

Chapter 4 – DRAFT Section 4(f) Determination

4.1. Introduction

Section 4(f) of the U.S. DOT Act provides protection for publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic properties or archaeological sites on or eligible for listing on the National Register of Historic Places. This chapter presents the evaluation of the parks and historic resources protected under Section 4(f), addresses potential impacts of the SSX project on these resources, and describes plans to minimize harm. The following analysis demonstrates that the SSX project, implemented with noise mitigation and designed consistent with historic preservation design principles, would have no adverse effect on historic properties, and therefore would either involve no Section 4(f) use or, in the case of the Fort Point Channel seawall, a *de minimis* impact (as defined in Section 4.3 below).

4.2. Project Overview

The SSX project would expand South Station Terminal capacity and related layover capacity in order to meet current and anticipated future high-speed, intercity, and commuter rail service needs. The project includes planning and preliminary engineering for the following components:

- Acquire and demolish the USPS Facility;
- Reopen Dorchester Avenue and extend the Harborwalk;
- Expand the South Station Terminal; and
- Construct rail layover facilities for storing midday trains at Widett Circle and existing Readville – Yard 2.¹

Further description of the proposed action is presented in Chapter 1 and Chapter 2, while Figures 1-1, 1-2, and 1-5, and Figures 2-3 through 2-6 depict the project site.

4.3. Section 4(f) Protections and Definitions

Under Section 4(f) of the U.S. DOT Act of 1966 (49 U.S.C. §303 and 23 U.S.C. §138), U.S. DOT and its modal administrations may approve the use of publicly owned parks, recreation areas, wildlife and waterfowl refuges, or historic sites, only if there is no feasible or practicable alternative to the use of the land and the project includes all possible means to minimize harm resulting from the use. FHWA's Section 4(f) regulations² define “use” to include:

- **Permanent Incorporation** into a transportation facility (either by purchase or easement acquisition);
- **Temporary Occupancy**, when there is temporary use of property that is adverse in terms of Section 4(f) preservationist purposes; and

¹ FRA has elected to follow FHWA Section 4(f) regulations codified at 23 CFR 774 et seq. for its Section 4(f) analysis, since FRA has not enacted Section 4(f) regulations.

² *Ibid.*

- **Constructive Use**, when the proximity impacts (including visual or noise impacts) are so great as to impair the qualities that qualify the property for protection.

A U.S. DOT agency may approve transportation projects if it determines that the use will involve a “*de minimis*” impact. A *de minimis* impact is one that, taking into account avoidance, minimization, and mitigation, results in no adverse effects to the activities, features, or attributes of a park, recreation area, or historic site that qualifies for Section 4(f) protection. A U.S. DOT agency may make a determination of *de minimis* impacts for a use of Section 4(f) property that is minor in nature, as long as the agency coordinates with the officials having jurisdiction over the Section 4(f) property and provides opportunities for public involvement.

For parks and recreation areas, a *de minimis* impact finding may be made for projects that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f). In making this determination, the public must be afforded an opportunity to comment, and the officials with jurisdiction over the property have to concur in writing.

For historic sites, a *de minimis* impact finding may be made when the U.S. DOT agency has determined that no historic property will be affected by the project or that the project will have “no adverse effect” on historic properties. In making this determination, the views of any parties participating in the Section 106 consultation must be considered, and the State Historic Preservation Officer (SHPO) has to concur in writing.

4.4. Existing Conditions

4.4.1. Parks and Recreation Areas

Section 4(f) protects only those publicly owned and accessible areas whose primary purpose is parkland use or public recreation, and that are significant as designated by the officials with jurisdiction. Section 4(f) protection also extends to public walkways and trails that are privately owned but are made publicly accessible through a public easement, but not to walkways or bicycle paths that are part of a transportation facility right-of-way. For example, completed sections of the Harborwalk that border the South Station site to the east along the Fort Point Channel and the Federal Reserve Bank site (Table 4-1 and Figure 4-1), as well as the section on the east side of the Fort Point Channel, are protected under Section 4(f).

Table 4-1 and Figures 4-1 through Figures 4-3 identify parks and recreational areas potentially protected under Section 4(f) within one-quarter mile of the project sites.

Table 4-1 — Parks and Recreation Areas in the SSX Study Area

Map ID	Site Name	Facility Type	Ownership
SOUTH STATION			
1	Atlantic Avenue plantings	Malls, Squares, Plazas	State (MBTA)
2	Binford Street Park	Malls, Squares, Plazas	Private
3	Children’s Museum Plaza	Malls, Squares, Plazas	Private
4	Children’s Wharf Harborwalk	Malls, Squares, Plazas	Private
5	Children’s Wharf Park	Parks, Playgrounds, Athletic Field	City
6	Dewey Square Plaza	Malls, Squares, Plazas	State (MassDOT)
7	Federal Reserve Bank Harborwalk	Malls, Squares, Plazas	Private
8	Fort Point Channel Harborwalk	Malls, Squares, Plazas	Private
9	I-90 Interchange	Malls, Squares, Plazas	State
10	Pagoda Park	Parks, Playgrounds, Athletic Field	State (MassDOT)
11	Rolling Bridge Park	Malls, Squares, Plazas	State (MassDOT)
12	Rose Fitzgerald Kennedy Greenway	Malls, Squares, Plazas	State (MassDOT)
13	Russia Wharf Harborwalk	Malls, Squares, Plazas	Private
14	South Bay Harbor Bicycle Trail	Bicycle Trail	Federal/State/ City/ Private
15	Tufts Wharf Harborwalk	Malls, Squares, Plazas	Private
WIDETT CIRCLE			
1	Union Park Street Playground	Parks, Playgrounds, Athletic Fields	City
2	South Bay Harbor Bicycle Trail	Bicycle Trail	Federal/State/ City/Private
READVILLE – YARD 2			
1	Blue Hills State Reservation	Parkways, Reservations, and Beaches	State
2	Iacona/Readville Playground	Parks, Playgrounds, Athletic Field	City
3	Jeremiah Hurley Memorial Park/Wolcott Square	Malls, Squares, and Plazas	City
4	Moynihan Playground	Parks, Playgrounds, Athletic Field	State
5	Neponset River Reservation	Parkways, Reservations, and Beaches	State (MassDCR)
6	Dedham Rail-Trail	Bicycle Trail	State
7	Readville to Neponset Rail -Trail	Bicycle Trail	Private
8	Neponset Extension Rail -Trail	Bicycle Trail	State

Note: Refer to Figure 4-1 (South Station), Figure 4-2 (Widett Circle), and Figure 4-3 (Readville – Yard 2) for numbered locations.
Source: City of Boston Open Space Plan 2008-2014, MassGIS, MassDOT, MassDCR.

4.4.2. Wildlife and Waterfowl Refuges

Section 4(f) protection extends to wildlife and waterfowl refuges, however none exist in the vicinity of the project sites.

4.4.3. Historic and Archaeological Resources

Table 4-2 lists the individual properties and historic districts within the South Station APE. The locations of these historic resources are depicted on Figure 4-4.

The Readville – Yard 2 and Widett Circle APE do not contain historic properties listed, or eligible for listing, in the National or State Register of Historic Places.³

Section 4(f) protects archaeological resources that are significant for preservation in place. FRA and MassDOT (the Project Team) have not identified any recorded archaeological sites or sites of archaeological sensitivity in the APEs at the SSX project sites due to the filling and disturbances that have historically occurred at these urbanized sites.⁴

Table 4-2 — National Register Listed or Eligible Properties or Districts within the South Station Area of Potential Effect

Name	Historic Designation/Recommendation
SOUTH STATION	
Properties listed in the National and/or State Registers of Historic Places	
Fort Point Channel Historic District	Listed in National and State Registers
Leather District	Listed in National and State Registers
Russia Wharf Buildings	Listed in National and State Registers
South Station Headhouse	Listed in National and State Registers
Commercial Palace Historic District	Determined National Register Eligible Listed in State Register
Fort Point Channel Landmark District	Listed in State Register (Boston Landmark District)
Properties Determined Eligible for Listing in the National Register of Historic Places	
Chester Guild, Hide and Leather Machine Company	Determined National Register Eligible
Chinatown District	Determined National Register Eligible
Federal Reserve Bank of Boston	Determined National Register Eligible
Kneeland Street Steam Heating Plant	Determined National Register Eligible
South End Industrial Area	Determined National Register Eligible
Weld Building	Determined National Register Eligible
Gillette	Determined National Register Eligible

Source: South Station Expansion Project, *Historic Architectural Resources Technical Report*, March 2016 UPDATE.

³ Further information is presented in South Station Expansion Project, *Historic Architectural Resources Technical Report*, March 2016 UPDATE.

⁴ Further information is presented in South Station Expansion Project, *Draft Environmental Impact Report, Appendix 13 (Part 1), Phase I Archaeological Reconnaissance Survey Technical Report*, October 2014.

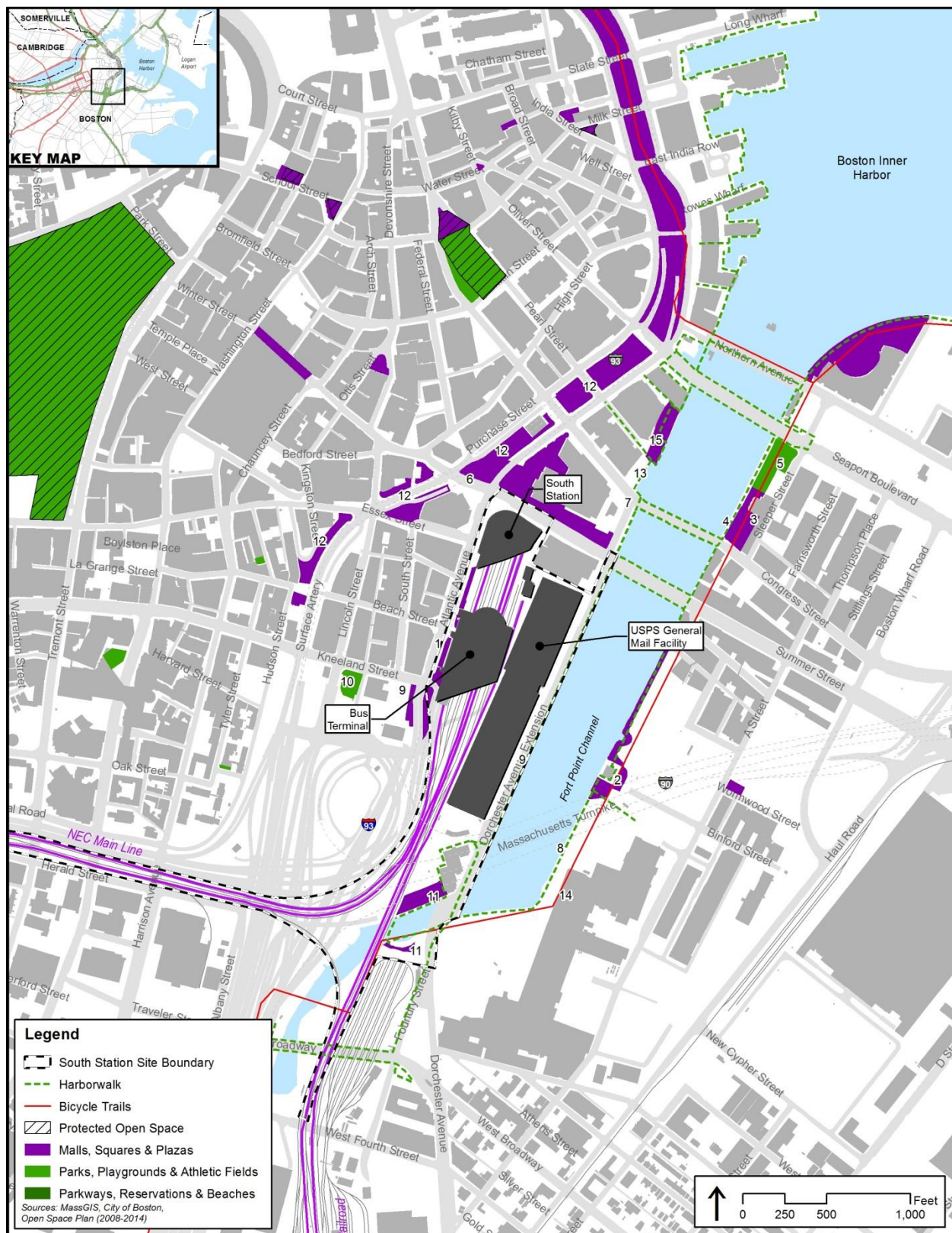


Figure 4-1 — Potential Section 4(f) Parks and Recreation Areas in the South Station Study Area

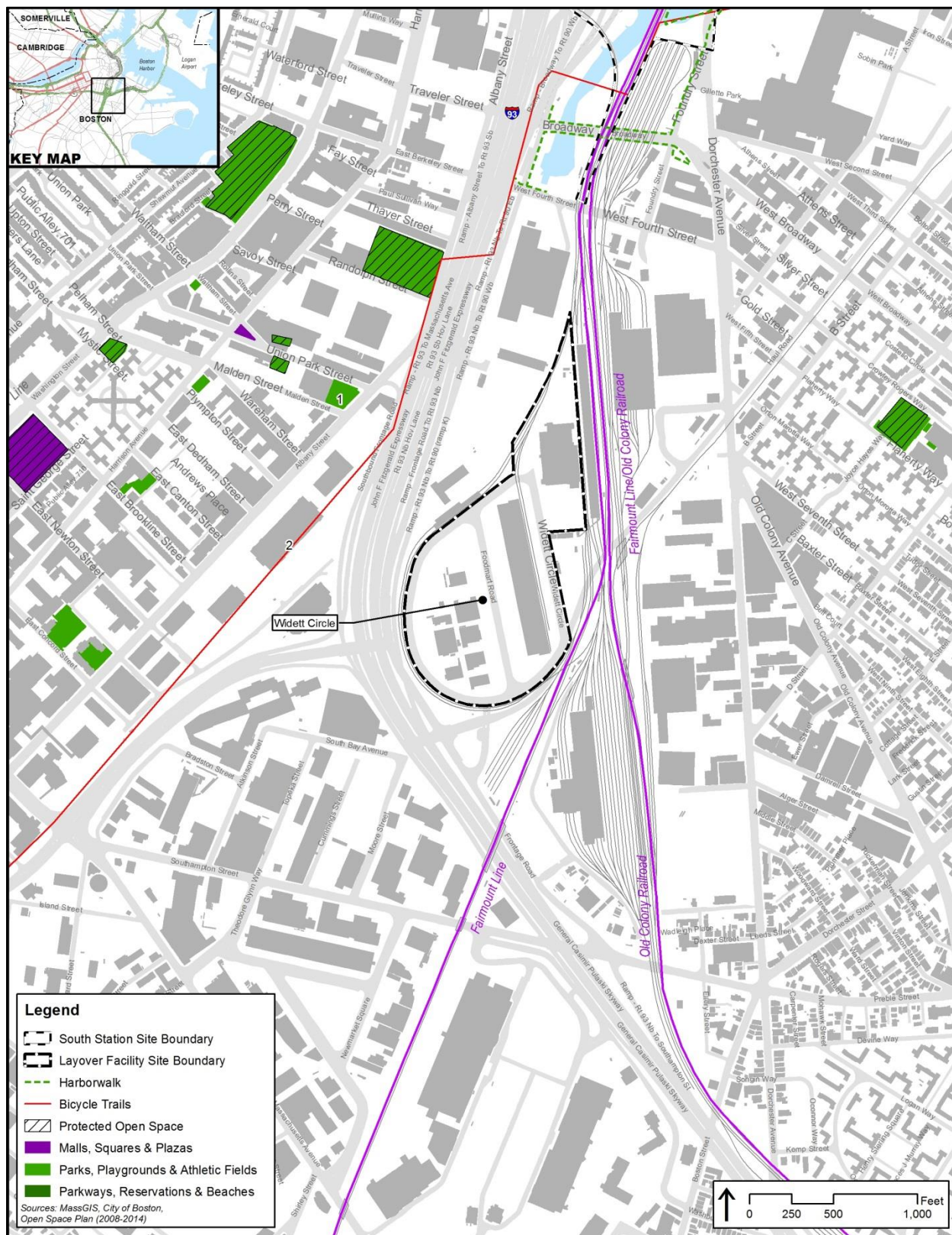


Figure 4-2 — Potential Section 4(f) Parks and Recreation Areas in the Widett Circle Study Area

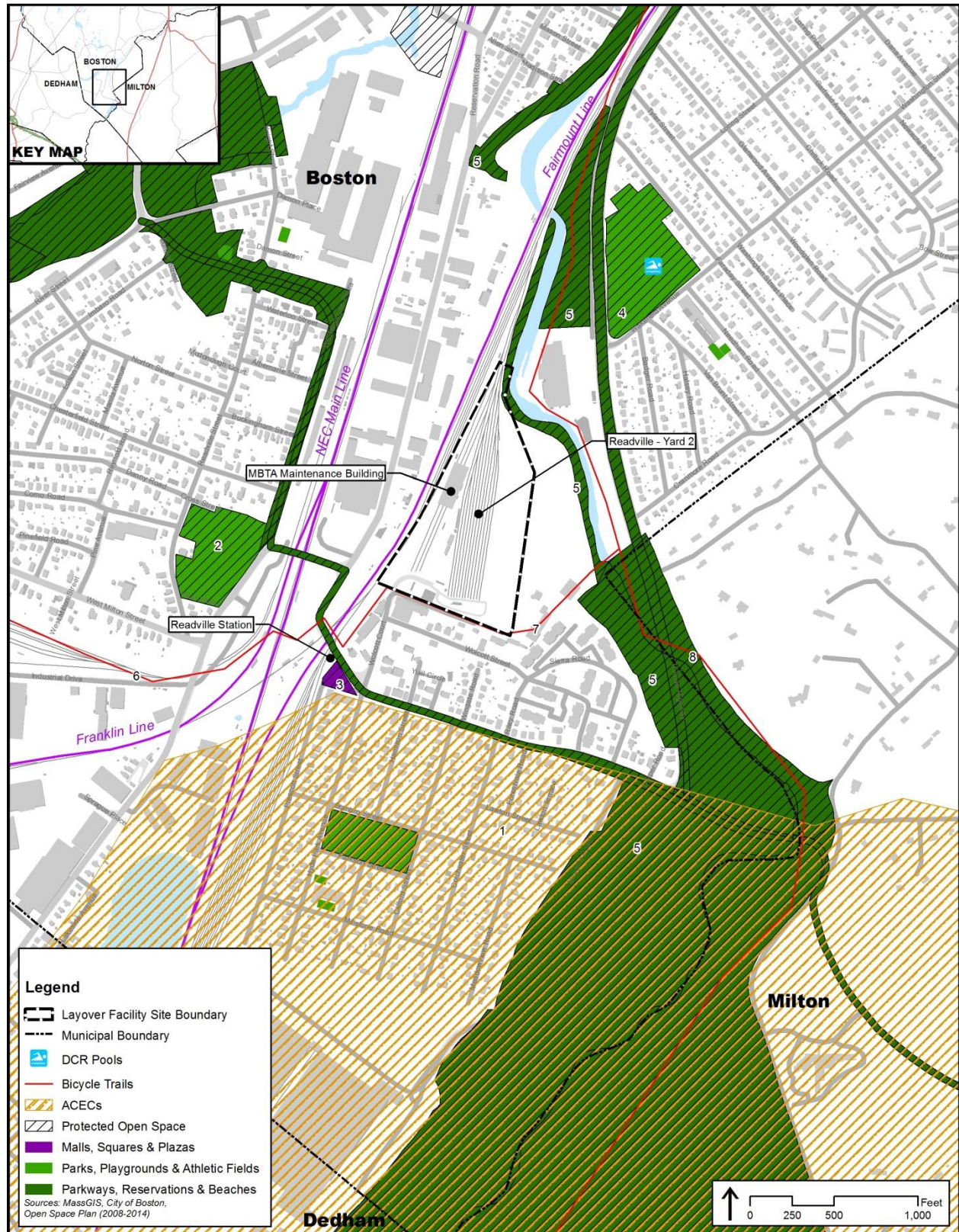


Figure 4-3 — Potential Section 4(f) Parks and Recreation Areas in the Readville – Yard 2 Study Area

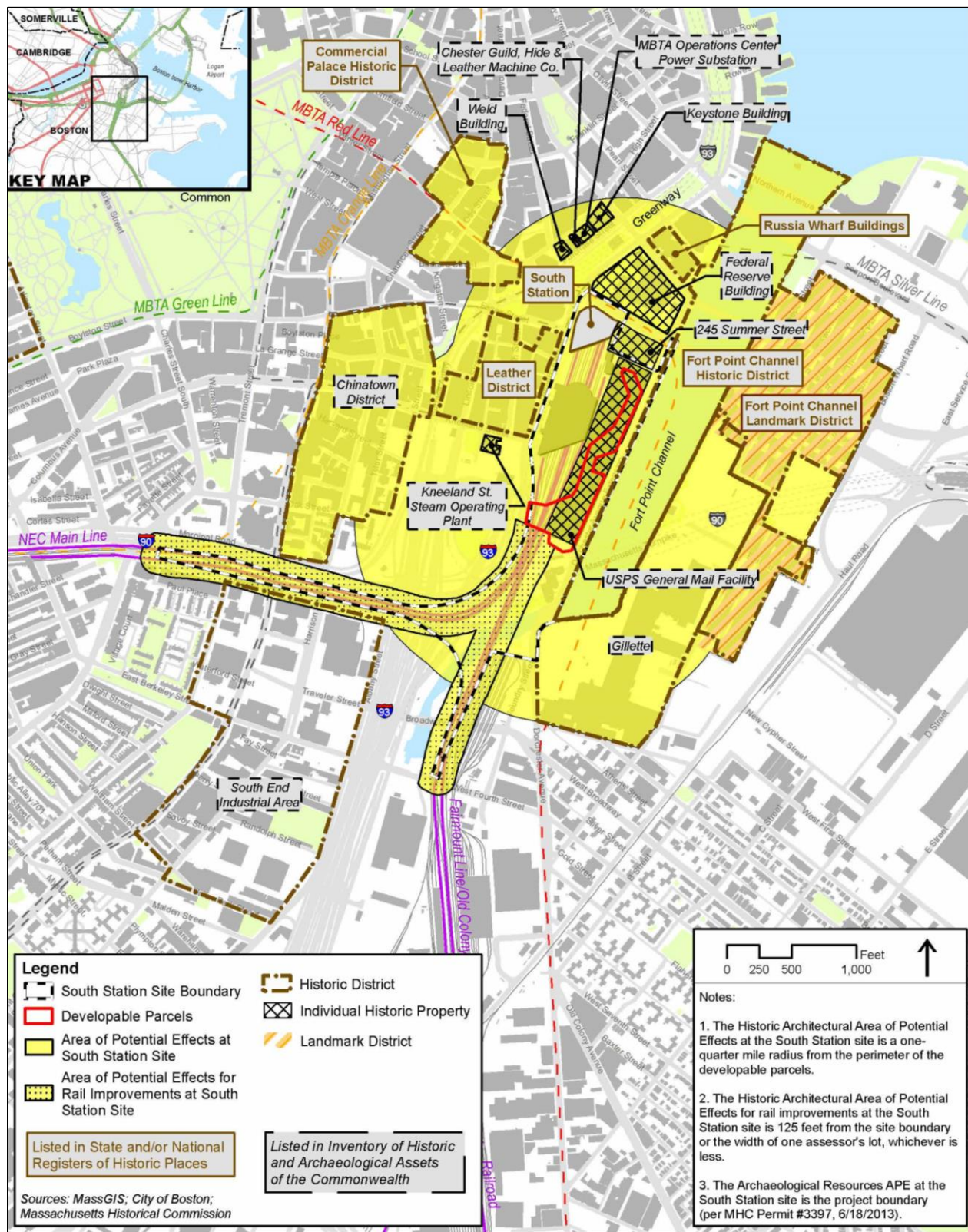


Figure 4-4 — South Station Historic Architectural Area of Potential Effects

4.5. Potential Impacts to Section 4(f) Resources

The Project Team compared the SSX Build Alternative plans to park, recreation area, and historical site boundaries to determine if the project would require any permanent acquisition or temporary occupancy of land. For determining constructive uses as defined by Section 4(f), the Project Team assessed noise and vibration impacts, access restrictions, and visual impacts to determine if these impacts would constitute a use of the Section 4(f) resource.

4.5.1. Parks and Recreation Areas

FRA has determined that the Build Alternative would not use any parks and recreation areas protected by Section 4(f). The Build Alternative would not require permanent land acquisition or temporary occupancy of any Section 4(f) park or recreation area. Constructive uses of parks and recreation areas occur primarily when there is an increase in noise levels due to the operation and construction of the project.

The parks and recreation areas closest to the South Station site include the Dewey Square Parks, Rolling Bridge Park, and the Fort Point Channel Harborwalk. The South Station building acts as a noise barrier for Dewey Square Parks/Rose Fitzgerald Kennedy Greenway, effectively shielding them from constructive use. The predicted noise levels at the Dewey Square Parks would remain compatible with outdoor recreation in this urban environment and would not be so severe that the activities at the parks would be substantially impaired or constitute a constructive use. Rolling Bridge Park is located approximately 900 feet south of the new tracks, and the Project Team anticipates no noise impacts will occur at this location.

Removal of the USPS facility adjoining South Station would increase noise levels from train operations along the Fort Point Channel Harborwalk on the opposite side of the Fort Point Channel. As mitigation, the Project Team would construct an 18-foot high noise barrier to reduce noise from train operations at the station along the existing and proposed sections of Harborwalk. With this mitigation, the predicted future noise levels in this location would remain compatible with outdoor recreation in this urban environment and would not be so severe that the activities would be substantially impaired or constitute a constructive use of the Harborwalk.

There are no parklands within 500 feet of the Widett Circle layover facility site; therefore, FRA has determined that there would be no Section 4(f) use in this location.

At the expanded Readville – Yard 2 layover facility site, the Massachusetts Department of Conservation and Recreation (MassDCR) Neponset River Reservation borders the northeast corner of the site, but no direct impacts to the Neponset River Reservation would occur. Noise levels from trains traveling along the Neponset River Reservation and into the layover facility would remain similar to existing conditions. With the extension of the existing berm/noise barrier at the Readville – Yard 2, and the distance from the layover facility, noise impacts are not expected to occur at either the MassDCR Neponset River Reservation or the Blue Hills Reservation immediately to the south.

As discussed in Chapter 3, there would be no substantive increases in visual impacts or vibration levels at these Section 4(f) parks or recreation areas, and therefore no constructive use of these facilities.

4.5.2. Historic Resources

Project impacts to historic properties include potential construction noise impacts to the South Station headhouse and potential operational noise impacts to the Fort Point Channel Historic District, as further described in the following section. Proposed mitigation measures would effectively eliminate or minimize any potential adverse project impacts.

The SSX project will not result in any direct alteration of the designated historic portions of the South Station headhouse, and the Project Team does not anticipate any temporary construction impacts (i.e., temporary occupancy) of the historic portions of the headhouse. The proposed elevated concourse will connect to the existing facilities at the platform level, outside of the existing headhouse, and no modifications to the interior of the building are currently proposed. The historic South Station headhouse includes the main concourse/waiting room, which was entirely reconstructed and rehabilitated consistent with the *Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitation of Historic Buildings (Standards)* in the mid-1980s as part of the station upgrades by FRA/MBTA.

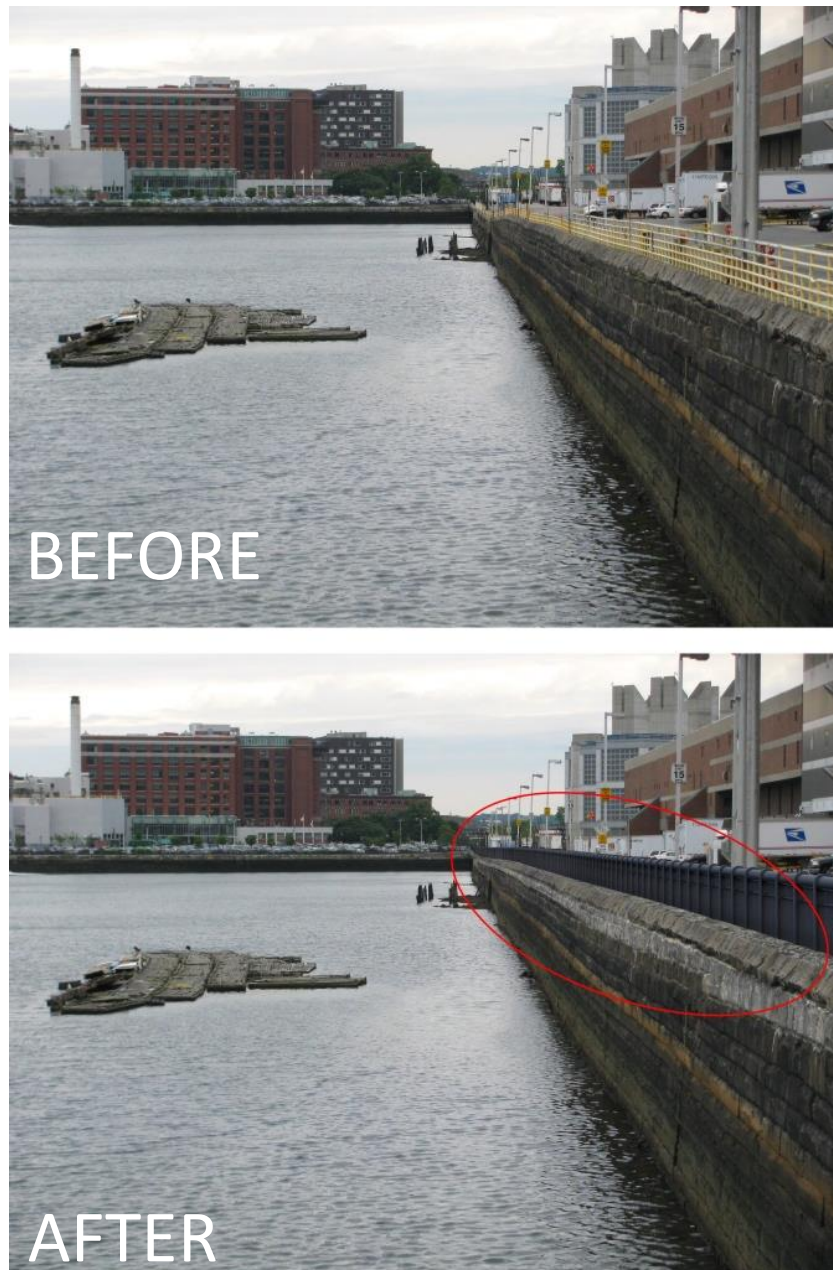


Figure 4-5 — Proposed Seawall Improvements – Before and After (View 1)

The Fort Point Channel east and west seawalls are contributing structures to the Fort Point Channel Historic District. The Build Alternative includes replacing the existing deteriorated railing to match the section of seawall across Summer Street and raising an approximately 700-foot section of the west seawall along Dorchester Avenue by 1.5 feet to match the elevation of the seawall to the north and south. MassDOT's proposal to raise the seawall is in response to recent projections of sea level rise of nearly two feet by the year 2050 and would help to mitigate potential flooding on the future South Station site. The raising of a 700-foot section of the Fort Point Channel seawall would be undertaken in a manner that is consistent with the *Standards* and would have no adverse effect on the seawall or the Fort Point Channel Historic District. Figures 4-5 and 4-6 provide before and after views of the proposed seawall improvements.



Figure 4-6 — Proposed Seawall Improvements – Before and After (View 2)

Under Section 4(f), FRA and MassDOT have preliminarily determined that the proposed seawall improvements would have a *de minimis* impact. Replacing the deteriorated railing would enhance preservation of this historic resource and raising the elevation of the seawall represents mitigation to address sea level rise. For historic sites, a *de minimis* determination requires concurrence from the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO): (1) that there is “no adverse effect” or “no historic properties affected” on the historic resource and (2) with the U.S. DOT’s determination that the Section 4(f) use is *de minimis*.⁵ U.S. DOT must also consider the views of any consulting parties participating in the Section 106 consultation.

At the South Station site, the Project Team assessed impacts to historic resources resulting from demolition activity and noise and vibration as discussed below. There are no historic properties within the Widett Circle or Readville – Yard 2 layover facilities sites. Accordingly, FRA does not anticipate any visual, wind, and shadow impacts to historic resources to result from the SSX project.

Noise

The proposed tracks would be located further from the existing headhouse than the existing tracks, which will reduce operating noise in the existing headhouse. In general, the noise from any single train operation, such as an Amtrak locomotive idling in front of the South Station headhouse, would generate the same noise level inside the headhouse for both the existing condition and the Build Alternative. However, the noise from all the trains operating at South Station over a 24-hour period (the Ldn noise level) would decrease because the train noise would be distributed over 20 tracks instead of the existing 13 tracks, with the new tracks located farther from the South Station headhouse. This is true, even accounting for the increase in the number of train operations at South Station between the existing and the future Build

⁵ FRA has preliminarily determined that the project would have no adverse effect on historic properties, and therefore would result in no Section 4(f) use, except in the case of the seawall, which would have a *de minimis* impact. FRA anticipates the SHPO will concur with this finding, although this determination is not expected prior to publication of the draft EA. FRA will present its final Section 4(f) use determination in the final EA.

Alternative. Moreover, the historic significance of South Station relates to its use as a transit hub and is not considered to be a quiet historic setting.

Prior to mitigation, a moderate noise impact would be expected to occur at sensitive residential receptors within the Fort Point Channel Historic District due to the removal of the USPS facility. As discussed in Sections 4.5.1 and 4.6.1, construction of a noise barrier would significantly reduce noise (10 to 12 dBA) at the Fort Point Channel Historic District, and would extend approximately 1,450 feet, essentially the full length of the USPS facility, to mitigate noise impacts for the entire Fort Point Channel Historic District.

The Ldn noise level (the average noise level over a 24-hour period) is expected to decrease at locations within the Leather District. The expansion would add tracks to the east of South Station further from the Leather District and would distribute the trains over a larger area and the project would also reduce the amount of train idling in the terminal area. This would also result in a reduction of the peak hour Leq noise level (the average sound pressure level during a period of time) along Atlantic Avenue and within the Leather District.

Prior to mitigation, the demolition and construction activity associated with the project would impact the South Station headhouse. While construction noise levels from the project are not expected to exceed FTA construction noise limits, they are expected to exceed the more stringent City of Boston construction noise limits at the existing headhouse based on the assumed construction equipment mix. Temporary noise barriers or noise enclosures for equipment would be utilized to mitigate construction noise levels at these receptors. A Construction Management Plan/Noise Control Plan would be implemented to mitigate construction noise levels, including providing noise monitoring during construction to determine compliance with FTA and City of Boston construction noise limits. With implementation of this proposed mitigation, FRA does not anticipate any construction noise impacts, and thus there will be no use under Section 4(f).

Vibration

Due to the slow speed of trains entering and leaving South Station (approximately 10 mph), train vibration levels would be below FTA criteria⁶. Train activity at South Station is not expected to result in any ground-borne noise inside the headhouse. Vibration levels generated by the construction equipment proposed for this project would not result in structural damage to the headhouse or other nearby historic buildings, but could exceed the FTA human annoyance criterion⁷ and will be addressed and mitigated under the Construction Management Plan/Noise Control Plan.

4.5.3. Preliminary Determination of Section 4(f) Use

Table 4-3 summarizes the preliminary Section 4(f) use determinations.⁸ Multiple historic properties are located within the SSX APE, as summarized in Table 4-2 (page 4-4). The project would have “no effect” on a majority of the historic properties, as discussed in the preceding section. With the exception of the *de minimis* impact of the seawall, project impacts to historic properties in the SSX APE would be limited to potential construction noise impacts to the South Station headhouse and potential operational noise impacts to the Fort Point Channel Historic District. As described in Sections 4.5.2 and 4.6.1, there would be no use

⁶ Vibration levels from train movements would be below FTA human annoyance criteria (for both residential and non-residential receptors) and impact criterion for building damage, as presented in Federal Transit Administration’s (FTA’s) *Transit Noise and Vibration Impact Assessment*. (Report No. FTA-VA-90-1003-06). May 2006.

⁷ *Ibid.*

⁸ FRA has preliminarily determined that the project would have no adverse effect on historic properties, and therefore would result in no Section 4(f) use, except in the case of the seawall, which would have a *de minimis* impact. FRA anticipates the SHPO will concur with this finding, although this determination is not expected prior to publication of the draft EA. FRA will present its final Section 4(f) use determination in the final EA.

under Section 4(f) of these properties, and a Construction Management Plan/Noise Control Plan would be implemented to assure construction noise would be in compliance with FTA and City of Boston construction noise limits. To minimize or eliminate adverse noise impacts to the Fort Point Channel Historic District, a noise barrier would be installed along the easternmost track, as described in Section 4.6.2. These mitigation measures would effectively minimize or eliminate any potential adverse project impacts.

The project, as designed, would not have any adverse visual impacts on the South Station headhouse or surrounding historic properties.

FRA has determined that the project, implemented with noise mitigation and designed consistent with the historic preservation design principles (discussed in Section 3.17), would have no adverse effect on historic properties, and therefore would result in no Section 4(f) use, except in the case of the seawall, which would have a *de minimis* impact.

Table 4-3 — South Station Determination of Section 4(f) Use

Name	Determination of Effect
Properties listed in the National and/or State Registers of Historic Places	
Leather District	No Section 4(f) Use
Russia Wharf Buildings	No Section 4(f) Use
Commercial Palace Historic District	No Section 4(f) Use
Fort Point Channel Historic District	No Section 4(f) Use (<i>De Minimis</i> impact determination for seawall)
South Station Headhouse	No Section 4(f) Use
Fort Point Channel Landmark District	No Section 4(f) Use
Properties determined eligible for listing in National Register of Historic Places	
Chester Guild, Hide and Leather Machine Company	No Section 4(f) Use
Chinatown District	No Section 4(f) Use
Federal Reserve Bank of Boston	No Section 4(f) Use
Kneeland Street Steam Heating Plant	No Section 4(f) Use
South End Industrial Area	No Section 4(f) Use
Weld Building	No Section 4(f) Use
Gillette	No Section 4(f) Use

4.6. Summary and Conclusions

As discussed above, there would be no substantive increases in visual impacts or vibration levels at these Section 4(f) parks or recreation areas, and therefore no constructive use of these facilities.

4.6.1. South Station Headhouse and Fort Point Channel Harborwalk

The project would provide substantial public recreational benefit to this portion of the Fort Point Channel waterfront with the proposal to reopen public access on Dorchester Avenue (which is currently closed off for private use for USPS postal operations). Restoration of Dorchester Avenue would include the addition of landscaping and improved pedestrian and cycling connections and facilities, including adjacent sidewalks and crosswalks. The proposed Dorchester Avenue Harborwalk, to be constructed along the newly reconstructed South Station, would complete a missing link in the 40-mile public walkway extending along the Boston Harbor waterfront. Constructing one-half mile of Harborwalk adjacent to Fort Point Channel would close one of the last remaining gaps in an otherwise continuous waterfront walkway. In addition to a dedicated pedestrian path, street furniture and landscaping would also be provided.

The SSX project will not result in direct alteration of the designated historic portions of the historic South Station headhouse, and the Project Team does not anticipate temporary occupancy of these areas during construction. The construction noise from the assumed mix of construction equipment has the potential to exceed the City of Boston construction noise limits, which are more stringent than FTA construction noise limits, at the historic headhouse, and vibration from construction equipment could exceed the FTA human annoyance criterion at the headhouse. The temporary construction impacts would be addressed through a Construction Management Plan/ Noise Control Plan, so that there would be no Section 4(f) constructive use during construction.

The Construction Management Plan/Noise Control Plan to be implemented to mitigate construction noise levels would include noise monitoring during construction to determine compliance with FTA and City of Boston construction noise limits. The Construction Management Plan/Noise Control Plan would provide a detailed list of construction equipment used in each construction phase, including the type and location of each piece of equipment. The Construction Management Plan/Noise Control Plan would establish vibration limits and other similar performance criteria, as well as require the contractor to plan and implement mitigating measures if adverse impacts were detected during construction.

If the construction noise levels were predicted to exceed the FTA or City of Boston construction noise limits, then appropriate noise mitigation measures, such as noise barriers, would be evaluated, including determining the appropriate location, height, and length of the noise barrier to provide effective mitigation. During construction at the South Station site, precondition surveys and vibration monitoring would be conducted to document initial conditions and to monitor vibration levels during construction. Below-grade work would be conducted under the technical monitoring of a geotechnical engineer, to observe and document construction procedures, monitor vibrations, and to anticipate and facilitate any needed mitigation measures.

In addition to this construction mitigation, permanent noise mitigation is proposed to substantially reduce operating noise from trains to avoid impacts on the Fort Point Channel Section 4(f) resources. As described in Section 3.3, the removal of the USPS facility would increase noise from idling locomotives across Fort Point Channel, which would otherwise result in noise impacts to the Harborwalk and the historic Fort Point Channel Historic District. The proposed installation of a 1,450-foot long, 18-foot-high noise barrier along the easternmost track of the South Station Terminal would eliminate or minimize these noise impacts, and there would be no constructive use of Section 4(f) resources.

4.6.2. Seawall Reconstruction

A 700-foot section of the west historic Fort Point Channel seawall along Dorchester Avenue will be raised by 1.5 feet to match the elevation of the seawall to the north and south, which FRA and MassDOT have determined would have a *de minimis* impact. This *de minimis* determination is based on FRA's finding that there would be no adverse effect on the seawall, which is a contributing component of the Fort Point Channel historic district, and the fact that the elevation of the seawall represents mitigation to address sea level rise.

The option of not reconstructing the seawall is not considered a prudent and feasible alternative as it does not adequately mitigate and address sea level rise. The seawall is not at a consistent elevation throughout the site, it is being reconstructed to match higher sections to the north and south. The locations where the 100-year coastal flood zone encroaches upon the site correspond to the lower areas of seawall. If the seawall is not constructed, much of the South Station site, as well as much of the areas surrounding South Station, would be inundated in the future with the projected sea level rise during a 100-year flood event.

In the absence of mitigation, the 100-year floodplain would encompass approximately 38 acres of the SSX project footprint, representing nearly complete inundation of the site and infrastructure, during a 100-year flood event, assuming a 2-foot rise in sea level by the year 2050. By 2070, portions of the South Station platform areas could flood to a depth of between 0.5 feet and 1.5 feet under the conditions of a 3.2-foot rise in sea level. The proposed seawall would elevate the barrier to the Fort Point Channel to prevent inundation by channel waters due to sea level rise. In addition, the proposed wall addition would also elevate the seawall above the 100-year flood elevation, thereby substantially reducing the extent of flooding on the site.

Mitigation measures for impacts on historic resources are described in more detail in Section 3.17. The seawall improvements, which are within the Fort Point Channel Historic District, have been designed to be consistent with the Secretary of the Interior's Standards for Rehabilitation. Replacing the deteriorated railing would enhance preservation of this historic resource. The new course of seawall would be constructed of granite blocks, either recovered from near the seawall/channel or acquired from local quarries in Massachusetts or New England.

With the proposed mitigation measures, the Build Alternative would involve either no Section 4(f) use, or, in the case of the seawall, a *de minimis* impact.

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