential vibration impacts have also been assessed for sensitive receptors near College Avenue Station. A crossover on the Green Line tail tracks north of the College Avenue Station is the only vibration source that is associated with College Avenue being a terminal station. There would be no vibration impact from Green Line trains near College Avenue Station.

A crossover south of College Avenue Station is required regardless of whether College Avenue Station is a terminal station or an intermediate station. No changes to noise and vibration impacts or proposed mitigation have occurred at this crossover location since the DEIR/EA.

Lechmere Station

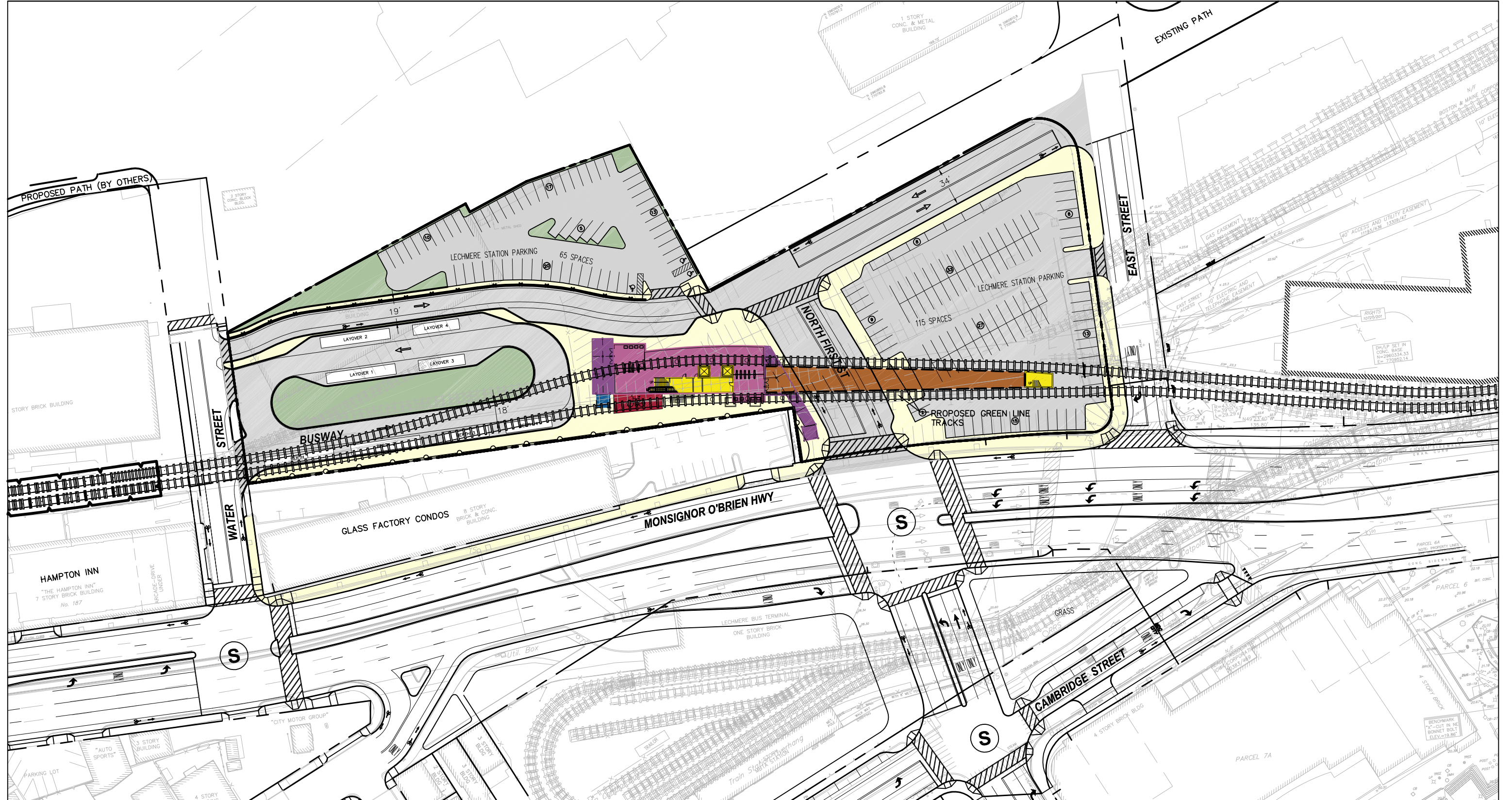
Chapter 5 of the FEIR responds to the requirements of the Secretary's Certificate and describes modifications made to the design of the proposed relocated Lechmere Station in response to comments on the DEIR/EA. The existing Lechmere Station must be relocated to the east side of O'Brien Highway/Route 28 to allow the Green Line to be extended. Refinements to the 10-percent conceptual design presented in the DEIR/EA are summarized in the following section. The station design was revisited to evaluate opportunities and address concerns related to parking, access from the neighborhoods, pedestrian and bicycle safety, MBTA operations (both bus and Green Line), and impact on abutters.

MassDOT worked closely with the MBTA and the City of Cambridge, and reviewed feedback from local interest groups, to develop a redesigned Lechmere Station that achieves many of the desired goals including reducing parking at the station, separating bus operations from vehicular and pedestrian movements, providing an improved station layout with access from two sides, accommodating requests for a wider crosswalk across O'Brien Highway, and providing bike lanes within the station area. MassDOT would continue to refine the station further during the next phase of Project development. Figure ES-3 shows the revised station layout and the surrounding neighborhood.

Refinements to Concept Design since the DEIR/EA

Modifications made to the Lechmere Station layout since the DEIR/EA include:

- The proposed parking program has been reduced from approximately 234 parking spaces (as shown in the DEIR/EA) to approximately 180 parking spaces, which would replace some of the parking spaces that exist today at Lechmere Station.
- The station layout has been redesigned to address many of the comments received by the public. While final station design would be explored further in the next phase of Project development and in conjunction with the public involvement program, the following design elements at the station have been modified:
 - Access into the station headhouse would be provided from both the north and south sides of the building structure. Access from the exclusive bus drop-off/pick-up area would have a direct connection on the north side of the station.
 - The automatic fare collection and other station amenities would be fully enclosed within the station headhouse and protected from the elements.



Legend

- Property Line
- Retaining Wall
- Fence
- Proposed Track
- Existing Track
- Limit of Structure
- Area of Refuge
- Doors
- Turnstiles

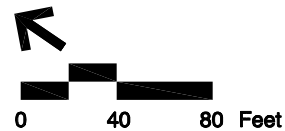
- Platform
- Station Concourse
- Station Entry
- Service Areas
- Elevators
- Escalators
- Stairs
- Bicycle Storage

- Proposed Traffic Signal
- New Sidewalk
- New Landscaping
- New Pavement
- Proposed Community Path



Green Line Extension Project

Figure ES-3
Relocated Lechmere Station
Revised Station Layout



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- Because the station would no longer function as a terminal station, the proposed center island platform length was reduced from 450 feet to 225 feet long.
- The revised station design would establish an architectural presence originating at the station and running along North First Street to better define the station entry and direct users from O'Brien Highway to the station area.
- Modifications to the roadways as part of the refined station layout include:
 - An exclusive busway with one-way circulation to accommodate local bus service with access and egress from Water Street. In the revised layout, bus layover would be located further away from the Glass Factory Condominiums.
 - A redesigned station access road would be provided to connect Water Street, North First Street, and East Street, as well as the north and south parking lots.
 - Curbside drop-offs for taxis, corporate shuttles, and station patrons would be provided at the station along the access road and also along new North First Street.
 - Bicycle lanes would be provided along the station access road in order to make a continuous connection between the proposed 22 Water Street multiuse path on the north and the recently constructed NorthPoint path on the south.
 - Pedestrian access would be provided by a wider (15 feet wide) crosswalk across O'Brien Highway/Route 28.

In the next stages of the Project, the visual identity of the station would be further explored and final design would be advanced. The station identity would be shaped by the design of platform and station elements (i.e. canopy, elevators, side walls, etc.). Visual qualities would be investigated that integrate station elements and Green Line infrastructure. Design elements would have to be balanced with potential neighborhood impacts (such as those associated with extensive glass surfaces, including noise and light impacts). Additional aspects of the station that influence its appearance and would be evaluated in more detail are providing security, visibility, and noise mitigation.

Station Access

Approximately 3,200 boardings are anticipated during the peak hour at Lechmere Station by 2030 and approximately 90 percent of the passengers using this station are expected to walk or bike to reach the station. All new crosswalks along O'Brien Highway and at Cambridge Street and First Street would be designed such that they provide pedestrian crossing times that are in compliance with the Federal Highway

Administration's Manual of Uniform Traffic Control Devices (MUTCD), Americans with Disabilities Act (ADA), and associated state requirements. The crossings of O'Brien Highway would be shortened to the extent practicable and provide substantial improvement over the existing condition.

Careful attention has also been paid to minimizing conflicts with pedestrians and vehicles within the station area. The use of crosswalks and channelization techniques such as fencing would direct pedestrians to primary paths of travel. The use of pedestrian signals at primary station access points would also provide better pedestrian access at the roadways. Finally, exclusive bicycle lanes are being provided in and around the station site for ease of access for bicycle commuters. Additional safety and design features can be considered as the station design moves into Preliminary Engineering.

A revised traffic circulation analysis was completed as part of the FEIR to address changes in circulation and access, including changes in circulation that would result from reconstructing O'Brien Highway. The analysis also compared circulation prior to and after construction of the NorthPoint development. No major changes in LOS at intersections surrounding the Lechmere Station site are expected due to the Proposed Project. Detailed traffic analyses are included in FEIR Chapter 5.

Pedestrians and Bicycles

The pedestrian crossings across O'Brien Highway were identified as a concern for East Cambridge residents during the DEIR/EA process. All new crosswalks along O'Brien Highway and at Cambridge Street and First Street would be designed such that they provide pedestrian crossing times that are in compliance with the Federal Highway Administration's MUTCD, ADA and associated state requirements. The operations of signalized pedestrian crossings would be further refined as part of the Preliminary Engineering process. This includes identifying the exact width and length of crosswalks and further refinements to signal timing and phasing. The crossing times of O'Brien Highway would be shortened to the extent feasible and provide substantial improvement over the existing condition.

The proposed configuration, with new crossings and split phase signal operation for First Street and North First Street would increase protection for pedestrians crossing between Lechmere Station and East Cambridge. The North First Street phase would allow pedestrians to cross in the westerly crosswalk across O'Brien Highway without facing conflicting left turning vehicles. Likewise, the First Street phase would allow pedestrians to cross in the easterly crosswalk without conflicting left or right turns. To address the potential safety implications associated with these pedestrians, and to properly channel opposing left-turns (O'Brien Highway north to First Street), a median with a minimum width of 20 feet is recommended.

Proposed bicycle access to/from relocated Lechmere Station has been refined since the DEIR/EA. From the east side of the station, bicycle access from the south would continue to be provided via the existing bicycle path along the Charles River Basin and connection into NorthPoint. Access from the north would be via a proposed (non-MassDOT) multiuse path to Water Street. Since the DEIR/EA was published, additional bicycle lanes have been added to the internal circulation road within the station area. At Water Street, and along O'Brien Highway, the Project proposes the construction of on-street bicycle lanes. Access to/from Lechmere Station from the west side of the tracks would be via these on-street accommodations. Bicyclists entering from the north can choose to ride with roadway traffic, turning left to enter the station at Water Street or dismount and use pedestrian crosswalks at Water Street or North First Street. Bicycle parking for a minimum of 110 spaces would be provided near the northern entrance to the station concourse.

Automobile Parking

A parking demand analysis was performed to evaluate whether there is an opportunity to reduce parking at Lechmere Station with the planned extension of the Green Line through Somerville and Medford. The existing parking lot at Lechmere Station provides 347 marked parking spaces that are available for daily parking. Based on this analysis, only 35 vehicles currently parking at Lechmere Station are expected to change travel mode and use one of the new Green Line Extension stations. The redesigned Lechmere Station accommodates 180 parking spaces in two lots, which is less than the anticipated demand. Therefore, it is assumed that park-and-ride users of the station will utilize some of the available municipal or private parking lots in close proximity of the station. It is anticipated that once the NorthPoint development is constructed, the station parking supply will be replaced by 300 parking spaces within the development, as was part of the previous NorthPoint agreement.

Additionally, because the new station would be built on the site of the existing parking area, no parking is expected to be available during construction. During the next phase for this Project, available alternate parking locations for construction and prior to construction of NorthPoint would be evaluated and recommended.

Impacts to Sensitive Noise and Vibration Receptors

Potential noise impact has been assessed at sensitive receptors near the relocated Lechmere Station. Future noise sources associated with the Project near Lechmere Station include mainline Green Line operations, maintenance facility noise sources and the bus operations at Lechmere Station. Near Lechmere Station, a total of two properties (NorthPoint Tango and Sierra) may be exposed to moderate noise impact and four properties (proposed 22 Water Street, Hampton Inn Hotel, Glass Factory Condominiums and the proposed Archstone Phase II Site 1 building) may be exposed to severe noise impact, prior to mitigation.

Since the DEIR/EA, the outdoor-to-indoor noise level reduction (OILR) of the Hampton Inn Hotel and Glass Factory Condominiums buildings was measured by playing a high-amplitude broadband noise outside of the building and measuring the relative difference inside and outside of the building. Based on this analysis, future interior noise levels at the Hampton Inn Hotel are projected to be below the criterion for interior day-night sound levels and would not require noise mitigation. At the Glass Factory Condominiums, interior noise levels are projected to be above the criterion for interior day-night sound levels. Therefore, noise mitigation is required for the Glass Factory Condominiums. Noise barriers totaling 900 feet in length (two barriers each 450 feet long) and 450 feet (900 track-feet) of ballast mat or resilient rail fasteners would be effective in minimizing the potential for noise impact at Glass Factory Condominiums. FEIR Table 5-7 summarizes the proposed noise mitigation for receptors near Lechmere Station, which included the Option L maintenance facility location in the analysis.

Potential moderate noise impact has been identified for exterior land use at the existing Tango and Sierra residential properties at NorthPoint due to the proposed relocation of the Green Line near East Street. Since these are moderate noise impacts, existing noise levels are below 65 dBA (Ldn) and the relative increase in noise is low due to the proposed shifting of the Green Line structure, no mitigation is required for this property. If constructed, the Archstone Phase II buildings would provide acoustic shielding from Green Line operations.

Since the proposed developments at 22 Water Street and Archstone Phase II Site 1 are not currently constructed and are assumed to be completed concurrent with the Green Line Extension Project, the buildings could be designed with consideration of the noise environment (i.e. windows with high transmission loss or sound transmission class [STC] ratings) to mitigate potential impact. It is anticipated that the developments would be designed and constructed to address the impacts of the Green Line Extension and MassDOT would not be responsible for mitigation.

Potential vibration impact has been assessed at sensitive receptors near Lechmere Station including a residential development planned at 22 Water Street, the Hampton Inn Hotel, the Glass Factory Condominiums, NorthPoint development properties and two planned Archstone residential developments. The proposed Lechmere Station would not result in vibration impact for these properties. While the future planned Archstone Phase II buildings would be approximately 15 feet from the relocated Green Line alignment, train speeds are relatively slow (20 mph) and vibration impact is not expected. No mitigation would be needed as no potential vibration impact has been identified for receptors near the proposed relocated Lechmere Station.

Public Involvement Plan

In partnership with the MBTA, MassDOT would continue public outreach through a Public Involvement Plan (PIP - see Chapter 6 of the FEIR). The PIP would guide outreach through the design, engineering, and construction of the Green Line Extension.

MassDOT expects that members of the public are likely to comment on a number of topics. While MassDOT welcomes this input, topics related to building and operating the transit system safely must remain the responsibility of MassDOT and the MBTA. Final determination of many elements of the transit system is guided by regulation and established practice. In these cases, the Project Team would provide relevant explanations for policies and decisions.

MassDOT and the MBTA plan to continue and enhance effective outreach strategies and hope to involve new stakeholders and interests in the design review. The methods for this engagement include:

- Public information meetings, community briefings, meetings and presentations;
- A Design Working Group;
- Design Public Workshops;
- Updates on the Project website;
- Project fact sheets and information materials;
- Email notifications, communication, and media outreach; and
- Outreach to environmental justice populations.

MassDOT and the MBTA are committed to continuing a robust public involvement process during the construction of the Green Line Extension. Strategies would a) inform the public of construction plans, b) provide regular updates on construction, traffic detours and other impacts, and c) solve problems that arise during construction. MassDOT and the MBTA would achieve these goals in part by requiring the Green Line Extension construction contractor to commit to a spectrum of outreach activities and efforts to mitigate the impacts of construction. MassDOT and the MBTA would hold the construction contractor to these obligations. Working together, agency and contractor staff members would be dedicated to implementing these communication and problem-solving strategies. Key elements of the construction outreach plan include:

- Establishing a Project construction office;
- Establishing the position of Green Line Project Ombudsman who would field all construction-period comments and complaints, coordinate with the cities, and respond to public concerns;

- Establish a Construction Working Group, to advise MassDOT and the MBTA;
- Hosting neighborhood construction kick-off meetings;
- Producing quarterly construction updates; and
- Developing a business outreach plan to assist local businesses during construction.

MassDOT and the MBTA would review these communication and outreach plans in light of comments received on this document and the final Certificate from the Secretary of Energy and Environmental Affairs; new ideas or proposals from the Design Working Group, communities, or individuals; and information that arises during the Preliminary Engineering phase. As always, MassDOT and the MBTA are committed to public outreach strategies that reflect the phase of the Project, that provide all interested individuals with an opportunity to give input and ask questions, and that assist the Project Team in its plans and designs for the Green Line Extension.

Mitigation Measures

Potential permanent impacts resulting from constructing the Proposed Project would be mitigated to the extent feasible, as described in Chapter 5 of the DEIR/EA and in FEIR Chapter 8. Mitigation commitments are summarized on the following pages. For those items that are known today, cost estimates for mitigation have been provided. As the Project advances into Preliminary Engineering, additional design details would be developed and costs estimates for mitigation would be further refined and/or developed.

Typically, transit projects such as the Green Line Extension Project evaluate the potential impacts of the Proposed Project using standard analytical measures and methods approved by the FTA and relevant state agencies. Mitigation measures are typically developed based on these standard methods and legal requirements, and are the basis for the Project's mitigation commitments. At many locations throughout the Proposed Project corridor, specific mitigation measures have been identified to offset the impacts created by the Green Line Extension. These recommendations have been identified in both the DEIR/EA and in the FEIR.

Generally, noise mitigation has been identified in the form of noise barriers at locations throughout the Project corridor. The heights and effectiveness of these barriers would be refined during the Preliminary Engineering phase of the Project. However, there are some locations that are projected to be exposed to noise impact where noise barriers may not be a feasible or an effective means of mitigation.

These locations include the:

- Brickbottom Lofts;
- Apartment complex on Pearl Street (near Medford Street);
- Visiting Nurses Association;
- Tufts Science and Technology Center;
- Outside the Lines Art Studio;
- Tufts Bacon Hall; and
- Walnut Street Center in Union Square.

In order to best determine the most appropriate mitigation type for each of these individual properties, the existing outdoor-to-indoor noise reduction at these locations would be measured and assessed during Preliminary Engineering. Appropriate mitigation measures would then be evaluated for these impacted properties to determine if the noise reduction of a building could be improved by five decibels or more utilizing specific mitigation techniques. Possible mitigation measures may include: sound insulation treatments, such as adding an extra layer of glazing to windows, sealing any holes in exterior surfaces that act as sound leaks, or providing forced ventilation and air conditioning so that windows do not need to be opened; or noise barriers that would be effective in reducing interior noise levels at these locations. Specific mitigation measures would be developed as they are appropriate to each impacted structure during Preliminary Engineering.

Estimated costs for sound insulation depend on specific factors such as the existing noise reduction, existing HVAC systems and the number and size of windows and doors that would need to be replaced. The costs associated with potential sound insulation or noise barrier mitigation for these properties would be defined for each of the affected properties during the next phase of the Project.

Once construction is complete, the MBTA would monitor noise and vibration after service starts to determine future noise levels generated by the Green Line Extension and the relocated commuter rail. If noise levels are found to be higher than the projections, the MBTA would investigate the cause and take appropriate corrective action. It is worthwhile to note that when conducted for the Greenbush Line, projections made based on measurements of actual MBTA commuter rail trains on the Greenbush Line showed that there were no locations where actual noise levels exceeded the pre-construction modeled levels.

Project Mitigation Commitments

Human and Environmental Resources	Mitigation Measure	Implementation Schedule	Cost Estimate
Traffic	Provide roadway and signal modifications at ten specific intersections in order to prevent adverse traffic impacts from the Project. Revisit opportunities to reduce vehicular traffic associated with the addition of new stations during design.	Completion of construction ¹	\$10 M
	Provide pedestrian improvements at 33 specific locations to improve pedestrian flow and safety.	Completion of construction ¹	\$800,000
	Work with cities to develop station-area parking enforcement plans.	Completion of construction ¹	N/A
	Work with the MBTA to evaluate opportunities to improve connections between the new stations and existing bus connections.	Prior to/Completion of construction ¹	N/A
	Work with cities and applicable emergency personnel during design of intersection mitigation measures, as well as establishment of construction management and detour plans.	Prior to/Completion of construction ¹	N/A
Noise	Provide noise mitigation in the form of noise barriers or sound insulation to mitigate severe noise impacts. Provide noise mitigation for moderate noise impact where existing noise levels are above 65 Ldn. Provide noise mitigation for impacts with no significant outdoor land use if interior day-night sound levels (Ldn) are above 45 dBA from project sources or single-event maximum noise levels (Lmax) above 65 dBA.	Completion of construction ¹	\$2.7 M (noise barriers), costs for sound insulation or noise barriers to be determined in next phase
Vibration	Provide vibration mitigation in the form of ballast mats or resilient rail fasteners and relocated or specially-engineered special track to mitigate vibration impacts.	Completion of construction ¹	\$3.5 M (mats), \$5.9 M (fasteners)
Hazardous Materials	Consult with MassDEP during design and commencement of construction to ensure planning and implementation of demolition and management of contaminated soils is consistent with applicable MassDEP regulations and recommendations.	Completion of construction ¹	N/A
Land Use	Work with the community for the area of the future Mystic Valley Parkway/Route 16 station to consider land use and station design elements.	Prior to construction	N/A
	Complete the final design for the proposed Somerville Community Path between Lowell Street and the Inner Belt area. Work with City of Somerville to identify opportunities for state and Federal funding for construction of Community Path.	Prior to construction	\$2 M

Project Mitigation Commitments (continued)

Human and Environmental Resources	Mitigation Measure	Implementation Schedule	Cost Estimate
Water Quality/ Stormwater	Prepare a Stormwater Pollution Prevention Plan (SWPPP).	Prior to construction	N/A
	Install detention and infiltration systems to infiltrate peak runoff and to prevent any increase in peak flows to municipal stormwater drainage systems and to remove TSS from stormwater runoff prior to discharge.	During construction ²	\$455,000
	Install hydrodynamic particle separators to treat pavement runoff.	During construction ²	\$255,000
	Install Low Impact Development practices, where feasible, to maintain natural hydrology (e.g., raingardens to treat disconnected roof drainage and/or parking runoff).	Completion of construction ¹	TBD
	Update the Operation and Maintenance (O&M) plan in the SWPPP to include a detailed outline of inspection and cleaning schedules for stormwater management practices, including detention areas and deep sump catch basins.	Completion of construction ¹	N/A
	Implement all aspects of the SWPPP including recommendations in annual updates based on new or improved procedures or changes to operations.	Post-construction	N/A
Visual Environment	Provide vegetation on and/or above retaining walls to minimize visual changes.	Completion of construction ¹	TBD
	Work with affected communities on design of noise barriers and vegetated walls.	Prior to construction	N/A
Historical and Cultural Resources	Perform archival documentation of historic structures to be removed or altered.	Prior to demolition	\$30,000
	Construct noise barriers with materials and colors compatible with adjacent historic properties.	Completion of construction ¹	N/A
	Provide noise mitigation (sound insulation) for sensitive historic structures that cannot be protected using noise barriers.	Completion of construction ¹	N/A
	Perform intensive archaeological survey before disturbing any archaeologically-sensitive areas.	Prior to construction	\$50,000
Public Involvement	Continue civic engagement opportunities during the design process. Provide transparent public information and outreach process once construction commences.	Completion of construction ¹	N/A
	Engage interested parties in a station Design Working Group.	Prior to construction	N/A

Project Mitigation Commitments (continued)

Human and Environmental Resources	Mitigation Measure	Implementation Schedule	Cost Estimate
Public Involvement (continued)	Conduct land use workshops with affected communities to further identify community needs and issues near the proposed station areas.	Prior to construction	N/A
Design	As design advances, facilitate future transit projects such as light rail expansion or connections to existing infrastructure to the extent possible.	Prior to construction	N/A
	Include "green" design component (recycled or recyclable materials or incorporate vegetation) in design of proposed retaining walls.	Prior to construction	N/A
	During design, refine Project designs to further minimize temporary and permanent impacts on local neighborhoods and property owners.	Prior to construction	N/A
	Design all stations in compliance with ADA standards, Massachusetts AAB standards; MBTA's settlement agreement with the Boston Center for Independent Living; applicable National Fire Protection Association standards.	Prior to construction	N/A

1 Completion of construction (12/31/2014)

2 During construction (11/11/2011 – 12/31/2014)

TBD = To be determined during final design

N/A = Cost not applicable for this item

Temporary, short-term impacts from construction activities would be mitigated to the extent feasible. Appropriate construction mitigation measures would be incorporated into the contract documents and specifications governing the activities of contractors and subcontractors constructing elements of the Project. Prior to construction, MassDOT would prepare a detailed plan to address various construction period impacts through coordination with cities and appropriate emergency personnel. This plan would seek to avoid, minimize and mitigate potential impacts to vehicular traffic, pedestrian and bicycle traffic, on-street parking, public access, emergency access to local businesses and residences, dust, noise, odor, rodents and construction-related nuisance conditions. MassDOT would work with contractors to establish construction protocols. On-site resident engineers and inspectors would monitor all construction activities to ensure that mitigation measures are properly implemented. The construction mitigation measures summarized below are described in detail in Section 3.7.6, *Construction Sequencing and Staging*, of the DEIR/EA and Chapter 8 of the FEIR.

Summary of Construction Mitigation Measures

Environmental Categories	Mitigation Measure	Implementation Schedule
Traffic	Temporary detours would be established to minimize traffic disruption due to construction.	During construction ¹
	Bridge reconstruction would be timed so as to minimize temporary bridge closures and to ensure that adjacent bridges were not closed simultaneously.	Completion of construction ²
Noise	Use specially quieted equipment with enclosed engines and/or high-performance mufflers.	During construction ¹
	Avoid nighttime construction in residential neighborhoods.	During construction ¹
	Keep truck idling to a minimum.	During construction ¹
	Route construction equipment and vehicles through areas that would cause the least disturbance to nearby receptors where possible.	During construction ¹
	Fit any air-powered equipment with pneumatic exhaust silencers.	Prior to construction
	Locate stationary construction equipment as far as possible from noise-sensitive sites.	During construction ¹
	Construct noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers.	Prior to construction
Vibration	Avoid nighttime construction in residential neighborhoods.	During construction ¹
	Use alternative construction methods to minimize the use of impact and vibratory equipment (e.g. pile drivers and compactors).	During construction ¹
Water Quality/ Stormwater	Develop and implement a SWPPP in accordance with NPDES and MassDEP standards.	Prior to construction
	Stabilize any highly erosive soils with erosion control blankets and other stabilization methods, as necessary.	During construction ¹
	Reinforce slopes using a hydroseed mix with a resin base, native vegetation, or other approved methods.	During construction ¹
	Use dewatering controls, if necessary.	During construction ¹
	Install a gravel entrance to prevent sediment from being tracked onto roadways and potentially discharged to surface waters.	During construction ¹
	Maintain construction equipment to prevent oil and fuel leaks.	During construction ¹
Air Quality	Apply water to dry soil to prevent dust production.	During construction ¹
	Use water for compaction in the fill areas and as a dust retardant in both the soil cut areas and haul roads.	During construction ¹
	Follow existing MassDEP's Solid Waste and Air Quality Control regulations and MBTA retrofit procedures for construction equipment to reduce emissions.	During construction ¹
	Comply with MassDEP's idling regulations. Post idling restriction signage on Project construction sites.	During construction ¹

¹ During construction (11/11/2011 – 12/31/2014)

² Completion of construction (12/31/2014)

Additional mitigation measures that would be applied where feasible to minimize temporary construction noise impacts, include: avoiding nighttime construction in residential neighborhoods; using specially quieted equipment with enclosed engines and/or high performance mufflers; locating stationary construction equipment as far as possible from noise sensitive sites; and constructing noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers.

Responses to Comments on the DEIR/EA

The Green Line Extension Project has received significant public input throughout the planning process, as documented in DEIR/EA Section 1.5, *Public Involvement and Agency Coordination*, and FEIR Section 1.4, *Public Involvement*. The public hearing for the DEIR, attended by over 400 people, was held in November 2009. As noted in the Secretary's Certificate, the approximately 400 comment letters (with more than 2,400 individual comments) on the DEIR/EA reflect a substantial interest in the future of the corridor from elected officials and municipal representatives; city, state, and regional agencies; environmental, bicycle, and pedestrian advocacy groups; neighborhood groups; groups that represent the disabled; businesses; residents; and the general public. Appendix A (Volumes 2 and 3) of the FEIR provides copies of all comment letters, and MassDOT's specific response to each substantive comment.

Key concerns and issues raised in these comments include:

- **Station Design** – Members of the public were concerned with station design issues. The greatest number of station design comments focused on the relocated Lechmere Station (approximately 200 comments). Comments included the location of the track near the Glass Factory Condominiums; parking at the station; bus circulation and bus stop locations; the pedestrian crossing at O'Brien Highway; and general station layout, access, and architectural character. Several comments expressed support for adaptive reuse of parts of the existing Lechmere Station, particularly the bus shed. Several comments requested reconsideration of the Mystic Valley Parkway/Route 16 station layout and its inclusion in the Proposed Project.
- **Access** – Stakeholder comments expressed general support for prioritizing pedestrian, bicycle, and bus access to the Project stations. Members of the public were concerned with locations of drop-off and pick-up areas and their impacts on traffic; platform locations; bicycle/pedestrian access; and ADA accessibility at station approaches, within the stations, and between the platforms and vehicles.

- **Maintenance and Storage Facility** – Members of the public were concerned with the location of the maintenance and storage facility. Of all comments received, the majority (including over 225 petition signatures) opposed the siting of the light rail maintenance and storage facility at Yard 8. Most maintenance facility commenters were in favor of the Option L site. Lechmere Station-area stakeholders expressed general opposition to the Mirror H location, while Somerville stakeholders generally preferred Mirror H but also welcomed Option L.
- **Continued Coordination with Agencies and Interested Parties** – Members of the public requested that MassDOT and the MBTA continue public involvement during design and construction. Several requested a construction field office where stakeholders could speak in person with Project representatives regarding construction impacts and mitigation.
- **Alternatives** – Members of the public were predominantly in favor of the Proposed Project. A large number of comments requested that the Project continue to Mystic Valley Parkway/Route 16 in one phase. Few expressed support for a College Avenue terminus of the Medford Branch. Approximately 70 comments expressed concern about traffic and neighborhood parking impacts at College Avenue. Several other comments expressed concern that the College Avenue terminus would not adequately serve Medford Hillside residents. Approximately 50 comments requested that the Project not preclude future extensions or additions of the Green Line. Most of these comments supported a future extension of the Union Square Branch to Porter Square; several comments supported a possible future station on one or both branches near the Brickbottom Artists Building and/or Boynton Yards.
- **Mitigation/Section 61 Findings** – Members of the public were concerned and/or interested with proposed mitigation measures for potential impacts from noise, vibration, traffic, and the maintenance facility. A large number of comments pertained to noise, vibration, and visual impacts at the Glass Factory Condominiums near the proposed Lechmere Station. Most of the comments from Brickbottom Artists Building stakeholders expressed concern about noise and visual impacts of a maintenance and storage facility at Yard 8; others expressed concern about impacts from railroads and proposed light rail along the south side of the Brickbottom Artists building.
- **Community Path** – Members of the public requested that the design and construction of the Somerville Community Path be included in the Green Line Extension Project (over 125 comments and 175 petition signatures). Many of these comments requested that the Path extend to Lechmere Station as part of the Project.
- **Construction Impacts** – Members of the public expressed concerns with regards to impacts during construction, including noise and vibration, vehicular traffic, detours during bridge reconstruction, pedestrian traffic, on-street parking, public access, and emergency access to local businesses and residences.

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