



South Station Expansion Project

Appendix 13 (Part 2) - Historic Architectural Resources Technical Report

October 2014

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1. Introduction

The Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), and the National Railroad Passenger Corporation (Amtrak) have for decades identified the expansion of rail capacity at Boston's South Station as a crucial transportation need, one that has been articulated in multiple local, regional, state, and Northeast Corridor (NEC)-wide planning documents.¹ In cooperation with the Federal Railroad Administration (FRA), Amtrak, and the MBTA, MassDOT is now pursuing the expansion of South Station to support existing NEC and commuter rail services and to provide for future Amtrak and MBTA service expansions. The current track capacity, layout, and operations of South Station limit the ability to accommodate projected future expanded services. In addition to expanding South Station terminal facilities, the South Station Expansion (SSX) project will also identify a solution to address existing and future intercity and commuter rail service layover needs. The SSX project includes planning, environmental reviews, and preliminary engineering for the five primary elements of the project:

1. **Expand the South Station terminal facilities**, including the addition of up to seven tracks and four platforms and construction of a new passenger concourse and other amenities.
2. **Acquire and demolish the U.S. Postal Service (USPS) General Mail Facility** located on Dorchester Avenue adjacent to South Station, which will provide an approximate 16-acre site on which to expand South Station. (Note that the relocation of the USPS facility will be the subject of a separate environmental review process by others.) Dorchester Avenue will be restored for public and station access.
3. **Create an extension of the Harborwalk along reopened Dorchester Avenue.**
4. **Provide for the possibility of future joint public/private development** adjacent to and over an expanded South Station.
5. **Provide adequate rail vehicle layover space** to address existing and future intercity and commuter rail service needs.

This Historic Architectural Resources Technical Report has been prepared in support of the Draft Environmental Impact Report (Draft EIR) and Environmental Assessment (EA) for the SSX project, in accordance with the Certificate of the Secretary of the Office of Energy and Environmental Affairs (EEA) on the Environmental Notification Form (ENF) for the SSX project (April 19, 2013), the Massachusetts Environmental Policy Act (MEPA) regulations, 301 CMR 11.00 (revised, May 10, 2013), and FRA's Procedures for Considering Environmental Impacts, 64 Federal Register (FR) 101 (26 May 1999), pp. 28545-28556.

1.1. Scope and Authority

An aboveground historic property survey was prepared for the Area of Potential Effects (APE) for the proposed project including the South Station terminal facilities and the three layover site locations. The goals of the aboveground historic property survey were to locate and record information about the nature and extent of aboveground historic properties within the APE and provide preliminary recommendations regarding the eligibility of properties that have not previously been evaluated for listing in the National

¹ Documents citing the need for an expanded South Station include: *Critical Infrastructure Needs on the Northeast Corridor* (2013), *The Northeast Corridor Infrastructure Master Plan* (2010), *The Amtrak Vision for High-Speed Rail in the Northeast Corridor* (2010), *A Vision for the Northeast Corridor* (2012), the Massachusetts Department of Transportation *Rail Plan* (2010), the Massachusetts Department of Transportation *Freight Plan* (2010), and the two most recent long range transportation plans of the Boston Region Metropolitan Planning Organization (2007, 2011).

Register of Historic Places. The survey included background research of previously identified historic properties, field work to verify results of the background research and locate and record information about all properties that are at least 50 years old within the project APE, and identify individual properties and areas that may be eligible for listing in the National Register of Historic Places. Included in this report is a statement of the methodology used to conduct the survey, results of the field survey to locate and identify historic properties within the APE, and recommendations for properties that have not been previously evaluated in terms of their potential for listing in the National Register of Historic Places. The aboveground historic property survey considered the South Station terminal facilities project area, as well as three locations for the new layover facilities (as shown in Figures 2 to 4).

State-level review is required by the Massachusetts Historical Commission (MHC) under M.G.L. Chapter 9, Sections 26-27C, as amended by Chapter 254 of the Acts of 1988 (950 CMR 71), as well as compliance with MEPA. The project is also required to comply with federal laws including the National Environmental Policy Act, Section 4(f) of the Department of Transportation Act of 1966 (49 USC 303), and Section 106 of the National Historic Preservation Act of 1966 as amended and the implementing regulations of the Advisory Council on Historic Preservation (36 CFR 800). In the event of a finding of adverse effect to historic architectural resources, MassDOT would consult with the Massachusetts State Historic Preservation Officer/MHC to determine whether there are prudent or feasible alternatives that would avoid, minimize, or mitigate any adverse effects of the project pursuant to 950 CMR 70-71 and 36 CFR 800.5(e) and 800.9. Consultation with the Boston Landmarks Commission (BLC) would also be undertaken as a consulting party under State Register Review and Section 106.

1.2. Area of Potential Effects

1.2.1. Definition of Area of Potential Effects

The APE is defined as “...the geographic area within which the undertaking may cause changes in the character of or use of historic properties if any such properties exist.”² A historic property is defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior” [36 CFR 800.16(l)]. The establishment of a project APE is based on the potential for effects, both direct and indirect, which would differ for aboveground historic properties (historic districts, buildings, objects, and structures) and belowground historic properties (archaeological sites).

1.2.2. SSX Project Areas: South Station Site and Layover Facility Sites

Figure 2 depicts the South Station site, which occupies approximately 49 acres near Chinatown, the Fort Point Channel, and the Seaport-Innovation District/South Boston Waterfront. The South Station site contains the following: South Station Rail/Transit Terminal and South Station Bus Terminal, approximately 16 acres; the USPS General Mail Facility/South Postal Annex, approximately 14 acres, including that portion of Dorchester Avenue fronting the site and running parallel to the Fort Point Channel; approximately 14 acres of primarily railroad track; and 3 acres containing a small park, Harborwalk area, and a portion of the Fort Point Channel located at the southern end of the site. The South Station site also extends west along a portion of the NEC Main Line right-of-way past Cove Interlocking and south along a portion of the MBTA’s Fairmount Line/Old Colony Railroad right-of-way just past Broadway Interlocking.

² Protection of Historic Properties. 36 CFR 800.16(d). 2004. <http://www.achp.gov/regs-rev04.pdf>.

There are three locations currently under consideration for new and/or expanded layover facilities: Widett Circle; Beacon Park Yard; and Readville-Yard 2 (as shown in Figures 2, 3, and 4).

1.2.3. Historic Architectural Area of Potential Effects

There are three APEs established for historic architectural resources: for the South Station project area surrounding South Station new construction; for the areas where only minor rail improvements associated with the South Station Terminal are proposed; and for the three layover facility sites; as described below.

The South Station project APE for aboveground resources in the immediate area surrounding South Station Terminal and new construction is defined as one-quarter-mile from the boundary of the new construction developable parcels. The one-quarter-mile APE exceeds the federal recommended screening distance of 250 feet for noise and vibration for rail stations (without horn blowing, unobstructed view) as set by Federal Transit Administration (FTA) standards.³ The one-quarter-mile boundary is consistent with local (Boston Redevelopment Authority) guidelines (*BRA Sections 80A-2 and 80B-5 of the Boston Zoning Code*) for evaluation of environmental impacts of new construction on historic resources and is also consistent with recommendations made by the BLC. In contrast to the APEs described below, the South Station project one-quarter-mile APE expands where the project area adjoins districts that are listed in or potentially eligible for listing in the National Register of Historic Places. In those cases, the APE extends to conform to the boundaries of the district. It is anticipated that the extension of the one-quarter-mile APE at South Station to the east will include the Fort Point Channel Historic/Landmark Districts and Gillette and to the west will include the Leather District, Commercial Palace District, and Chinatown would be sufficient to address potential impacts associated with the station Build Alternatives. The South Station APE totals approximately 305 acres.

In areas where minor rail improvements associated with the South Station Terminal is proposed (along the NEC Main Line to the west of the station and along the MBTA's Fairmount Line/Dorchester Branch and Old Colony Lines to the south of the station), the APE for aboveground resources is defined as 125 feet or one assessor's lot from the site boundary, whichever is less. The Rail Improvements APE totals approximately 35 acres.

For the layover facility sites, the APE is 250 feet or to major intervening infrastructure (e.g., active MBTA commuter rail, Interstate 93, Massachusetts Turnpike), whichever is less. The approximate totals for the layover APEs are: Widett Circle – 50 acres, Beacon Park Yard – 55 acres, and Readville Yard – 2 – 40 acres.

Figures 5 through 8 depict the Historic Architectural APE for South Station and the three layover facility sites.

2. Methodology

The methodology for the survey of aboveground historic resources was designed to locate and identify all aboveground properties, including districts, buildings, structures, objects, and sites, within the project's APE that are listed or may be eligible for listing in the National Register of Historic Places. The survey was conducted in accordance with the standards and guidelines established by the MHC in *Historic Properties Survey Manual: Guidelines for the Identification of Historic and Archaeological Resources in Massachusetts* (1992) and *Survey Technical Bulletin #1* (1993), and in the Secretary of the Interior's

³ Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Report No. FTA-VA-90-1003-06*. May 2006.

Standards and Guidelines for Identification (1983) and *National Register Bulletin 24, Guidelines for Local Surveys: A Basis for Preservation Planning* (1977, revised 1985).

3. Background Research

Background research was conducted to identify known historic resources within the project APE. The *Massachusetts Cultural Resource Information System* (MACRIS) online database, the National and State Registers of Historic Places, and the *Inventory of the Historic and Archaeological Assets of the Commonwealth* (Inventory) maintained by the MHC were reviewed. The National Register of Historic Places is the United States federal government's official list of the Nation's districts, sites, buildings, structures, and objects deemed worthy of preservation. The MHC's Inventory is a compilation of districts, sites, buildings, structures, and objects that have been previously surveyed and are on file in the MHC's database. Properties included in the Inventory may or may not have been previously determined eligible for inclusion in the National Register. Copies of Inventory and National Register of Historic Places nomination forms were obtained for all properties located within or in close proximity of the project APE.

3.1. Windshield Survey

Initial fieldwork consisted of a "windshield survey" (defined as a composite of subjective and objective data that provides a visual overview of an area, conducted while the observer sits in a car or by walking through a targeted area) of the South Station Terminal and layover facility sites. Properties located within the South Station and layover site APEs were identified. Previously identified historic resources were field verified. It is noted that one historic area (Gillette) was identified in the APE during the windshield survey that is at least 50 years old and not previously surveyed.

3.2. Intensive Field Survey

An intensive field survey was conducted using information collected during the background research and field survey. The survey team revisited all properties within the APE that were noted during the windshield survey as being at least 50 years old, including properties listed in the National or State Register and included in the Inventory. Each property was located on a base map and photographed.

3.3. Evaluation

The results of the intensive field survey and research provided the information used to develop the recommendations contained later in this report. The information gathered was sufficient to make a preliminary recommendation about whether a property or area might meet the criteria for listing in the National Register of Historic Places. Established by the National Park Service (NPS), the criteria are broadly defined to encompass the wide variety of resources that have been nominated. Under Section 106, the criteria act as a guide for federal agencies in their evaluation of historic resources that may be affected by a proposed undertaking. The NPS defines the criteria as the following:⁴

⁴ U.S. Department of the Interior, National Park Service. *How to Apply the National Register Criteria for Evaluation, Bulletin 13* (Washington D.C.: National Park Service, 1990, rev. 2002).

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association, and meet the following criteria:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or*
- B. That are associated with the lives of persons significant in our past; or*
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- D. That have yielded, or may be likely to yield, information important to prehistory or history.*

Ordinarily cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or*
- B. A building or structure removed from its original location but which is primarily significant for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or*
- C. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building associated with his or her productive life; or*
- D. A cemetery that derives its primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or*
- E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or*
- F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or*
- G. A property achieving significance within the past 50 years if it is of exceptional importance.*

3.4. MHC Area Forms

For the historic properties identified as 50 years or older and not previously surveyed, a standard MHC Inventory Form was prepared according to MHC guidelines (MHC 2006). The form is included in Attachment BB. Fieldwork involved recordation of buildings, an area description, and taking photos.

4. Existing Conditions

4.1. South Station Site

The South Station site occupies approximately 49 acres located near Chinatown, the Fort Point Channel, and the South Boston Waterfront/Innovation District. The site includes the following: South Station Terminal of approximately 16 acres; and the USPS General Mail Facility/South Postal Annex site of approximately 14 acres, including that portion of Dorchester Avenue fronting the site and running parallel to the Fort Point Channel. The USPS owns in fee that portion of Dorchester Avenue that extends from the southern line of Summer Street to a line on the southern shore of Fort Point Channel adjacent to the Gillette property.

The remainder of the site consists of track, a small park, Harborwalk area, and a portion of the Fort Point Channel located at the southern end of the site. The South Station site extends to include the historic South Station headhouse to the north, located at the intersection of Atlantic Avenue and Summer Street. The site extends along a portion of the NEC Main Line to the west, extending past Cove Interlocking. The site extends along a portion of the MBTA's Fairmount Line/Dorchester Branch and Old Colony Lines to the south, extending just past Broad Interlocking.

4.2. Layover Facility Sites

4.2.1. Widett Circle

The Widett Circle site, totaling approximately 29.4 acres, is located in South Boston along the MBTA's Fairmount Line, approximately one track-mile from South Station. It is comprised of two parcels, primarily in private ownership: Cold Storage and Widett Circle. Cold Storage, approximately 6.6 acres, located primarily at 100 Widett Circle, currently houses a temperature controlled food storage and distribution facility, owned by Art Mortgage Borrower Propco 2006 2 LP, and used by Americold/Crocker & Winsor Seafoods. The building has an active rail siding served by CSX Transportation, Inc. (CSXT) with space for six freight cars. A change in ownership of the Cold Storage parcel within the Widett Circle site is anticipated. In October 2013, Celtic Recycling, LLC received approval from the Massachusetts Environmental Policy Act (MEPA) Office (EEA No. 15070) to renovate and convert existing facilities at the Cold Storage parcel, located at 100 Widett Circle, into a material recycling facility. Widett Circle, located primarily at 1 and 2 Foodmart Road, is owned by The New Boston Food Market Development Corporation and is made up of approximately 30 units leased to multiple businesses in the food processing, food storage, and food logistics industry.

A review of Sanborn Maps and aerial photographs indicates that the buildings within the area were all developed circa (ca.) 1968 by the New Boston Food Market Company.

4.2.2. Beacon Park Yard

The Beacon Park Yard site, totaling approximately 30 acres, is located in Allston along the MBTA's Worcester Line approximately 3.8 track miles from South Station. The site served for many years as a major freight rail yard and intermodal terminal in Boston for CSXT, which recently relocated to central Massachusetts. It contains a number of buildings that formerly supported various railroad functions, including a freight rail yard, bulk transfer facility, intermodal facility, and engine facility. Beacon Park Yard is owned by Harvard University and remains encumbered by CSXT's operating rights. An agreement in principal has been reached between Harvard and MassDOT to use approximately 22 acres of Beacon Park Yard for a new commuter rail layover, maintenance facility and rail station.

A review of Sanborn Maps and aerial photographs indicates the site encompasses three structures on the northern side of the property constructed ca. 1969, consisting of two concrete block utility buildings and a corrugated metal sand/salt shed.

4.2.3. Readville – Yard 2

The MBTA's Readville – Yard 2 is located in the Readville section of Hyde Park in Boston in the northeast quadrant of the intersection of the NEC and the MBTA Fairmount Line/Dorchester Branch, approximately 8.8 track-miles south of South Station. Readville – Yard 2 is a maintenance repair facility and the largest layover yard used by the MBTA for its south side service. The layover yard has a total of 12 tracks. The MBTA currently uses Readville – Yard 2 for midday layover storage of ten train sets of variable lengths.

The Readville rail yard encompasses a large metal storage shed constructed ca. 1970.

5. Historic Architectural Resources Survey Results

Background research and subsequent field survey concluded that the SSX project APE, comprised of four sites (South Station and the three layover facility sites) encompasses six properties listed in the National and/or State Registers, 12 properties included in the Inventory, and one property that was at least 50 years old and not previously surveyed. Of the 12 inventoried properties, six are recommended as eligible for inclusion in the National Register of Historic Places, per NPS eligibility criteria, including one property less than 50 years of age that appears to meet the threshold of exceptional significance of the National Register Criterion Consideration G. Six of the inventoried properties are less than 50 years of age and/or were previously recommended as not meeting National Register eligibility criteria. One of the six individual properties (Gillette) was identified as being at least 50 years old and not previously surveyed, and is also recommended as eligible for inclusion in the National Register.

The results of the survey are described in the following subsections.

5.1. South Station

Historic properties identified in the South Station APE are shown in Figure 5 and Table 1 and described in the following subsection. Excerpted copies of the nomination forms for National and State Register-listed properties within the South Station APE are located in Attachment Z; excerpted copies of MHC inventory forms for previously surveyed areas and individual properties included in the Inventory within the South Station APE are located in Attachment AA; and a copy of the inventory form prepared for the property that had not been previously identified (Gillette) is included in Attachment BB. The historic resources are described in the following subsections.

Table 1—Historic Resources within the South Station APE

Name	National/State Register Status
<i>Properties listed in the National and/or State Registers of Historic Places</i>	
Commercial Palace Historic District	Listed in State Register
Fort Point Channel Historic District	Listed in National and State Registers
Fort Point Channel Landmark District	Listed in State Register (Boston Landmark District)
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 Register
<i>Properties included in the Inventory of Historic and Archaeological Assets of the Commonwealth</i>	
Chester Guild, Hide and Leather Machine Company	Recommended National Register Eligible
Chinatown District	Recommended National Register Eligible
Federal Reserve Bank of Boston	Recommended National Register Eligible
Keystone Building	Not evaluated – To be evaluated when building is 50 years old
Kneeland Street Steam Heating Plant	Recommended National Register Eligible
MBTA Operations Center Power Substation	Not evaluated – To be evaluated when building is 50 years old
South End Industrial Area	Recommended National Register Eligible
245 Summer Street	Not evaluated – To be evaluated when building is 50 years old
USPS General Mail Facility/South Postal Annex	Recommended Not National Register Eligible
Weld Building	Recommended National Register Eligible
<i>Properties Not Previously Surveyed</i>	
Gillette	Recommended National Register Eligible

5.1.1. Properties Listed in the National and/or State Registers of Historic Places

Commercial Palace Historic District

The Commercial Palace Historic District is located to the northwest of South Station and the project site. The district, located at the junction of Boston's downtown retail and financial districts, is characterized by a mixture of low-scale mid-to-late nineteenth century masonry commercial buildings and modern high rise office towers. More than half of the District is comprised of four to six-story masonry 'commercial palaces' constructed by wealthy Boston merchants following the Great Fire of 1872. Together, they form a cohesive late nineteenth century urban streetscape. Of additional significance are the District's distinctive eighteenth century winding street patterns and large number of intact storefronts. The building was determined eligible for listing in the National Register of Historic Places by the Keeper of the Register and is listed in the State Register of Historic Places in 1985.

Fort Point Channel Historic District

The Fort Point Channel Historic District is located just southeast of downtown Boston, and east of the project site, separated from South Station by the Fort Point Channel, 245 Summer Street, and the USPS

General Mail Facility/South Postal Annex. The District is roughly bounded by New Northern Avenue to the north, A Street to the east, and Richards and Wormwood Streets to the south, and the Fort Point Channel to the west. Four bridges provide direct access between downtown Boston and the District: Northern Avenue Draw Bridge (pedestrian use only), Evelyn Moakley Bridge (New Northern Avenue), Congress Street Bridge, and Summer Street Bridge.

The Boston Wharf Company, through an ongoing campaign of land filling which began in 1836 and continued until 1882, created the land on which the District was constructed. The Boston Wharf Company was responsible for erecting nearly all the buildings within the District. These buildings were constructed for use as general manufacturing, warehouse, and commercial space, and as shipping and receiving uses for Boston's wool trade. Throughout their building campaign, the Boston Wharf Company employed a staff architect who was responsible for building design. Most of the buildings within the District were designed by Morton D. Safford, the Wharf Company's staff architect from 1893 to 1917, and his successor, Howard B. Prescott (1917 to 1939). The District is characterized by well-preserved late nineteenth and early twentieth century masonry buildings which average five to six stories in height and represent a variety of architectural styles including Romanesque Revival, Renaissance Revival, Classical Revival, Queen Anne, Italianate, and Industrial.

At the time of the Fort Point Channel Historic District National Register listing in 2004, the District encompassed 98 industrial, commercial, and civic buildings on A, Binford, Congress, Farnsworth, Melcher, Midway, Pittsburgh, Sleeper, Stillings, and Summer Streets.

Fort Point Channel Landmark District

With similar but slightly different boundaries than the National Register district, the Fort Point Channel Landmark District was adopted as a City of Boston landmark district in 2008. When listed, the District included 95 industrial and commercial buildings and four structures (Summer Street Bridge over A Street, Factory Buildings Trust Industrial Building chimney, roof sign on 10 Melcher Street, and the seawall along Fort Point Channel). The 55-acre District is roughly bounded by Seaport Boulevard to the north, Boston Wharf Road, West Service Road and Medallion Avenue to the east, Iron Street to the South and A Street, Necco Street and the eastern perimeter of the Fort Point Channel to the west. Unlike the Fort Point Channel Historic District, the Landmark District was created to ensure that any proposed exterior alterations to buildings within the District remain consistent, with the design guidelines established as part of the landmark designation process through review provided by the Fort Point Channel Landmark District Commission. Therefore, the Fort Point Channel itself was not included in the Landmark District.

Leather District

The Leather District is located to the south of Boston's Financial District, and is bounded by the railroad yards and Bus Terminal of South Station to the east, the Surface Artery to the west and north, and the Massachusetts Turnpike ramps (Kneeland Street) to the south. South Station and the project site lie immediately east of the District. The District is comprised of approximately forty-six buildings, all of which were built for commercial purposes, many associated with the leather trade.

The Leather District, formerly known as South Cove, was largely underwater until 1833, when the South Cove Corporation was given a charter to fill in the cove to create more developable commercial land. Over the next six years, 77 acres of land were added. However, during the 1840s, the need for low-cost housing led to the area being developed for residential rather than commercial uses. During the 1850s and 1860s, the growing shoe and leather trade began to push into this area, and the inexpensive housing which had been built was torn down. The Great Fire of 1872 destroyed much of Boston's Central Business District, including parts of the Leather District. The redevelopment that took place in the 1880s

and 1890s resulted in a cohesive district with harmony of design, scale, and materials. The Romanesque Revival and Classical Revival styles dominate the area. Most of the buildings are five or six stories in height, and are characterized by continuous floor levels, band courses, and cornice lines. The favored building materials are red brick and brownstone, as well as granite, limestone, and cast stone.

Although the uses in the District have changed, the buildings have retained a high degree of architectural integrity and character. The Leather District is notable today as Boston's most intact and homogeneous district of late nineteenth century vernacular commercial structures. The district was listed on the National Register of Historic Places in 1983.

Russia Wharf Buildings

The Russia Wharf Buildings form a 2.2-acre commercial block at 270 and 276-290 Congress Street and 518-540 Atlantic Avenue. Historically known as the old Russia Wharf, the site is located in the vicinity of the 1773 Boston Tea Party and subsequently served as headquarters for the prosperous trade with Russia as early as 1784. After the Great Fire of 1872 destroyed much of the downtown and Russia Wharf structures, the City of Boston extended Congress Street over the wharf with construction of a new bridge connecting downtown to South Boston. The three extant buildings on Russia Wharf were not constructed until 1897 and were originally intended for commercial and light industrial use. The Russia Wharf buildings at 270 and 276-290 Congress Street were designed in the Classical Revival style by Boston architectural firms Rand and Taylor, and Kendall and Stevens. The locally significant architectural firm of Peabody and Stearns was responsible for the building at 518-540 Atlantic Avenue. The district was listed on the National Register of Historic Places in 1980.

South Station Headhouse

In 1896, the Boston Terminal Company (which was comprised of five smaller railroad companies) was incorporated, and plans were made to consolidate five railroad lines into one terminal, which would be called South Union Station. Land was acquired in the South Cove area, a developing commercial and warehouse district where the Boston & Worcester Railroad had already located a terminal. In preparation for this massive undertaking, the company cleared a large swath of land of existing commercial and industrial structures, abolished streets, and rerouted others. The cleared site extended east to Dorchester Avenue, including the present site of the USPS General Mail Facility/South Postal Annex, and as far south as Kneeland Street.

The Boston Terminal Company hired the architectural firm of Shepley, Rutan & Coolidge (successors to architect H.H. Richardson) to design the South Station headhouse. The building was Boston's first and now the only remaining monumental public example of the Classical Revival Style. The curved facade consists of five symmetrically arranged bays. The lower two floors have rockfaced granite facing, while the upper floors are unified by dressed granite columns. The central bay is framed by full height piers, and has three massive round arched openings, topped by a colonnade and a portico of two Ionic columns with a triangular pediment. The centerpiece of the entablature is an ornate clock topped with an eagle.

With the post-war rise of the automobile and a decline in rail travel, the headhouse fell into disrepair by the 1960s, and was proposed for demolition in 1966. In 1975, however, the headhouse was placed on the National Register of Historic Places and efforts were made to restore the building as part of the South Station Urban Renewal Project that had begun in 1969. At that time, only the central portion of the original station remained. Large sections of the east and west wings had been demolished in the early 1970s for construction of the 245 Summer Street for Stone & Webster, for expansion of the USPS General Mail Facility/South Postal Annex on Dorchester Avenue, and for construction of a bus depot on Atlantic Avenue.

5.1.2. Properties Included in the Inventory of Historic and Archaeological Assets of the Commonwealth

Chester Guild, Hide and Leather Machine Company

The Chester Guild, Hide and Leather Machine Company, located at 51-53 High Street in Boston's Central Business District, was built circa 1873 following the Great Fire of 1872 that destroyed much of downtown Boston. The narrow four-bay-wide mercantile building features a granite façade with rectangular fenestration, granite sill courses, and projecting band courses between each story. A stone modillion course defines the cornice. The rear elevation features a brick façade with an exposed basement level, granite sill and lintel courses and a corbelled brick cornice.

Built by Chester Guild & Son around 1873, the early post-fire brick mercantile building was once part of a continuous granite-faced row of buildings that extended west down High Street and around the corner on Federal Street. The building is also significant for its associations with Boston's leather industry, as Chester Guild & Son were joined by the leather splitting H.H. Read & Company in 1887. The building was recommended as eligible for inclusion in the State and National Registers as part of the Central Artery/Third Harbor Tunnel Project Updated Survey of Historic Resources.

Chinatown District

The Chinatown District is a densely populated residential and commercial neighborhood bounded on the north by Essex Street, on the west by Washington Street, on the south by Marginal Road, Oak, and Tai Tung Streets, and on the east by Tyler, Hudson, and Edinboro Streets.

Established during the Early Industrial Period, the District is characterized by a series of ca. 1840 Greek Revival style brick rowhouses along Tyler, Beach, and Hudson Streets. These early residences were built in response to the 1833 construction of the Boston and Worcester Railroad terminal and rail yard at the intersection of Lincoln and Beach Streets. The buildings were used to house successive waves of immigrants throughout the first three quarters of the nineteenth century, including the Irish, Jewish, Syrian, and Italian populations. Following the Civil War, the development of Chinatown gained momentum with the influx of Chinese immigrants to the area. By 1875 the first Chinese laundries appeared on Harrison Avenue and by 1890 the area from Kneeland to Essex Streets was deemed the Chinese 'colony' of Boston. The District was recommended as eligible for inclusion in the State and National Registers as part of the Central Artery/Third Harbor Tunnel Project Updated Survey of Historic Resources.

Federal Reserve Bank of Boston

The Federal Reserve Bank of Boston located at 556 Atlantic Avenue was designed by Hugh Stubbins & Associates and completed in 1973. The building was "designed to unite a growing central business district with a major transportation exchange." At the time, Stubbins noted that "three main forces converged to shape the design of the complex: the importance of a clear expression of distinct but related functions in a unified scheme that would enhance a prime renewal area of downtown Boston, the need for well-defined circulation and the requirement for a high level of security within a pleasant environment."⁵

The building was surveyed by the BLC in 2009, at which time it was noted that although not yet 50 years of age, the Federal Reserve Bank of Boston is significant for its associations with the architectural and

⁵ Massachusetts Historical Commission. *Inventory of Historic and Archaeological Assets of the Commonwealth*. Boston: Massachusetts Historical Commission, Office of the Secretary of State, 2013 Federal Reserve Building, MHC BOS.1516

economic renewal of downtown Boston and its waterfront in the late-twentieth century and for its important role in the financial industry of New England. The building is an outstanding example of late twentieth-century office design by a nationally-known architect, Hugh Stubbins, and maintains an iconic presence on the Boston waterfront. Therefore, when the building reaches 50 years of age, likely it will merit National Register designation for its significance under NPS eligibility criteria A and C on the local and state levels. For the purposes of the SSX project, the Federal Reserve Bank of Boston is recommended as meeting National Register eligibility criteria.

Keystone Building

The Keystone Building, located at 73-103 High Street in Boston's Central Business District, was designed by architect Pietro Belluschi with the help of Emery Roth & Sons. The trapezoidal modern office tower is of steel frame construction with a two-story high base and double-height ground floor, recessed behind deep engaged piers enclosed with bronzed curtain-wall construction with clear glass spandrel panels. Bay windows wrap around the building corners and give an undulating appearance to the facades. The Keystone Building was the first to use Travertine marble as a cladding material rather than an interior embellishment.

Construction of the building was completed in 1970 as headquarters for Keystone Custodian Funds, Inc., a financial organization founded in 1932. It does not appear to meet the threshold of exceptional significance of National Register Criterion Consideration G, for properties less than 50 years of age. While it is included in the Inventory, consideration of the building's eligibility for inclusion in the National Register is recommended when the building reaches 50 years of age, per the NPS eligibility criteria. The BLC updated the original Inventory Form in 2009 and noted the building should be reconsidered for listing when it reaches 50 years of age.

Kneeland Street Steam Heating Plant

The Kneeland Street Steam Heating Plant, located at 155 Kneeland Street in the Central Business District, was built between 1929 and 1930 as the first central steam plant in the City of Boston. The red brick building features a band course of cast stone beneath a continuous cast stone sill course between the first and second stories along the north and west elevations. The south and east elevations are clad with corrugated metal, and a pair of highly visible twin stacks extend from the roof. The power plant was recommended as eligible for inclusion in the State and National Registers as part of the Central Artery/Third Harbor Tunnel Project Updated Survey of Historic Resources in 1989; the power plant was determined eligible for listing in the State and National Registers by the MHC in 1990.

MBTA Operations Center Power Station

The MBTA Operations Center Power Station, located at 35-49 High Street in Boston's Central Business District, was designed by the architectural and engineering firm of Jackson & Moreland and built by the George A. Fuller Company in 1970. Jackson & Moreland was a Boston-based firm of consulting engineers, founded around 1920 by Dugald C. Jackson (1865-1951) and Edward L. Moreland, who each served, at different times, as head of the electrical engineering department at MIT. The company provided services in electrical, civil, structural, and mechanical design, with a broad portfolio of infrastructure projects around the country. The modern brick power station does not appear to meet the threshold of exceptional significance of National Register Criterion Consideration G, for properties less than 50 years of age. While it is included in the Inventory, consideration of the building's eligibility for inclusion in the National Register is recommended when the building reaches 50 years of age, per the NPS eligibility criteria.

South End Industrial Area

The South End Industrial Area comprises approximately 83 acres located south of Chinatown and the Massachusetts Turnpike Extension, south of downtown Boston. The roughly L-shaped Area includes 20 buildings, most of which are masonry-clad, multi-story, rectangular factory, machine shop, and warehouse buildings with flat-roofs, regular fenestration patterns, brick and granite trim. The first floors typically contain heavy granite and iron structural members, allowing wide bays for display of merchandise and movement of raw materials and finished products through the building. Historically, the main industries of the Area included furniture making, specifically pianos. The Area also includes a significant early electrical generating station, the former Boston Elevated Railway Co. Central Power Station at 540A Harrison Avenue. Most structures are in fair to good condition, and the Area benefits from significant adaptive reuse as well as mixed use of its industrial structures.

The South End Industrial Area was previously surveyed for the BLC as part of a City-Wide Comprehensive Industrial Survey of Boston, Massachusetts. At that time, it was noted that the South End Industrial Area possessed integrity of location, design, setting, materials, workmanship, feeling, and association. The area was recommended as eligible for inclusion in the National Register of Historic Places as a potential historic district, meeting NPS eligibility criteria A and C. The South End Area continues to possess integrity of location, design, setting, materials, workmanship, feeling, and association and the recommendation that the area is eligible for inclusion in the National Register of Historic Places is still relevant.

The South Station Rail Improvements APE contains a small section of one building at 110-112 Shawmut Avenue located within the South End Industrial Area. This building was identified as a contributing property to the South End Industrial Area but was not recommended as individually eligible for inclusion in the National Register as part of the BLC's industrial survey.

245 Summer Street

The building at 245 Summer Street, constructed for Stone & Webster Building, was designed by the New York architectural firm of Welton Becket & Associates in 1973. The International style steel frame office block effectively extended the financial area into the South Station area. Because of its relatively low profile and uncomplicated facades, it presents a non-competing backdrop for the monumental, South Station headhouse. Construction of the building was completed in 1973 and does not appear to meet the threshold of exceptional significance of National Register Criterion Consideration G, for properties less than 50 years of age. While it is included in the Inventory, consideration of the building's eligibility for inclusion in the National Register is recommended when the building reaches 50 years of age, per the NPS eligibility criteria.

USPS General Mail Facility/South Postal Annex

The USPS General Mail Facility/South Postal Annex, located adjacent to the South Station tracks to the southeast, was constructed ca. 1934 with a substantial renovation and addition constructed in 1966 (southern structure) by the Boston architecture firm of Pedersen & Tilney, and a subsequent renovation in 1979 (northern building) by the Boston firm of Perry Dean Stahl and Rogers. The three-story southern structure is constructed of brick, with irregular fenestration and loading docks at ground level on the east (Dorchester Avenue) elevation. Stepped-back penthouse levels at the northern end of the structure contain horizontal bands of windows and wide concrete bands at the top edge. The northern structure is clad in metal with pairs of overscaled vent pipes protruding from three levels of the southern end of the east elevation. A double-height entrance occupies the northeast corner, featuring dark glass curtain walls framed by white metal-clad piers and lintels and a bright red, curved canopy over the revolving door. A

small raised entry plaza contains concrete steps, low walls, and paving. Loading bays at the south end of this elevation are protected by a flat metal canopy above. Single square windows are distantly spaced on the second and third levels, surmounted by circular windows on the top floor. Single square windows are employed on the short north wall.

The building was surveyed by BLC in 1980, at which time it was noted that the structure did not contribute architecturally to the surrounding area. The building was evaluated by the USPS in 1983, which concluded that extensive renovations had substantially altered the original structure and that the property did not meet National Register eligibility criteria. The building is now over 50 years of age, however, per the NPS eligibility criteria, the building still lacks sufficient integrity of design, materials, and workmanship to be eligible for listing in the National Register. A copy of the USPS documentation is included with the inventory form in Attachment AA.

Weld Building

The Classical Revival style Weld Building, located at 172-180 Federal Street in Boston's Central Business District, was designed by the nationally prominent architectural firm of Shepley, Bulfinch and Coolidge, the successor firm to Henry Hobson Richardson's firm, and built by the Norcross Brothers in 1900. The office and commercial building features two recessed entrances at the northwest and southwest corners, each with polished granite Doric columns set in antis within glass and metal storefront systems. The second story features cast stone ornamented with medallions and pendant swags between the paired windows and the upper stories feature flanking three-bay pavilions with cast stone window surrounds. A two-story addition designed by August Associates was made to the roof in 1987 which replicated the second story cast stone denticulated cornice and inserted symmetrical windows that were identical the single pane windows in the existing building with a 'transom' detail below. The building was recommended as eligible for inclusion in the State and National Registers as part of the Central Artery/Third Harbor Tunnel Project Updated Survey of Historic Resources.

5.1.3. Properties Not Previously Surveyed

Gillette

The Gillette complex currently consists of 20 buildings that were constructed from circa 1910 through 2000. As shown in Figure 5, the property totals approximately 37 acres, bounded on the northeast by Necco Street and Necco Court, on the southeast by A Street, on the southwest by West Second Street and the northwest by Dorchester Avenue and the Fort Point Channel. The property is accessed from the surrounding streets as well as an interior street network including Mt. Washington Avenue, Granite Street, Binford Street, Baldwin Street, Baldwin Place, and Richards Street.

Gillette was and remains an important manufacturing employer in the Boston area. The growth of the complex is part of a pattern of industrial development seen along the South Boston waterfront in the late nineteenth and early twentieth centuries. The complex is associated with the founder of the Gillette Company, King Camp Gillette, a noted inventor, and is the site of innovations in shaving technology and personal hygiene. While some buildings have been altered with later additions and/or replacement windows and doors, the majority of the complex is intact. Later development such as Building 14 is part of the expansion of facilities and associated with the company's growth in the twentieth century.

The property is recommended as eligible for listing in the National Register of Historic Places under Criterion A for its importance in the industrial history of Boston and the development of manufacturing along the Fort Point Channel. The complex is also recommended as eligible under Criterion C as an important example of industrial architecture from the early through the mid-twentieth century.

5.2. Layover Facilities Summary

5.2.1. Widett Circle

The APE for Widett Circle is shown in Figure 6.

There are no historic properties listed in the National or State Register of Historic Places, included in the Inventory, or 50 years or older that have not been previously identified within the Widett Circle project limits APE.

5.2.2. Beacon Park Yard

The APE for Beacon Park Yard is shown in Figure 7.

There are no historic properties listed in the National or State Register of Historic Places, included in the Inventory, or 50 years or older that have not been previously identified within the Beacon Park Yard APE.

5.2.3. Readville – Yard 2

A review of MHC records conducted during the background research phase of the survey and field survey found that there are no historic buildings or structures listed in the National or State Register of Historic Places within the Readville – Yard 2 APE. A portion of the Readville – Yard 2 APE is located within the Readville Industrial Survey Area, which is a large, previously surveyed area that encompasses historic districts and individual historic properties. The portion of the Readville Industrial Survey Area located within the APE includes two individual historic properties. There are no other properties 50 years or older in the Readville – Yard 2 APE that have not been previously identified. The APE and resources are shown in Figure 8 and Table 2.

An excerpted copy of the MHC Inventory form for the Readville Industrial Survey Area is located in Attachment AA. The Readville Industrial Survey Area and the two individual historic resources located within the Readville – Yard 2 APE are described in the following subsections.

Table 2—Historic Resources within the Readville – Yard 2 APE

Name	National/State Register Eligibility
<i>Properties included in the Inventory of Historic and Archaeological Assets of the Commonwealth</i>	
Frank Kunkel & Son Hammered Forgings	Recommended Not National Register Eligible
Standard Oil Company Depot Complex	Recommended Not National Register Eligible

Areas included in the MHC Inventory within the APE

Readville Industrial Survey Area

The Readville Industrial Survey Area in Hyde Park is a roughly bow-shaped region comprising approximately 215 acres beginning at the former Readville Car Shops (MHC 11076; 12907-16; 1902) at the Dedham/Hyde Park border and continuing north toward Milton. The area ranges northeast-southwest along the line of the former New York, New Haven and Harford Railroad (now the NEC and MBTA Fairmount Line/Dorchester Branch). Most sites are concentrated in a corridor along Hyde Park Avenue between Wolcott Square, Grantley Street, B Street, Eastern Avenue and Factory Street. The area is bordered by the Neponset River to the northeast, and terminates just south of the junction of the Neponset River and Mother Brook. There are several sites close to the northeast corner of Mill Pond and along the path of Mother Brook on River Street, Reservation Road, and Business Street. The area is characterized by masonry, concrete-frame, steel-frame, and timber-frame buildings constructed between 1866 and about 1950. Building types include foundries, machine shops, and warehouses.

The Readville Industrial Survey Area was previously surveyed for the BLC as part of a City-Wide Comprehensive Industrial Survey of Boston, Massachusetts. The area as a whole was not recommended for listing as a potential historic district. Within the area, four separate industrial complexes were recommended for listing in the National Register Places. The two properties identified and surveyed within the Readville Industrial Survey Area and located within the Readville – Yard 2 APE described above were not recommended for meeting NPS National Register eligibility criteria. The two properties are described in the following subsection.

Properties Included in the Inventory of Historic and Archaeological Assets of the Commonwealth

Frank Kunkel & Son Hammered Forgings, Wolcott Court

Frank Kunkel & Son Hammered Forgings located on Wolcott Court is a rectangular, one-story, 1 by 13-bay, masonry and steel frame building with a gable roof. The elevations are articulated by brick piers between the bays. The main entrance is located on the west elevation and to the north of a large, metal, roll up bay. Windows are rectangular, aluminum, fixed sash, single pane openings with bay-width concrete sills and lintels. The south elevation of the structure has been modified to an office building appearance with a metal, standing-seam shed roof over the entrance. To the south of this structure is a 1½-story, end gable building clad in corrugated metal with an asphalt shingle roof. An entrance is located on the south elevation with a large, metal roll-up door. The last two bays on the east elevation are smaller and contain a standing seam metal roof. The building is in fair condition.

The Frank Kunkel & Son Hammered Forgings building was previously surveyed in 1997 as part of a City-Wide Comprehensive Industrial Survey of Boston, Massachusetts. At the time the building was surveyed it was noted to be extensively modified and the building was not recommended as eligible for inclusion in the National Register. In the subsequent years, the building has continued to be modified. The building is not associated with significant events or persons and does not embody distinctive architecture. In addition, the building lacks sufficient integrity of design, materials, and workmanship and does not appear to be eligible for listing in the National Register, per the NPS eligibility criteria.

Standard Oil Company Depot Complex, Wolcott Street

The Standard Oil Company Depot Complex on Wolcott Street, consisting of six masonry-and-steel frame buildings, originally supplied oils and lubricants for machine shops, cranes, rail car bearings, and other

machinery in the area. The main building is a two-story, three-by-three-bay structure with a one-story shed-roof ell. The second building to the east is a rectangular six-by-three-bay structure with the entrance located in a shed-roof porch at the west elevation. The third building at the northeast corner is a four-by-one-bay structure with a high concrete foundation sheathed in ribbed metal with a shed roof. The fourth building is a one-story, three-by-two-bay structure located in the northern half of the complex. The fifth building is a small, end-gable brick structure. The sixth building is a one-story, shed-roof timber frame building sheathed in ribbed metal. The buildings are in fair to poor condition.

The Standard Oil Company Depot Complex was previously surveyed in 1997 as part of a City-Wide Comprehensive Industrial Survey of Boston, Massachusetts. At that time, the complex was not recommended as eligible for inclusion in the National Register. When the complex was surveyed it was noted to be in poor condition and the buildings have continued to deteriorate. The complex is not associated with significant events or persons and does not embody the distinctive architecture. In addition, the buildings lack sufficient integrity of design, materials, and workmanship and do not appear to be eligible for listing in the National Register, per the NPS eligibility criteria.

6. Project Impacts

6.1. Methodology

MassDOT conducted impact analyses to assess project impacts to historic resources within and in the vicinity of the South Station and the layover facilities. These analyses were considered for impacts to historic resources, specifically in the areas of visual, noise and vibration, shadow, and wind. The analysis methodology and project impacts to historic resources are summarized in this section. More detailed information on the analyses may be found in the respective DEIR sections and appendices.

6.1.1. Visual

Attachment CC describes the analysis that was undertaken to assess the potential visual impacts of the new construction in Alternative 2 and 3. Note that the No Build Alternative includes the South Station Air Rights (SSAR) project. Photographs were taken at vantage points from and looking toward historic resources within the South Station APE, including the South Station headhouse, Fort Point Channel Historic District, Leather District, Federal Reserve building, and Chinatown. A total of seven views were included in the visual analysis. Analysis considered the location of the new construction, potential view corridors, and the potential for new construction visual impacts to the historic properties within the APE. The analysis was undertaken to assess if the new construction would have an adverse effect, defined as the introduction of visual elements that are out of character with or would alter the setting of the historic property.

Outlines of the No Build Alternative with the South Station Air Rights project and the new construction associated with Alternatives 2 and 3 were superimposed on the photographs to depict the existing and Build conditions and to assess potential visual impacts to historic properties within the South Station APE. The views of the No Build Alternative and Alternatives 2 and 3 are included in DEIR Section 4.7 and Attachment CC.

The new construction at the layover facilities is minimal. New construction and/or expansion at the layover facility sites would be consistent with the surrounding industrial land uses. A visual impact analysis was not undertaken for the layover facilities. Visual impacts to significant resources within the layover facilities APEs are not anticipated.

6.1.2. Noise and Vibration

Section 4.13 and Appendix 11 – *Noise and Vibration Technical Report* of the SSX DEIR describe the analysis methodology and potential noise and vibration impacts resulting from train operations and construction of the proposed project. The noise analysis considered the existing conditions and potential impacts to resources in the vicinity of South Station in accordance with FTA criteria, to assess if the project would introduce new noise and/or vibration that would have adverse impacts on historic properties located within the APE, defined as the introduction of audible or atmospheric elements that could cause damage, are out of character with, or could alter the setting of the historic property. Historic properties that were included in the noise assessment that are also included in the South Station APE include the South Station headhouse, Federal Reserve building, Fort Point Channel Historic District, and Leather District.

6.1.3. Shadow

Section 4.3 and Appendix 6 – *Coastal Resources Technical Report* of the SSX DEIR describe the analysis methodology and potential shadow impacts of the proposed project. The shadow analysis considered the existing conditions and potential impacts to resources in the vicinity of South Station in accordance with Chapter 91 shadow study criteria. Analysis consider if new shadow from the project would have adverse impacts on historic properties within the APE, defined as the introduction of shadows that are out of character with or would alter the setting of the historic property.

Historic properties that were included in the study that are also included in the South Station APE include South Station, Fort Point Channel Historic District, Federal Reserve building, and 245 Summer Street (located within the APE, but not a historic property).

The shadow analysis examined the potential impacts to the ground-level public spaces. Analyses were conducted for the hours of 9:00 a.m., 10:00 a.m., 11:00 a.m., 12:00 p.m., 1:00 p.m., 2:00 p.m., 3:00 p.m., 4:00 p.m., 5:00 p.m., and 6:00 p.m. on October 23, which is a commonly used and accepted date by both Massachusetts Coastal Zone Management (MCZM) and the Massachusetts Department of Environmental Protection (MassDEP) for shadow analysis within Chapter 91 jurisdiction. The new construction at the layover facilities in Joint/Private Development Alternatives 1, 2, and 3 is minimal and shadow impacts to significant resources are not anticipated. A shadow analysis was not undertaken for the layover facilities.

6.1.4. Wind

Section 4.3 and Appendix 6 – *Coastal Resources Technical Report* of the SSX DEIR describe the potential wind impacts within a 1,600 foot radius of the South Station project site. The wind analysis considered the existing conditions and potential impacts to resources in the vicinity of South Station in accordance with the BRA's standards for assessing the relative wind comfort of pedestrians. The analysis was undertaken to assess if the project would introduce new wind conditions that would have adverse impacts on historic properties located within the APE, defined as the introduction of atmospheric elements that could cause damage, are out of character with, or could alter the setting of the historic property. Historic properties located in the wind study area that are also included in the South Station APE are the South Station headhouse, Fort Point Channel Historic District, Leather District, Commercial Palace Historic District, Kneeland Street Steam Heating Plant, Federal Reserve building, and 245 Summer Street (located within the APE, but not a historic property).

The massing configuration for the proposed Alternative 3 was studied without and with mitigation measures. Mitigation measures include wind control features at the pedestrian level proposed to reduce

mean speed winds and effective gusts. These wind control features include six coniferous trees to the south of Joint Development Building 1 (JD1) and an at-grade wind screen at the west end of JD1.

The new construction at the layover facilities is minimal and wind impacts to significant resources are not anticipated. A wind study was not undertaken for the layover facilities.

6.1.5. Demolition

Joint/Private Development Alternatives 1, 2, and 3 include the expansion of South Station onto the adjacent 14-acre USPS property. MassDOT would acquire and demolish the USPS General Mail Facility/South Postal Annex. The USPS facility is located within the APE but is not a historic property.

Joint/Private Development Alternatives 1, 2 and 3 include the demolition of the food processing, food storage, and food logistics buildings at Widett Circle. The buildings located within the Widett Circle APE were all constructed less than 50 years ago in circa 1968 and are therefore not considered historic properties.

There is no demolition proposed at Beacon Park Yard or Readville – Yard 2.

6.2. No Build Alternative Impact Analysis

The No Build Alternative represents a future baseline condition against which the Build Alternatives will be compared.

6.2.1. South Station Site

The No Build Alternative represents a future baseline condition against which the Build Alternatives are compared. With the No Build Alternative, South Station, including the headhouse and track operations, and the USPS General Mail Facility, would remain as they currently exist. The majority of Dorchester Avenue at the site would remain in private use by the USPS in support of USPS operations. Extending from the southern line of Summer Street, the MBTA would continue to maintain a permanent easement along Dorchester Avenue for pedestrians and vehicles of over approximately 200 feet. Generally unrestricted public access would continue to be provided along Dorchester Avenue of over approximately 400 feet for customer use of USPS facilities.

With the No Build Alternative, there would be no private development associated with South Station beyond the development previously approved by the Massachusetts EEA: the South Station Air Rights (SSAR) project. The SSAR project was approved by the Secretary of EEA in 2006 (EEA Number 3205/9131) as an approximate 1.8 million sf mixed-use development to be located directly above the railroad tracks at the South Station headhouse. The SSAR project also includes a horizontally expanded bus terminal of approximately 70,000 square feet, pedestrian connections from the train station concourse and platforms to the expanded bus terminal, and a 3-level parking garage with 775 spaces located above the bus terminal.

Visual

The SSX No Build Alternative would introduce no visual impacts on historic properties within the South Station APE.

Noise and Vibration

As in the DEIR Section 4.10, noise and vibration from the No Build Alternative would be similar to the existing conditions.

Shadow

As described DEIR Section 4.3, shadow from the No Build Alternative would not increase impacts beyond the future existing conditions of the South Station site, which already experiences significant morning shadow cover from existing buildings and decreased shadow cover as the afternoon progresses.

Wind

As described DEIR Section 4.3, wind from the No Build Alternative would not increase impacts beyond the future existing conditions. Winds at sidewalks and building entrances in the No Build Alternative are comfortable for walking, standing, or sitting. Uncomfortable wind speeds exist at the intersection of Atlantic Avenue and Essex Street, along the east bank of Fort Point Channel, and at the south end of the development site.

Demolition

There is no demolition in the No Build Alternative.

6.2.2. Layover Facility Sites

Widett Circle

In the No Build Alternative, it is anticipated the existing parcels would continue in private ownership, and the site would continue to be used for industrial/heavy industrial land uses. In October 2013, Celtic Recycling, LLC received approval from the Massachusetts EEA to renovate and convert existing facilities at the Cold Storage site, located at 100 Widett Circle, into a material recycling facility.

The No Build Alternative would have no impacts on historic properties within the Widett Circle APE.

Beacon Park Yard

In the No Build Alternative, it is anticipated that the Beacon Park Yard site would remain largely the same as today, with the exception of highway reconfiguration of the Massachusetts Turnpike to the north of the site and MBTA Worcester Line track improvements to the south of the site.

The No Build Alternative would have no impacts on historic properties within the Beacon Park Yard APE.

Readville – Yard 2

In the No Build Alternative, MassDOT would continue to use Readville – Yard 2 as its maintenance repair facility and largest layover yard for its south side service. It is anticipated that MassDOT would continue to use Readville – Yard 2 to provide layover space for ten trainsets.

The No Build Alternative would have no impacts on historic properties within the Readville – Yard 2 APE.

6.3. Alternative 1 – Transportation Improvements Only Impact Analysis

Alternative 1 would include the previously-approved private development described in the No Build Alternative. In addition, South Station would be expanded onto the adjacent 14-acre USPS property. MassDOT would acquire and demolish the USPS General Mail Facility/South Postal Annex. The existing South Station Terminal would include expanded passenger concourse and passenger support services. Capacity improvements would include construction of up to seven new tracks and four platforms and extensions of some existing platforms, for a total of 20 tracks. Cove, Broad and Tower 1 Interlockings at the terminal approach would be reconstructed. In Alternative 1, South Station expansion and development would be in accordance with Chapter 91 standards for nonwater-dependent infrastructure facilities and City zoning requirements. In this alternative, no provision would be made for future private development as part of the SSX project.

Dorchester Avenue would be restored for public and station access. Restoration of Dorchester Avenue would reconnect Dorchester Avenue to Summer Street as a public way. It would include landscaping and improved pedestrian and cycling connections and facilities (adjacent sidewalks, crosswalks, and cycle track). Restoration also would include construction of an extension of the Harborwalk along reopened Dorchester Avenue.

6.3.1. South Station Site

Visual

Alternative 1 would have no adverse visual impact on views to or from historic properties included in the APE.

Although the station designs have not been advanced beyond conceptual design, it is assumed that the station expansion into the USPS site would generally be consistent with the scale of the existing South Station headhouse.

Alternative 1 would enhance views to a historic district. The completion of the Harborwalk along Dorchester Avenue would facilitate an important public amenity, allowing access to an area that is currently closed to the public. The completion of the Harborwalk would improve the views of the Fort Point Channel Historic District, which currently cannot be viewed from the southwest because of prohibited access along Dorchester Avenue adjacent to the USPS facility.

Noise

Train Operation Noise Impacts: As described in the noise sections of the DEIR, noise impacts are limited to one historic property located within the APE for Alternative 1. A moderate noise impact is expected to occur to noise receptors within the Fort Point Channel Historic District due to the removal of the USPS facility along Dorchester Avenue. Currently, the USPS facility acts as an effective noise barrier so that noise from existing train operations does not impact the receptors across the Fort Point Channel. As a result of the removal of the USPS facility, the 24-hour Ldn noise levels would exceed FTA moderate impact criteria.

Construction Noise Impacts: As described in the construction noise sections of the DEIR, construction noise levels from the SSX project are not expected to exceed FTA construction noise limits. Per the City of Boston L10 construction noise criteria, the South Station headhouse could be impacted by construction noise.

Vibration

Train Operation Vibration Impacts: As described in the vibration sections of the DEIR, as a result of the slow speed of the trains (approximately ten mph) entering and leaving South Station, the vibration levels generated by the trains would be below FTA criteria. In addition, because of the low vibration levels generated by the train, the train activity at South Station is not expected to result in any ground-borne noise inside the buildings.

Construction Vibration Impacts: As described in the construction vibration section of the DEIR, vibration levels generated by the construction equipment for this project are well below the building damage threshold and would not result in any structural damage to nearby buildings.

Shadow

As described in the shadow impact sections of the DEIR, the Fort Point Channel Historic District would experience some new shadows late in the day. At 3pm Alternative 1 would create a small area of net new shadows approximately 100 feet wide adjacent to the existing South Station platforms. At 4pm Alternative 1 would create net new shadows extending approximately 175 feet from the proposed headhouse. No adverse impacts are anticipated from the minor new shadows created by Alternative 1.

Wind

As described in the wind sections of the DEIR, a wind study was not conducted for Alternative 1 because as a nonwater-dependent infrastructure project subject to 310 CMR 9.55, it is not subject to the provisions of 310 CMR 9.51.

Demolition

Alternative 1 calls for the demolition of the USPS General Mail Facility/South Postal Annex. The building is located within the South Station APE, but is not a historic property.

6.3.2. Layover Facilities Sites

The layover impacts described below are the same for Alternative 1 – Transportation Improvements Only, Alternative 2 – Joint/Private Development Minimum Build, and Alternative 3 – Joint/Private Development Maximum Build.

Noise

Train Operation Noise Impacts: As described in the noise sections of the DEIR, train operation noise impacts at the Widett Circle are below FTA impact criteria.

The noise analysis identified noise impacts at residences along Wadsworth Street and Pratt Street at Beacon Park Yards. These areas are located outside of the APE and no identified historic properties within the APE would be impacted.

The noise analysis identified noise impacts at residences along Wolcott Street and Riley Road at Readville – Yard 2. These areas are located within the APE, but the impacted properties are not identified historic properties.

Construction Noise Impacts: As described in the construction noise sections of the DEIR, construction noise levels from the SSX project at the layover facilities are not expected to exceed FTA construction noise limits. Construction at the Beacon Park Yard could exceed City of Boston construction noise limits.

Vibration

Train Operation Vibration Impacts: As described in the vibration sections of the DEIR, predicted new vibration at the layover facilities would not impact historic properties within the APE.

Construction Vibration Impacts: As described in the construction vibration section of the DEIR, vibration levels generated by the construction equipment for this project are well below the building damage threshold and would not result in any structural damage to nearby buildings.

Demolition

All three alternatives call for the demolition of food processing, food storage, and food logistics buildings. The buildings are located within the Widett Circle APE but are not historic properties.

There is no demolition proposed at Beacon Park Yard or Readville – Yard 2.

6.4. Alternative 2 – Joint/ Private Development Minimum Build Impact Analysis

Alternative 2 would include all of the improvements in Alternative 1, including provisions for future private development by incorporating appropriate structural foundations into the overall station and track design.

In Alternative 2, the potential for future private development at the South Station site would comply with existing state and local regulations. Future private development with Alternative 2 could include approximately 660,000 sf of mixed-use development along Dorchester Avenue, consisting of residential, office, and commercial uses, including retail and hotel uses, with building heights ranging up to approximately twelve stories. Development could include approximately 234 parking spaces.

6.4.1. South Station Site

Visual

Alternative 2 would have no adverse visual impacts on views to or from historic properties included in the South Station APE.

As described in the visual analysis sections of the DEIR, Alternative 2 calls for the area along Dorchester Avenue to be developed with a combination of residential, hotel, office space and commercial space. The proposed joint/private development establishes a 50-foot street wall along Dorchester Avenue and steps up to approximately 140 feet in conformance to the Chapter 91 regulations. The new construction is consistent in height and dimensions with other development fronting the west side of the Fort Point Channel (e.g., 245 Summer Street).

Alternative 2 would not be visible from the north or west (Federal Reserve building, Leather District, Chinatown). Along Fort Point Channel, the joint/private development minimum build would be visible from within the Fort Point Channel Historic District. While Alternative 2 is visible from within the

District, the proposed development does not block views to or within any historic properties within the South Station APE.

Alternative 2 would enhance views to a historic district. The completion of the Harborwalk along Dorchester Avenue would facilitate an important public amenity, allowing access to an area that is currently closed to the public. The completion of the Harborwalk would improve the views of the Fort Point Channel Historic District, which currently cannot be viewed from the southwest because of prohibited access along Dorchester Avenue adjacent to the USPS facility.

Noise

Train Operation Noise Impacts: As described in the noise sections of the DEIR, the development of/in Alternative 2 would effectively shield the area across the Fort Point Channel from the train noise from South Station and would eliminate any potential noise impact. There would be no noise impact from the train operations associated with SSX project. However, depending on the reverberation characteristics of the enclosed space and the use of sound absorption materials, the noise levels inside the station area (tracks and platforms) could increase. The noise increase would be limited to the tracks and platforms, which are located within the APE, but are not listed on the National Register as part of South Station. The existing doors between the tracks and platforms and the passenger waiting area inside the South Station headhouse would provide effective noise mitigation within the headhouse.

Construction Noise Impacts. As described in the construction noise sections of the DEIR, construction noise levels from the SSX project are not expected to exceed FTA construction noise limits. Per the City of Boston L10 construction noise criteria, the South Station headhouse could be impacted by construction noise.

Vibration

Train Operation Vibration Impacts. As described in the vibration sections of the DEIR, as a result of the slow speed of the trains (approximately ten mph) entering and leaving South Station, the vibration levels generated by the trains would be below FTA criteria. In addition, because of the low vibration levels generated by the train, the train activity at South Station is not expected to result in any ground-borne noise inside the buildings.

Construction Vibration Impacts. As described in the construction vibration section of the DEIR, vibration levels generated by the construction equipment for this project are well below the building damage threshold and would not result in any structural damage to nearby buildings.

Shadow

As described in the shadow impact sections of the DEIR, no net new shadows would affect the historic properties located within the APE until 5 p.m. At this time, the eastern edge of the Fort Point Channel Historic District would be shaded. By 6 p.m. the majority of the City of Boston is covered in shadow from the existing urban environment. Alternative 2 would add incrementally to these shadows within the Fort Point Channel Historic District.

Wind

Alternative 2 was also not examined as part of the wind study because this alternative would meet all applicable building height and setback requirements under Chapter 91.

Demolition

Alternative 2 calls for the demolition of the USPS General Mail Facility/South Postal Annex. The building is located within the South Station APE, but is not a historic property.

6.5. Alternative 3 – Joint/ Private Development Maximum Build Impact Analysis

Alternative 3 would include Alternative 1, as well as provisions for future private development by incorporating appropriate structural foundations into the overall station and track design.

In Alternative 3, the maximum level of future private development at the South Station complex would be limited by the Federal Aviation Administration's (FAA's) maximum building height limits, pursuant to the Terminal Instrument Procedures (TERPS) regulations applicable to Boston Logan International Airport. Accordingly, building heights would be limited to approximately 290 feet. Alternative 3 would require an amendment to the Municipal Harbor Plan, modifying applicable Chapter 91 regulations. No development would likely occur over the secondary headhouse and portions of track interlocking.

In Alternative 3, the potential for future private development at the South Station site could include approximately two million sf of mixed-use development along Dorchester Avenue, consisting of residential, office, and commercial uses, including retail and hotel uses, with building heights up to approximately 21 stories. Development could include approximately 506 parking spaces.

6.5.1. South Station Site

Visual

Alternative 3 would have no adverse visual impact on views to or from historic properties included in the South Station APE.

As described in the visual analysis sections of the DEIR, Alternative 3 calls for the area along Dorchester Avenue to be developed with a combination of residential, hotel, office space and commercial space. The proposed joint/private development creates a row of tall buildings up to approximately 290 feet along Dorchester Avenue. The proposed joint/private development would be taller than 245 Summer Street (200 feet tall), but shorter than Russia Wharf complex (390 foot tall) located on the west side of Fort Point Channel.

The Alternative 3 joint/private development maximum build would be partially visible from Chinatown at a considerable distance on the opposite site of the elevated highway. Along Fort Point Channel, the joint/private development maximum build would be visible from within portions of the Fort Point Channel Historic District.

While Alternative 3 is visible from within the Fort Point Channel Historic District and Chinatown, the proposed development does not block views to or within any historic properties within the South Station APE.

Alternative 3 would enhance views to a historic district. The completion of the Harborwalk along Dorchester Avenue would facilitate an important public amenity, allowing access to an area that is currently closed to the public. The completion of the Harborwalk would improve the views of the Fort Point Channel Historic District, which currently cannot be viewed from the southwest because of prohibited access along Dorchester Avenue adjacent to the USPS facility.

Noise

Train Operation Noise Impacts. As described in the noise sections of the DEIR, the development of/in Alternative 3 would effectively shield the area across the Fort Point Channel from the train noise from South Station and would eliminate any potential noise impact. There would be no noise impact from the train operations associated with SSX project. However, depending on the reverberation characteristics of the enclosed space and the use of sound absorption materials, the noise levels inside the station area (tracks and platforms could increase. The noise increase would be limited to the tracks and platforms, which are located within the APE, but are not listed on the National Register as part of South Station. The existing doors between the tracks and platforms and the passenger waiting area inside the South Station headhouse would provide effective noise mitigation within the headhouse.

Construction Noise Impacts. As described in the construction noise sections of the DEIR, construction noise levels from the SSX project are not expected to exceed FTA construction noise limits. Per the City of Boston construction noise criteria, the South Station headhouse could be impacted by construction noise.

Vibration

Train Operation Vibration Impacts. As described in the vibration sections of the DEIR, as a result of the slow speed of the trains (approximately ten mph) entering and leaving South Station, the vibration levels generated by the trains would be below FTA criteria. In addition, because of the low vibration levels generated by the train, the train activity at South Station is not expected to result in any ground-borne noise inside the buildings.

Construction Vibration Impacts. As described in the construction vibration section of the DEIR, vibration levels generated by the construction equipment for this project are well below the building damage threshold and would not result in any structural damage to nearby buildings.

Shadow

As described in the shadow impact sections of the DEIR, the Fort Point Channel Historic District would experience some new shadows late in the day. At 3 p.m. new shadows would be cast on the edge of the Fort Point Channel. By 4 p.m. new shadows would be cast on the western half of Summer Street and a small area at the midpoint of the Congress Street Bridge near the Tea Party Ship Museum. No new shadows would fall on this museum and the entire eastern shoreline of the Fort Point Channel would be in full sun. By 5 p.m. Alternative 3 would shade the entire eastern shoreline of the Fort Point Channel for approximately 1,000 feet south of Summer Street and one block into South Boston. At this hour, shadows would extend as far northeast as Children's Wharf, north of the Congress Street Bridge. At 6 p.m. Alternative 3 would also create new shadows filling in small gaps in the shade dominated areas of South Boston in the vicinity of Seaport Boulevard and open spaces adjacent to Pier 4 in South Boston. The area experiences significant shadows under the No Build Alternative. No adverse impacts are anticipated from the minor new shadows created by Alternative 3.

Wind

The wind sections of the DEIR describe potential mean speed wind and effective wind gust impacts within a 1,600 foot radius of South Station project site.

As described in the wind impact sections of the DEIR, the mean speed wind study revealed that historic properties within the APE could experience uncomfortable wind impacts and wind gusts with and without

mitigation at the intersection of Atlantic Avenue and Essex Street, along the east bank of Fort Point Channel, and at the south end of the development site. These impacts also exist in the No Build Alternative. Alternative 3 would not add to the wind conditions in these areas.

Demolition

Alternative 3 calls for the demolition of the USPS General Mail Facility/South Postal Annex. The building is located within the South Station APE, but is not a historic property.

6.6. Mitigation

6.6.1. Visual

As described above, there are no adverse visual impacts to historic resources as a result of project alternatives. Every project alternative enhances views of the historic district via the extension of the Harborwalk. MassDOT has defined principles to guide the planning and design to ensure future project development maintains and enhances the historic nature of the site.

As noted in chapter 3 of the DEIR, the principles encompass planning, design, and preservation considerations. Specific to preservation, the planning and design principles were developed to be respectful of South Station's rich history, its prominent location, the complexity of its project components, and its role as the transportation hub for the region.

The new construction proposed in Alternatives 1, 2, and 3 would be implemented to be consistent with the planning and design principles developed for the project. The principles are intended to guide the preservation and protect the historic integrity of the existing South Station headhouse. SSX preservation principles include:

- Recognize and protect the historic integrity of the existing South Station headhouse and its value as a public space. Maintain a public presence in the existing lobby, including the possible inclusion of information kiosks and service retail.
- Rehabilitate the existing headhouse structure in a sensitive manner.
- Consider historic precedent in the design of the expansion.
- Design the expansion to integrate with the existing station architecture, maximizing setback from perimeter walls, and ensuring compatibility with the historic headhouse.

6.6.2. Noise

South Station

Train Operation Noise: The results of the noise assessment at South Station indicate that for Alternative 1, the noise levels at receptors within the Fort Point Channel Historic District are expected to exceed the FTA moderate impact criteria. To reduce the noise levels across the Fort Point Channel, a noise barrier could be installed along the length of Track 20 to reduce noise from the idling locomotives from impacting this area. The noise barrier would not be necessary in Alternatives 2 or 3 due to the proposed enclosure of the station area.

Construction Noise: The demolition and construction activity associated with the project would impact the South Station headhouse and 245 Summer Street (located within the APE but not a historic property). Noise barriers would be required to mitigate the construction noise levels at these receptors. The contractor would be required to submit a Construction Noise Control Plan to indicate the methods to

mitigate construction noise levels, and to provide noise monitoring during construction to determine compliance with the FTA and the City of Boston construction noise limits.

Layover Facilities

There are no noise impacts to historic properties within the APE at Widett Circle, Beacon Park Yard, or Readville – Yard 2 associated with project operations or construction. Vibration

Precondition surveys and vibration monitoring would be conducted prior to and during construction to document initial conditions and to monitor vibration levels during construction.

Vibration levels would be obtained at selected areas in the adjacent streets including within Atlantic Avenue itself, as well as the train platform area.

Although monitoring points within Atlantic Avenue itself are appropriate, buildings located along Atlantic Avenue and in other neighborhoods, are judged beyond the potential area of influence from the project.

The Construction Management 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 are detected during construction. The 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.

6.6.3. Shadow

Mitigation is not proposed because the shadow impacts are minor and are far outweighed by the project benefits. In Alternative 1 no net new shadows would affect the historic properties located within the APE during any of the time periods studied. In Alternative 2, no net new shadows would affect the historic properties located within the APE until 5 p.m. Furthermore, these net new shadows would be incremental along the eastern edge of the Fort Point Channel Historic District. In Alternative 3, new shadows would not appear until after 4 p.m., at which point approximately 50% of the Fort Point Channel watershed between Summer Street and the southern end of the Joint/Private Development would be covered.

6.6.4. Wind

Mitigation for wind impacts can include coniferous tree plantings and screen walls. The appropriateness of these measures would be determined upon selection of a preferred alternative and with advanced design.

6.6.5. Demolition

Mitigation is not anticipated due to the non-historic nature of the properties proposed for demolition.

7. Figures

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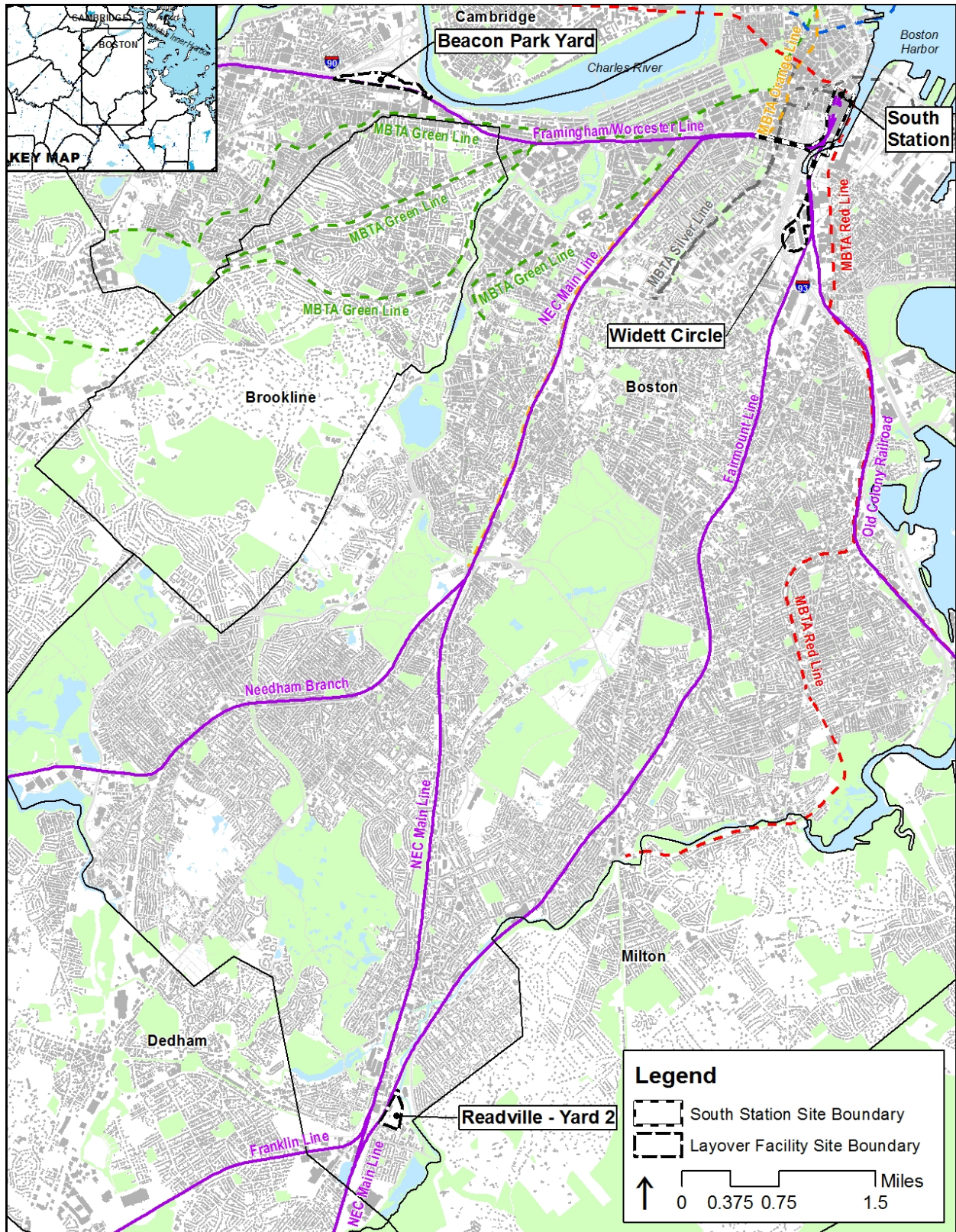


Figure 1—South Station Expansion Project Site Boundaries

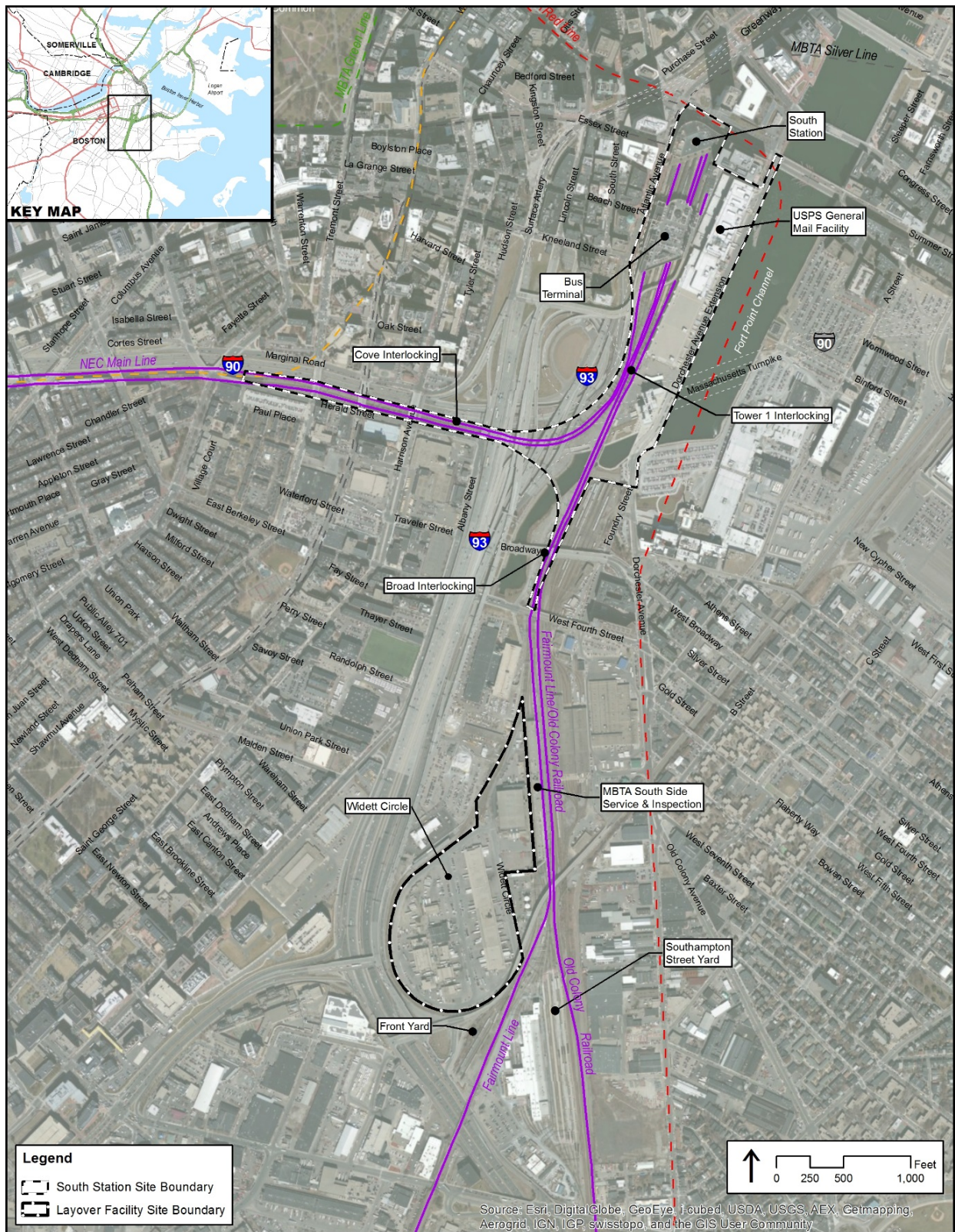


Figure 2—South Station and Widett Circle Layover Facility Site Boundaries

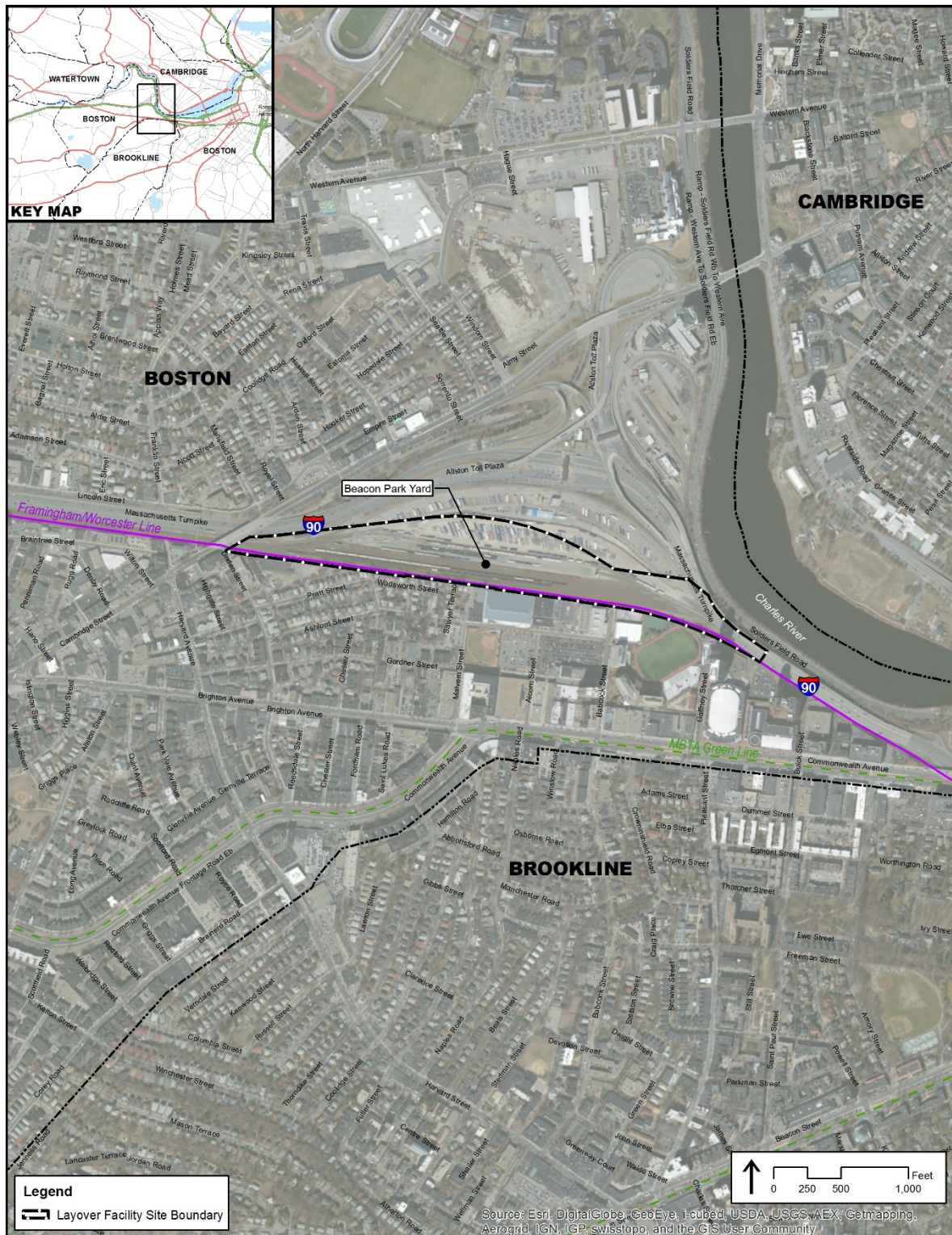


Figure 3—Beacon Park Yard Layover Facility Site Boundary

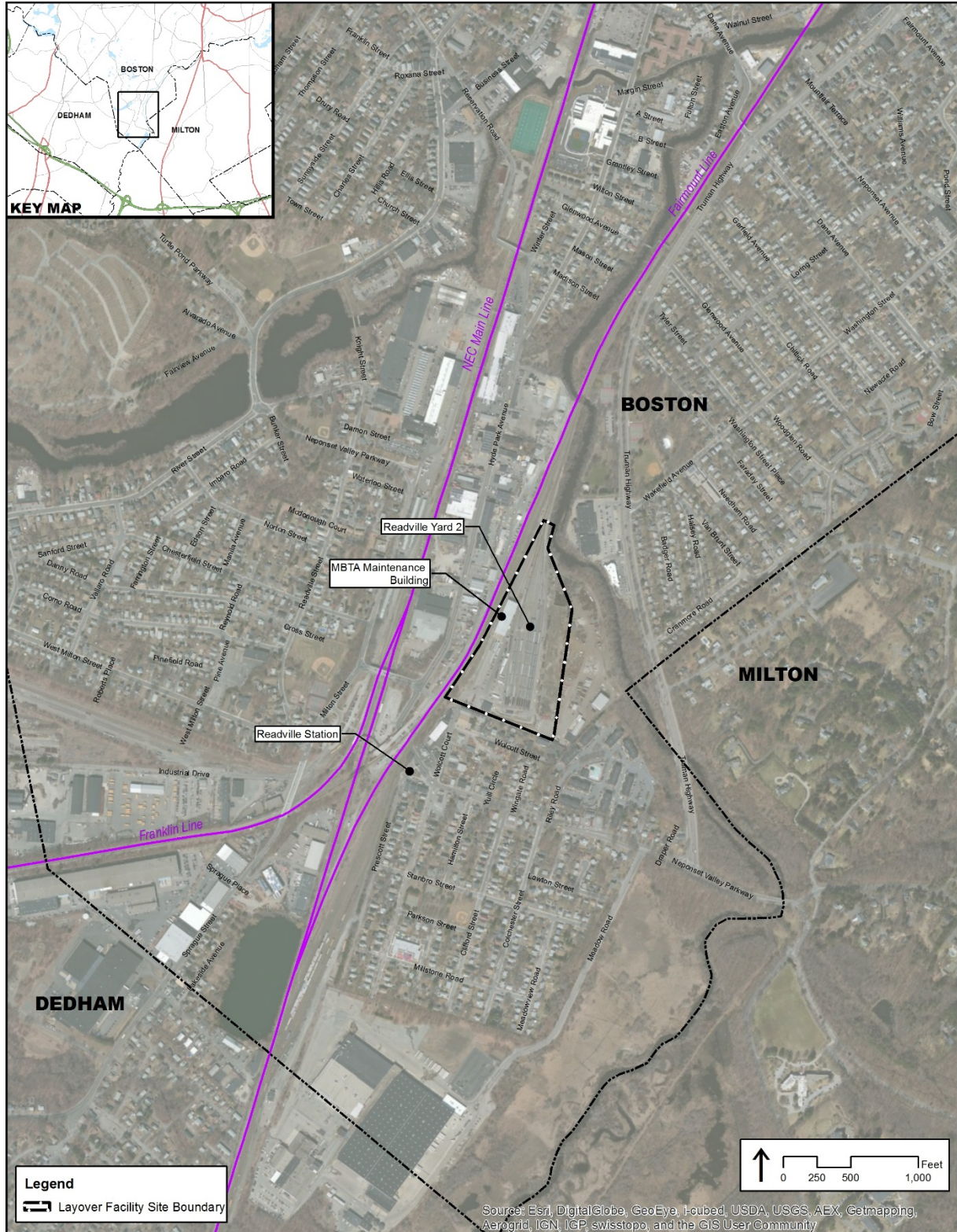


Figure 4—Readville – Yard 2 Layover Facility Site Boundary

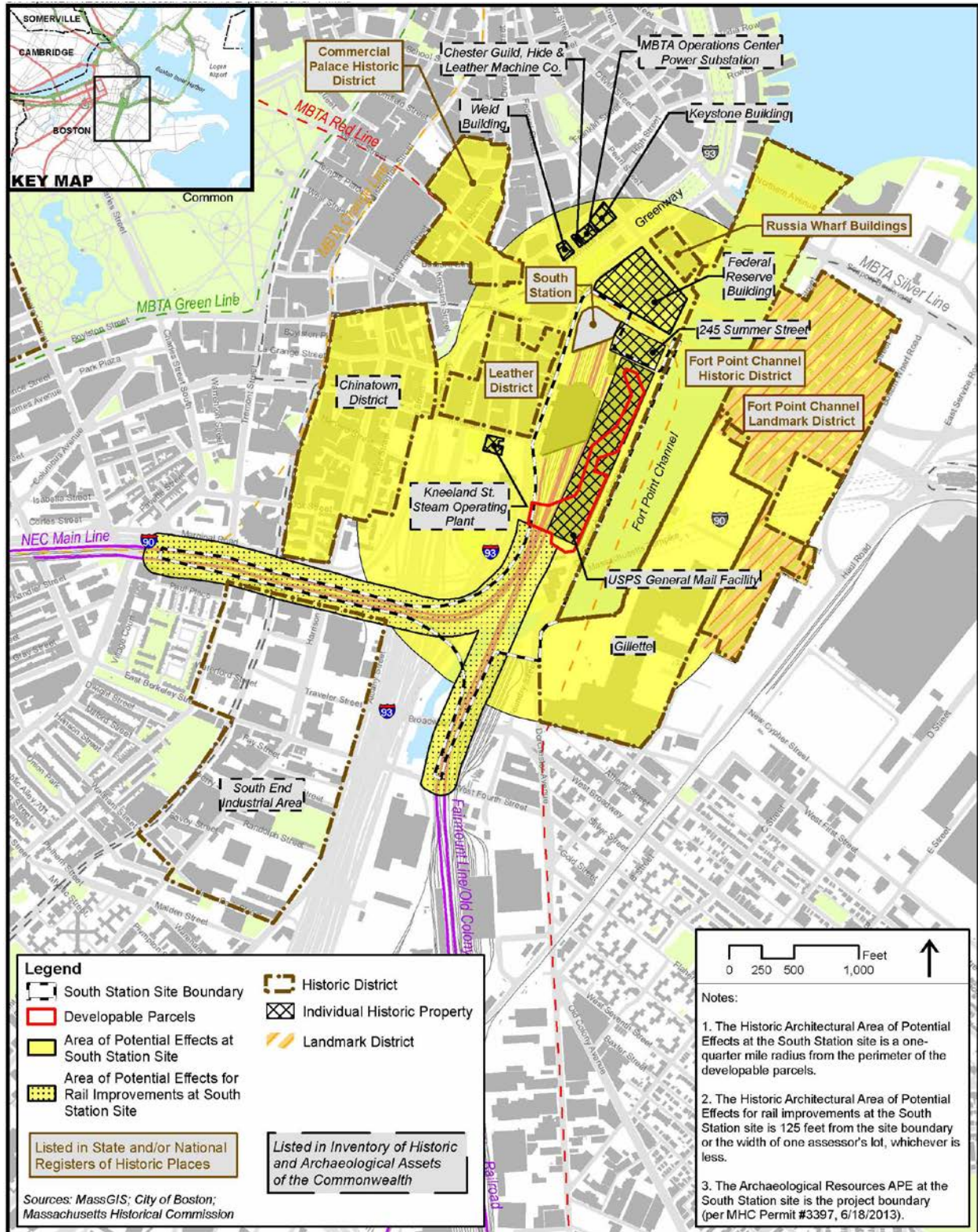


Figure 5—South Station Historic Architectural Area of Potential Effects

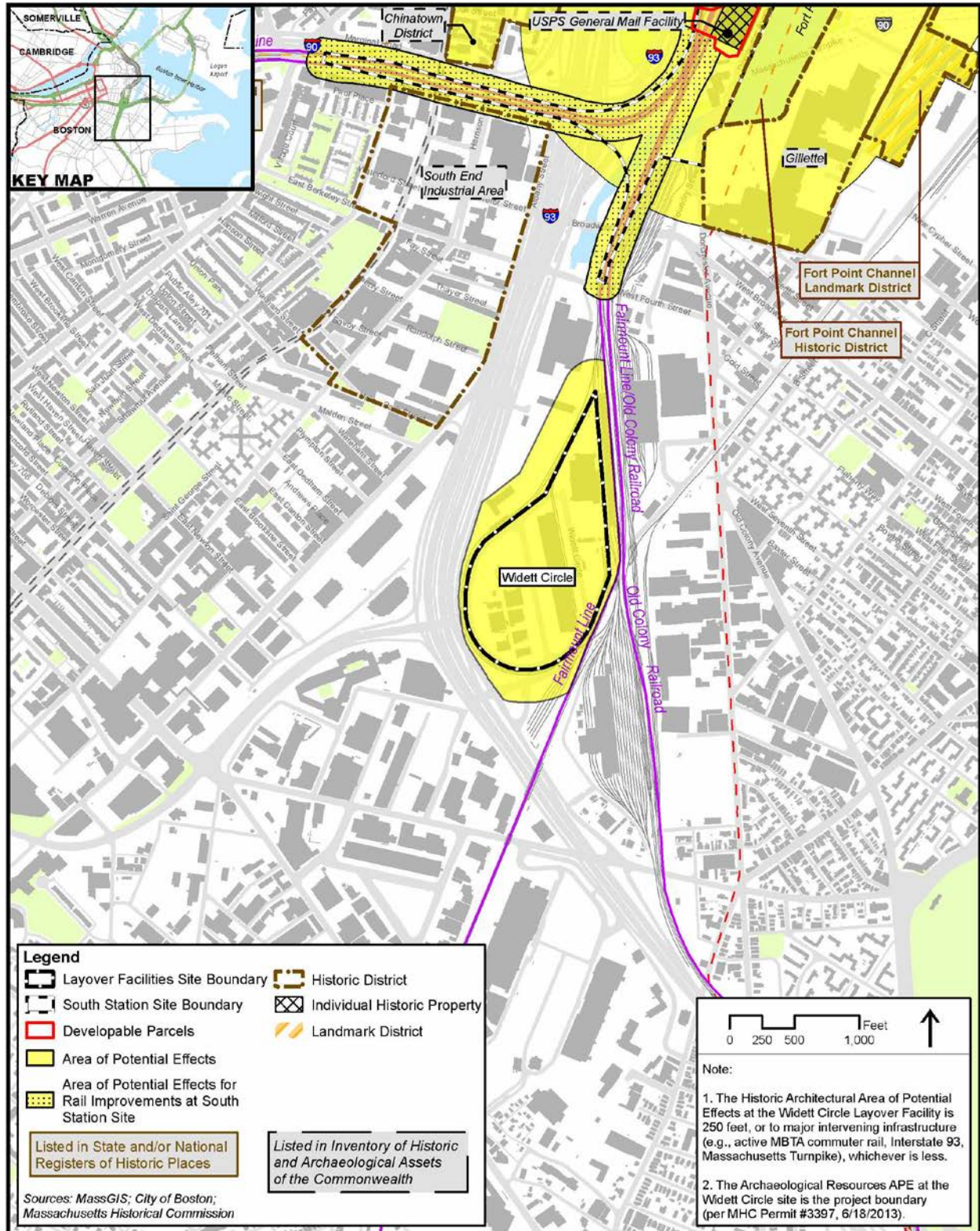


Figure 6—Widett Circle Layover Facility Historic Architectural Area of Potential Effects

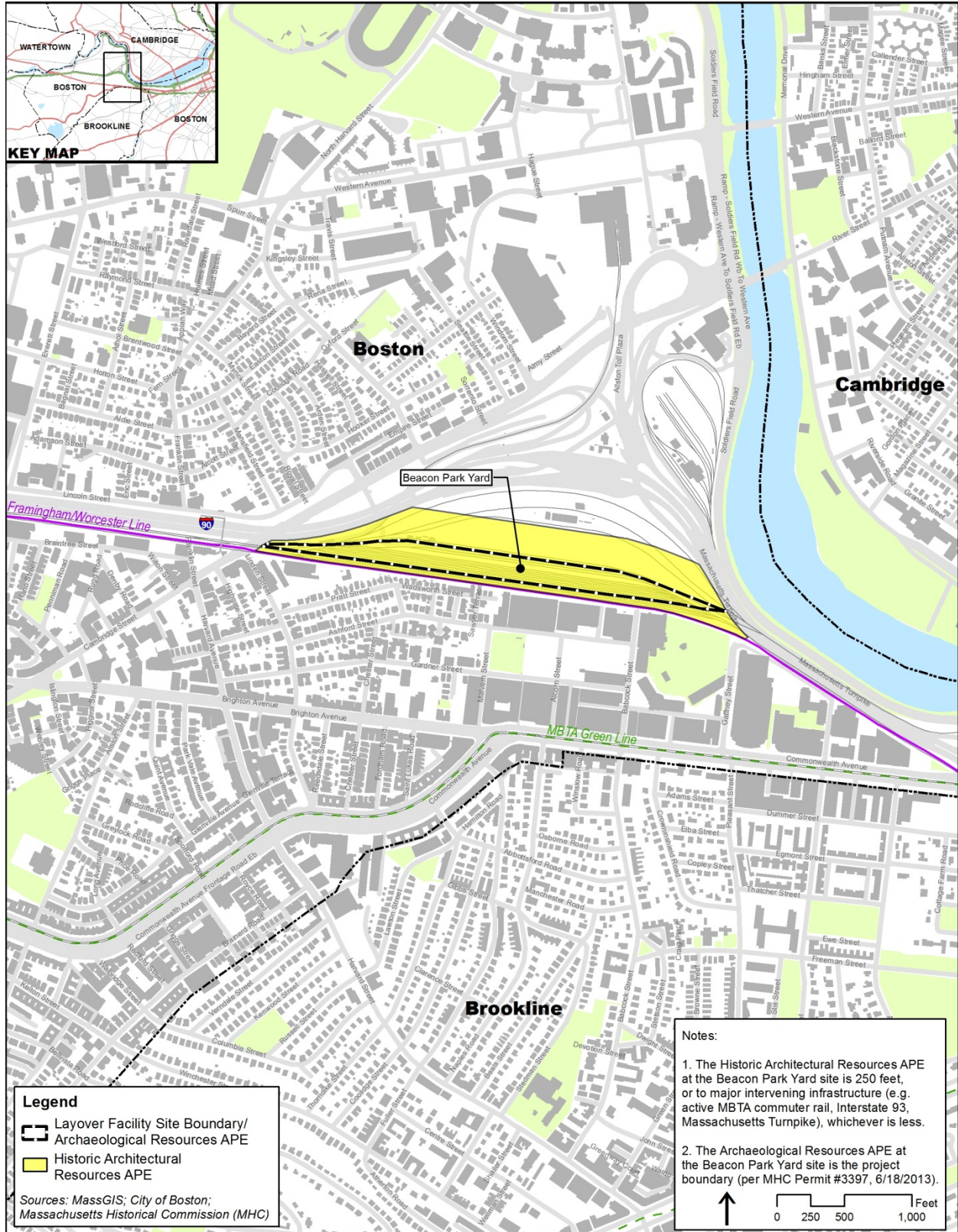


Figure 7—Beacon Park Yard Layover Facility Historic Architectural Area of Potential Effects

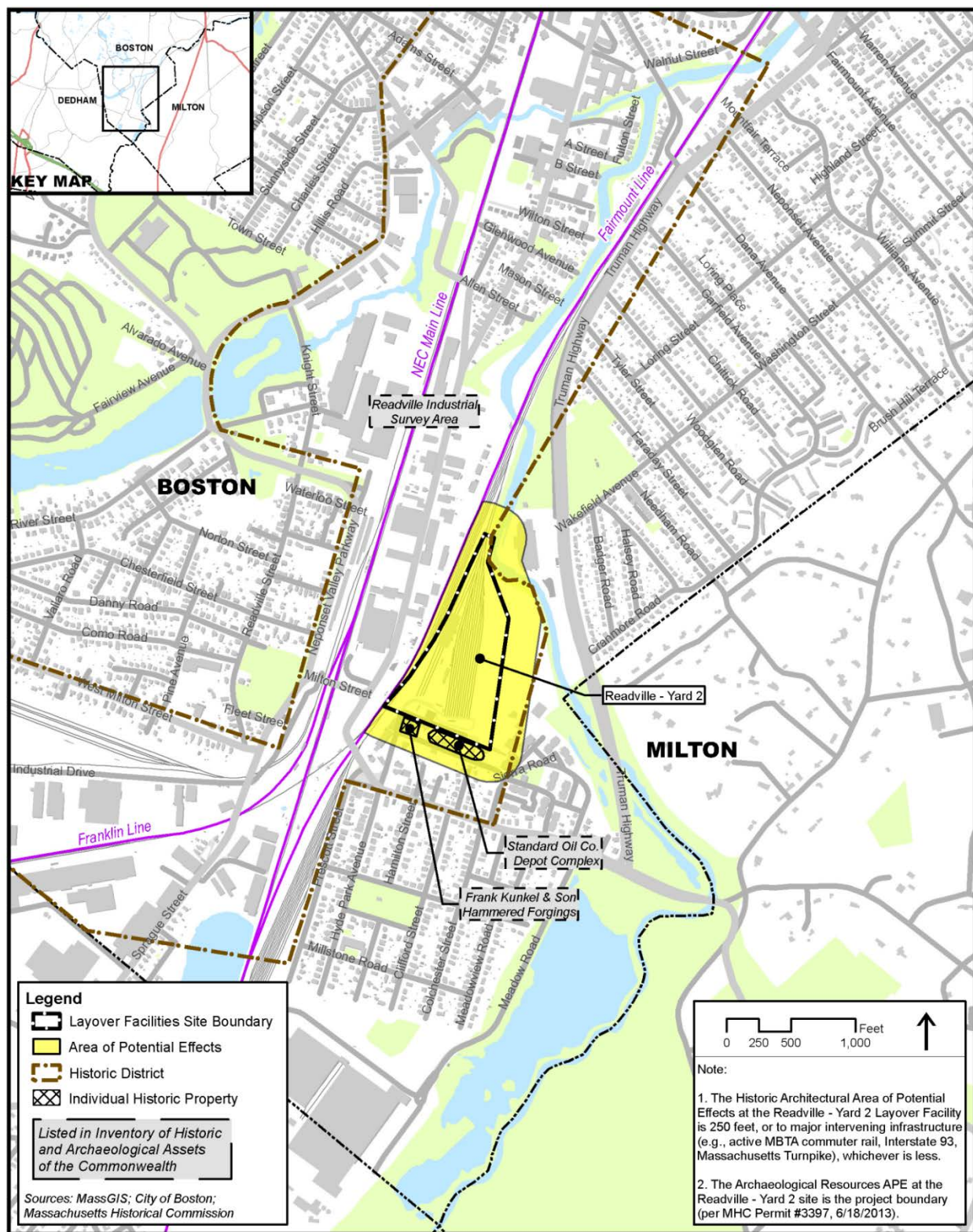


Figure 8—Readville – Yard 2 Layover Facility Historic Architectural Area of Potential Effects