



South Station Expansion Project

Appendix 3 - Environmental Justice and Title VI 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 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 14-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 Environmental Justice and Title VI 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.

2. Purpose

The purpose of this technical report is to demonstrate that MassDOT and the SSX project are in compliance with Title VI of the Civil Rights Act of 1964 and the *Environmental Justice (EJ) Policy* of Massachusetts Executive Office of Energy and Environmental Affairs (EEA).

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

Title VI of the Civil Rights Act of 1964 states: “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

The EEA *EJ Policy* states: “Environmental justice is the equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits.” An EJ population is identified as a neighborhood containing a certain percentage of minority, low-income, foreign-born, or limited English proficiency (LEP) residents. (See Section 4 for a more detailed definition.)

Title VI ensures that federally funded projects do not discriminate based on race, color, or national origin and also provides a vehicle for residents to file a complaint if they feel they have been discriminated against. The EEA *EJ Policy* identifies specific populations that are vulnerable to discrimination and requires that project proponents demonstrate that their project would not disproportionately impact these populations. While the SSX project is not subject to the EEA *EJ Policy*,² MassDOT is committed to evaluate the project for potential impacts to EJ communities based on federal and State guidelines.

3. Summary of Findings

The effects of the project alternatives were evaluated to determine whether impacts in the No Build and Build conditions would be disproportionate or adverse on EJ communities or populations. In fact, the SSX project would benefit EJ and Title VI populations, primarily by improving mobility. This analysis indicates the following:

- The proposed transportation improvements would improve station accessibility and mobility for all users, including EJ and Title VI populations.
- The project would not involve disproportionate impacts to EJ and Title VI populations and would not directly displace these populations; no residences would be displaced by the SSX project.
- The displacement of the USPS facility could affect some EJ and Title VI population workers, but this facility is anticipated to be relocated within the area. Similarly, the displacement of approximately 30 businesses at the Widett Circle site could affect EJ populations. It is anticipated that these businesses would be relocated in the Boston area. No long-term losses of employment are anticipated to occur at these locations.

Additionally, the Central Transportation Planning Staff (CTPS), staff for the Boston Region Metropolitan Planning Organization (MPO), performed travel demand modeling to assess any changes to accessibility to needed services and employment for EJ populations due to SSX project alternatives. This analysis indicates that minimal or no permanent changes would occur among the project alternatives across the communities of concern. Furthermore, permanent changes would be negligible (with either no change or changes of less than 2%) for both EJ and disabled populations and non-disadvantaged populations in the Build Alternatives as compared to the No Build Alternative.

4. Regulatory Context

Environmental justice refers to social equity in sharing the benefits and burdens of a project or program. Title VI, enacted as part of the landmark U.S. Civil Rights Act of 1964 (42 U.S.C. 2000d), is one law that prohibits discrimination on the basis of race, color, religion, sex or national origin in federally assisted

² Per the Secretary’s Certificate on the ENF, April 2, 2013.

programs or activities.³ The U.S. Americans with Disabilities Act (42 U.S.C. 12101) prohibits discrimination based on disabilities and mandates reasonable accommodations for disabled populations. Executive Order (EO) 12898, "*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*," requires each federal agency to identify and address, as appropriate, "*disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations*,"⁴ collectively referred to as EJ populations.

The United States Department of Transportation (U.S. DOT) issued Order 5610.2(a) and regulations under Title 23 of the U.S. Code (U.S.C.), Section 109, to address environmental justice for minority and low-income populations.⁵ The guiding EJ principles followed by U.S.DOT that apply to all federal transportation agencies are summarized as follows:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process;
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The *Environmental Justice Policy* of the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) defines environmental justice as the "*equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits*."⁶ EJ populations are those segments of the population that EEA has determined to be most at risk of being unaware of or unable to participate in environmental decision-making or to gain access to state environmental resources. An EJ population is defined as a neighborhood (consisting of a U.S. Census Bureau census block group) that meets one or more of the following criteria:

- The median annual household income is at or below 65.49% of the statewide median income (\$62,133) for Massachusetts (\$40,673 in 2010).
- 25% of the residents are minority.
- 25% of the residents are foreign born.
- 25% of the residents are lacking English language proficiency, defined as households in which no one aged 14 and over speaks English only or speaks English "very well."

5. Methodology

This report utilizes the Massachusetts Office of Geographic Information (MassGIS) database of EJ populations that was developed using U.S. Census data and the EEA EJ criteria identified in Section 4 of this Technical Report.

³ Racial and ethnic categories are further defined as follows: White (White alone, not Hispanic or Latino); Black (Black or African American alone, not Hispanic or Latino); Asian (Asian alone, not Hispanic or Latino); Hispanic (Hispanic or Latino; persons of Hispanic origin may be of any race); Other (American Indian and Alaska Native alone, not Hispanic or Latino; Native Hawaiian and other Pacific Islander alone, not Hispanic or Latino; some other race alone, not Hispanic or Latino; two or more races alone, not Hispanic or Latino).

⁴ Executive Order 12898. *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Federal Register, Volume 59, No. 32, February 11, 1994.

⁵ U.S. Department of Transportation, 2012. U.S. DOT Order 5610.2(a), *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Federal Register, Volume 77, No. 99, May 10, 2012.

⁶ Executive Office of Environmental Affairs, 2002. *Environmental Justice Policy of the Executive Office of Environmental Affairs*, October 9, 2002.

The EJ Technical Report was based on the EEA's definition of EJ populations described in the last section. EJ populations were considered relative to the City's overall population to determine if they would be disproportionately impacted by the SSX project. This EJ assessment involved the following steps:

- Identifying EJ populations within the study area,
- Identifying potentially significant and adverse impacts of the SSX project, and
- Evaluating the proposed SSX project's effects on EJ populations relative to its overall effects to determine whether any impacts on EJ populations would be disproportionate and adverse.

This EJ study area encompasses a one-half-mile radius of both South Station and the three layover facility sites, representing areas within walking distance and the areas determined to be most likely affected by the construction and operation of the SSX project. EJ communities were mapped and identified within the study areas using MassGIS-developed data (shown in Figure 1-4). The MassGIS EJ community designations shown for the SSX project area, consisting of minorities, low-income populations, and populations lacking English proficiency, are based on Census block group data. Linguistic isolation (or English isolation) was used as an indicator of limited English proficiency (LEP). MassGIS excludes from designation those block groups with group quarters housing greater than 65%. Even though MassGIS designates EJ communities based on census block group boundaries, population census counts are available down to the block level. Although the characteristics of a particular census block, which is a smaller U.S. Census designation, may not meet these EJ criteria, the entire block group is included in the designated EJ community. In many instances, the one-half-mile study area crosses block group boundaries; and in some cases, much of the block group extends well outside the study area. To account for this discrepancy, only population within census blocks within the one-half mile study area was included in the EJ population counts.

This EJ Technical Report addresses changes in accessibility and mobility using the results of CTPS' analysis of potential disproportionate burdens on EJ populations in the realms of environmental impacts, mobility, congestion, and accessibility to services and employment for the SSX project. CTPS identified the following thresholds for EJ populations in the transportation analysis zones (TAZs)⁷ in the Boston Region MPO:

- A minority (non-white or Hispanic) TAZ was identified as having a percentage of minority population greater than or equal to 25%, according to the 2010 Census.
- A low income TAZ was identified as having a median household income at or below 60% of the state median household income in 2012 (60% of \$69,393, or \$42,497).
- A linguistically isolated TAZ was identified as having a percentage of linguistically isolated population⁸ greater than or equal to 25% population.
- A disabled TAZ was identified as having a percentage of self-reported disable population greater than or equal to 10.4%, which is the percentage of self-reported disabled persons in the MBTA service area, according to the 2012 American Community Survey (ACS) 5-year summary data.

To assess disproportionate impacts to EJ populations, a comparison of impacts to EJ and non-EJ populations was made to determine if the potential impacts would be disproportionately high and adverse upon the EJ populations.

⁷ A transportation analysis zone (TAZ) is an aggregation of census geography based on population and estimated trip volumes. The Boston Region MPO travel demand model area is composed of 2,727 TAZs that comprise nearly all of eastern Massachusetts.

⁸ A linguistically isolated household is identified as one in which all members 14 years old and over speak a non-English language and also speak English less than "very well."

6. Existing Conditions

The racial and ethnic composition of the City of Boston has changed dramatically over the last several decades, from a city that was predominantly white in 1980 (70%), to a majority-minority city (47% white) in 2010. The City of Boston is one of the most diverse cities in the nation and has one of the highest percentages of foreign-born populations (26.9%) in the U.S. Among the 25 largest U.S. cities in 2010, Boston ranked as sixth largest for foreign born populations. Boston also has the highest concentration of “affordable” subsidized housing among major U.S. cities. Approximately 20% of the city’s housing is dedicated to low- and moderate-income families.

The ethnic and racial diversity of the city is reflected in the predominance of EJ populations in the SSX project study areas. Table 1 presents the percentages (by both population and land area compared to the total study area) of EJ areas designated for one or more parameters within the one-half-mile study areas of the SSX project sites. Population estimates in this table are based only on the Census blocks located entirely or partially within the half-mile study area.

Table 1—Percentages by Population and Land Area Meeting Environmental Justice Criteria, SSX Project Study Areas

Study Area ^a	Minority		Low Income		Limited English Proficiency		Meets All EJ Criteria		EJ Community Totals	
	Population %	Area %	Population %	Area %	Population %	Area %	Population %	Area %	Population %	Area %
South Station	78.1	36.0	51.7	17.5	43.0	15.5	43.0	15.5	84.9	36.0
Widett Circle	81.1	46.3	42.1	34.8	27.7	11.4	27.7	11.4	88.3	65.8
Beacon Park Yard	73.7	80.3	34.7	48.8	0	0.0	0	0.0	93.9	80.3
Readville - Yard 2	97.2	84.7	0	0	0	4.4	0	0.0	97.2	84.7

Sources: MassGIS, U.S. Census Bureau

^a MassGIS defines EJ populations based on census block groups. Even though the characteristics of a particular census block may not meet this EJ criteria, the entire block group is included in the designated EJ community. Population percentages are only for those census blocks (within the EJ block group) that fall entirely or partially within the one-half-mile study area.

6.1. South Station Study Area

The total population of the one-half-mile South Station study area is 12,659 people, with 6,444 households. The total EJ population within EJ communities in the one-half-mile study area is 10,571 people, or 85% of the total population. The EJ communities within the one-half-mile study area include 5,112 households, representing 80% of total households in the study area.

Figure 1 presents the EJ populations located within one-half-mile of South Station. As shown in Figure 2, most of the areas to the north in Downtown and to the east in South Boston Waterfront/Innovation District, consisting of commercial high-rises and buildings or industrial/transportation uses, are largely unpopulated. The EJ population in the study area is located primarily west of the Central Artery (I-93) and the Surface Road. The EJ population generally encompasses a large portion of Chinatown to the west and populated portions of Downtown, to the north/northwest, accounting for 36% of the South Station study area (as shown in Figure 2). Within the one-half-mile study area, 181.4 acres have been designated by MassGIS, as an EJ community.

The South Station study area includes portions of seven Census tracts. Within those seven tracts, the study area almost entirely encompasses eight Census block groups and portions of eleven other Census block groups. EJ populations, consisting predominantly of minority (Asian) populations, exist in 12 of the 19 Census block groups in the South Station study area. All 12 block groups in the study area designated as EJ communities exceed the EJ minority criterion. Eight of these block groups are also designated as low-income communities. Of these, seven block groups also meet the criterion for LEP.

Table 2 presents the total population of the one-half-mile South Station study area, disaggregated by racial and ethnic characteristics. It compares the statistics for the study area to the surrounding neighborhoods, the City of Boston, Suffolk County, and the state as a whole. The racial and ethnic composition of the South Station study area, with an Asian population of 32%, reflects the Chinatown population. The South Station study area and adjoining neighborhoods generally had a smaller percentage of minority populations in 2010 than the city and county, but a higher percentage than the state as a whole.

Table 2—Race and Ethnicity Characteristics, South Station Study Areas, 2010

Area	White	% of Total	Minority	% of Total	Black	% of Total	Asian	% of Total	Hispanic	% of Total	Other	% of Total
South Station Study Area	7,305	57.7	5,354	42.4	463	3.7	4,013	31.7	602	4.8	276	2.2
Chinatown	700	15.8	3,744	84.3	132	3.0	3,411	76.8	130	2.9	71	1.6
Leather District	490	76.7	149	23.3	25	3.9	85	13.3	22	3.4	17	2.7
Downtown	7,747	69.1	3,701	30.9	1,002	8.5	1,495	13.3	786	7.0	418	2.1
South Boston Waterfront/Innovation District	1,605	85.0	284	15	32	1.7	115	6.1	97	5.1	40	2.1
City of Boston	290,312	47.0	327,282	53.1	138,073	22.4	54,846	8.9	107,917	17.5	26,446	4.3
Suffolk County	346,979	48.1	375,044	51.9	142,980	19.8	58,963	8.2	143,455	19.8	29,646	4.1
Massachusetts	4,984,800	76.1	1,562,829	23.9	391,693	6.0	347,495	5.3	627,654	9.6	195,987	3.0

Sources: 2010 U.S. Census; Boston Redevelopment Authority, US Census – Summary File 1 Data, 2010

6.2. Layover Facility Study Areas

Table 3 presents the total population of the one-half-mile layover facility study areas, disaggregated by racial and ethnic characteristics. It presents the statistics for the study areas in in comparison to each other, their immediate/surrounding neighborhoods, the City of Boston, Suffolk County, and the state as a whole.

Table 3—Race and Ethnicity Characteristics, Layover Facility Study Areas, 2010

Area	White	% of Total	Minority	% of Total	Black	% of Total	Asian	% of Total	Hispanic	% of Total	Other	% of Total
Widett Circle Study Area	5,288	46.8	6,011	53.2	1,958	17.3	1,298	11.5	2,468	21.9	287	2.5
Beacon Park Yard Study Area	12,089	62.7	7,203	37.3	646	3.3	3,605	18.7	2,038	10.6	914	4.7
Readville - Yard 2 Study Area	2,375	46.5	2,736	53.5	1,476	28.9	103	2.0	982	19.2	175	3.4
South Boston	25,264	75.8	8,047	24.1	2,247	6.7	1,542	4.6	3,706	11.1	552	1.7
South End	13,574	55.2	11,003	44.7	3,083	12.5	3,982	16.2	3,276	13.3	662	2.7
Allston	17,480	59.9	11,716	40.1	1,338	4.6	5,545	19.0	3,391	11.6	1,442	4.9
Hyde Park	8,650	28.2	21,987	71.8	14,476	47.3	485	1.6	6,034	19.7	992	3.2
City of Boston	290,312	47.0	327,282	53.1	138,073	22.4	54,846	8.9	107,917	17.5	26,446	4.3
Suffolk County	346,979	48.1	375,044	51.9	142,980	19.8	58,963	8.2	143,455	19.8	29,646	4.1
Mass	4,984,800	76.1	1,562,829	23.9	391,693	6.0	347,495	5.3	627,654	9.6	195,987	3.0

Sources: 2010 U.S. Census; Boston Redevelopment Authority, US Census – Summary File 1 Data, 2010

The following sections present a more detailed assessment of each layover facility study area.

6.2.1. Widett Circle

The total population of the one-half-mile Widett Circle study area is 11,299 people, with 4,797 households. The total population of EJ communities in the one-half-mile study area is 9,973 people, representing 88% of the total population. The designated EJ communities within the one-half-mile study area contain 3,949 households, representing 82% of total households in the study area.

Figure 3 presents the EJ populations located within the one-half-mile study area of the Widett Circle layover facility. Table 1 presents the percentages (by both population and area) of EJ areas designated for one or more parameters within the one-half-mile study area. Within the one-half-mile study area, 331.1 acres have been designated by MassGIS as an EJ community. These EJ block groups account for roughly 66% of the study area, in areas west of the Southeast Expressway (I-93) and east of the MBTA Red Line. Transportation and industrial uses occupy most of the largely unpopulated area surrounding the project site between these two transportation routes, as shown in Figure 4.

The Widett Circle layover facility study area includes portions of nine Census tracts. Within those nine tracts, it includes portions of 14 Census block groups. EJ populations exist in 12 of the 14 Census block groups that are partially contained within the one-half-mile study area. Eleven block groups in the study area exceed the EJ minority threshold. Five of these block groups also meet the EJ standard for low-income communities, with a total of six block groups that are low-income communities. Four of the block groups that are designated as minority and low-income have LEP populations as well.

The most populous block group, which also has the second highest percentage of minorities (82%), includes the Suffolk County House of Correction (South Bay), which influences the EJ population

percentages.⁹ Other EJ block groups with elevated minority populations include the Boston University Medical campus.

As shown in Table 3, the minority population percentages in the Widett Circle layover facility study area are similar to that of the city and county, but are higher than that for the state.

6.2.2. Beacon Park Yard

The total population of the one-half-mile Beacon Park Yard study area is 19,292 people, with 6,698 households. In the study area, 18,115 people reside within designated EJ communities (94% of the total population). The EJ communities within the one-half-mile study area contain 6,520 households, representing 97% of total households in the study area.

Figure 5 presents the EJ populations located within the one-half-mile study area of the Beacon Park Yard layover facility. Table 3 presents the percentages (by both population and area) of EJ areas designated for one or more parameters within the one-half-mile study area. Within the one-half-mile study area, 404.3 acres have been designated by MassGIS as an EJ community. These EJ-designated block groups account for roughly 80% of the study area. Although identified as an EJ community, the area surrounding the layover facility site between the Massachusetts Turnpike, the Charles River, and the Framingham/Worcester rail line is landlocked and largely unpopulated, with the exception of the Doubletree Suites/Hilton Hotel, as shown in Figure 6.

The Beacon Park Yard layover facility study area includes portions of 10 Census tracts. Within those 10 tracts, it includes portions of 22 Census block groups, three of which are located completely within the study area.

EJ populations exist in 17 of the 22 Census block groups, three of which are located completely within the study area. All 17 EJ block groups in the study area exceed the EJ minority threshold, and nine of these meet the EJ criterion for low-income communities. None of the block groups in the study area exceed the EEA EJ threshold for lack of English proficiency (English language isolation). The designated EJ communities within the Beacon Park Yard layover facility study area may reflect high student populations, even though MassGIS eliminates from designation those block groups with 65% or more of their total population living in group (institutional) housing, such as Boston University's John Hancock Student Village.

As shown in Table 3, the study area population percentages for whites (62.7%) and Asians (18.7%) are higher than those for the city and county. The study area population percentages for blacks, however, fall well below those for the city, county, and state.

6.2.3. Readville – Yard 2

The total population of the one-half-mile Readville – Yard 2 study area is 5,111 people, with 2,128 households. The total population within designated EJ communities in the one-half-mile study area is 4,967 people, representing 97% of the total study area population. The EJ communities within the one-half-mile study area contain 2,086 households, representing 98% of total households in the study area.

Figure 7 presents the EJ populations located within the one-half-mile study area of the Readville – Yard 2 layover facility. Table 1 presents the percentages (by both population and area) of EJ areas designated for

⁹ The Suffolk County House of Correction (South Bay) accounts for 62% of the block group population. MassGIS eliminates from EJ designation those block groups with 65% or more of their total population living in group (institutional) house. At 62%, the Suffolk County House of Correction (South Bay) is included in the MassGIS count of EJ communities.

one or more parameters within the one-half-mile study area. Within the one-half-mile study area, 426.3 acres have been designated by MassGIS as an EJ community. These EJ block groups account for roughly 85% of the study area, with only a small number of these areas unpopulated, including natural and wetland areas along the Neponset River, as shown in Figure 8.

The Readville – Yard 2 layover facility study area includes portions of four Census tracts. Within those four tracts, it includes portions of seven Census block groups. EJ populations exist in six of the seven Census block groups. All six block groups in the study area exceed the EJ minority threshold. One of these block groups in the Readville – Yard 2 layover facility study area also exceeds the EJ threshold for LEP. None of the block groups in the study area meet the EJ low-income criterion.

As shown in Table 3, the percentage of the black population (at 29%) in the Readville – Yard 2 study area is higher than that of the city, county, and state while the Asian population is lower (at 2%). All other population percentages are similar to those for the City of Boston and Suffolk County as a whole. The study area has higher percentages of black and Hispanic populations.

7. Potential Impacts

The following types of benefits and impacts were assessed to determine the potential impacts of the SSX project on EJ populations:

- Changes in accessibility and mobility for EJ and disabled populations, compared to changes for non-disadvantaged populations.
- Direct impacts due to relocations and other indirect property impacts.
- Indirect impacts due to air quality and noise impacts.

7.1. Changes in Accessibility and Mobility

The terminal improvements at South Station would improve accessibility to public transportation for all users, including EJ populations. Additionally, an improved station design would improve public access within the station for all users, including EJ populations. Further, the station improvements would benefit EJ populations that use the station by providing improved transportation facilities and additional areas of open space, including the new Harborwalk extension on Dorchester Avenue.

CTPS assessed the changes in regional access for EJ and disabled populations using the Boston Region MPO regional travel demand model. This model encompasses 2,727 TAZs covering nearly all of eastern Massachusetts.¹⁰ The CTPS analysis evaluated accessibility to employment (basic, retail, and service) opportunities, hospitals, and higher education destinations located within a 40-minute transit trip and a 20-minute automobile trip within the regional travel demand model area. Additionally, the differences in the mobility, congestion, and environmental impacts, measured by the carbon monoxide emissions per square mile and congested vehicle miles traveled per square mile, also were assessed.

Table 4 presents the accessibility and mobility measures that were assessed for the SSX project alternatives.

¹⁰ The 2,727 TAZs encompasses 164 cities and towns, including the 101 Boston Region MPO cities and towns and 63 additional communities.

Table 4—Accessibility and Mobility Measures for Environmental Justice and Disabled Populations

Accessibility and Mobility Measures for EJ and Disabled Populations
Average number of basic, retail, service jobs within a 40-minute transit trip or 20-minute automobile trip
Average transit time/highway time (minutes) to these jobs
Average number of available hospital beds within a 40-minute transit trip or 20-minute automobile trip
Average transit time/highway time (minutes) to these hospitals
Average number of available college enrollments within a 40-minute transit trip or 20-minute automobile trip
Average transit time/highway time (minutes) to these colleges
Average door-to-door transit times to or from study area destinations
Average door-to-door highway travel times to or from study area destinations
Carbon monoxide emissions per square mile
Congested vehicle miles traveled per square mile

CTPS evaluated the following four SSX project alternatives:

- **No Build Alternative.** In the No Build Alternative, South Station would remain as it currently exists, with 13 tracks and eight platforms. The USPS General Mail Facility would not be relocated in the No Build Alternative. The majority of Dorchester Avenue at the site would remain in private use by the USPS in support of its operations. Other than retail that could occur within the existing headhouse, there would be no private development associated with the South Station site other than the South Station Air Rights (SSAR) project¹¹ previously approved by the Secretary of EEA.
- **Alternative 1 – Transportation Improvements Only.** In Alternative 1, 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, totaling approximately 210,000 square feet (sf), would be expanded by approximately 400,000 sf, consisting of passenger platform and concourse levels with passenger support services, including amenities such as retail and food and beverage sales. Capacity improvements would include construction of seven new tracks and four new platforms for a total of 20 tracks and 11 platforms. Additionally, several existing tracks and platforms would be reconfigured. Tower 1 and four approach interlockings would be reconfigured. Alternative 1 would not provide for potential private development at the South Station site, other than the previously-approved South Station Air Rights (SSAR) project.
- **Alternative 2 – Joint/Private Development Minimum Build Alternative.** Alternative 2 would include all of the transportation improvements provided in Alternative 1, as well as provisions for future private development at the South Station site by incorporating appropriate structural foundations into the overall station and track design. In Alternative 2, future private development could include approximately 660,000 sf of mixed uses consisting of residential; office; and commercial uses, including retail and hotel, located in six separate buildings with open space and plazas.

¹¹ The South Station Air Rights (SSAR) project consists of an approximate 1.8 million square foot mixed-use development to be located directly above the railroad tracks at the South Station headhouse. The SSAR project was approved in 2006 (EEA No. 3205/9131).

- **Alternative 3 – Joint/Private Development Maximum Build Alternative.** Alternative 3 would include all of the transportation improvement provided in Alternative 1, as well as provisions for future private development at the South Station site by incorporating appropriate structural foundations into the overall station and track design. Future private development could include approximately 2,000,000 sf of mixed uses consisting of residential; office; and commercial uses, including retail and hotel uses, located in six separate buildings with open space and plazas.

CTPS determined that minimal or no permanent changes would occur among the alternatives across the communities of concern for accessibility to needed services and jobs, mobility and congestion, or environmental impacts. Furthermore, permanent changes would be negligible (with either no change or changes of less than 2%) for both EJ and disabled populations and non-disadvantaged populations in the Build Alternatives as compared to the No Build Alternative.

CTPS determined that none of the EJ populations, including low-income, minority, linguistic isolation, or disabled populations, would experience a greater burden than any non-EJ population resulting from any of the SSX project Build Alternatives.

CTPS's assessment primarily evaluated the changes associated with improved MBTA commuter rail service, and did not include improved Amtrak intercity services. Given the minimal differences in accessibility for both EJ and non-EJ communities between the Build and No Build conditions for MBTA service, when Amtrak service is factored in, the differences expected with Amtrak service are still expected to be minimal for the Build Alternatives.

Attachment A contains CTPS' detailed technical memorandum on the accessibility and mobility assessment conducted for the SSX project.

7.2. Property Acquisitions and Other Impacts

The proposed South Station improvements would not directly displace any EJ populations, as there are no residential property takings. The displacement of the USPS facility would result in the displacement (or more likely relocation) of all employees. The number of employees at the USPS facility meeting EJ criteria is not known. Assuming that the percentage of workers that represent EJ population is similar to the statistics for the City of Boston, roughly half (or 500) of the USPS workers could represent EJ populations. It is anticipated that this facility would be relocated to another site in Boston, and would not result in permanent loss of jobs. Moreover, it is MassDOT's intent to replace the retail mail functions within the expanded South Station complex. Regarding the temporary loss of the post office facility as a community service, there are two other USPS post offices within close proximity (a 5- to 10-minute walk from South Station). Therefore, no disproportionate impacts on EJ populations are anticipated as a result of the USPS facility relocation.

SSX project-related property displacements would occur at Widett Circle, with the displacement of approximately 30 private businesses. This displacement could affect minority or low-income workers. The number of employees at these businesses meeting EJ criteria is not known, but if the workforce has similar EJ characteristics as the City of Boston, half of the workforce could represent EJ populations. The displaced private businesses at the Widett Circle site are located within an area that is tax exempt under M.G.L. Chapter 121A (Urban Redevelopment Corporation) to encourage private investment and development in the area. It is anticipated that these businesses would be relocated in the Boston area, and no long-term loss of employment is anticipated to occur at this location.

No disproportionately high and adverse human health and environmental effects, including air quality, visual, social and socioeconomic effects, are anticipated to occur to EJ populations due to the SSX project.

In the EJ communities surrounding Beacon Park Yard and Readville – Yard 2, increases in rail operations and associated increases in noise would adversely impact nearby residences. The midday peak activity noise level at Beacon Park Yard would impact residences located along Wadsworth Street and Pratt Street. The midday peak activity noise level at Readville – Yard 2 would impact residences located along Wolcott Street and Riley Road. Both of these residential areas include EJ communities. Noise barriers are proposed at both locations to mitigate adverse impacts. At the Beacon Park Yard site, a noise barrier installed along the MBTA’s Framingham-Worcester Line and (as necessary) ballast mats installed under the mainline tracks would reduce noise and vibration levels adjacent to residential receptors located proximate to the site’s southern border. At the Readville - Yard 2 site, an existing noise barrier located between the layover facility and the residences located along Wolcott Street could be extended to include the layover facility expansion area to provide noise mitigation. In addition, the noise barrier would be extended to provide noise mitigation to the apartment buildings along Riley Road. Appendix 11 – *Noise and Vibration Technical Report* provides additional information. No air quality impacts are anticipated due to the SSX project.

8. Public Outreach

A Public Participation Plan has been prepared for the SSX project that outlines the public outreach program, and the SSX project has, and would continue to, implement the public outreach specified in the plan. MassDOT maintains a SSX project website, which is used to disseminate information and includes the project brochure translated into Chinese, Spanish, and Portuguese, the three most commonly spoken languages in Massachusetts for limited English proficiency populations in the 2010 census. The brochure also includes a TTY number for the hearing impaired. Project website materials are accessible for use by screen readers (for the visually impaired). The project website states that project materials posted on the website can be translated or alternative formats (such as large print) made available upon request, and a web link for such requests is provided.

MassDOT sends regular email updates, including when significant documents are uploaded to the SSX project website and public meetings are scheduled, to an extensive database that includes 2,500 groups and individuals and nearly 1,000 abutters. Email notifications include contacts for requests for access accommodations or interpreter services. A TTY number for the hearing impaired is also included. This interpreter information in the notification is translated into Chinese (both traditional and simplified characters), Spanish, and Portuguese.

Two open houses were held in November 2012 at Atlantic Wharf, 290 Congress Street, one block from South Station, to kick off the SSX project. These open houses were widely advertised and noticed. One meeting was held in the morning and the other meeting was held in the late afternoon/early evening to accommodate individuals with different schedules. Meeting notices were sent via e-mail to the SSX project database. Flyers advertising the open houses were distributed to abutters door-to-door in the Leather District, Chinatown, and South Boston (along Fort Point Channel). Signs advertising the events were displayed at South Station, and copies of the meeting flyer were available at the station’s information desk. Meeting advertisements included a display ad posted in the Chinese newspaper, SamPan, in Chinese.

A MEPA scoping session on the ENF was held at South Station on April 1, 2013. The meeting was noticed in newspapers ads, including SamPan, and e-mail notifications were sent out. Signs advertising

the MEPA scoping session were displayed in South Station, and a Chinese interpreter attended the meeting. Interpreter services will be made available for future meetings upon request.

MassDOT also periodically conducts information sessions about the project. To date, there have been five information sessions at South Station and an additional session at the Farmer's Market in Dewey Square. These sessions are advertised through e-mail notifications to the project database. Sign language interpreters are available upon request. This service was requested and provided at an information session in September 2013.

MassDOT has provided briefings to neighborhood organizations, local institutions, and businesses. Meetings were held with local community organizations in EJ neighborhoods. For neighborhood organizations alone, there have been eleven briefings on the project to date. Project briefings were held with a number of civic and community organizations, including Chinatown Coalition, Chinatown Safety Committee, Leather District Neighborhood Association, Friends of Fort Point Channel, Allston Civic Association, and Andrews Square Civic Association. MassDOT's public informational materials and notices have included an offer to hold project briefings upon request.

MassDOT has conducted two online surveys, presented in English, Chinese and Spanish, on the SSX project to gauge public preferences and obtain public input into the station design and planning process. The first survey was conducted during the Fall of 2013 to gather feedback on current and future amenities at South Station. Nearly 800 people responded to this survey. The second survey opened in May 2014 and focused on gathering information on pedestrian and bicycling in the South Station/Dewey Square area. Print versions of the surveys were made available upon request. The surveys were promoted via the following: the project website, e-mail notifications to the project database, information sessions at South Station, the large display screens at South Station, printed bookmarks distributed at the South Station information desk, other organizations' mailing lists, and the MassDOT blog.

As the layover facility site screening advances, outreach to EJ communities will continue. MassDOT intends to utilize Beacon Park Yard as a preferred location to the west, to provide a more-balanced mix of layover sites west and south of South Station. MassDOT is continuing to evaluate the Widett and Readville – Yard 2 Alternatives to provide a layover facility south of South Station. MassDOT is simultaneously performing environmental review of the I-90 Allston Interchange project, which is located in an area that includes the Beacon Park Yard rail site and I-90 (the Massachusetts Turnpike). The Interchange project is examining how to best realign the transportation assets in this area while also addressing significant structural needs; highway operational changes (the introduction of All-Electronic Tolling); the construction of a commuter rail station; and the introduction of significant off-road multimodal connections throughout the area. MassDOT has determined that it is appropriate to consider these potential transportation changes under a single environmental review process. Therefore, MassDOT plans to continue environmental review of the Beacon Park Yard site as a layover facility as part of the I-90 Allston Interchange project's environmental review. An ENF for that project is anticipated to be filed with the Secretary of EEA in late 2014 concurrent with this DEIR.

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9. SSX Project Figures

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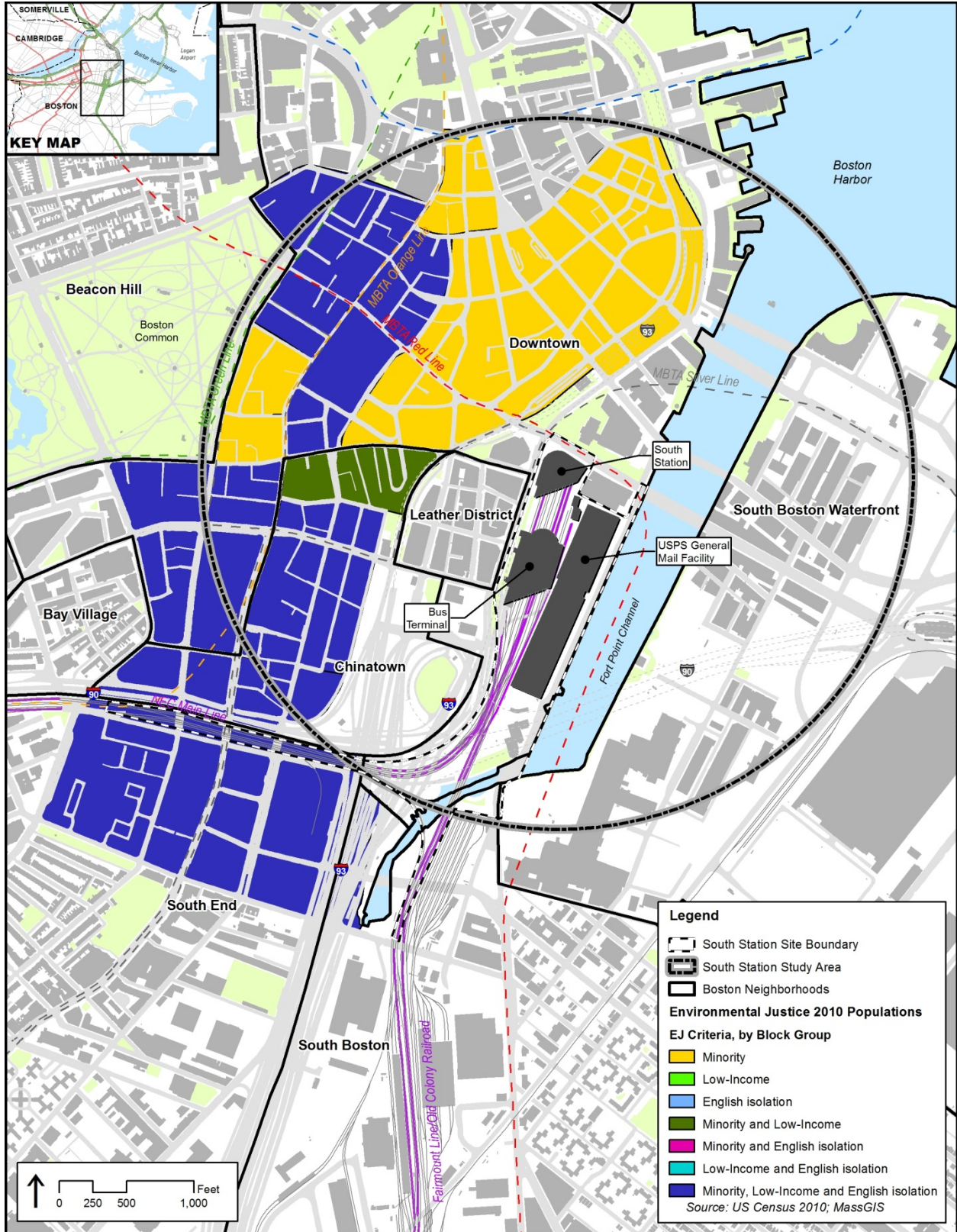


Figure 1—Environmental Justice Block Groups – South Station Study Area

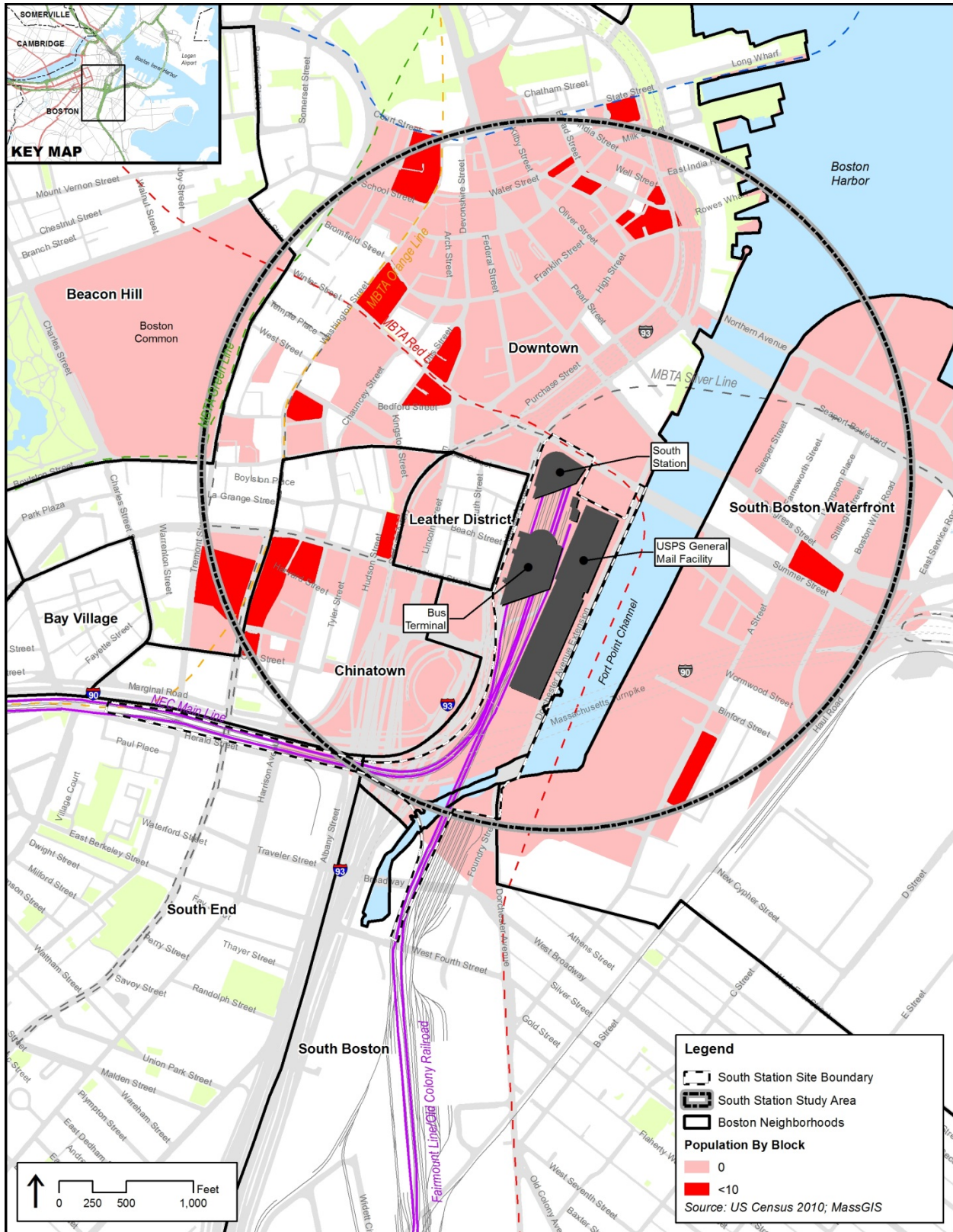


Figure 2—Unpopulated Census Blocks – South Station Study Area

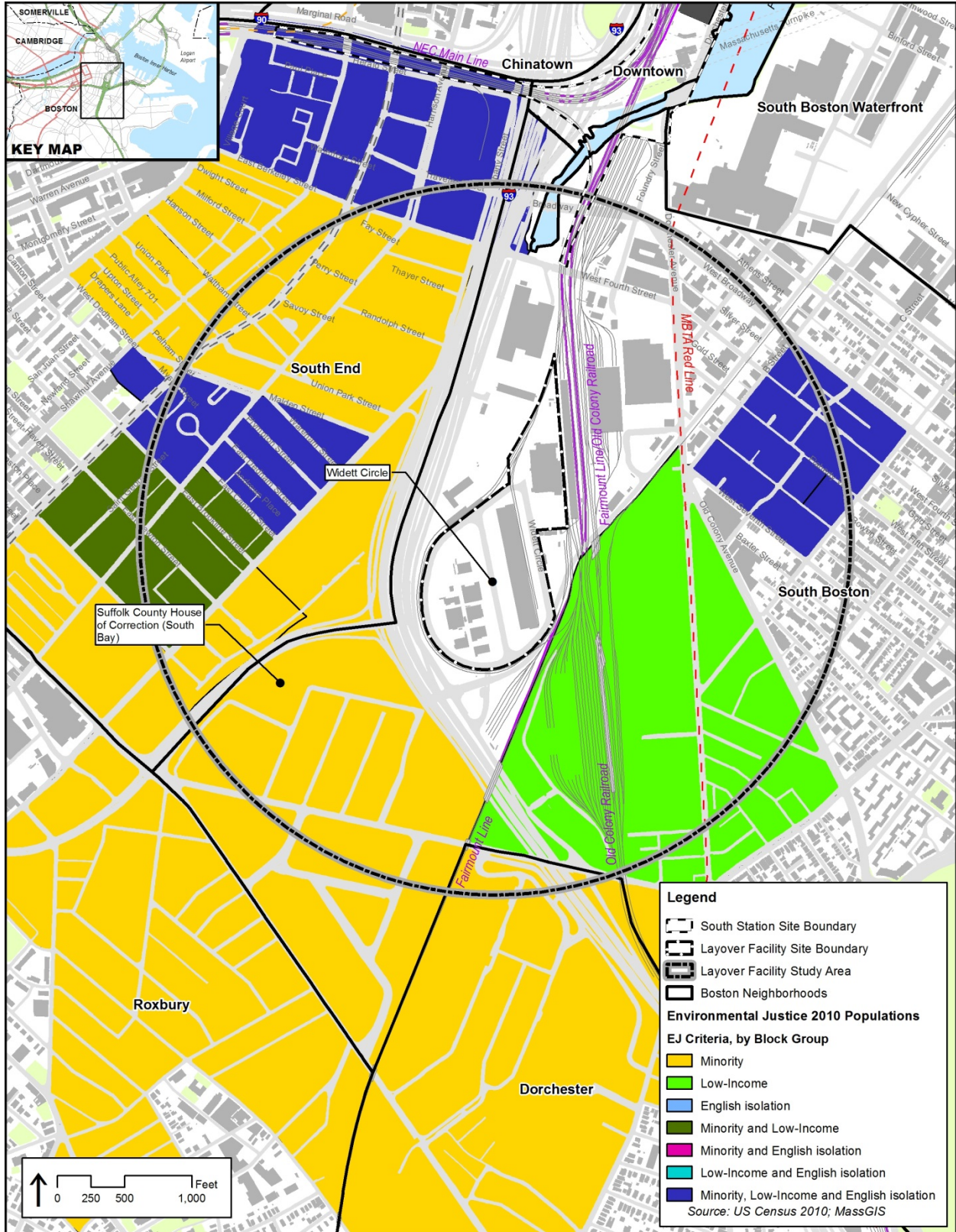


Figure 3—Environmental Justice Block Groups – Widett Circle Layover Facility Study Area

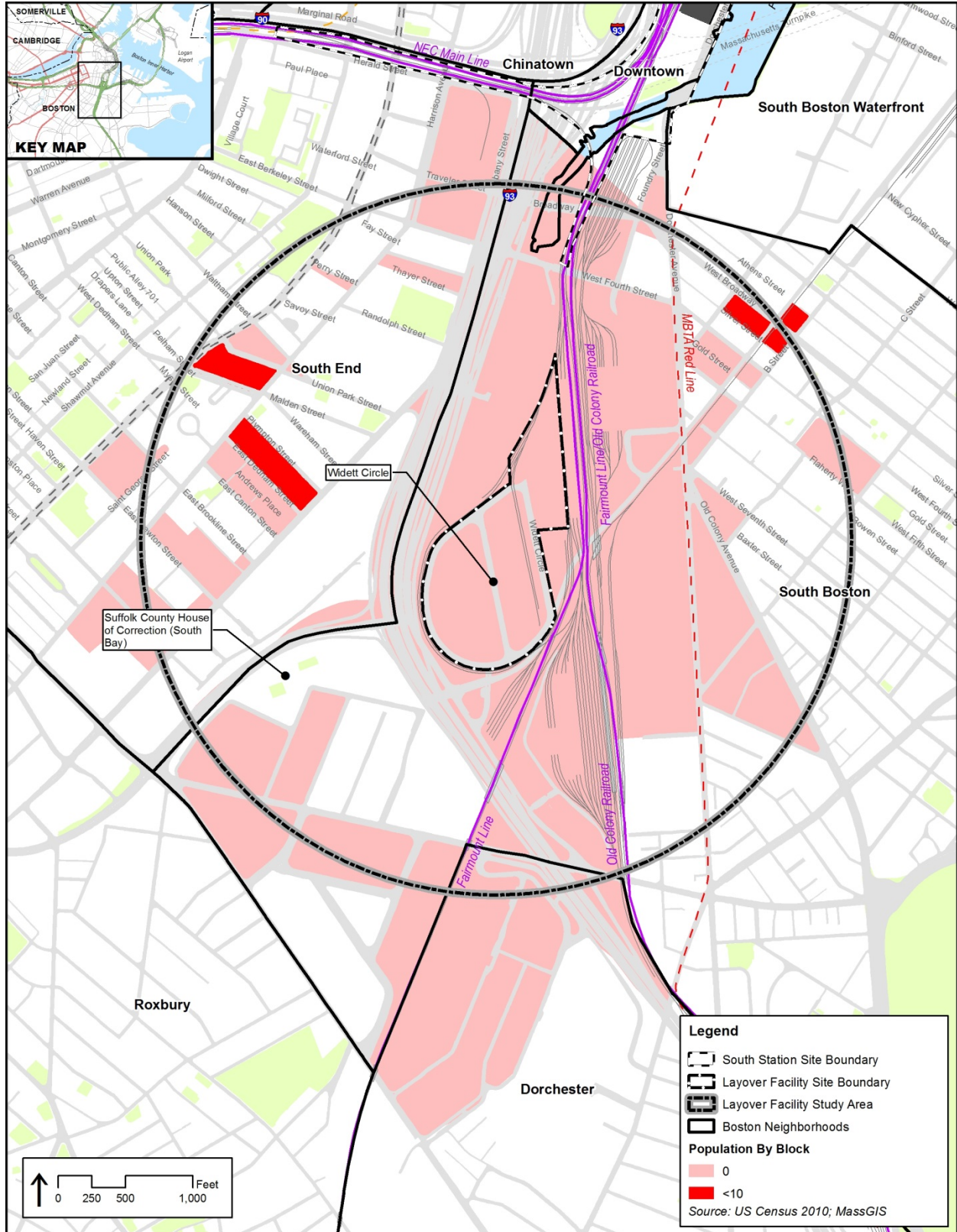


Figure 4—Unpopulated Census Blocks – Widett Circle Layover Facility Study Area

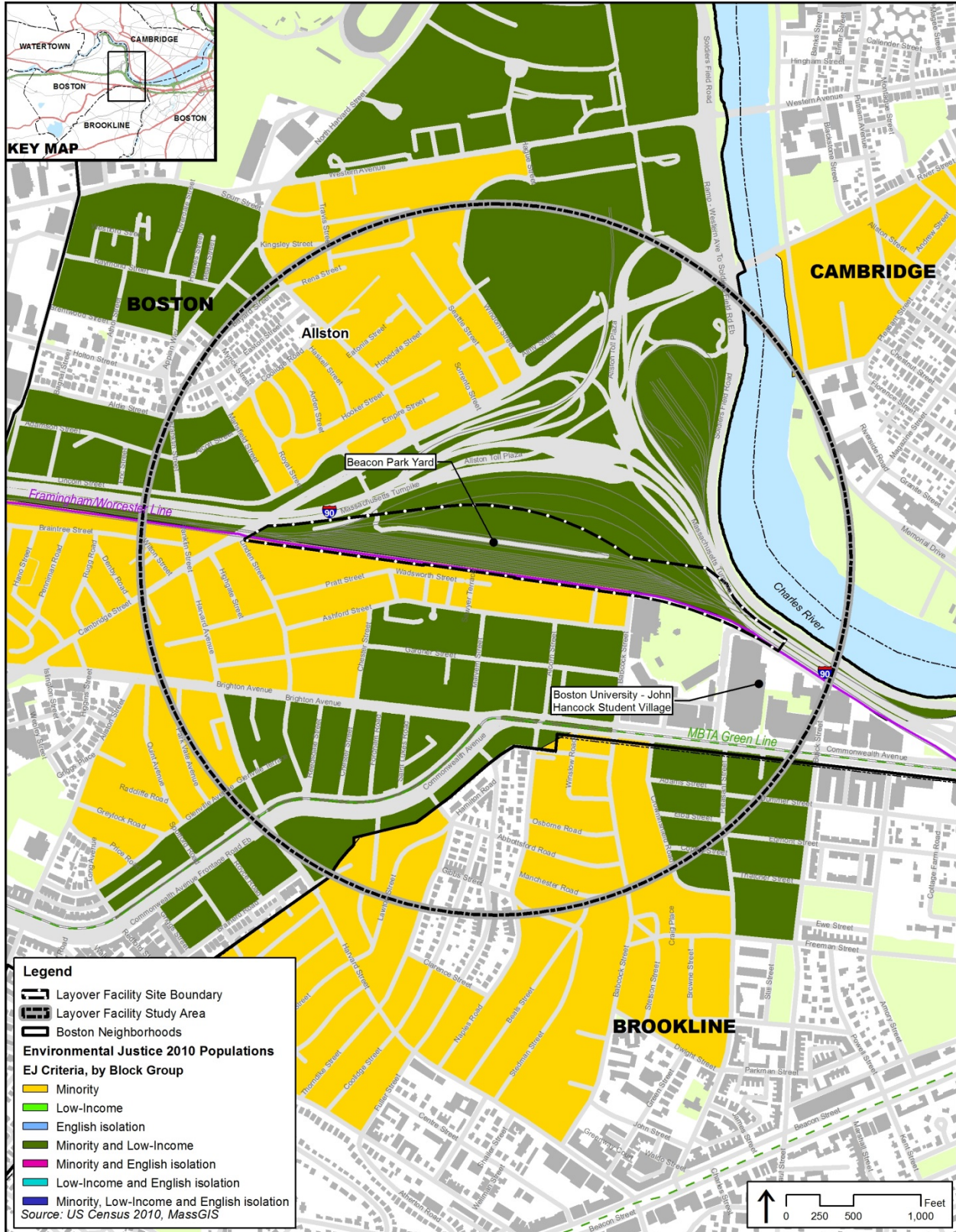


Figure 5—Environmental Justice Block Groups – Beacon Park Yard Layover Facility Study Area

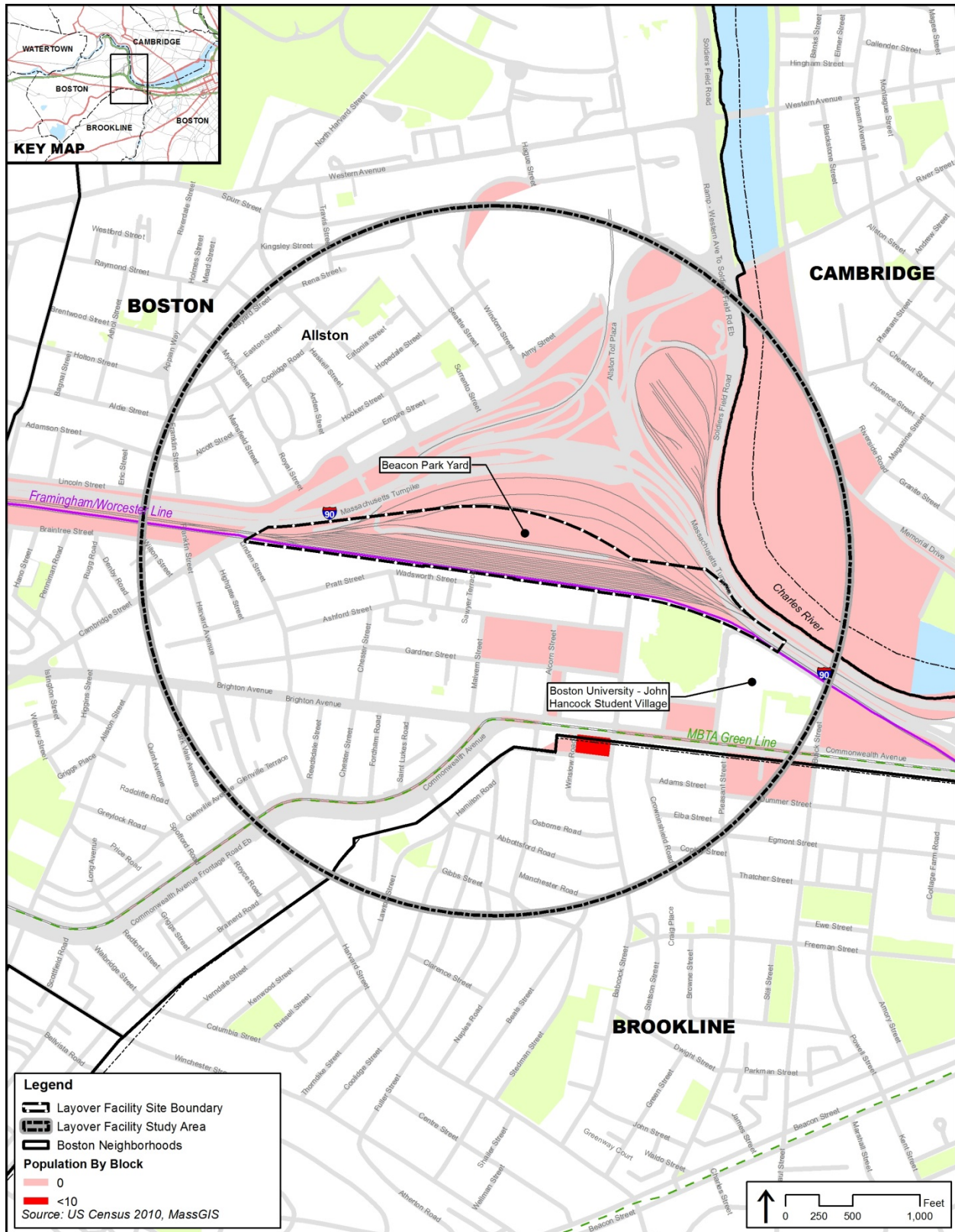


Figure 6—Unpopulated Census Blocks – Beacon Park Yard Layover Facility Study Area

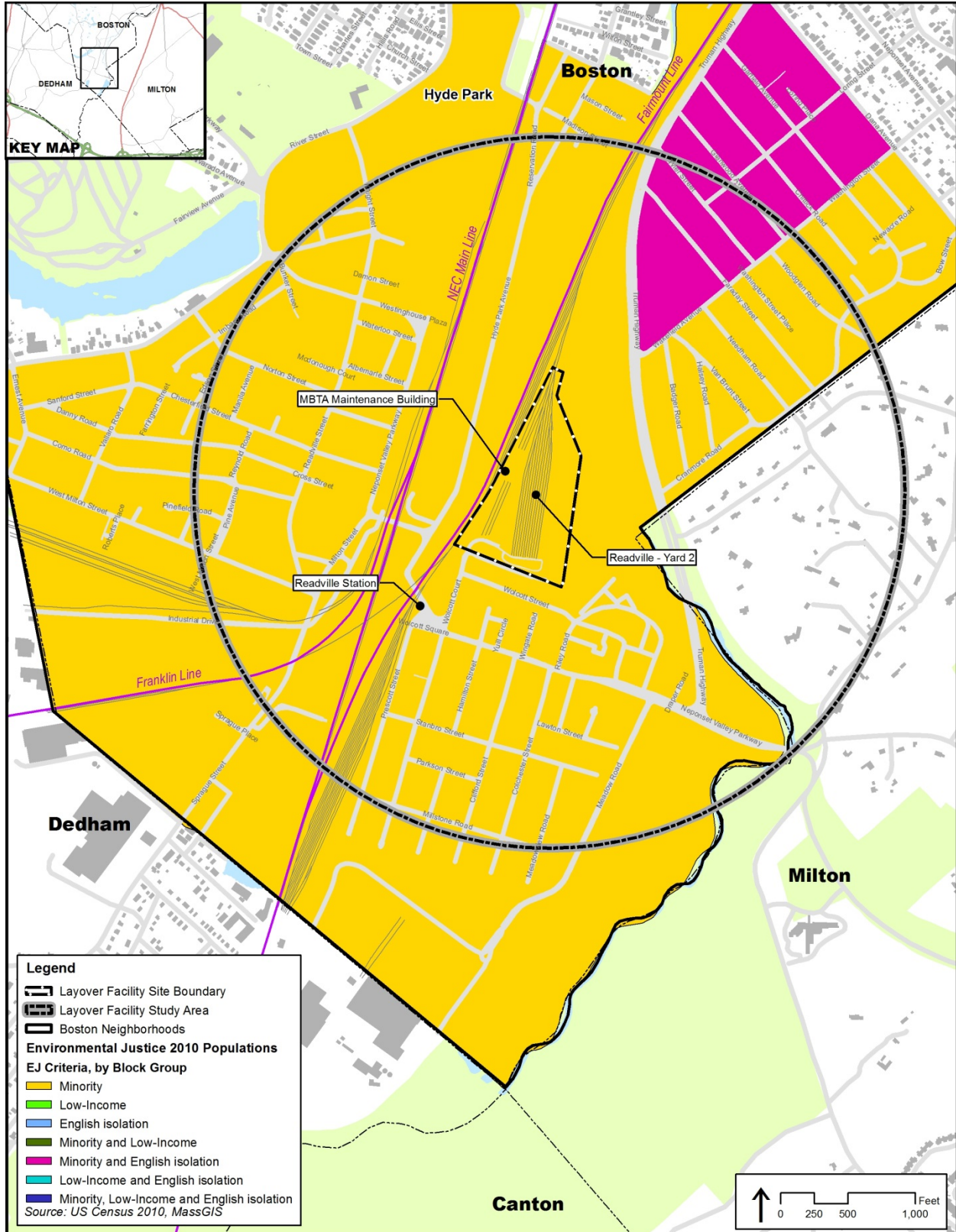


Figure 7—Environmental Justice Block Groups – Readville – Yard 2 Layover Facility Study Area

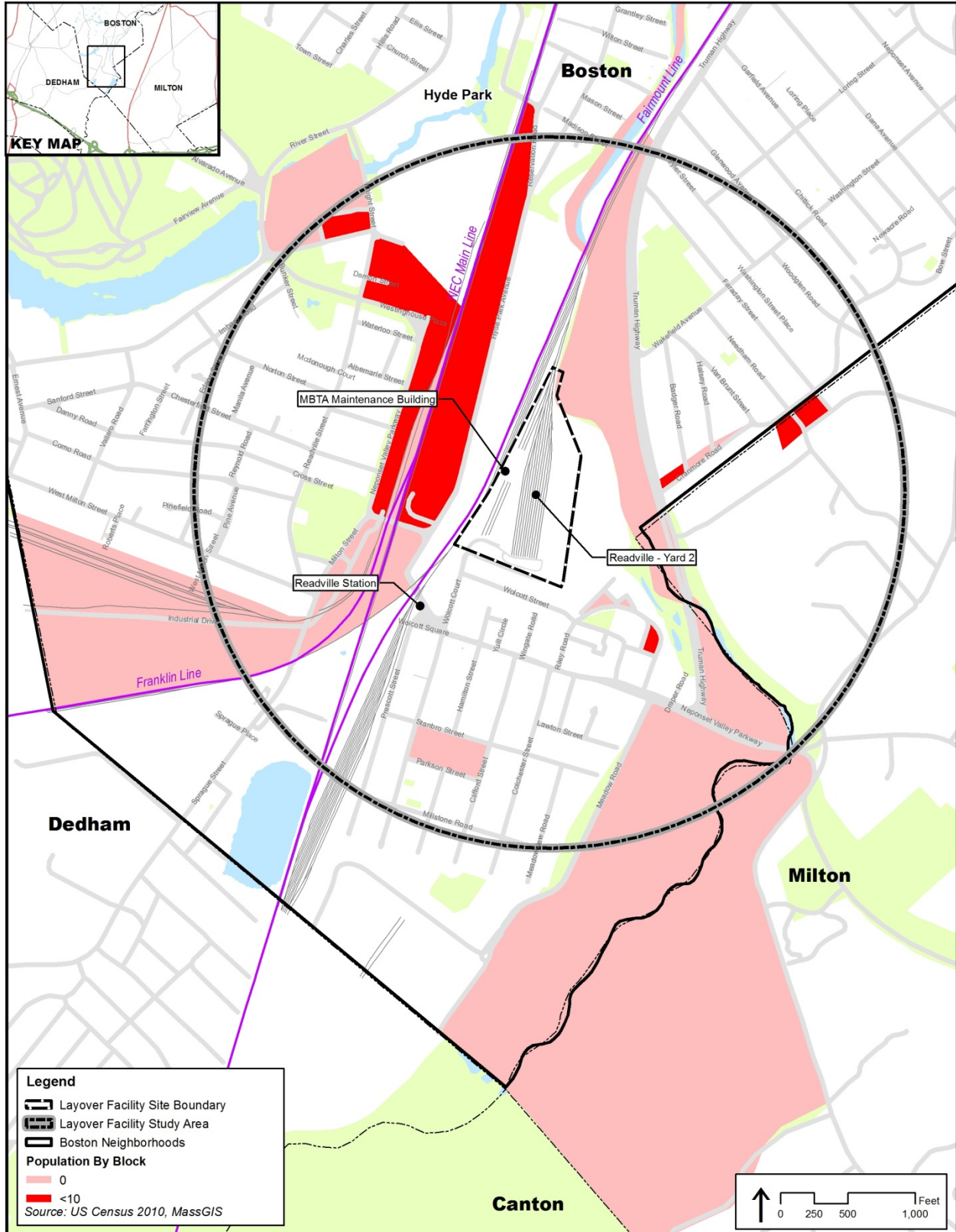


Figure 8—Unpopulated Census Blocks – Readville – Yard 2 Layover Facility Study Area