

5 ENVIRONMENTAL JUSTICE

5.1 Introduction

Chapter 5, Environmental Justice, of the Burbank to Los Angeles Project Section Environmental Impact Report/Environmental Impact Statement (EIR/EIS) defines environmental justice (EJ) populations within the region, describes the affected environment in the resource study areas (RSA), and determines whether the No Project Alternative and the High-Speed Rail (HSR) Build Alternative would have disproportionately high and adverse environmental and health impacts on EJ populations. Chapter 5 also describes impact avoidance and minimization features (IAMF) that would avoid, minimize, or reduce these impacts. Where applicable, mitigation measures are proposed to further reduce, compensate for, or offset impacts of the HSR Build Alternative. This evaluation is based on the totality of impacts (construction and operation) identified in EIR/EIS resource sections (Section 3.2 through Section 3.18) and discusses only those impacts that remain adverse after all IAMFs and mitigation measures have been considered.

EJ populations include minority populations and/or low-income populations. Low-income and/or minority populations are present in substantial proportions close to the existing rail corridor and the proposed HSR Build Alternative. The EJ analysis in this chapter complies with U.S. Executive Order (USEO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and/or Low-Income Populations, which requires federal agencies to assess the potential for their actions to have disproportionately high and adverse environmental and health impacts on low-income and/or minority populations. This chapter also complies with the U.S. Department of Transportation's (U.S. DOT) updated Actions to Address Environmental Justice in Minority Populations and/or Low-Income Populations (U.S. DOT Order 5610(a)), the Federal Railroad Administration (FRA) Procedures for Considering Environmental Impacts (64 *Federal Register* 28556), and the California High-Speed Rail Authority's (Authority) Title VI Program Plan, Limited English Proficiency Plan, and Environmental Justice Guidance. The roots of EJ lie in Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

Demographic data used in the analysis to identify low-income and/or minority populations within the RSA were derived from various sources, including the U.S. Census Bureau 2010 Decennial Census and U.S. American Community Survey (ACS) 2010–2014 dataset, as well as the California Department of Finance. In all cases, the most current reliable data available at the time the research was conducted were used to document the EJ characteristics of the region and the RSA.

The *Burbank to Los Angeles Project Section Community Impact Assessment* (CIA) (Authority 2019) provides additional technical details on EJ. Key information related to the EJ analysis is also found in Appendix 5-A, Environmental Justice Outreach Plan, in Volume 2 of this EIR/EIS. This preliminary EJ analysis is being released for comment by the Authority pursuant to 23 U.S. Code 327 and the terms of the National Environmental Policy Act (NEPA) Assignment Memorandum of Understanding (FRA and State of California 2019) assigning the Authority responsibility for complying with NEPA and other federal environmental laws, including Executive Order 12898 and related U.S. DOT orders and guidance.

Eight other resource sections in this Draft EIR/EIS provide additional information related to effects on low-income and/or minority populations:

- **Section 3.2, Transportation**—Construction and operations impacts of the HSR Build Alternative on transit, roadway, freight, bicycle, and pedestrian facilities.

Environmental Justice

Environmental Justice is a federally mandated analysis that requires federal agencies to assess the potential for their actions to have disproportionately high and adverse environmental and health impacts on minority and/or low-income populations. Environmental Justice Guidance also requires opportunities for substantive input for minority and/or low-income populations in the project planning process.

- **Section 3.3, Air Quality and Global Climate Change**—Construction and operations impacts of the HSR Build Alternative on regional and local air quality from generated air emissions.
- **Section 3.4, Noise and Vibration**—Construction and operations impacts of the HSR Build Alternative on noise and vibration that would affect nearby uses.
- **Section 3.12, Socioeconomics and Communities**—Construction and operations impacts of the HSR Build Alternative on community cohesion, children’s health and safety, residential and business displacements, potential losses of local government revenue sources, potential physical deterioration of communities, and job creation.
- **Section 3.13, Station Planning, Land Use, and Development**—Construction impacts of the HSR Build Alternative on access to businesses and residents and conversion of land and operations impacts related to alteration of land use patterns.
- **Section 3.15, Parks, Recreation, and Open Space**—Construction and operations impacts of the HSR Build Alternative on parks and recreational facilities.
- **Section 3.16, Aesthetics and Visual Quality**—Construction and operations impacts of the HSR Build Alternative on visual changes in areas adjacent to or within viewing range of the project section.
- **Section 3.17, Cultural Resources**—Construction and operations impacts of the HSR Build Alternative on archaeological and historic resources.

5.1.1 Definition of Resources

The following are definitions for low-income and/or minority populations analyzed in this EIR/EIS.

- **Minority** includes persons who are American Indian, Alaskan Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian and other Pacific Islander, and other individuals who are one other or two or more races. A minority population means any readily identifiable group or groups of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed or transient persons (such as migrant workers, students, or Native Americans) who could be affected by a proposed program, policy, or activity.
- **Low-Income** means a person whose median household income is at or below the Department of Health and Human Services’ poverty guidelines. A low-income population means any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically transient persons (such as migrant workers, students, or Native Americans) who could be affected by a proposed program, policy, or activity.

5.2 Laws, Regulations, and Orders

This section describes the federal, state, and local laws, regulations, orders, and plans relevant to EJ. Although federal law and policy requires EJ analysis for federally funded actions, the California Environmental Quality Act (CEQA) does not.

5.2.1 Federal

5.2.1.1 *Title VI of the Civil Rights Act (42 U.S. Code § 2000(d) et seq.)*

Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, national origin, age, sex, or disability in programs and activities receiving federal financial assistance. Under Title VI, each federal agency is required to ensure that no person, on the grounds of race, color, or national origin, is excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance.

5.2.1.2 *Federal Actions to Address Environmental Justice in Minority Populations and/or Low-Income Populations (U.S. Presidential Executive Order 12898)*

USEO 12898 outlines the federal government's EJ policy. The USEO requires federal agencies to identify and address to the greatest extent practicable and permitted by law the disproportionately high adverse human health and environmental effects of their programs, policies, and activities, on low-income and minority populations in the United States.

5.2.1.3 *Actions to Address Environmental Justice in Minority Populations and/or Low-Income Populations (U.S. Department of Transportation Order 5610.2(a))*

To implement USEO 12898, U.S. DOT relies on U.S. DOT Order 5610.2(a), which applies to actions undertaken by U.S. DOT operating administrations, including FRA. The U.S. DOT Order affirms the importance of considering EJ principles as part of early planning activities in order to avoid disproportionately high and adverse effects. The Order states that U.S. DOT will not carry out any programs, policies, or activities that will have a disproportionately high and adverse effect on minority populations and/or low-income populations unless "further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effect are not practicable." The Order defines environmental justice to mean an adverse impact that is predominately borne by a minority population and/or a low-income population, or that would be suffered by the minority population and/or low-income population, and that is appreciably more severe or greater in magnitude than would be suffered by the non-minority population and/or nonlow-income population.

5.2.1.4 *Presidential Memorandum Accompanying U.S. Presidential Executive Order 12898*

The Presidential Memorandum accompanying USEO 12898 calls for specific actions to be directed in NEPA-related activities. They include:

- Analyzing environmental effects, including human health, economic, and social effects on minority populations and/or low-income populations when such analysis is required by NEPA
- Ensuring that mitigation measures outlined or analyzed in environmental assessments, EISs, and Records of Decision, whenever feasible, address disproportionately high and adverse environmental effects or proposed actions on minority populations and/or low-income populations
- Providing opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving accessibility to public meetings, official documents, and notices to affected communities.

5.2.1.5 *Improving Access to Services for Persons with Limited English Proficiency (U.S. Presidential Executive Order 13166)*

USEO 13166 requires each federal agency to ensure that recipients of federal financial assistance provide meaningful access to their programs and activities by limited English proficiency (LEP) applicants and beneficiaries. Meaningful access can include availability of vital documents, printed and internet-based information in one or more languages, depending on the location of the project, and translation services during public meetings.

5.2.1.6 *Uniform Relocation Assistance and Real Property Acquisition Policy Act (42 U.S. Code § 61)*

The Uniform Relocation Assistance and Real Property Program ensures that persons displaced as a result of a federal action or by an undertaking involving federal funds are treated fairly, consistently, and equitably. This helps to ensure persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

5.2.2 State

5.2.2.1 California Government Code 65040.12(e)

Section 65040.12(e) defines *environmental justice* as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.” It does not, however, require an analysis of impacts to these populations as part of the CEQA process.

5.2.2.2 California High-Speed Rail Authority Environmental Justice Policy

In August 2012, the Authority adopted an *Environmental Justice Policy* (Authority 2012e). The policy states:

- The Authority shall develop and maintain an Environmental Justice Guidance in compliance with Title VI of the Civil Rights Act of 1964, USEO 12898, and California State law—Government Code Section 65040.2 et seq. and Public Resources Code Section 1110 et seq.
- The Authority will promote EJ in its programs, policies, and activities to avoid, minimize, or mitigate disproportionately high human health and environmental effects, including social and economic effects on minority and/or low-income populations.
- The Authority will duly emphasize the fair and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the HSR project planning, development, operations, and maintenance.
- The Authority will engage the public through public participation forums so that decisions are mitigated and reflect EJ for all communities.

5.2.2.3 California High-Speed Rail Title VI Plan

In March 2012, the Authority adopted a policy and plan to ensure that the California HSR System complies with Title VI. The policy states:

- The Authority is committed to ensuring that no person in the State of California is excluded from participation in, nor denied the benefits of, its programs, activities, and services on the basis of race, color, national origin, age, sex, or disability as afforded by Title VI of the Civil Rights Act of 1964 and Related Statutes.
- The Authority, as a federal grant recipient, is required by the FRA to conform to Title VI of the Civil Rights Act of 1964 and related statutes. The Authority’s sub-recipients and contractors are required to prevent discrimination and ensure non-discrimination in all of their programs, activities, and services.
- As permitted and authorized by Title VI, the Authority will administer a Title VI Program in accordance with the spirit and intent of the non-discrimination laws and regulations.

The Title VI Plan includes a commitment to inclusive public involvement of all persons affected by the HSR project.

5.2.2.4 California High-Speed Rail Limited English Proficiency Policy and Plan

In May 2012, the Authority adopted a policy and plan to ensure the California HSR Program complies with the requirements of USEO 13166. The policy states:

- It is the policy of the Authority to communicate effectively and provide meaningful access to LEP individuals to all the Authority’s programs, services, and activities. The Authority will provide free language assistance services to LEP individuals encountered or whenever an LEP individual requests language assistance services.
- The Authority will treat LEP individuals with dignity and respect. Language assistance will be provided through a variety of methods, including staff interpreters, translation and interpreter service contracts, and formal arrangements with local organizations providing interpretation or translation services or telephonic interpreter services.

The LEP Policy and Plan supplements the Title VI Plan (Limited English Proficiency Plan), Resolution 12-15.

5.2.2.5 California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund (Senate Bill 535, De León)

This bill requires the California Environmental Protection Agency to identify disadvantaged communities for investment opportunities, as specified. The bill requires the California Department of Finance, when developing a specified 3-year investment plan, to allocate 25 percent of the available moneys in the Greenhouse Gas Reduction Fund to projects that provide benefits to disadvantaged communities, as specified, and to allocate a minimum of 10 percent of the available moneys in the Greenhouse Gas Reduction Fund to projects located within disadvantaged communities, as specified. The bill requires the California Department of Finance, when developing funding guidelines, to include guidelines for how administering agencies should maximize benefits for disadvantaged communities. The bill requires administering agencies to report to the California Department of Finance, and the California Department of Finance to include in a specified report to the Legislature, a description of how administering agencies have fulfilled specified requirements relating to projects providing benefits to, or located in, disadvantaged communities.

5.2.3 Regional and Local

Table 5-1 lists county and city general plan goals, policies, and ordinances relevant to the HSR Build Alternative. Plans and policies related to other resources on which effects may be related to low-income and/or minority populations, as described in this chapter, are found in Section 3.2, Transportation; Section 3.3, Air Quality and Global Climate Change; Section 3.4, Noise and Vibration; Section 3.12, Socioeconomics and Communities; Section 3.13, Station Planning, Land Use, and Development; Section 3.15, Parks, Recreation, and Open Space, Section 3.16, Aesthetics and Visual Quality; and Section 3.17, Cultural Resources;

Table 5-1 Regional and Local Plans and Policies

Plan	Summary
Southern California	
Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy (2016)	<ul style="list-style-type: none"> • Goal 2: Maximize mobility and accessibility for all people and goods in the region. • Goal 3: Ensure travel safety and reliability for all people and goods in the region.
Los Angeles County	
County of Los Angeles General Plan (2015)	Economic Development Policy 2.3: Ensure environmental justice in economic development activities.
City of Burbank	
City of Burbank General Plan (2013)	<p>The general plan's foremost goal is to plan for future change while preserving the City of Burbank's high quality of life for future generations. The Land Use Element states the types of development needed to achieve the community's physical, economic, and environmental goals.</p> <p>The Land Use Element lays out land use goals and policies that seek to maintain a careful balance between a desire for economic prosperity and the high quality of life valued by the Burbank community. The goals and policies apply citywide and are intended to guide future land use decisions.</p> <p>The Mobility Element sets forth policies for each component of the city's transportation system to advance city mobility goals of a diverse transportation network to provide a high level of service while remaining accessible, minimizing neighborhood effects, and preserving Burbank's community feel.</p>

Plan	Summary
City of Glendale	
City of Glendale General Plan (1972, amended 1993 and 1995)	The Open Space and Conservation Element is concerned with the preservation of open space and natural resources and the amenities that are important to City of Glendale residents.
City of Los Angeles	
City of Los Angeles General Plan (2001)	Mobility Plan Policy 4.3: Ensure the fair and equal treatment of people of all races, cultures, incomes and education levels with respect to the development and implementation of citywide transportation policies and programs.
Boyle Heights Community Plan (1998)	The Land Use Policies and Programs of this community plan sets forth objectives that encourage compatibility between land uses, preserve and strengthen existing viable development, create more job opportunities, and provide adequate recreation/open space and services.

5.2.4 Consistency with Plans and Laws

As indicated in Section 3.1, Introduction, CEQA and NEPA regulations¹ require a discussion of inconsistencies or conflicts between a proposed undertaking and federal, state, regional, or local plans and laws.

Federal and state laws, listed in Section 5.2.1, Federal, and Section 5.2.2, State, pertain to EJ. The Authority, as both the lead state and federal agency (the Authority is the lead federal agency pursuant to 23 U.S. Code 327 and the terms of the Memorandum of Understanding between FRA and the State of California effective July 23, 2019) proposing to construct and operate the HSR system, is required to comply with all federal and state laws and regulations and to secure all applicable federal and state permits prior to initiating construction of the project. Therefore, there would be no inconsistencies between the HSR Build Alternative and these federal and state laws and regulations.

As a state agency, the Authority is not required to comply with local land use and zoning regulations; however, it has endeavored to design and construct the HSR project so that it is compatible with land use and zoning regulations. A total of nine policies from six plans were reviewed. The HSR Build Alternative would be compatible with nine policies and would be incompatible with no policies.

5.3 Methods for Evaluating Impacts

The following sections summarize the reference community and RSA and the methods used to analyze potential environmental justice impacts. As summarized in Section 5.1, Introduction, eight other sections also provide additional information related to EJ: Section 3.2, Transportation; Section 3.3, Air Quality and Global Climate Change; Section 3.4, Noise and Vibration; Section 3.12, Socioeconomics and Communities; Section 3.13, Station Planning, Land Use, and Development; Section 3.15, Parks, Recreation, and Open Space; Section 3.16, Aesthetics and Visual Quality; and Section 3.17, Cultural Resources.

5.3.1 Definition of Reference Community and Resource Study Area

The reference community represents the general population that could be affected positively or negatively by the HSR Build Alternative. For the EJ analysis, the reference community is Los Angeles County. Demographics for the reference community are used as a point of comparison

¹ NEPA regulations refer to the regulations issued by the Council for Environmental Quality located at 40 Code of Federal Regulations Part 1500.

with demographics of the EJ RSA to identify low-income and/or minority populations within the EJ RSA.

As defined in Section 3.1, Introduction, RSAs are the geographic boundaries in which the Authority conducted environmental investigations specific to each resource topic. The RSA for impacts on EJ includes all census tracts within a 0.5-mile radius of the HSR Build Alternative footprint. The RSA is in a highly urbanized region; therefore, with the exception of a few large census tracks, most of the census tracts are small and do not extend substantially beyond the 0.5-mile RSA boundary. Table 5-2 provides a general definition and boundary description for the Burbank to Los Angeles Project Section RSA and reference community, which are shown in Figure 5-1 and Figure 5-2, respectively.

Table 5-2 Definition of Reference Community and Resource Study Area

General Definition	Reference Community and Resource Study Area Boundary and Definition
Environmental Justice	
Reference Community	As it is inclusive of the cities within the Burbank to Los Angeles Project Section, Los Angeles County serves as the reference community for those census blocks, block groups, and tracts within the county. This reference community serves as the context for comparison of the populations within the EJ RSA and is used to identify the presence of EJ communities.
RSA	The RSA for the EJ analysis includes all census tracts within a 0.5-mile radius of the HSR Build Alternative footprint, which includes support facilities and stations. Figure 5-1 shows the location of the EJ RSA and the boundaries of the census tracts and the incorporated cities and neighborhoods in Los Angeles within that RSA. The relationship of the reference community to the EJ RSA and HSR Build Alternative is illustrated on Figure 5-2.

EJ = environmental justice

HSR = High-Speed Rail

RSA = resource study area

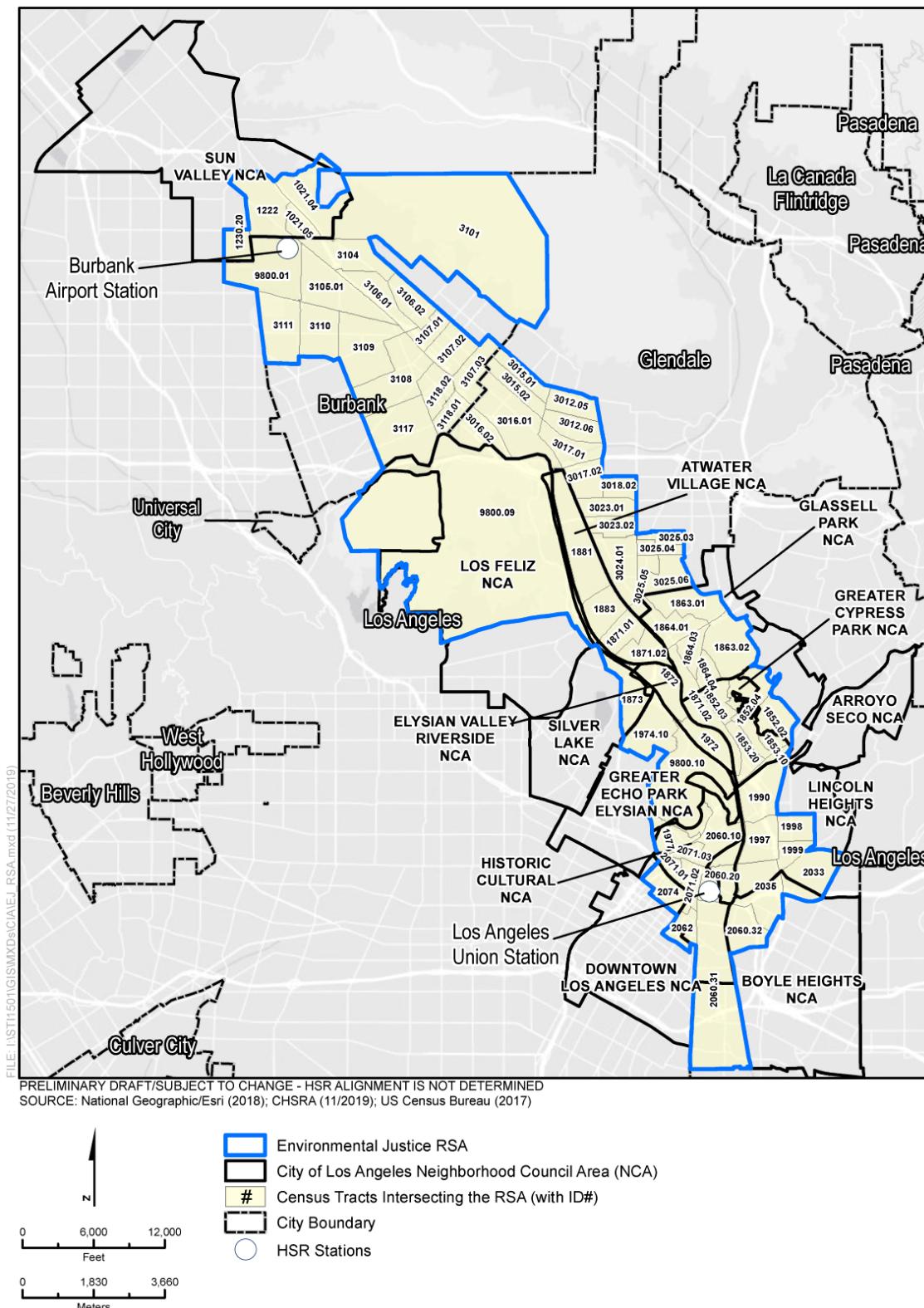


Figure 5-1 Environmental Justice Resource Study Area



Figure 5-2 Reference Community and Environmental Justice Resource Study Area

5.3.2 Methods for NEPA Impact Analysis

This section describes the sources and methods the Authority used to analyze potential impacts on low-income and/or minority populations from implementing the HSR Build Alternative. Refer to Section 3.1.3.4, Methods for Evaluating Impacts, for a description of the general framework for evaluating impacts under NEPA. Refer to the *Burbank to Los Angeles Project Section Community Impact Assessment* (Authority 2019) for additional information regarding the methods and data sources used in this analysis. Laws, regulations, and orders (Section 5.2, Laws, Regulations, and Orders) that regulate EJ were also considered in the evaluation of impacts on low-income and/or minority populations.

The process for identifying the locations of low-income and/or minority populations followed the methodology provided in the *Project Environmental Impact Report/Environmental Impact Statement: Environmental Methodology Guidelines, Version 5* (Authority 2017). The methodology used to identify low-income and/or minority populations also incorporates guidance from the Council on Environmental Quality (CEQ), an advisory body that has oversight of the federal government's compliance with USEO 12898 and NEPA (CEQ 1997). The analysis was based on the 2010–2014 ACS data set to determine the presence or absence of areas with low-income and/or minority populations within the Burbank to Los Angeles Project Section RSA.

Analysts used the following methods to evaluate potential direct and indirect effects on low-income and/or minority populations from construction and operation of the Burbank to Los Angeles Project Section.

5.3.2.1 Step 1: Initial Screening to Identify Minority and/or Low-Income Populations

The CEQ guidance recommends identifying minority populations where either: (1) the minority population of the affected area exceeds 50 percent, or (2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (CEQ 1997). Because the HSR Build Alternative would be constructed in a diverse area, the threshold of 50 percent would not provide a meaningful comparison to identify minority populations. Therefore, for the purposes of this analysis, minority populations are identified based on whether the minority population percentage of the affected area is meaningfully greater² than that of the reference community. The CEQ guidance also recommends identifying low-income populations in an affected area by applying the annual statistical poverty thresholds from the U.S. Census Bureau Current Population Reports, Series P-60 on Income and Poverty (U.S. Census Bureau 2014). This poverty threshold does not provide a meaningful comparison to identify low-income populations in Los Angeles County because income levels are generally much higher than other areas of the U.S. For the purpose of this analysis, a “meaningfully greater” percentage of a population is defined as the measured group of the population (e.g., low-income and/or minority populations) that is higher than that of the reference community, which in this analysis is Los Angeles County.

EJ areas were identified using demographic data from the 2010–2014 ACS. Unlike the 2010 Census, which is based on a 100 percent count, the 2010–2014 ACS is an average of five annual sample survey estimates and is generally published for census tracts, although some data sets are published for census block groups. A tract is typically divided into several block groups.

Socioeconomic information (e.g., poverty and income) and the racial, ethnic, and age composition of the cities and communities in the EJ RSA were researched using 2010–2014 ACS data.

The following populations were considered in assessing whether the HSR Build Alternative would result in disproportionate adverse effects or benefits to EJ or other underserved populations:

- **Minority Population**—Defined as all individuals who self-identify as Black or African American, American Indian or Alaska Native, Native Hawaiian or other Pacific Islander,

² For the purpose of this analysis, the threshold used for “meaningfully greater” is any percentage that is larger than that of the reference community, regardless of how small this difference.

Asian, some other race alone, two or more races, or Hispanic or Latino, regardless of race. For the purpose of this analysis, a census block group was identified as having a minority population that was meaningfully greater than the general population in the reference community if, according to Table B03002 of the 2010–2014 ACS, the minority population percentage in that block group was higher than the countywide average for Los Angeles County (72.8 percent).

- **Low-Income Population**—Defined as all individuals with incomes below the U.S. Census poverty threshold. A census block group was identified as having a low-income population that was meaningfully greater than the general population in the reference community if, according to Table B17001 of the 2010–2014 ACS, the low-income population percentage in that block group was higher than the countywide average for Los Angeles County (18.4 percent).

As noted above, the U.S. Census poverty threshold was used to identify low-income populations. The U.S. Census poverty threshold is calculated following the Office of Management and Budget Statistical Policy Directive 14 (U.S. Census Bureau 1978), using a set of money income thresholds that vary by family size and composition to determine who is living in poverty. If a family's total income is less than the appropriate family's threshold (considering size and type), then that family and every individual in it is considered to be living in poverty.

The official U.S. Census poverty thresholds do not vary geographically, but they are updated for inflation using the Consumer Price Index. The official poverty definition uses money income before taxes and does not consider capital gains or noncash benefits (such as public housing, Medicaid, and food stamps).

The U.S. Census poverty threshold is the original version of the federal poverty measure developed by the Social Security Administration in 1964. The threshold is used mainly for statistical purposes (e.g., preparing the estimates of the number of Americans in poverty for each year's report).

The poverty guidelines are the other version of the federal poverty measure. The U.S. Department of Health and Human Services issues these guidelines each year (generally in the winter) in the *Federal Register*. The guidelines are a simplification of the poverty thresholds for use for administrative purposes (e.g., determining financial eligibility for certain federal programs). Both the thresholds and the guidelines are the same for all contiguous states, regardless of regional differences in the cost of living, and both are updated annually for price changes using the Consumer Price Index (U.S. Department of Health and Human Services 2016; Institute for Research on Poverty 2016).

Table 5-3 presents a comparison of the two federally established poverty measures for families of various sizes. The U.S. Census threshold was used in this EJ analysis; however, as shown in Table 5-3, using the federal poverty guidelines would produce similar results in this analysis, as both poverty measures are very similar in value.

Table 5-3 Comparison of U.S. Census Poverty Threshold and Department of Health and Human Services Poverty Guidelines

Family Size	U.S. Census Bureau Poverty Thresholds, 2014	Department of Health and Human Services Poverty Guidelines, 2015
One person	\$12,071	\$11,770
Two people	\$15,379	\$15,930
Three people	\$18,850	\$20,090
Four people	\$24,230	\$24,250
Five people	\$28,695	\$28,410
Six people	\$32,473	\$32,570

Source: U.S. Department of Health and Human Services, 2014
 U.S. Census Bureau poverty thresholds are weighted average thresholds.

Due to different yet reasonable labeling practices, the 2014 U.S. Census Bureau poverty thresholds and the 2015 U.S. Department of Health and Human Services poverty guidelines both reflect price changes through calendar year 2014. Thus, despite the labels, the 2015 poverty guidelines are not 1 year more up-to-date than the poverty thresholds for 2014, but are approximately equal to the 2014 thresholds.

5.3.2.2 Step 2: Comparison of Block/Block Group/Census Tract Data

The analysis conducted at the census block level is more precise than the analysis at the block group or census tract levels. This is because the block group and census tract geographic areas are larger than blocks and often extend well beyond the area within 0.5 mile of the HSR Build Alternative, making it sometimes difficult to pinpoint the locations of minority and/or low-income populations within the EJ RSA.

Table 5-4 provides the total population of the census blocks, block groups, and tracts in the EJ RSA that are partially or entirely within 0.5 mile of the HSR Build Alternative, as reported in the 2010–2014 ACS. As shown in Table 5-4, the more expansive block groups capture 232,326 individuals, which is 123 percent larger than the population captured in the blocks. In other words, more than 44,000 of these 232,326 individuals are actually more than 0.5 mile from the HSR Build Alternative. The individuals more than 0.5 mile from the HSR Build Alternative are not likely to experience the direct and indirect effects of construction and operation of the HSR Build Alternative. This fact is even more pronounced with the census tracts, which include nearly 147 percent of the blocks' population.

Table 5-4 Population within 0.5 Mile of the High-Speed Rail Build Alternative

Area Partially or Completely Within 0.5 Mile of the HSR Build Alternative	Population
Census blocks	188,231
Census block groups	232,326
Census tracts	276,327

Source: California High-Speed Rail Authority, 2019
 HSR = high-speed rail

The imprecision of the block group and census tract data requires the validation of the preliminary conclusions regarding the presence or absence of low-income and/or minority populations drawn from the review of U.S. Census data. This validation process is detailed below in Step 3.

5.3.2.3 Step 3: Validation of Environmental Justice Areas Identified Using Census Data

Given the imprecision of the census tract and block group data, which can extend beyond the area within 0.5 mile of the HSR Build Alternative and require additional refinement, the EJ RSA was examined quantitatively and qualitatively to ensure that no pockets of low-income and/or minority populations were inadvertently overlooked due to data limitations.

The validation process involved coordination and data-sharing between the Authority's environmental team and the community outreach team to confirm that the identified low-income and/or minority populations matched up with the comments raised during public information meetings regarding the HSR Build Alternative. This coordination resulted in confirmation of the locations and general disposition of low-income and/or minority populations based on the sharing of U.S. Census and 2010–2014 ACS data.

5.3.2.4 Step 4: Identification of Disproportionately High and Adverse Effects on Environmental Justice Populations

The baseline analysis conducted in Steps 1 through 3 above identified the location of low-income and/or minority populations in the EJ RSA. USEO 12898, the federal EJ policy, requires federal agencies to address the potential for their programs, policies, and activities to have

disproportionately high and adverse human health and environmental effects on minority and/or low-income populations. U.S. DOT Order 5610.2(a) on EJ interprets a “disproportionately high and adverse effect on low-income and/or minority populations” to mean an adverse effect that is predominantly borne by a minority and/or low-income population, or that would be suffered by the minority population and/or low-income population, and that is appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the nonminority population and/or nonlow-income population.

Technical analyses prepared in support of the environmental process provided impact analyses of the HSR Build Alternative related to environmental resources in the EJ RSA, including community cohesion, relocations and displacements, air quality, traffic and transportation, aesthetics, noise and vibration, water quality, soil contamination, natural resources, public services, and employment. These impacts were identified by area and type of impact, but without regard to whether they might have a disproportionately high and adverse effect on low-income and/or minority populations.

For this EJ analysis, findings from the pertinent resource analyses in Chapter 3 were reviewed and summarized. For resource analyses where it was determined that the HSR Build Alternative would have no effect under NEPA, no further analysis was conducted on the potential to cause adverse effects on low-income and/or minority populations. All impacts that were determined to be adverse were reviewed to consider the population affected and the presence of low-income and/or minority populations. If mitigation measures were proposed that reduced adverse effects, no further evaluation was conducted. Adverse effects that could not be reduced after mitigation were compared to the low-income and/or minority populations’ baseline analysis to determine whether the impact might have disproportionately high and adverse effects on such populations.

5.3.3 Environmental Justice Engagement

The Authority requires that for each HSR project section, an EJ outreach plan be developed in support of the Draft EIR/EIS. Refer to Appendix 5-A, Environmental Justice Outreach Plan, of this EIR/EIS for the Burbank to Los Angeles Project Section.

The outreach plan serves to accomplish several things:

- Summarizes demographics in the RSA
- Identifies EJ advocacy and community group stakeholders
- Describes a strategy for reaching out to and engaging with low-income and/or minority populations, including gathering input from consulting with communities to identify potential effects to low-income and/or minority populations and potential mitigation measures
- Identifies specific outreach methods
- Lists the sources of documentation for the EJ outreach effort

Throughout the EIR/EIS process, the Authority used inclusive public involvement strategies to engage a wide range of participants and provide meaningful access for low-income and/or minority populations. Specific outreach efforts targeting low-income and/or minority populations are summarized in Table 5-5. Table 9-3 in Chapter 9, Public and Agency Involvement, lists meetings held as part of the Authority’s outreach effort.

The Authority also contacted groups with interest in environmental and economic social justice issues and established minority organizations, as well as other civic and group leaders and elected officials. Other opportunities to gain a better understanding of potential EJ impacts included city council meetings, stakeholder working groups, public information meetings, community pop-ups,³ correspondence emails, phone calls, and group briefings.

³ Pop-ups are informal information tables set up to distribute information that is tailored to a targeted area.

Table 5-5 Specific Outreach Efforts

Resource	Strategy
Community Outreach Tools	Meeting notices and social media notice tool kits to EJ interest groups and local public schools.
	Advertisements in Spanish, Armenian, Filipino, Korean, Vietnamese, Thai, and Chinese-language newspapers.
	Meeting notices in English and Spanish at community and education facilities that serve low-income and/or minority populations.
	Meeting materials provided contact information for those with special needs to allow them to make necessary arrangements.
Language Interpretation Services	Materials for public meetings hosted by the Authority were translated into languages spoken by more than 5 percent of the population, and language interpreters were available at all public information meetings.
	Spanish interpretation services were offered at all meeting locations. In addition, Korean interpretation services were offered at the Santa Clarita meeting. Eastern Armenian and Tagalog interpretation services were offered at the Burbank meeting. Thai interpretation services were offered at the Sylmar and Lake View Terrace meetings. Mandarin Chinese, Tagalog, and Vietnamese interpretation services were offered at the downtown Los Angeles meeting. At public meetings, translation was offered upon request prior to the meetings through the meeting notification materials.
	The Authority posted translated materials to its website and used them to notify the public of meetings.

Authority = California High-Speed Rail Authority

EJ = environmental justice

5.4 Affected Environment

This section describes the affected environment for EJ in the EJ RSA, including low-income and/or minority populations. This information provides the context for the environmental analysis and evaluation of impacts.

A summary of stakeholder issues and concerns from public outreach efforts can be found in Chapter 9, Public and Agency Involvement.

5.4.1 Reference Community Demographics

5.4.1.1 Overview

Table 5-6 provides key EJ demographics for Los Angeles County (the reference community).

Table 5-6 Environmental Justice Reference Community (American Community Survey 2010–2014)

Characteristics	Reference Community (Los Angeles County)
Total population	9,974,203
% population low-income	18.4
% total minority	72.8

Source: California High-Speed Rail Authority, 2019

5.4.1.2 **Low-Income Populations**

As shown in Table 5-6, low-income residents comprise 18.4 percent of the total population in Los Angeles County.

5.4.1.3 **Minority Populations**

As shown in Table 5-6, the reference community has a high percentage of minority residents. Minority residents represent 72.8 percent of the population in Los Angeles County.

5.4.2 Resource Study Area Demographics

5.4.2.1 **Overview**

Table 5-7 provides key EJ demographics for Los Angeles County (the reference community) and the population within the EJ RSA.

Table 5-7 Environmental Justice Reference Community and Resource Study Area Demographic Characteristics (American Community Survey 2010–2014)

Characteristics	Reference Community (Los Angeles County)	Environmental Justice Resource Study Area
Total population	9,974,203	277,103
Percentage of population low-income	18.4	20.1
Percentage total minority	72.8	63.6

Source: California High-Speed Rail Authority, 2019

The EJ RSA has a smaller percentage of the population that is identified as minority (63.6 percent) than Los Angeles County (72.8 percent).

The low-income and/or minority populations identified within the EJ RSA are discussed below.

5.4.2.2 **Low-Income Populations**

As shown in Table 5-7, the EJ RSA as a whole has a higher percentage of low-income residents (20.1 percent) than the reference community of Los Angeles County (18.4 percent). Figure 5-3 (Sheets 1 through 3) shows the low-income populations in each of the census block groups within the EJ RSA. The block groups shown in dark blue on Figure 5-3 are block groups in which the percentage of low-income residents is meaningfully greater than or substantial⁴ when compared to the average for Los Angeles County. Substantial low-income populations are identified in block groups where the low-income population percentage (income below the U.S. Census poverty threshold) exceeds 50 percent or exceeds the countywide average (18.4 percent for Los Angeles County). The block groups shown in gray are those where there is no measurable population (e.g., Block Group 9800.09 consists of Griffith Park and Block Group 9800.01 consists of Hollywood Burbank Airport; neither area has any residential population). Less than one-third of the area of Burbank captured by the EJ RSA is made up of substantial low-income populations. Glendale has pockets of substantial low-income populations scattered throughout the area east of the existing railroad corridor. South of State Route 134, the low-income populations in Glendale are more numerous and closer together. Los Angeles has a small pocket of substantial low-income populations in Atwater Village, west of the HSR Build Alternative. South of Glendale Boulevard, substantial low-income populations in Los Angeles are more numerous. As shown on Figure 5-4 (Sheets 1 through 3), substantial low-income populations are found in parts of the Downtown Los Angeles, Boyle Heights, Lincoln Heights, Greater Cypress Park, Greater Echo Park Elysian, and

⁴ “Substantial” refers to a percentage of the population that is meaningfully greater than the minority population and/or low-income population thresholds. For the purpose of this analysis, a “meaningfully greater” percentage is any percentage higher than that of the reference community.

Historic Cultural Neighborhood Council Areas (NCA)⁵ that are captured by the RSA. Parts of Glassell Park and the northern third of the Elysian Valley Riverside NCA have clusters of substantial low-income populations.

The number of block groups in the RSA with substantial low-income populations is less than half of the total number of block groups within the RSA (78 of 190 block groups).

5.4.2.3 Minority Populations

As shown on Figure 5-5 (Sheets 1 through 3), the RSA as a whole has a lower percentage of minority residents (63.6 percent) than the reference community of Los Angeles County (72.8 percent). However, individual areas defined by census block groups have higher percentages, and these areas are EJ areas.

Figure 5-5 shows the minority populations in each of the block groups within the EJ RSA. The block groups shown in dark blue on Figure 5-5 are block groups in which the percentage of minority population is meaningfully greater than or substantial when compared to the average for Los Angeles County. Substantial minority populations are identified in block groups where the minority population percentage exceeds 50 percent or exceeds the countywide average (72.8 percent for Los Angeles County). The block groups shown in gray are those where there is no measurable population (e.g., Block Group 9800.09 consists of Griffith Park and Block Group 9800.01 consists of Hollywood Burbank Airport; neither area has any residential population). As shown on Figure 5-5, most block groups in the RSA in the city of Los Angeles have substantial minority populations, including Sun Valley at the north end of the HSR Build Alternative. While most of the block groups within the EJ RSA do not have substantial minority populations, there are pockets of substantial minority populations within the RSA in these cities. There is a cluster of substantial minority populations near downtown Burbank, west of Interstate 5, and a smaller cluster of substantial minority populations east of the existing railroad corridor.

There is also a sizeable area of substantial minority populations along the eastern edge of Griffith Park. Southeast of Griffith Park, the area within 0.5 mile of the HSR Build Alternative consists predominantly of substantial minority populations.

It should be noted that the minority categories described here are defined by the U.S. Census, to which respondents self-report. In this diverse region, there are a number of ethnic groups (e.g., Armenian, Arabic, Chinese, Japanese, Korean, Filipino, and Vietnamese) that may not be individually named. For example, the presence of Armenian churches in Burbank and Glendale, as well as many Armenian restaurants and businesses, indicates the presence of concentrations of Armenian populations in Census Tracts 3104 3016.02, 3015.01, and 3015.02 that may be substantial. Such race/ethnicity minority groups may be captured within the “Other” race/ethnicity category on Figure 5-5 or may be underrepresented.⁶

In the RSA, block groups without a substantial minority population outnumber those with a substantial minority population (106 of 190 and 82 of 190 block groups, respectively). Two block groups have no residential population, as specified above).

⁵ Neighborhood councils are city-certified local groups made up of community members who are elected or selected to their positions by their neighborhoods. Neighborhood councils were established by the City of Los Angeles Department of Neighborhood Empowerment to foster local engagement in addressing communities' issues of concern, such as safety or health services. The city provides operational support to neighborhood councils, such as supplying meeting spaces and translators, and the councils receive public funds to support their local projects, programs, and events that address the unique needs of their communities. Council meetings are held at least once every 3 months.

⁶ People of Middle Eastern and North African descent have historically identified themselves as White on Census forms and may be underrepresented in Census data.

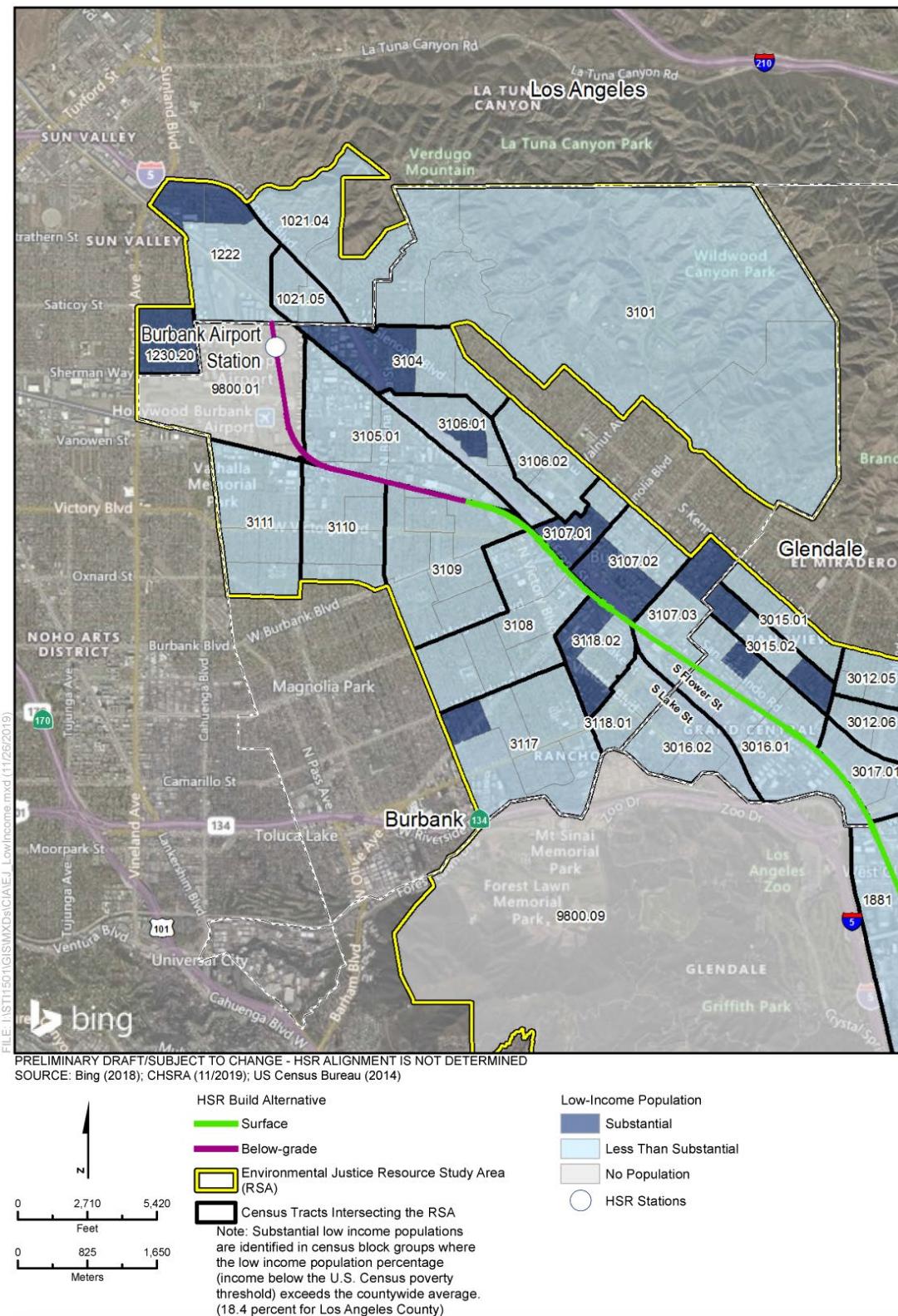


Figure 5-3 Low-Income Populations in the Environmental Justice Resource Study Area
(Sheet 1 of 3)

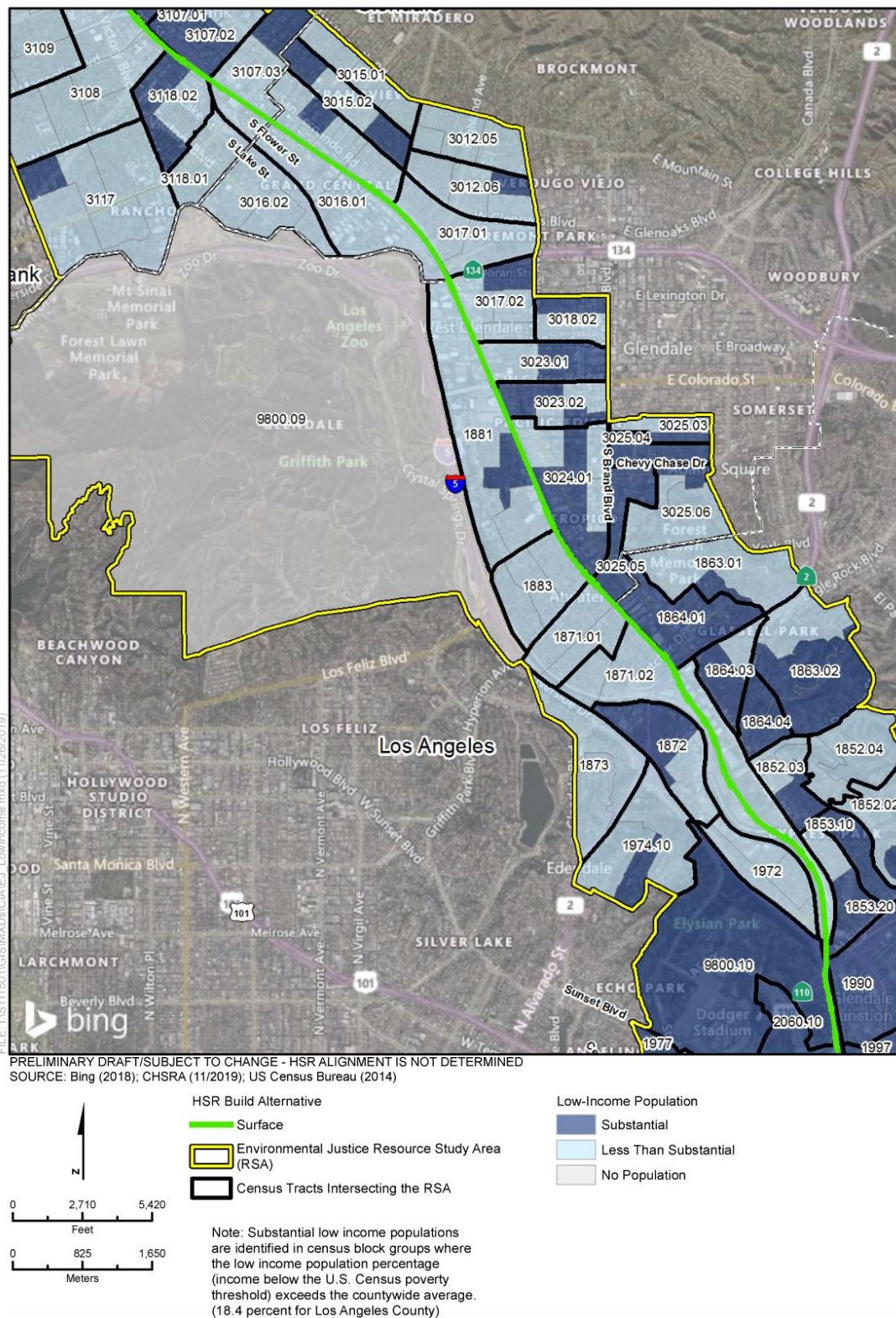


Figure 5-3 Low-Income Populations in the Environmental Justice Resource Study Area
(Sheet 2 of 3)

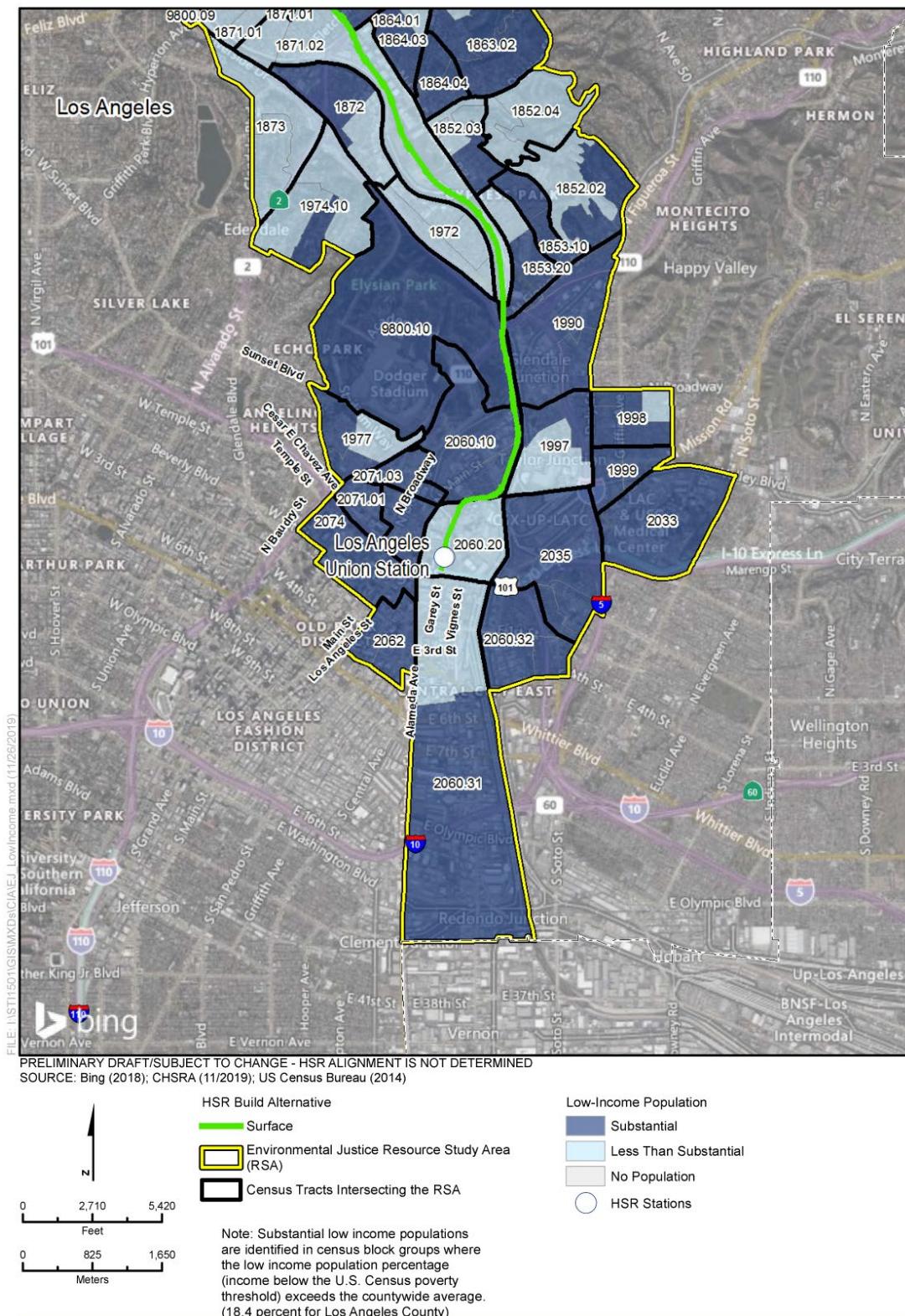


Figure 5-3 Low-Income Populations in the Environmental Justice Resource Study Area
(Sheet 3 of 3)

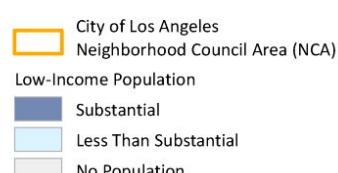
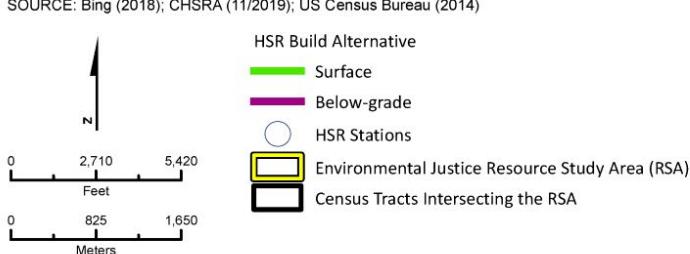
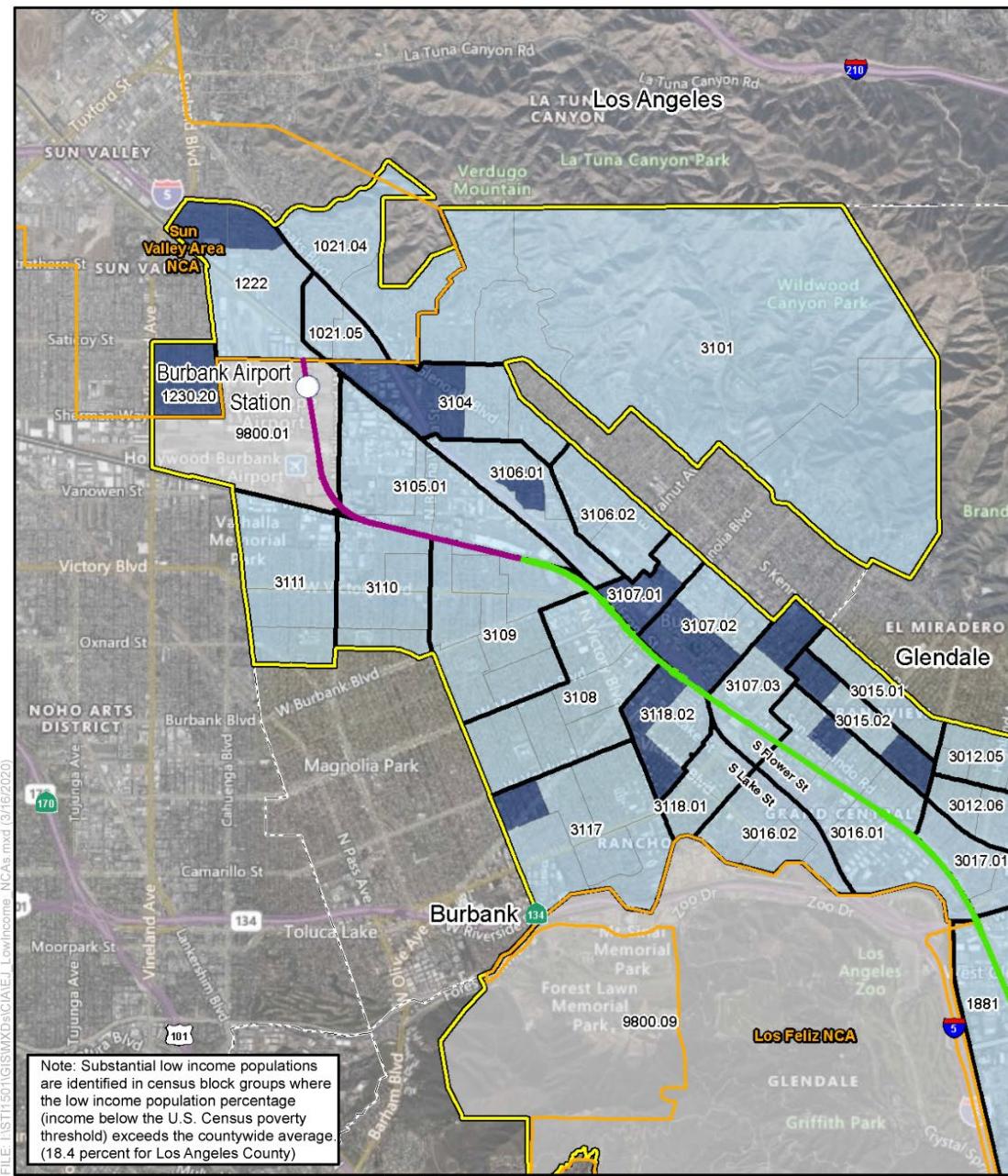


Figure 5-4 Low-Income Populations in the Neighborhood Council Areas
(Sheet 1 of 3)

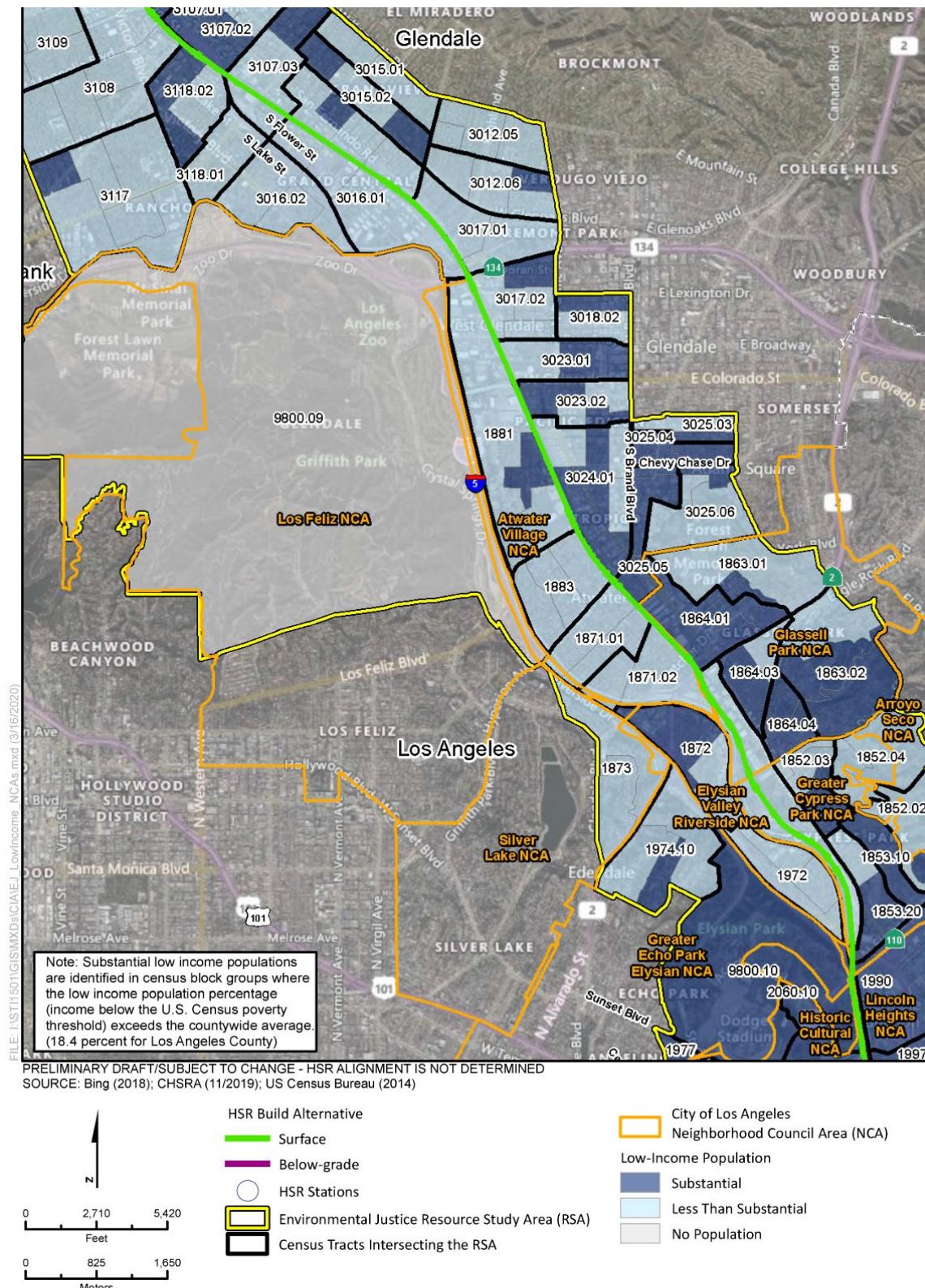


Figure 5-4 Low-Income Populations in the Neighborhood Council Areas

(Sheet 2 of 3)

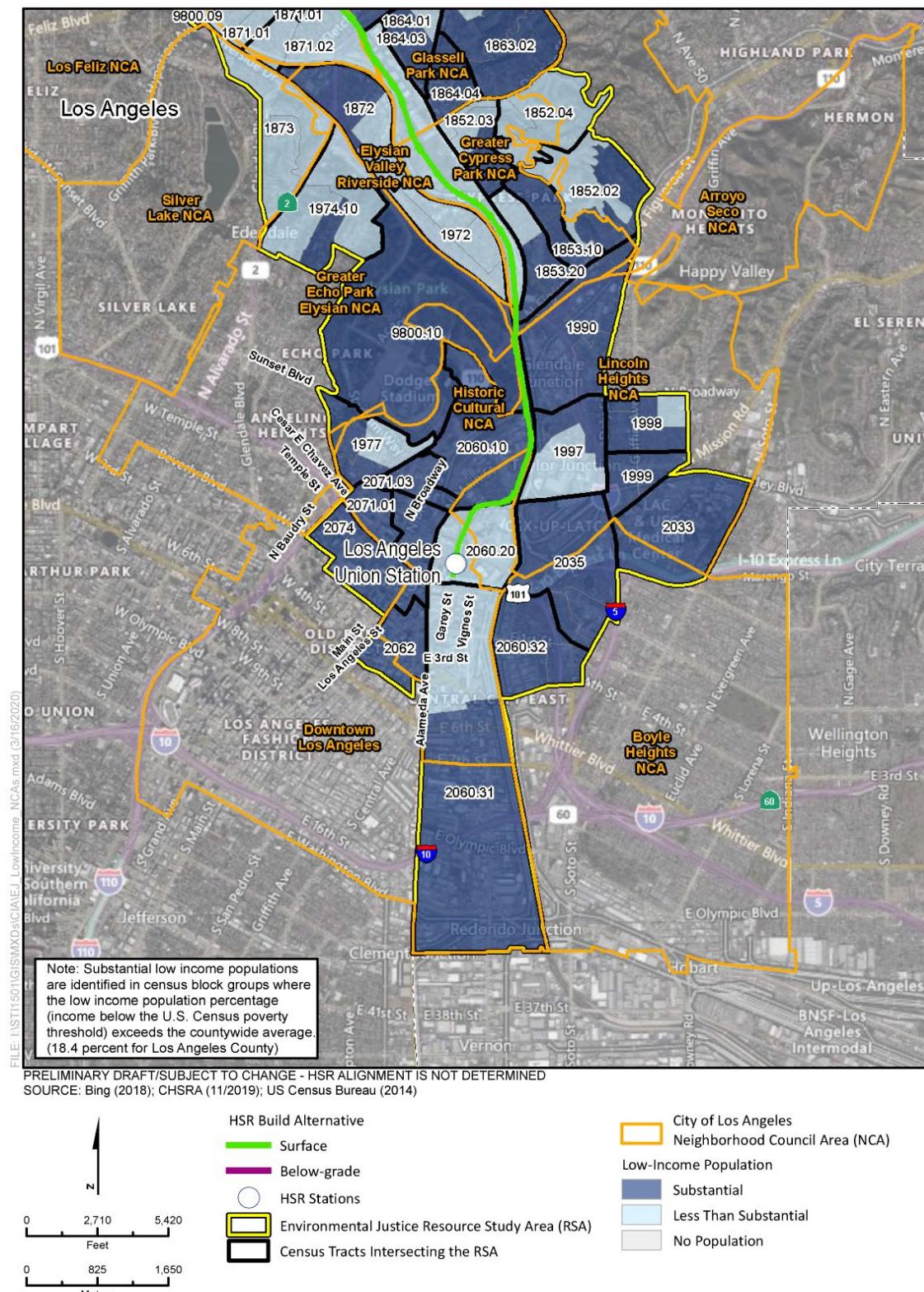


Figure 5-4 Low-Income Populations in the Neighborhood Council Areas

(Sheet 3 of 3)

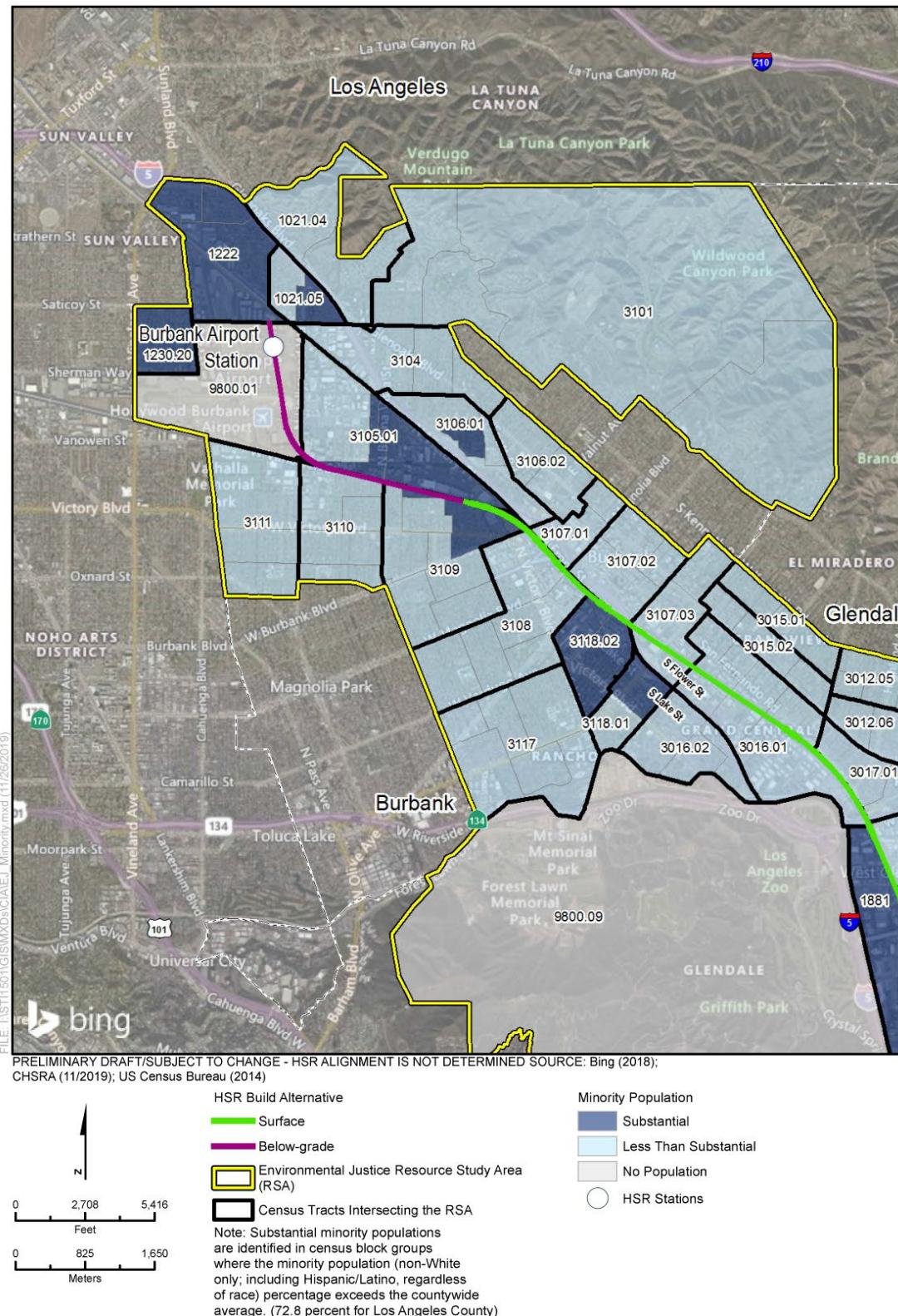


Figure 5-5 Minority Population in the Environmental Justice Resource Study Area

(Sheet 1 of 3)

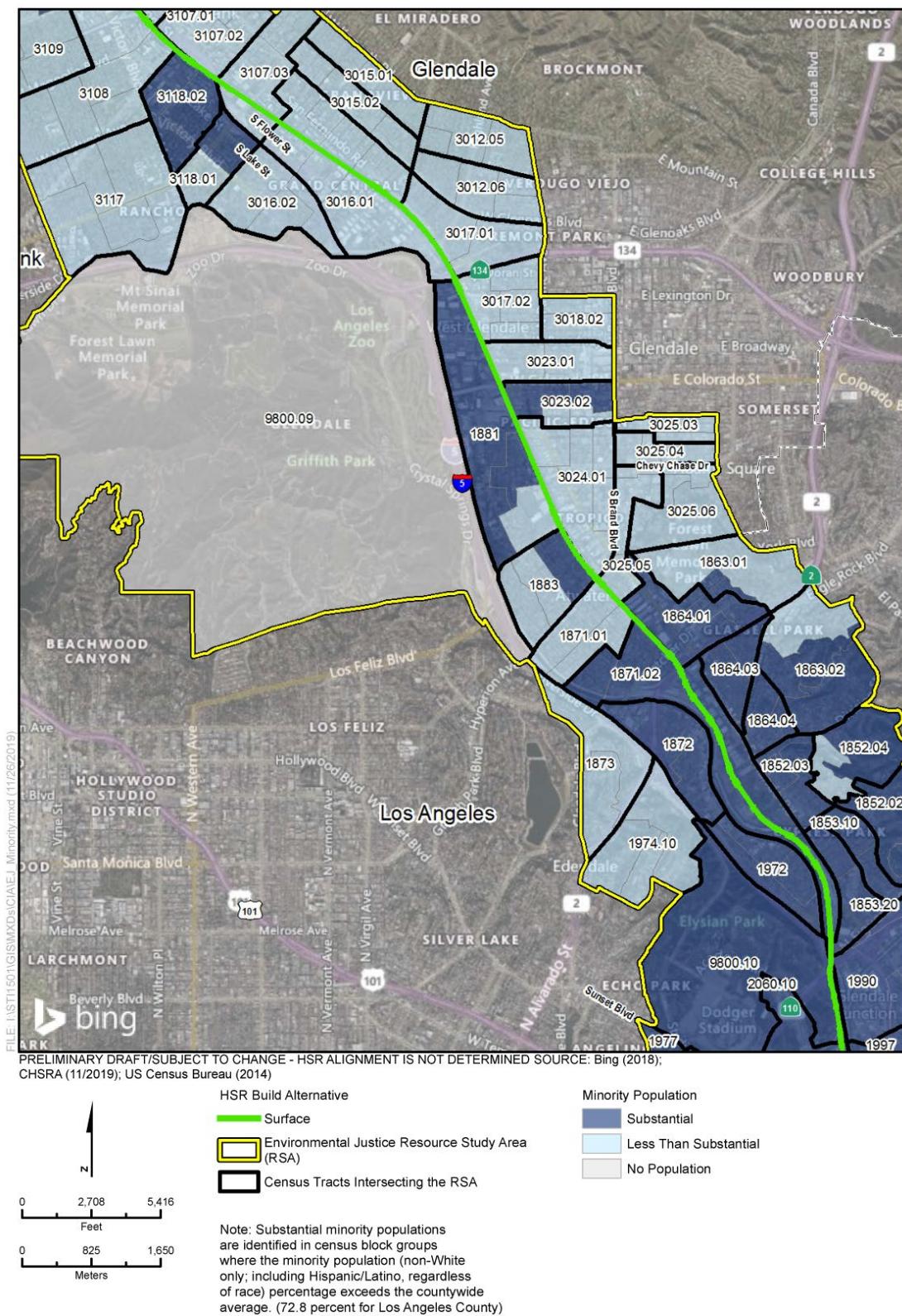


Figure 5-5 Minority Population in the Environmental Justice Resource Study Area

(Sheet 2 of 3)

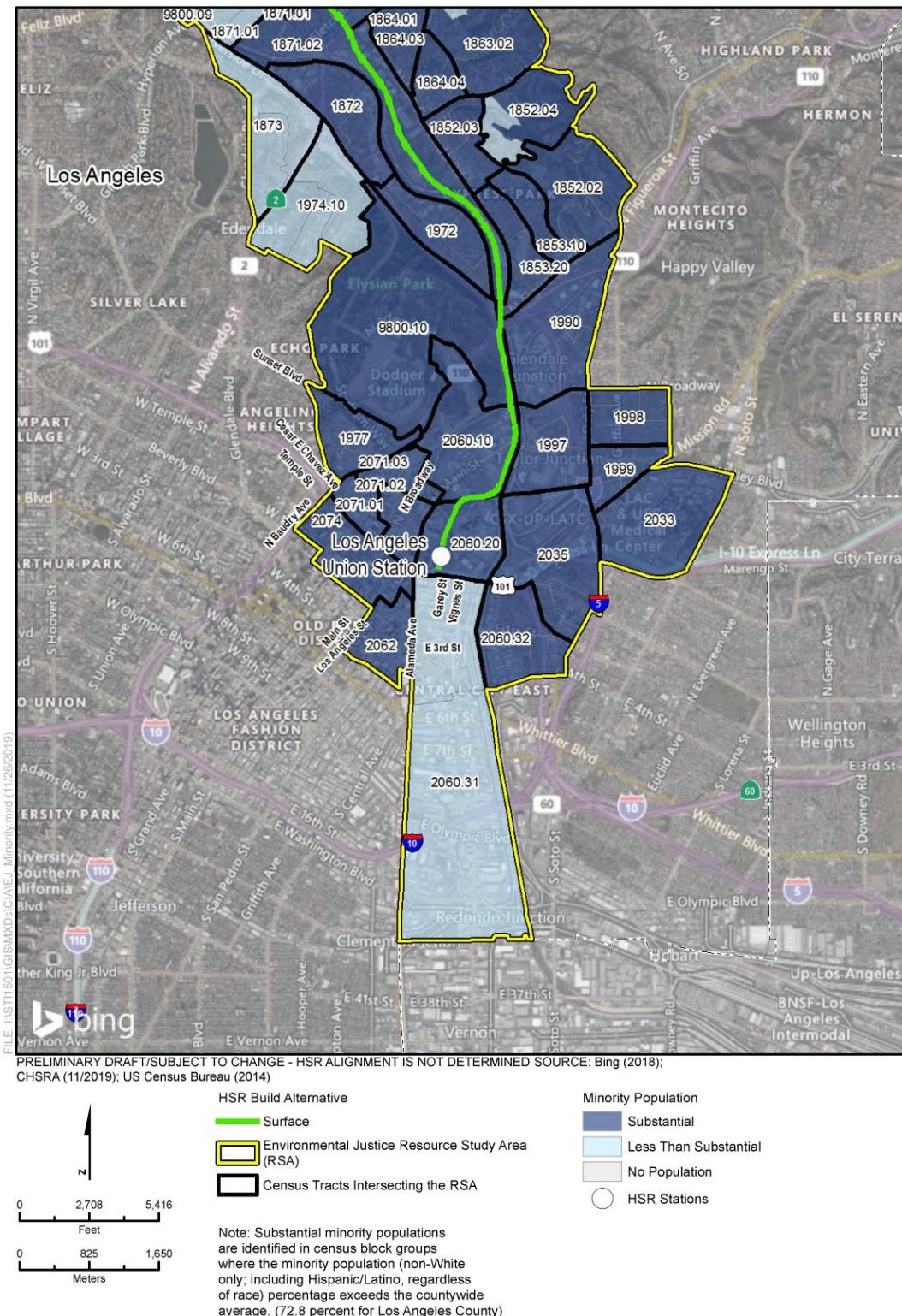


Figure 5-5 Minority Population in the Environmental Justice Resource Study Area
(Sheet 3 of 3)

Figure 5-6 (Sheets 1 through 3) provides a more detailed look at the race and ethnicity makeup of residents in the block groups within the EJ RSA. Most residents within the RSA are Hispanic/Latino in ethnicity, but substantial populations of Asians reside in Glendale and in downtown Los Angeles, in and around the Chinatown and Little Tokyo neighborhoods (near Los Angeles Union Station [LAUS]). Glendale also contains some pockets of a notable multiracial population. Although the different race/ethnicity classifications are not addressed differently in terms of impacts on low-income and/or minority populations, this visual representation helps to identify neighborhoods and enclaves of minority populations that may not be immediately evident based on census data that only indicate the percentage level of minority populations within a census block group.

As shown on Figure 5-7 (Sheets 1 through 3), substantial minority populations are found in parts of the Downtown Los Angeles, Boyle Heights, Lincoln Heights, Greater Cypress Park, Greater Echo Park Elysian, Historic Cultural, Glassell Park, Elysian Valley Riverside, and Atwater Village NCAs. Some neighborhoods within the RSA have historically housed or served as places of meeting and congregation for minority populations. Some of these neighborhoods have since become historically designated or general points of interest. Some of the more well-known instances within the RSA are Chinatown, located within the Historic Cultural NCA, and Little Tokyo, located within the Downtown Los Angeles NCA.

Los Angeles' Chinatown neighborhood, as defined by the City of Los Angeles Department of Neighborhood Empowerment, is generally bounded by Stadium Way and N Broadway to the north, the Los Angeles River to the east, Cesar Chavez Avenue/Sunset Boulevard to the south, and N Beaudry Avenue to the west. Measuring approximately 1 square mile, the neighborhood is a business and commercial center with residences that house a predominantly Asian and aging population. Chinatown's business district today is overseen by the Los Angeles Chinatown Business Council, which is the managing entity of the Los Angeles Chinatown Business Improvement District. The mission of the Business Improvement District is "to creatively plan, manage and facilitate the rebirth of historic Chinatown as a multinational culturally defined, economically vibrant, and socially engaging community." The Business Council includes representatives from business owners, community groups, and property owners and is responsible for area maintenance, marketing, and general revitalization efforts within the community.

The original Los Angeles Chinatown, known as Old Chinatown, was established in 1880. It was demolished and later relocated to its current site to make way for the construction of LAUS in the 1930s. Chinatown's relocation supplanted what was then a predominantly Italian-American neighborhood; vestiges of "Little Italy" remain today, such as the Italian American Museum of Los Angeles at 644 N Main Street and the San Antonio Winery, established in 1917.

Los Angeles' Little Tokyo neighborhood is defined by the Little Tokyo Business Improvement District and is generally bounded by Temple Street to the north, Vignes and Garey Streets to the east, E Third Street to the south, and Los Angeles Street to the west. The Little Tokyo Business Association manages the Little Tokyo Business Improvement District, the main goal of which is to "create a positive identity for the Little Tokyo community" by strengthening relationships, attracting and retaining business investment, and maintaining the neighborhood as a destination for work and play.

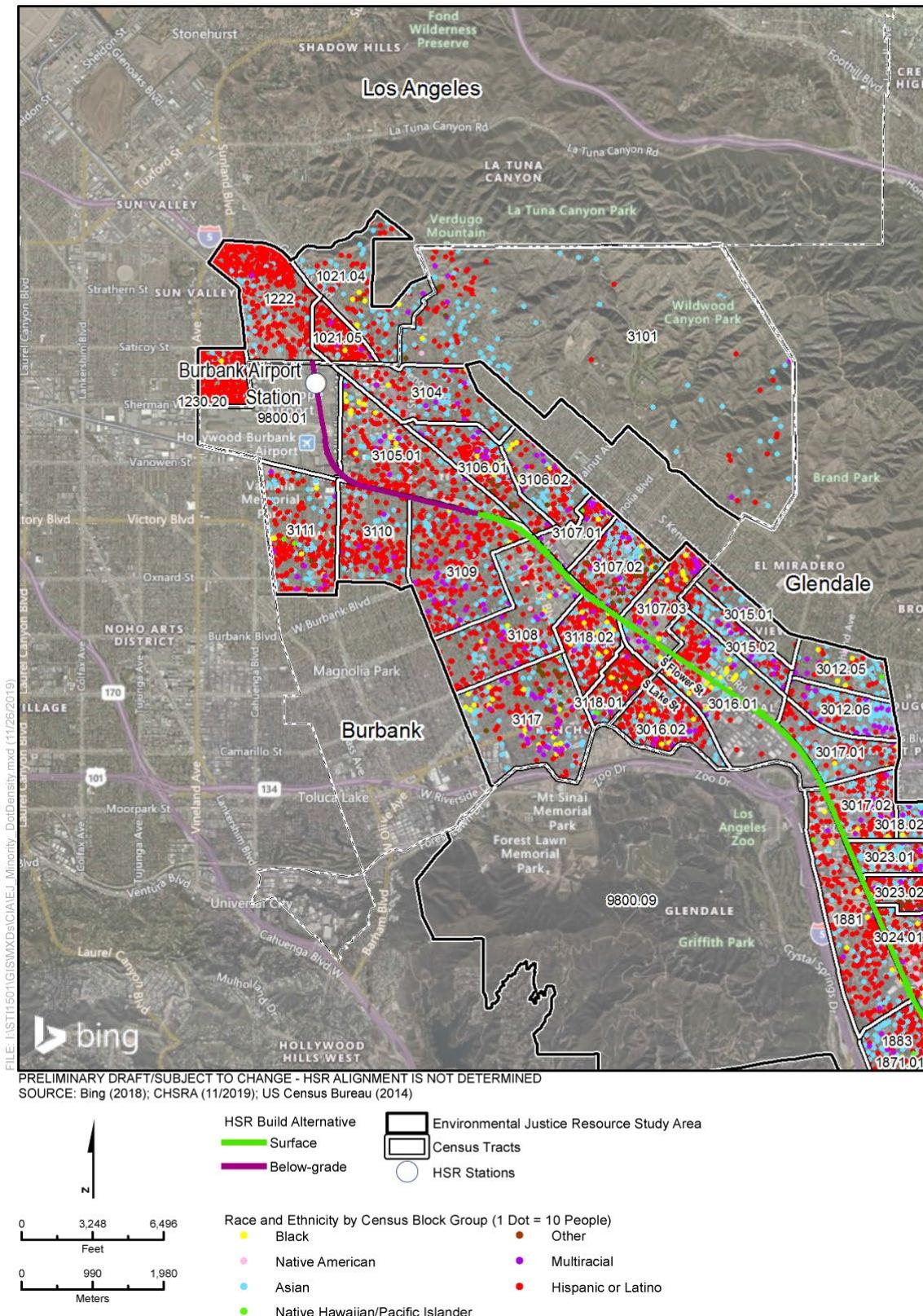


Figure 5-6 Race and Ethnicity in the Environmental Justice Resource Study Area

(Sheet 1 of 3)

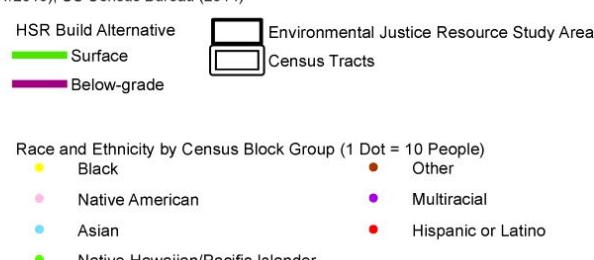
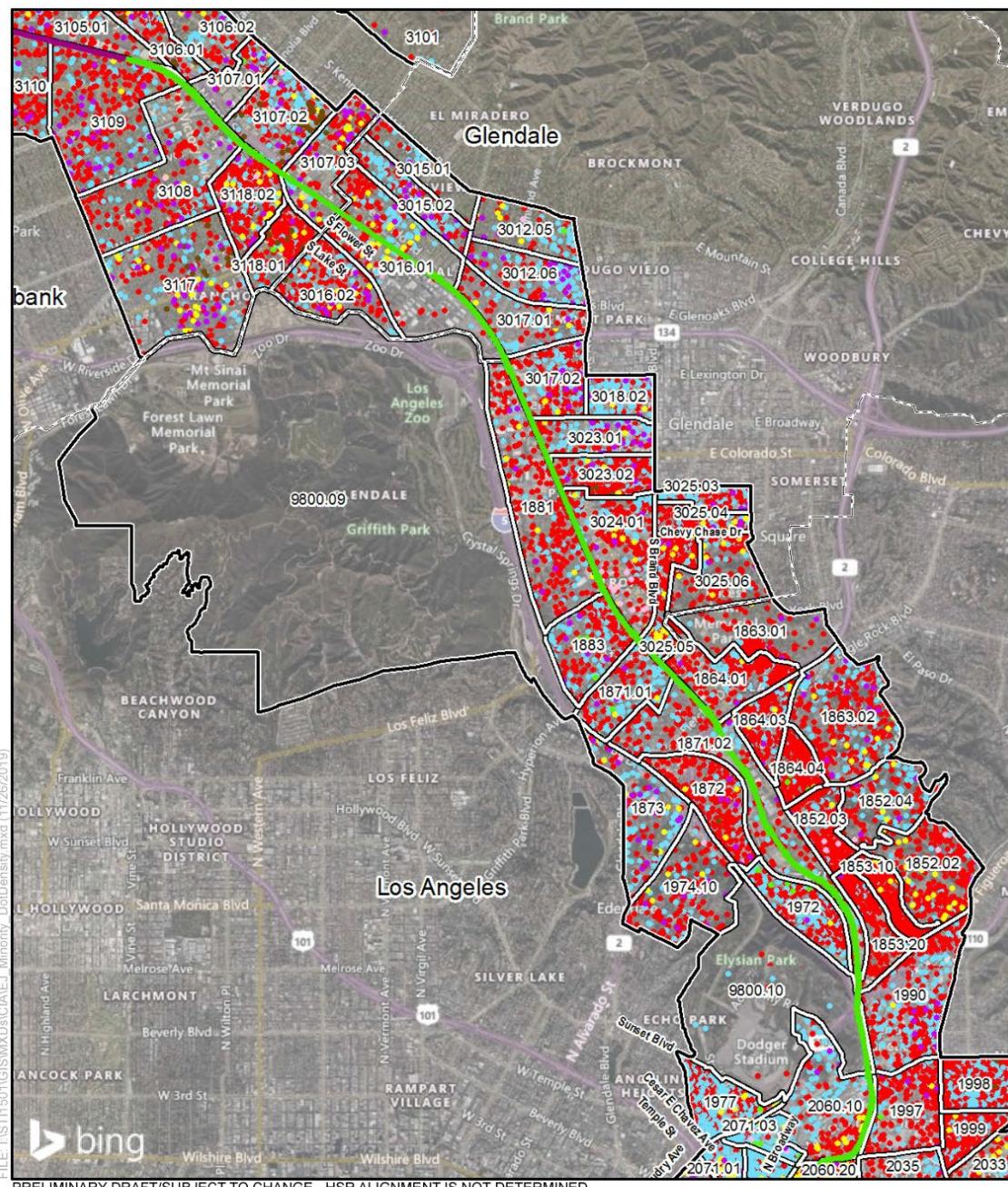


Figure 5-6 Race and Ethnicity in the Environmental Justice Resource Study Area
 (Sheet 2 of 3)

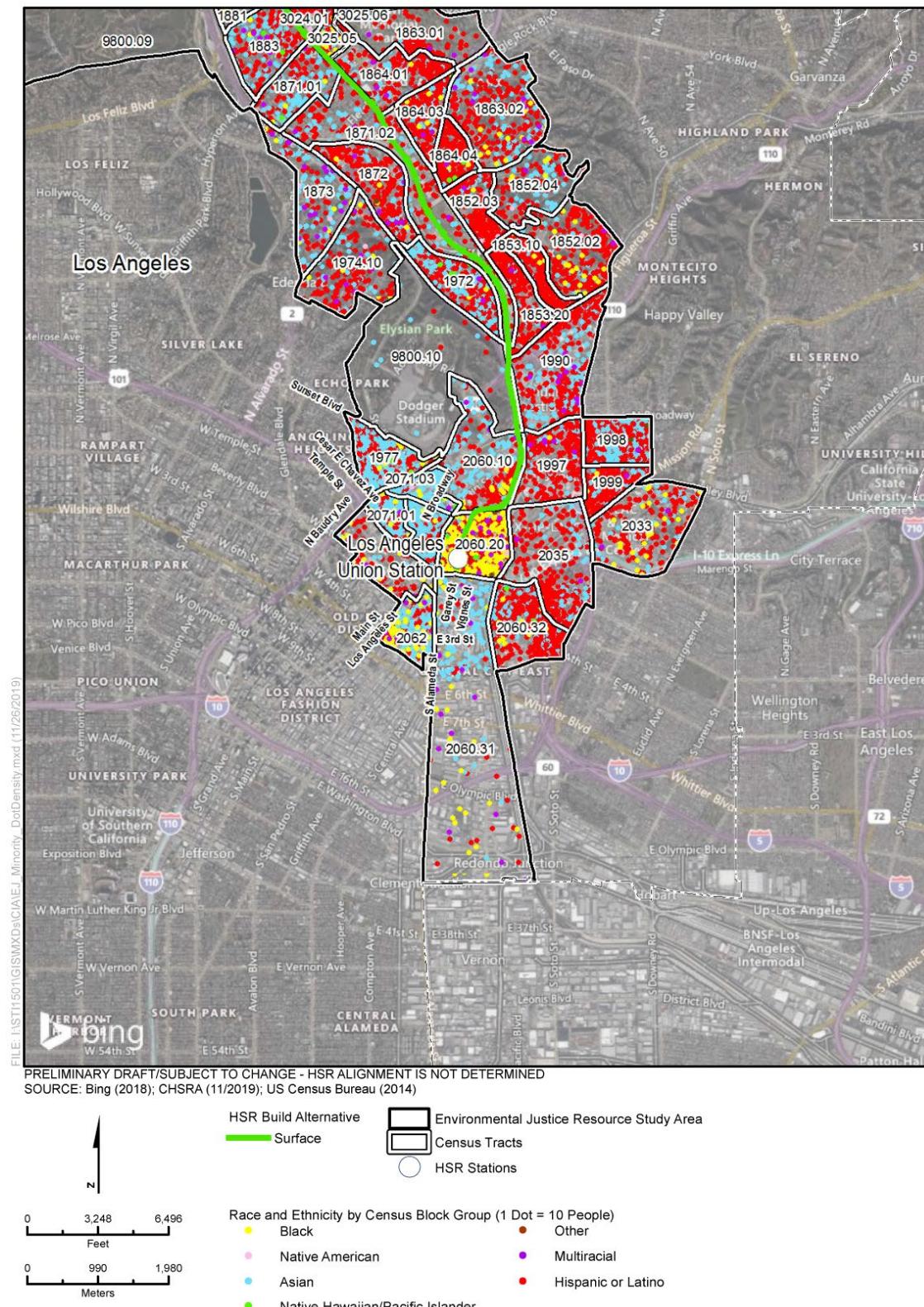
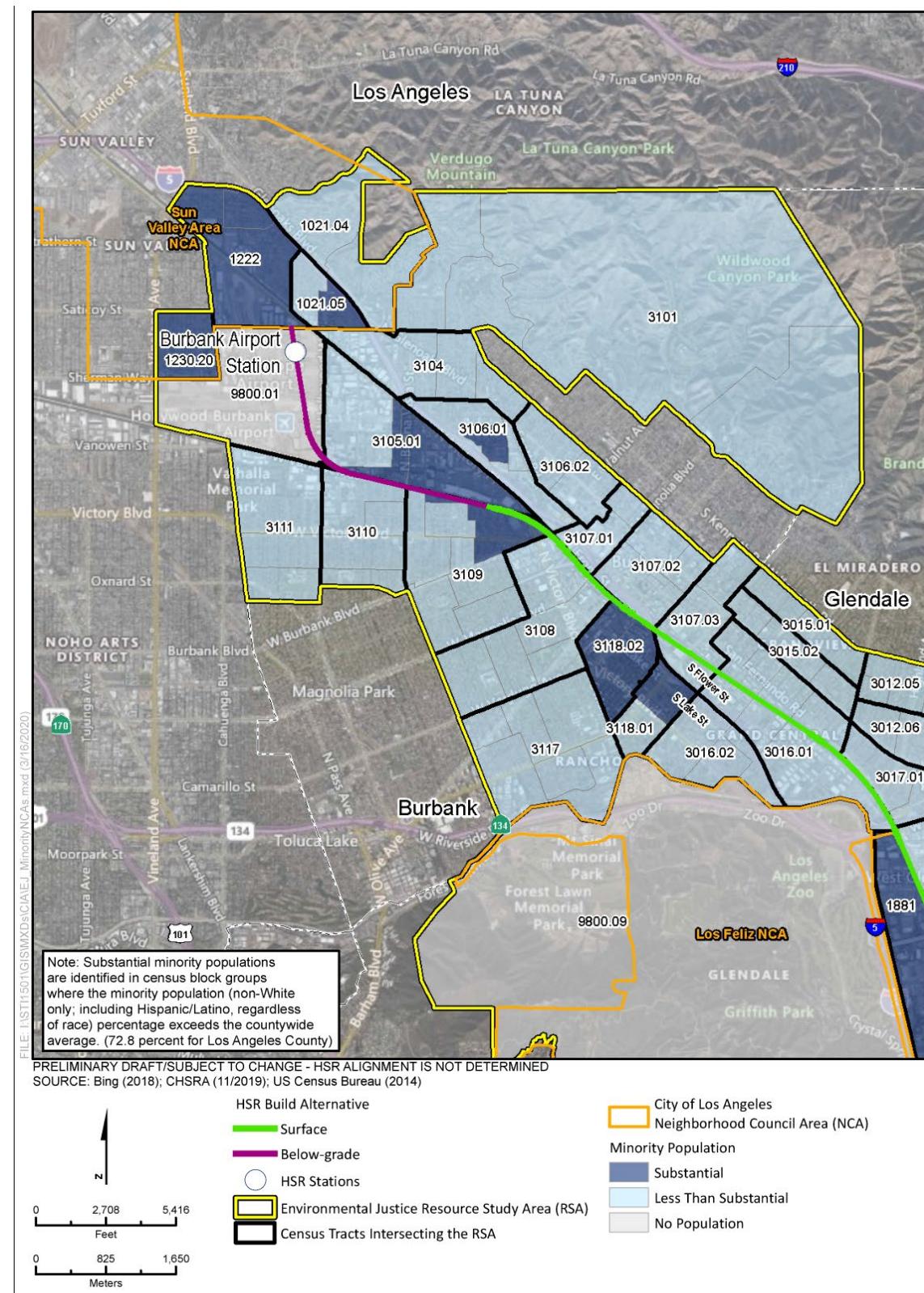


Figure 5-6 Race and Ethnicity in the Environmental Justice Resource Study Area

(Sheet 3 of 3)

**Figure 5-7 Minority Populations in the Neighborhood Council Areas**

(Sheet 1 of 3)

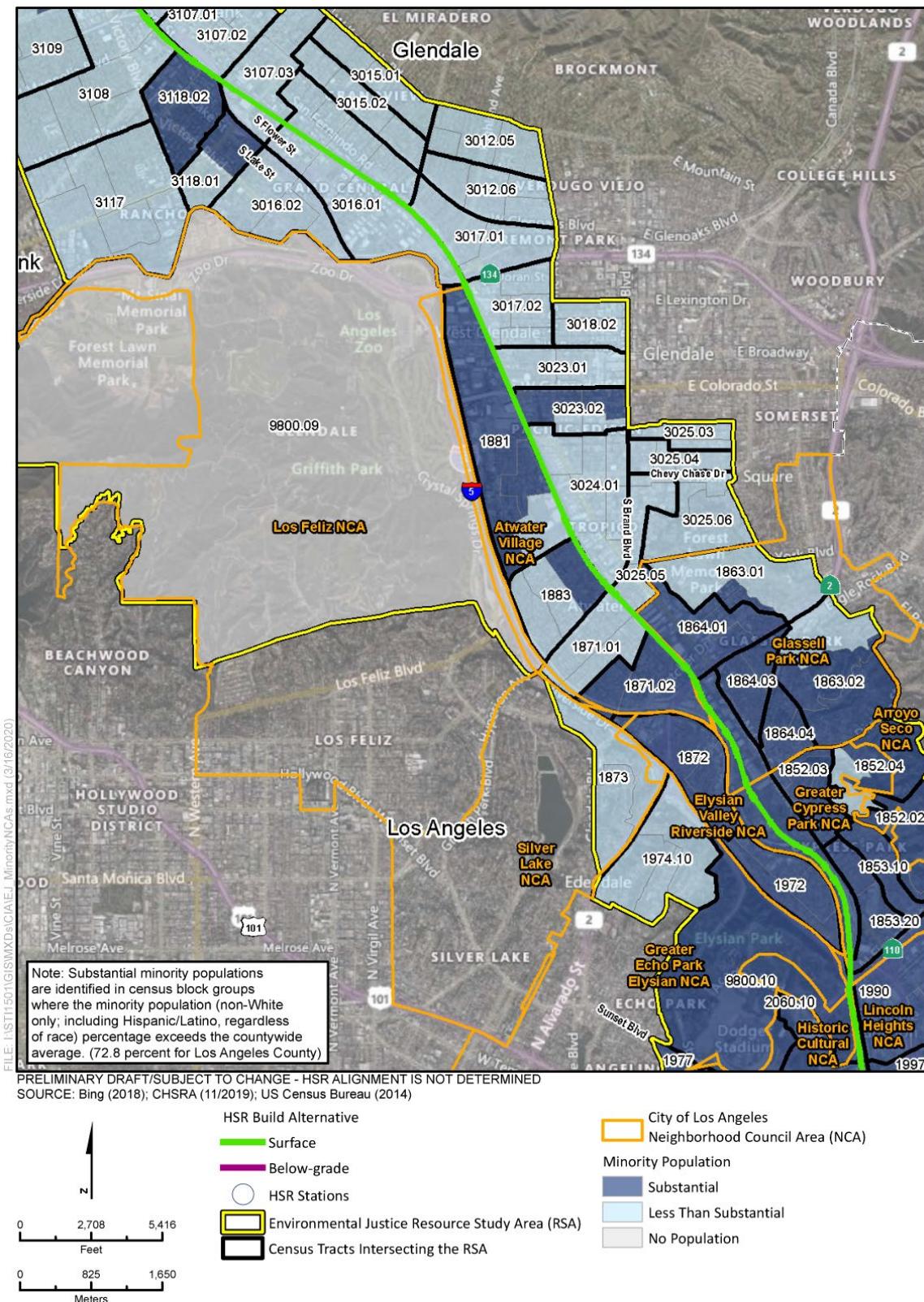
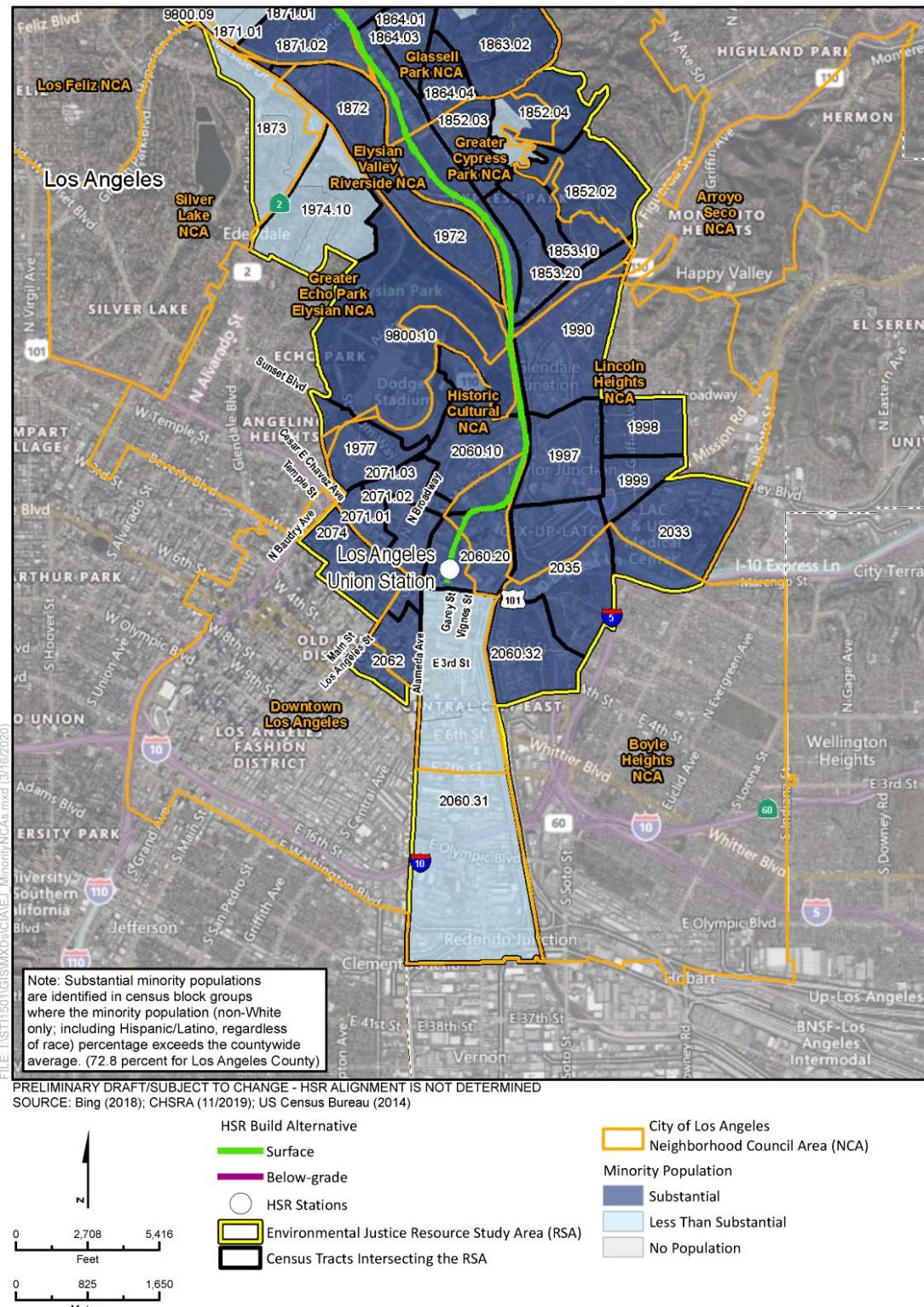


Figure 5-7 Minority Populations in the Neighborhood Council Areas
(Sheet 2 of 3)

**Figure 5-7 Minority Populations in the Neighborhood Council Areas**

(Sheet 3 of 3)

The Little Tokyo neighborhood, one of only three official Japantowns in the U.S. and a U.S. National Historic Landmark District, was first established in the late 1800s by a group of Japanese immigrants, who referred to themselves as the “Japanese Association of Los Angeles.” The community continued to develop and grow, and in the 1930s, the second generation of Japanese-Americans (known as Nisei) established the Nisei Week Festival, which has since run annually with only some interruptions. During World War II, internment of persons of Japanese ancestry removed many of the residents of Little Tokyo, but many resettled in the area following the end of the war, and Nisei Week was re-established. Today, Little Tokyo houses a growing residential population, along with cultural, shopping and dining, and religious destinations, including the Japanese American Community and Cultural Center, Japanese Village Plaza, and the Geffen Contemporary at the Museum of Contemporary Art Los Angeles, along with a stop on the Los Angeles County Metropolitan Transportation Authority Gold Line Eastside Extension.

5.4.3 Station Area Demographics

5.4.3.1 Overview

The Burbank Airport Station and LAUS would be in the northern and southern portions of the EJ RSA, respectively. A discussion of the key EJ demographics for the station areas is provided below.

5.4.3.2 Low-Income Populations

As shown on Figure 5-3, the area immediately surrounding the Burbank Airport Station is composed of census block groups that have either no population or less than substantial low-income populations. However, nearby block groups in Census Tracts 1222, 1230.20, and 3104 contain substantial low-income populations.

Similarly, the area immediately surrounding and to the south of LAUS is composed of block groups with less than substantial low-income populations. However, all of the block groups in adjacent census tracts contain substantial low-income populations.

5.4.3.3 Minority Populations

As shown on Figure 5-5, the area immediately surrounding the Burbank Airport Station is composed of block groups with less than substantial minority populations. However, block groups in nearby Census Tracts 1021.05, 1222, and 1230.20 contain substantial minority populations.

In contrast, the area immediately surrounding LAUS and extending to the boundaries of the RSA east, north, and west of LAUS is entirely composed of block groups with substantial minority populations. Only block groups south of LAUS in Census Tract 2060.31 contain less than substantial minority populations.

5.5 Environmental Justice Engagement

The Authority conducted targeted public outreach and involvement activities in locations where low-income and/or minority populations may be affected by the construction and operational activities associated with the Burbank to Los Angeles Project Section. The purpose of these outreach activities was to inform the public (including low-income and/or minority populations) of the project and its status, solicit input on potential and perceived project impacts, and provide opportunities for low-income and/or minority communities to take part in the project planning process, including identifying potential effects and mitigation measures. Identification for targeted outreach was based on demographic and income information, correspondence with advocacy and community groups, and review of recent reports on how low-income and/or minority populations may access information.

5.5.1 Affected Populations and Communities

USEO 12898 requires that federal agencies ensure effective public participation and access to information. Consequently, a key component of compliance with USEO 12898 is outreach to the affected minority and/or low-income populations to discover issues of importance that may not

otherwise be apparent. Outreach to affected communities has been—and will continue to be—conducted as part of the Authority's decision-making process. An extensive public and agency outreach program is being conducted throughout the EIR/EIS process and will continue through the design and construction phases. Public comments during the outreach process are collected by the Authority's outreach team and provided to engineers and resource analysts for consideration in the design and analysis of the HSR Build Alternative. Planned and upcoming outreach includes continued stakeholder working group meetings, community open house meetings, quarterly one-on-one briefings with county and local elected officials, e-blast updates, and stakeholder briefings.

5.5.1.1 Engagement Methods

During the EJ engagement process, the Authority confirmed the demographic information relating to the low-income and/or minority populations living within the EJ RSA. The Authority conducted specific outreach to low-income and/or minority populations as well as to areas of concern in the EJ RSA. The purpose of this outreach was to increase the Authority's understanding of potential project impacts on these populations. An effort was made to identify any community resources (e.g., gathering places, community services) during the ongoing EJ engagement process. No such community resources have been identified to date.

The Authority's outreach efforts geared toward low-income and/or minority populations include stakeholder working group meetings,⁷ community open house events, meetings and presentations with the Chinatown Business Improvement District, neighborhood council meetings, information booths at events or community gathering spaces, grade separation meetings, and meetings with service providers (e.g., Los Feliz Charter School for the Arts). Materials for public meetings hosted by the Authority were translated into Spanish. Spanish language interpreters were available at all public information meetings, and Spanish-language materials were posted to the website. Specific EJ outreach efforts as part of the HSR Build Alternative planning process also include providing meeting notices to EJ interest groups; listing advertisements in Spanish, Korean, and Vietnamese-language newspapers; posting meeting notices in English and Spanish at community facilities that serve low-income and/or minority populations; and providing a telephone number to call for information in Spanish. The EJ outreach efforts also include providing interpreters and informational materials at public hearings and meetings in Arabic, Armenian, Chinese, Japanese, Korean, Tagalog, and Vietnamese, as appropriate and per location-specific needs. Meeting materials provide contact information for those with special needs to allow them to make necessary arrangements.

In addition to meetings with the general public, the Authority also identifies on-the-ground opportunities to further engage and interact with low-income and/or minority populations. These opportunities have been and will continue to be noticed and scheduled to provide for maximum engagement. The materials presented at these opportunities have been tailored for low-income and/or minority populations and presented in a way that is easily distributed to their constituents or communities (including, but not limited to, newsletters and community news items).

5.5.1.2 Outreach Events

Table 5-8 contains a list of key EJ stakeholder outreach meetings and events held from August 2015 through December 2018. Planned outreach for the remainder of the EIR/EIS process includes continued stakeholder working group meetings, community open house meetings, quarterly one-on-one briefings with county and local elected officials, e-blast updates, and stakeholder briefings.

⁷ The Authority developed the stakeholder working group concept to engage communities and offer an informal forum in which community stakeholders can discuss issues of concern; EJ organizations have been identified for participation in each stakeholder working group.

Table 5-8 Burbank to Los Angeles Project Section Environmental Justice Targeted Outreach Activity (August 2015–December 2018)

Date	Outreach Activity
August 3, 2015	Glendale Concert in the Park
November 3, 2015	Stakeholder Working Group
November 10, 2015	Downtown Los Angeles Open House
November 16, 2015	Glendale Open House
November 19, 2015	Cypress Park Open House
December 16, 2015	Chinatown Business Improvement District
January 28, 2016	Chinatown Business Improvement District Board—Presentation
March 8, 2016	Greater Cypress Park Neighborhood Council Meeting
March 17, 2016	Elysian Park Riverside Neighborhood Council Meeting
March 31, 2016	LAUS Master Plan Community Meeting—Information Booth
April 6, 2016	Glendale/Los Angeles River/Downtown LA Stakeholder Working Group Meeting #2
April 24, 2016	Fiesta Broadway—Information Booth
April 30–May 1, 2016	Glendale Earth Day—Information Booth
June 2, 2016	Link US Scoping Meeting and Open House—Information Booth
June 12, 2016	Los Angeles River Ride—Information Booth
July 13, 2016	Elysian Valley Neighborhood Watch—Briefing
July 21, 2016	Lincoln Heights Neighborhood Council—Speakers Bureau
July 30–31, 2016	Central Avenue Jazz Festival—Information Booth
August 13, 2016	LA River Frogtown Art Walk—Information Booth
September 17–18, 2016	Mexican Independence Day—Fiestas Patrias
November 29, 2016	Open House—Burbank
December 1, 2016	Open House—Glendale
December 5, 2016	Open House—Downtown Los Angeles
December 6, 2016	Open House—Cypress Park
January 12, 2017	Downtown LA Women's Center (LA Central Providers Collaboration Meeting)
March 2, 2017	Super A Foods—Information Table
March 25, 2017	16th Annual Cesar Chavez Celebration
March 25, 2017	Grade Separation Information Meeting—Sonora/Grandview/Flower #1
March 27, 2017	Sotomayor Learning Academies (LAUSD) Briefing
March 27, 2017	Grade Separation Workshop Meeting #2—Chevy Chase/Goodwin
March 29, 2017	Grade Separation Workshop Meeting #3—Sonora/Grandview/Flower #2
April 19, 2017	Los Feliz Charter School for the Arts—Briefing
April 26, 2017	Seneca Street Neighborhood in Atwater Village Neighborhood Council—Presentation
April 30, 2017	Fiesta Broadway—Information Booth
July 15–July 16, 2017	Lotus Festival—Information Booth
July 28, 2017	Alliance Tennenbaum Family Technology High School—Information Booth

Date	Outreach Activity
April 19, 2018	Spring Green Expo—Information Booth
September 5, 2018	Community Open House—Burbank
September 6, 2018	Community Open House—Glendale/Atwater Village
September 17, 2018	Community Open House/Live Webcast—Downtown Los Angeles (English/Spanish)
October 11, 2018	Atwater Village Neighborhood Council—Briefing
October 18, 2018	Lincoln Heights Neighborhood Council—Presentation
November 2, 2018	City of Los Angeles—Briefing
November 13, 2018	Greater Cypress Park Neighborhood Council Presentation
November 19, 2018	Alliance of River Communities—Briefing
December 7, 2018	Glendale Community Center—Information Booth
December 17, 2018	Rio de Los Angeles State Park—Information Booth

Source: California High-Speed Rail Authority and Federal Railroad Administration, 2019
 LAUS = Los Angeles Union Station LAUSD = Los Angeles Unified School District

5.5.2 Summary of Public Outreach Issues and Concerns

During the public outreach events that have been held for the Burbank to Los Angeles Project Section, the following comments and concerns have been collected. The public outreach comments and concerns have been divided into a list that is general, as reflected by general public outreach events (e.g., open house meetings), and a separate list for comments and concerns identified by low-income and/or minority groups (e.g., neighborhood outreach events held in minority and/or low-income neighborhoods).

- **General List of Commonly Heard Comments:**

- Comment about noise/vibration impacts on adjacent communities, especially residences and sensitive receptors (e.g., schools, churches, and community centers).
- Comment about air quality impacts from moving diesel trains closer to homes and businesses.
- Comment that visual impacts need to be minimal and, when possible, mitigated by walls or landscaping.
- Comment that sound walls may be a necessary mitigation to reduce noise during operation.
- Comment about impacts from the eminent domain process and relocation.
- Comment about electromagnetic impacts to the surrounding community.
- Comment about impacts from construction activities, staging areas, and truck traffic.
- Comment about community disruption impacts from grade separations, especially during construction.
- Comment about isolating impacts from street closures on adjacent communities (e.g., Atwater Village).
- Comment about access, visual, and direct impacts to the Los Angeles River and conflicts with implementation of the Los Angeles River Revitalization Master Plan.
- Comment about impacts to pedestrian and bicycle safety, especially at bridges and crossings.

- **Comments from Environmental Justice Groups:**
 - Comment that residential displacements will be a major problem due to the lack of affordable housing in the area.
 - Comment that outreach needs to be done in languages that reflect the surrounding community.
 - Comment that the railroad serves as a physical barrier that splits communities.
 - Comment that Southern California Regional Rail Authority Metrolink service has not kept all the mitigation promises it made when building the maintenance yard (e.g., landscaping to minimize visual impacts, reduced horns, and a pedestrian bridge are top priorities).
 - Comment that the HSR Build Alternative will limit the community's access to the Los Angeles River and Rio de Los Angeles State Park.
 - Comment that the communities within the RSA are already burdened with much of the area's existing and planned infrastructure.
 - Comment that the Authority needs to coordinate with other projects, especially the Los Angeles County Metropolitan Transportation Authority Link US and Regional Connector, to minimize impacts.
 - Comment about gentrification as a result of the HSR Build Alternative, especially around the station areas.

The EJ engagement process identified several key opportunities to discuss impacts and mitigation with low-income and/or minority populations. After considering the adverse effects and potential benefits of the HSR Build Alternative, further practicable mitigation measures and design variations that would avoid or reduce any disproportionately high and adverse effects were identified.

5.6 Environmental Consequences

5.6.1 Overview

This section evaluates how the No Project Alternative and the HSR Build Alternative could affect low-income and/or minority populations. As described in detail in Section 5.3.2.4, only the topics where adverse impacts remain after mitigation are evaluated for effects to low-income and/or minority populations. The impacts of the HSR Build Alternative are described and organized as follows:

- **Construction Impacts**
 - Impact EJ #1: Changes to Traffic and Circulation Patterns during Construction
 - Impact EJ #2: Changes to Air Quality during Construction
 - Impact EJ #3: Generation of Noise and Vibration during Construction
 - Impact EJ #4: Disruption of Community Cohesion during Construction
 - Impact EJ #5: Land Use Disruption during Construction
 - Impact EJ #6: Displacement of Persons or Businesses during Construction
 - Impact EJ #7: Disruption to Parks, Recreation, and Open Space during Construction
 - Impact EJ #8: Changes to Aesthetics and Visual Quality during Construction
 - Impact EJ #9: Disturbance or Destruction of Cultural Resources during Construction
- **Operations Impacts**
 - Impact EJ #10: Changes to Traffic and Circulation Patterns during Operation
 - Impact EJ #11: Changes to Air Quality during Operation
 - Impact EJ #12: Generation of Noise and Vibration during Operation
 - Impact EJ #13: Disruption of Community Cohesion during Operation
 - Impact EJ #14: Land Use Alterations during Operation
 - Impact EJ #15: Disruption to Parks, Recreation, and Open Space during Operation

5.6.2 No Project Alternative

Under the No Project Alternative, recent development trends within the Burbank to Los Angeles Project Section are anticipated to continue, leading to direct and indirect effects on low-income and/or minority populations. Overall, traffic congestion within the Burbank to Los Angeles Project Section is anticipated to worsen as the population increases and intersection and roadway segment conditions worsen. With continued land development and population growth, emissions would increase under the No Project Alternative. However, given increasingly stringent federal and state emission control requirements; replacing older, higher-polluting vehicles with newer, less polluting ones; and State and local initiative plans and policies, air quality is expected to improve in the South Coast Air Basin under the No Project Alternative. Because substantial low-income and/or minority populations are often near existing transportation corridors and industrial areas, low-income and/or minority populations would still likely continue to be disproportionately affected by deteriorating air quality (California Office of Environmental and Health Hazard Assessment n.d.).⁸ Land development and infrastructure improvement projects under the No Project Alternative, along with additional rail and road traffic, would result in land conversions and residential and commercial displacements and relocations; divided communities; impacts to unknown archaeological sites, increased access and disturbances to archaeological sites, and impacts to historic built resources; increased localized noise and vibration impacts; impacts to views, visual resources, and visual quality; and degraded nighttime views from an increase in evening light and glare. Under the No Project Alternative, planned rail extension and improvement projects and light rail station improvement projects would continue to occur, which is likely to lead to intensification of development around station locations. The associated development may lead to land use changes such as gentrification along the existing rail corridor under the No Project Alternative. Planned recreational developments under the No Project Alternative would help to relieve the strain on existing recreational facilities, but they may also impact existing recreational and other resources.

It is assumed that each of the planned and programmed projects included under the No Project Alternative would undergo individual environmental review in order to identify and minimize effects to affected communities, including potential disproportionate adverse impacts on low-income and/or minority populations.

5.6.3 High-Speed Rail Build Alternative

The EJ analysis focuses on the potential for adverse effects on human health and the environment that could adversely affect low-income and/or minority populations. The evaluation of EJ impacts is based on the analysis and conclusions provided in Chapter 3 of this EIR/EIS. As described above in Section 5.3, Methods for Evaluating Impacts, this EJ analysis discusses only those topics for which adverse effects remain after implementation of prescribed mitigation. If impacts remain after implementation of prescribed mitigation, this analysis looks at whether the adverse impacts might have disproportionately high and adverse effects on low-income and/or minority populations. The topics covered in this analysis include:

- Transportation/Traffic
- Air Quality and Greenhouse Gas Emissions
- Noise and Vibration
- Community Cohesion
- Land Use and Development (including station planning)
- Displacements and Relocations
- Parks, Recreation, and Open Space
- Aesthetics and Visual Quality

⁸ According to the CalEnviroScreen 3.0 Map (2017), which is a screening tool designed to help identify California communities that are disproportionately burdened by multiple sources of pollution, most of the census tracts in the EJ RSA with substantial low-income and/or minority populations are scored in the “81–90 percent” or “91–100 percent” categories. A high score represents a census tract that experiences a higher pollution burden and vulnerability than census tracts with low scores.

- Cultural Resources

These impacts to low-income and/or minority populations from construction and operation of the HSR Build Alternative are described below.

5.6.3.1 Construction Effects

Construction of the HSR Build Alternative would involve demolition of existing structures, clearing, and grubbing; reduction of permeable surface area; handling, storing, hauling, excavating, and placing fill; possible pile driving; and construction of aerial structures, bridges, road modifications, utility upgrades and relocations, HSR electrical systems, and railbeds. Construction is more fully described in Chapter 2, Alternatives.

Impact EJ #1: Changes to Traffic and Circulation Patterns during Construction

Transportation impacts during construction of the HSR Build Alternative would primarily occur from construction of the below-grade alignment, reconstruction of Burbank Boulevard, and construction of grade separations. Construction of the HSR Build Alternative would require roadway closures and detours, which would increase traffic congestion and delays along the detour routes. Traffic congestion and delays could result in temporary disruptions to circulation, changes to emergency access, and conflicts with pedestrians, bicyclists, and transit users during construction.

Two roads (Chevy Chase Drive and a private Los Angeles Department of Water and Power road) would be permanently closed where they cross the HSR Build Alternative alignment; all other existing at-grade crossings would be grade-separated for HSR. The road crossing improvements would occur at the same locations as the existing roads. The grade separations would occur as early action projects and would include Sonora Avenue, Grandview Avenue, Flower Street, Goodwin Avenue, and Main Street. In addition, temporary impacts include the temporary disruption of transportation system operations from truck hauling/delivery and construction worker trips. For a more detailed discussion of transportation impacts, see Section 3.2, Transportation, of this EIR/EIS.

During some or all construction stages within the vicinity of the HSR Build Alternative, roadway access to nearby homes, businesses, and community facilities may be prohibited entirely due to construction for short or limited periods of time depending on the activity and the time of day. Traffic would be detoured to other crossing locations, adding vehicle volumes and delays to intersections near those locations. Pedestrians and bicyclists would need to be detoured, creating increased travel time delays, especially for pedestrians. Clear detour signage would be provided to direct motorists, pedestrians, and bicycles. Additionally, project construction activities that would restrict existing roadway capacity or create temporary full detours for tunnel sections, new overhead roadway structures, and grade separation replacements or new grade separation elements would also affect public bus transit service. The effects would range from potential schedule delays where capacity is restricted to rerouting of service and provision of temporary replacement bus stops where roadway closures occur. Construction of the HSR Build Alternative would not result in interference with existing railroad operations.

Temporary construction effects would occur at grade crossing locations where permanent new grade separations are not being constructed but existing structures would be modified. Construction of modified undercrossings at these locations would require temporary long-term lane closures or roadway closures during construction of support segments and decking. Pier foundation, column, and pier cap construction may require long-term lane closures. Depending on the duration for these closure operations, delays would be experienced by drivers that traverse the construction area when partial lane capacity is provided. These effects would affect nonlow-income and/or nonminority populations as well as low-income and/or minority populations.

Most street closures and detours would occur within the city of Burbank. The temporary closure of Hollywood Way, Vanowen Street, Burbank Boulevard, Buena Vista Street, and Empire Avenue would require detours that would modify local traffic conditions within Burbank. During construction, the intersections listed below would exceed level of service (LOS) thresholds and

impact thresholds within the city of Burbank. The following 20 intersections would also exceed impact thresholds as a result of project construction and would affect nonlow-income and/or nonminority populations as well as low-income and/or minority populations:

- Sunland Boulevard at Interstate 5 northbound ramps (LOS E in the a.m. and p.m. peak hours)
- Sunland Boulevard at San Fernando Road Minor (LOS E in the p.m. peak hour)
- Sunland Boulevard at San Fernando Road (LOS F in the a.m. and p.m. peak hours)
- Vineland Avenue at Vanowen Street (LOS E in the p.m. peak hour)
- Strathern Street/Clybourn Avenue at San Fernando Road (LOS F in the a.m. peak hour)
- Hollywood Way southbound at San Fernando Road (LOS E in the a.m. peak hour)
- Hollywood Way at Victory Boulevard (LOS F in the a.m. and p.m. peak hours)
- Buena Vista Street at Empire Avenue (LOS F in the a.m. peak hour)
- Buena Vista Street at Vanowen Street (LOS F in the a.m. peak hour and LOS E in the p.m. peak hour)
- Buena Vista Street at Thornton Avenue (LOS E in the a.m. peak hour)
- Buena Vista Street at San Fernando Road (LOS F in the a.m. and p.m. peak hours)
- Buena Vista Street at Victory Boulevard (LOS F in the a.m. and p.m. peak hours)
- Empire Avenue at San Fernando Road (LOS F in the p.m. peak hour)
- Burbank Boulevard at San Fernando Road (LOS F in the a.m. and p.m. peak hours)
- Burbank Boulevard at Victory Boulevard (LOS F in the a.m. and p.m. peak hours)
- Magnolia Boulevard at First Street (LOS F in the a.m. and p.m. peak hours)
- Magnolia Boulevard at Victory Boulevard (LOS F in the a.m. and p.m. peak hours)
- Olive Avenue at First Street (LOS F in the a.m. and p.m. peak hours)
- Olive Avenue at Victory Boulevard (LOS F in the a.m. and p.m. peak hours)
- San Fernando Road at Chevy Chase Drive (LOS F in the a.m. and p.m. peak hours)

In addition, Hollywood Way at Avon Street, Avon Street at Empire Avenue, Hollywood Way at Empire Avenue, and Burbank Boulevard at Interstate 5 southbound off-ramp/Front Street would be temporarily closed during construction.

Within the city of Glendale, the temporary closures of Alameda Avenue, Sonora Avenue, Grandview Avenue, Flower Street, San Fernando Road, Colorado Street, Goodwin Avenue, and Algers Street would require detours that would modify local traffic conditions. The Sonora Avenue, Grandview Avenue, Flower Street, and Goodwin Avenue/Chevy Chase Drive grade separations are early action projects that involve the modification of existing or construction of new grade crossings in the city of Glendale. The Sonora Avenue, Grandview Avenue, and Flower Street grade separations would construct undercrossings at the existing crossings. Goodwin Avenue is currently not a crossing, and the project would construct a new undercrossing there. The existing Chevy Chase Drive crossing would be closed to vehicle traffic and include a new pedestrian underpass. Chevy Chase Drive would remain open until the Goodwin Avenue grade separation is constructed. However, traffic impacts, such as delays, would occur adjacent to the industrial roadway network east of the railroad right-of-way. During project construction activities, San Fernando Road at Chevy Chase Drive (LOS F in the a.m. and p.m. peak hours) would exceed LOS thresholds and impact thresholds within the city of Glendale. The closures and detours in Glendale would affect nonlow-income and/or non-minority populations as well as low-income and/or minority populations.

Within the city of Los Angeles, detours may be required at Seneca Avenue, Glendale Boulevard, Los Feliz Boulevard, Kerr Road (located by the Metrolink Central Maintenance Facility), and Main Street. In addition, the Main Street grade separation, an early action project, would be built in the city of Los Angeles. An eastbound/westbound traffic detour may be required for construction of the roadway bridge overcrossing at Main Street. One lane would be maintained in each direction, including across the existing Main Street Bridge. During construction of the overcrossing, traffic levels at the intersection of Sotello Street and Main Street west of the Main Street overcrossing would temporarily exceed LOS thresholds during p.m. peak traffic periods. During project construction activities, Sotello Street at Main Street (LOS F in the p.m. peak hour) would exceed LOS thresholds and impact thresholds within the city of Los Angeles. The detours would affect nonlow-income and/or nonminority populations as well as low-income and/or minority populations. However, the Main Street detour is in a community with a substantial low-income population and would therefore primarily affect low-income populations.

Construction of new grade separations would have temporary transportation-related effects. Of the five early action projects, the areas around the Sonora Avenue, Grandview Avenue, and Flower Street undercrossings contain less than substantial low-income and/or minority populations. The Chevy Chase Drive/Goodwin Avenue undercrossing and the new Main Street overcrossing are in proximity to or within areas with substantial low-income and/or minority populations.

The access restrictions and other circulation impacts discussed above would occur within the project vicinity over a 5-year construction period. Law enforcement, fire, and emergency services would experience increased response times due to construction-related road closures, detours, and increased traffic congestion in some locations. However, emergency vehicle access for police and fire protection services would be maintained at all times and construction would be phased to prevent concurrent closures from limiting emergency access.

Project-related construction traffic would contribute to interference with pedestrians, bicyclists, and transit users where existing sidewalks, paths, and transit stops need to be temporarily closed or relocated to allow for construction of new facilities. Construction of the HSR Build Alternative grade crossing elements would affect bicycle travel. There are 13 roadways where grade crossing closures, or the construction of grade crossings, may have impacts on bicycle lane facilities.

The impacts to local residents and communities from construction-related transportation impacts would be addressed through the implementation of TR-IAMF#1 through TR-IAMF#7, TR-IAMF#9, TR-IAMF#11, TR-IAMF#12, and SS-IAMF#1, which employ actions such as the protection of public roadways during construction, preparation of a Construction Transportation Plan to minimize impacts on adjoining and nearby roadways, and strategies to minimize impacts to public on-street parking areas; maintain bicycle, pedestrian, and transit access; restrict construction hours; and manage construction truck routes, and pedestrian and bicycle safety.

Construction of the HSR Build Alternative would require the conversion of land planned for two bike paths (the planned Phase 3 of the San Fernando Road Bike Path and the San Fernando Railroad Bike Path) to railroad right-of-way. Mitigation measure PR-MM#4 would require the Authority to coordinate with officials with jurisdiction over the planned bike paths to identify alternative routes for these bicycle facilities. With implementation of mitigation measure PR-MM#4, it is anticipated that the planned Phase 3 of the San Fernando Road Bike Path could feasibly be rerouted. However, the planned San Fernando Railroad Bike Path may not be able to be rerouted. Therefore, it is assumed for this analysis that the HSR Build Alternative would preclude the development of the planned San Fernando Railroad Bike Path in this location. The loss of the planned San Fernando Railroad Bike Path would result in a loss of connectivity of the planned bicycle network and would change the benefits of the adopted bicycle plans, resulting in an incompatible use.

Although the above IAMFs would reduce the potential for temporary transportation impacts during construction, there would be an impact from increased response times for emergency responders; interference with pedestrians, bicyclists, and transit users; traffic impacts at nine intersections, on five roadway segments, and in the vicinity of one freeway interchange from

closures and detours; and a conflict with adopted bicycle plans from the permanent conversion of land for the San Fernando Railroad Bike Path. Given the relatively minor intensity of the remaining impacts to increased response times for emergency responders and interference with pedestrians, bicyclists, and transit users after implementation of the above IAMFs, the HSR Build Alternative would not result in adverse effects to emergency response and pedestrian, bicycle and transportation users. Therefore, impacts from increased response times and interference with pedestrians, bicyclists, and transit users would not result in disproportionately high, adverse effects on low-income or minority populations living within the EJ RSA. However, no feasible mitigation is available to reduce traffic impacts resulting from increased traffic at the specified locations during closures and detours. Therefore, there would be an adverse impact related to disruptions to circulation due to closures, detours, and construction traffic, as well as increased delays at intersections and on roadway segments. Additionally, there is no feasible mitigation for the incompatible use resulting from the permanent conversion of land planned for the San Fernando Railroad Bike Path in Glendale.

Temporary construction-related transportation impacts would occur along the entire HSR Build Alternative, particularly at various roadway locations where temporary closures would be necessary. As discussed above, the most substantial temporary construction transportation effects would occur around the below-grade alignment, Burbank Boulevard, and the grade separations. Although a few impacted intersections and roadways are in areas with substantial minority and/or low-income populations, most affected intersections and roadways are in areas with nonlow-income and/or nonminority populations. Because low-income and/or minority populations make up slightly more than half of the population within the RSA, the transportation construction impacts would generally be experienced by all populations living within the EJ RSA and all populations crossing the existing railroad right-of-way, including minority and/or low-income populations as well as nonlow-income and/or nonminority populations. Additionally, the loss of the planned San Fernando Railroad Bike Path would affect low-income and/or minority populations as well as nonlow-income and/or nonminority populations. Therefore, temporary transportation impacts would not result in disproportionately high and adverse effects on low-income or minority populations living within the EJ RSA.

Impact EJ #2: Changes to Air Quality during Construction

Construction of the HSR Build Alternative would generate elevated concentrations of criteria pollutants. These elevated concentrations may cause or contribute to exceedances of the National Ambient Air Quality Standards and the California Ambient Air Quality Standards, which are established concentrations of criteria pollutants that provide public health protections, and would impact all communities close to the project footprint. Sensitive receptors (such as schools, residences, health care facilities, and other community facilities) are near the construction areas within the Cities of Burbank, Glendale, and Los Angeles.

The construction emissions are associated with several different phases of construction, such as mobilization, demolition, earthmoving, land clearing, station construction, track construction, and roadway and rail bridges construction. Construction emissions are also associated with the construction equipment. The predominant pollutants associated with the construction activities noted above are fugitive dust (particulate matter smaller than or equal to 10 microns in diameter and particulate matter smaller than or equal to 2.5 microns in diameter). The predominant pollutants associated with construction equipment are combustion pollutants, particularly ozone precursors, including nitrogen oxides and volatile organic compounds.

During construction, exceedances of the National Ambient Air Quality Standards and California Ambient Air Quality Standards would occur for 1-hour nitrogen dioxide concentrations at two locations: between the Burbank Airport Station and the Alameda Avenue rail alignment, and at the Main Street grade separation.

AQ-IAMF#1, AQ-IAMF#2, AQ-IAMF#4, AQ-IAMF#5, AQ-IAMF#6, and SOCIO-IAMF#1 include measures to reduce temporary air quality impacts to populations living within the EJ RSA. Compliance with AQ-IAMF#1 would require the preparation of a fugitive dust control plan identifying the minimum features to be implemented during ground-disturbing activities.

Compliance with AQ-IAMF#2 would limit the type of paint used during construction of the HSR Build Alternative to those with low volatile organic compound content. AQ-IAMF#4, AQ-IAMF#5, and AQ-IAMF#6 would require measures to reduce criteria exhaust emissions from construction equipment. In addition, SOCIO-IAMF#1 requires the preparation of a Construction Management Plan with measures to minimize impacts, including air quality impacts, to all populations, including low-income and/or minority populations.

Although the above IAMFs would reduce the amount of construction-related air emissions, construction activities would still have the potential to exceed air quality standards, which would cause localized impacts, particularly to people living close to the project footprint, which in some locations includes minority and/or low-income populations. Implementation of AQ-MM#1 would be required to further reduce the potential impacts of construction emissions. AQ-MM#1 would offset construction-phase nitrogen oxides emissions through an anticipated South Coast Air Quality Management District emission offset program. Implementation of AQ-MM#1 would minimize construction-related air quality impacts at the regional level. However, short-term construction activities are predicted to have a localized impact on regional air quality and sensitive receptors, including minority and/or low-income populations, because the 1-hour average nitrogen dioxide concentrations near sensitive and residential receptors would exceed the National Ambient Air Quality Standards during construction with or without on-site mitigation.

As described in Section 5.4.3, low-income and/or minority populations are heavily concentrated in the southern portion of Glendale and in Los Angeles, generally near LAUS, which is at the southern portion of the project footprint. Other low-income and/or minority populations reside within the northern half of the EJ RSA; however, the census block groups where they are located are more scattered. Within the construction segment between the Burbank Airport Station and Burbank Boulevard, block groups with substantial low-income and/or minority residents make up less than half of all block groups within the EJ RSA. At the Main Street grade separation, all adjacent block groups contain substantial minority populations, and all adjacent block groups, with the exception of two block groups (within Census Tracts 1997 and 2060.20) contain substantial low-income populations. Both minority and/or low-income populations, as well as nonlow-income and/or nonminority populations, reside close to the project footprint, where most of the construction would take place. Therefore, while construction of the HSR Build Alternative would result in localized air quality impacts, these impacts would affect all communities close to the project footprint, including low-income and/or minority populations as well as nonlow-income and/or nonminority populations. Therefore, the HSR Build Alternative would not result in disproportionately high, adverse effects related to air quality on low-income and/or minority populations living within the EJ RSA.

Impact EJ #3: Generation of Noise and Vibration during Construction

Temporary construction impacts would occur from noise and vibration generated during construction activities and would impact all communities close to the project footprint. Noise and vibration impacts would result from construction of elevated structures, tunnels, and track at-grade; demolition of road crossings and structures; land clearing; earthmoving; and materials handling.

Temporary noise impacts from rail corridor construction and the associated construction activities, including drilling, bulldozing, demolition, blasting, and (potentially) pile driving, are expected to exceed the FRA's criteria for daytime construction noise of 80 A-weighted decibels equivalent sound level for residences and schools. If nighttime construction is required, construction noise impacts are expected to exceed the local jurisdictions' nighttime noise standards. Noise impacts from roadway construction would exceed the FRA's construction noise criteria during nighttime hours. If typical roadway construction activities are conducted in conjunction with pile driving, the noise impacts would be even greater. Noise during construction of the HSR Build Alternative would have an effect on both low-income and/or minority populations near the HSR Build Alternative, particularly in the southern half of the project footprint. However, noise effects during construction would occur along the entire HSR Build Alternative and would affect nonlow-income and/or nonminority populations as well as minority and/or low-income populations in the EJ RSA.

Ground vibration would occur during rail corridor construction and roadway construction from drilling, excavation, and vibro-compaction. Activities producing vibration are not anticipated to occur close enough to sensitive receptors to cause substantial damage; however, sensitive land uses such as schools, libraries, churches, and medical offices within 105 feet of the rail corridor and residential structures within 135 feet of the rail corridor could experience construction-related vibration annoyance impacts. Vibration impacts from roadway construction would be similar to those associated with rail corridor construction.

Compliance with NV-IAMF#1 would minimize temporary noise and vibration impacts from construction of the HSR Build Alternative by requiring the contractor to document how federal guidelines for minimizing noise and vibration would be employed when construction is occurring near sensitive receptors (e.g., hospitals, residential neighborhoods, and schools). Temporary adverse noise impacts during construction would occur along the entire HSR Build Alternative alignment and would affect low-income and/or minority populations as well as nonlow-income and/or nonminority populations within the EJ RSA.

Although the above IAMF would minimize temporary impacts, construction activities would still have the potential to cause temporary noise impacts. As discussed in Section 3.4, Noise and Vibration, mitigation measures N&V-MM#1 and N&V-MM#2 would be required to further reduce noise and vibration impacts during construction. Mitigation measure N&V-MM#1 requires the contractor to prepare a noise monitoring program, monitor construction noise, and verify compliance with daytime and nighttime noise standards. Mitigation measure N&V-MM#2 requires the use of alternative methods to pile driving (e.g., cast-in-drilled-hole) during construction of the HSR Build Alternative to reduce vibration impacts. Implementation of the IAMFs and mitigation measures would reduce temporary impacts associated with construction noise and vibration but would not eliminate them. Noise and vibration impacts associated with HSR stationary facilities would affect all communities close to the project footprint, including low-income and/or minority populations as well as nonlow-income and/or nonminority populations. Therefore, the HSR Build Alternative would not result in disproportionately high, adverse effects related to noise and vibration on low-income and/or minority populations living within the EJ RSA.

Impact EJ #4: Disruption of Community Cohesion during Construction

For the HSR Build Alternative, construction impacts would impact all communities close to the project footprint. Temporary construction activities could cause impacts relating to community cohesion by affecting community facilities, particularly those that serve as gathering places for the community or that provide community services, altering social interactions through temporary changes in access, and generating visual changes, noise, and dust. Generally, the area around the below-grade alignment, Burbank Boulevard, and grade separations would experience the most street closures and detours during construction. As described in more detail above, construction of the HSR Build Alternative would result in temporary impacts associated with traffic/transportation, air quality, and noise and vibration. Overall, temporary construction activities could impact community cohesion. These effects would be the greatest in the city of Burbank and may temporarily disrupt established patterns of interactions among community members. Along the project alignment within the Cities of Glendale and Los Angeles, construction of the HSR Build Alternative would adversely affect individuals and individual property owners, but the effects would not represent a long-term impact to community cohesion.

Implementation of TR-IAMF#1 through TR-IAMF#7, TR-IAMF#9, TR-IAMF#11, TR-IAMF#12, AQ-IAMF#1, AQ-IAMF#2, AQ-IAMF#4, AQ-IAMF#5, AQ-IAMF#6, and NV-IAMF#1 would minimize the HSR Build Alternative's temporary construction impacts from increases in traffic congestion, access, parking, dust, and noise. In addition, SOCIO-IAMF#1 requires the implementation of a Construction Management Plan, which would direct all street users around the construction, enabling them to access commercial destinations. In addition, the plan would include actions pertaining to air quality and noise controls to avoid and/or minimize adverse impacts on residents, including low-income and/or minority populations. Impacts to communities associated with changes in aesthetics and visual quality would be minimized with compliance with AVQ-IAMF#1 and AVQ-IAMF#2, which would design and construct structures with aesthetic

character and visual harmony with the surrounding environment and define the process to follow when implementing the Authority's aesthetic review process. However, even with implementation of IAMFs, the traffic disruption from closures and detours in the city of Burbank would remain.

Although there would be temporary adverse impacts to community cohesion in the city of Burbank, the impacts would affect all communities close to the project footprint, including low-income and/or minority populations as well as nonlow-income and/or nonminority populations. Temporary impacts to community cohesion from construction of the HSR Build Alternative would not result in disproportionately high, adverse effects on low-income and/or minority populations living within the EJ RSA.

Impact EJ #5: Land Use Disruption during Construction

Construction of the HSR Build Alternative would cause temporary and intermittent disruption of access to some properties and temporarily inconvenience nearby residents and businesses from increases in noise levels and dust. In addition, construction of the HSR Build Alternative would result in the direct temporary conversion of approximately 113 acres of existing and planned land uses to temporary construction easements outside of the project's right-of-way for construction staging, laydown, and fabrication. This land would be unavailable for these existing uses during the construction period for the HSR Build Alternative. Temporary construction easements typically do not encompass a full parcel and would only affect land use in a portion of an existing parcel. Most of the temporary construction easements would occur on land that is currently occupied by community facilities (approximately 34 acres), industrial uses (approximately 29 acres), or transportation/communications/utilities uses (approximately 24 acres). Most of the construction easements would occur on land that is currently planned for industrial uses (approximately 57 acres), commercial uses (approximately 19 acres), and transportation/communications/utilities uses (approximately 21 acres). Overall, the HSR Build Alternative would temporarily convert slightly less than 3 percent of the existing and planned land uses in the land use RSA.

LU-IAMF#3 would ensure that construction and staging areas used temporarily during construction would be returned to a condition equal to the pre-construction staging condition. NV-IAMF#1, AQ-IAMF#1, AQ-IAMF#2, and TR-IAMF#2 require documentation of how federal guidelines for minimizing noise and vibration would be employed, the preparation of a fugitive dust control plan, the use of low-volatile-organic-compound paint during construction, and the preparation of a Construction Transportation Plan to minimize access disruptions for residents, businesses, customers, delivery vehicles, and buses by limiting any road closures to the hours that are least disruptive to access for the adjacent land uses and making detours available to affected motorists. In addition, the Authority would negotiate with the property owners to lease the land required for the temporary construction easements.

Although the above IAMFs would reduce the potential for temporary construction impacts to existing land use patterns during construction activities due to temporary and intermittent disruption of access, temporary elevations in noise and dust levels, and temporary conversion of existing land uses to temporary construction easements, the HSR Build Alternative would still have the potential to temporarily alter existing land use patterns. Given the relatively minor intensity of the remaining impacts after IAMFs are implemented and the fact that impacts would affect all communities close to the project footprint, including low-income and/or minority populations as well as nonlow-income and/or nonminority populations, the HSR Build Alternative would not result in disproportionately high, adverse effects on low-income and/or minority populations living within the EJ RSA related to temporary construction impacts on land uses.

Construction of the HSR Build Alternative would result in the direct permanent conversion of 153 acres of existing and planned land uses to transportation uses. This amount of land is negligible compared to the overall amount of similar land uses within the RSA. Most of this land conversion would occur adjacent to an existing railroad corridor and is spread over a distance of 14 miles between the proposed Burbank Airport Station and LAUS. No IAMFs or mitigation measures exist that would avoid or minimize the direct impacts from permanent land use conversions related to the construction of the HSR Build Alternative between the two proposed stations. However, the magnitude of the impacts would be limited due to the overall amount of

similar land uses within the RSA, and the HSR Build Alternative would not result in adverse effects. Therefore, the HSR Build Alternative would not result in disproportionately high and adverse impacts on minority and/or low-income populations related to the permanent conversion of existing and planned land uses from construction.

Impact EJ #6: Displacement of Persons or Businesses during Construction

Displacements and relocations would impact communities close to the project footprint. As shown on Figure 5-8 and Figure 5-9 (each with Sheets 1 through 3) and detailed in Table 5-9, construction of the HSR Build Alternative would result in 12 residential displacements and 84 nonresidential displacements.

Table 5-9 Displacements within the Environmental Justice Resource Study Area

Type and Location	Total Displacements	Substantial Low-Income Population	Substantial Minority Population
Total Nonresidential Displacements	84	11 (13 percent)	48 (57 percent)
Burbank Nonresidential Property Displacements	39	8 (21 percent)	23 (59 percent)
Glendale Nonresidential Displacements	20	0	0
Los Angeles Nonresidential Property Displacements	25	3 (12 percent)	25 (100 percent)
Total Single and Multifamily Residential Displacements	12	0	7 (59 percent)
Burbank Residential Property Displacements	7	0	2 (29 percent)
Los Angeles Residential Property Displacements	5	0	5 (100 percent)

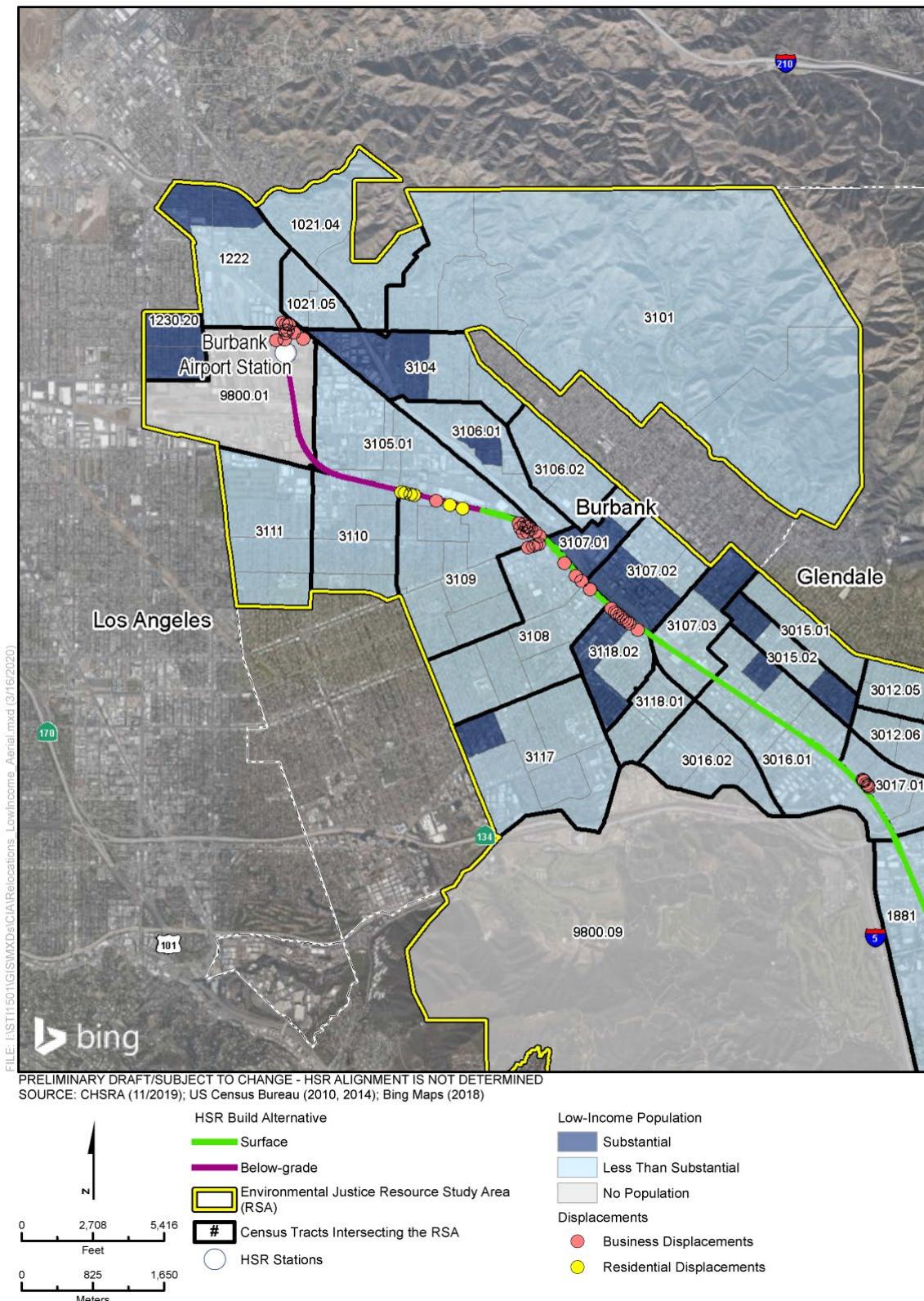
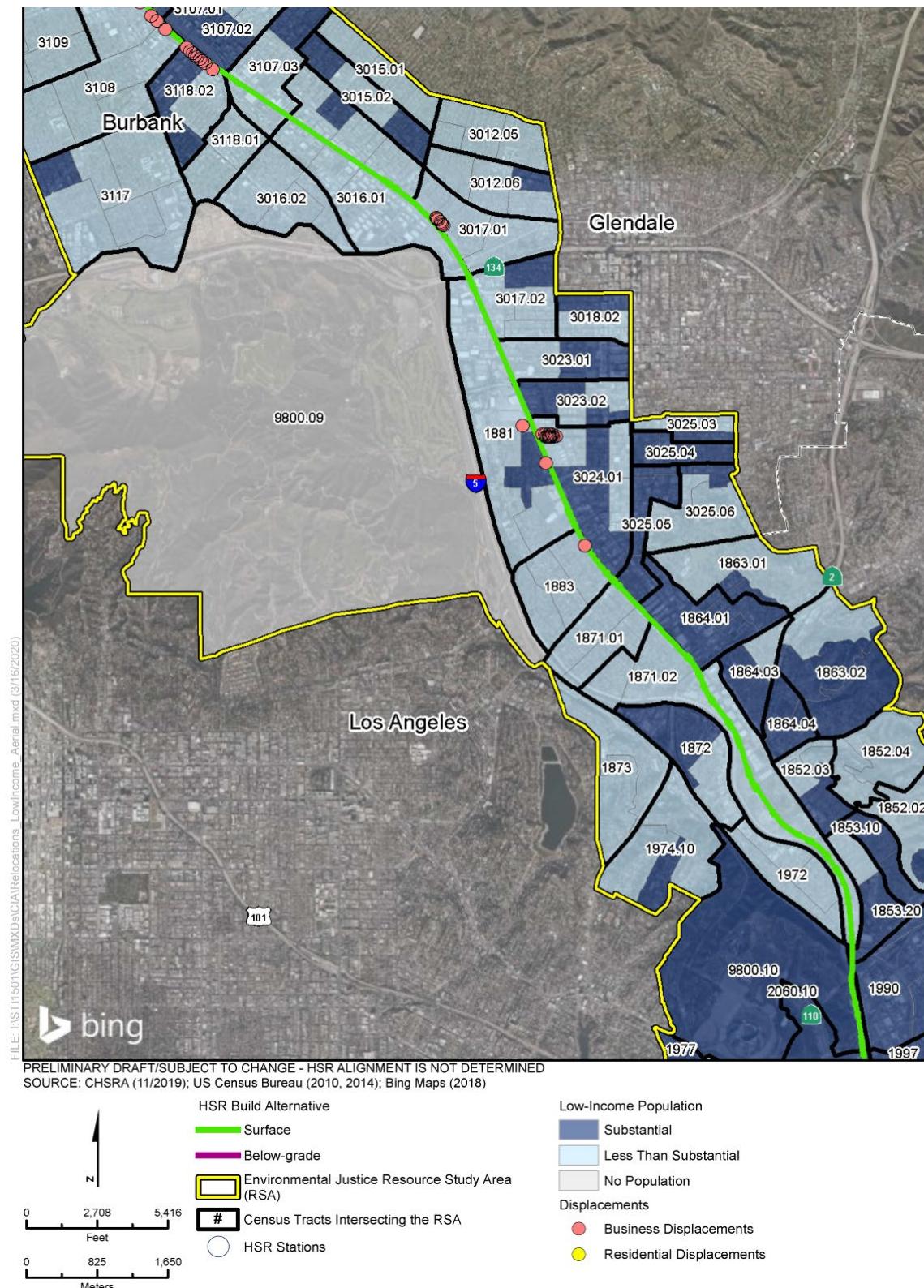


Figure 5-8 Displacements in Areas with Low-Income Populations

(Sheet 1 of 3)

**Figure 5-8 Displacements in Areas with Low-Income Populations**

(Sheet 2 of 3)

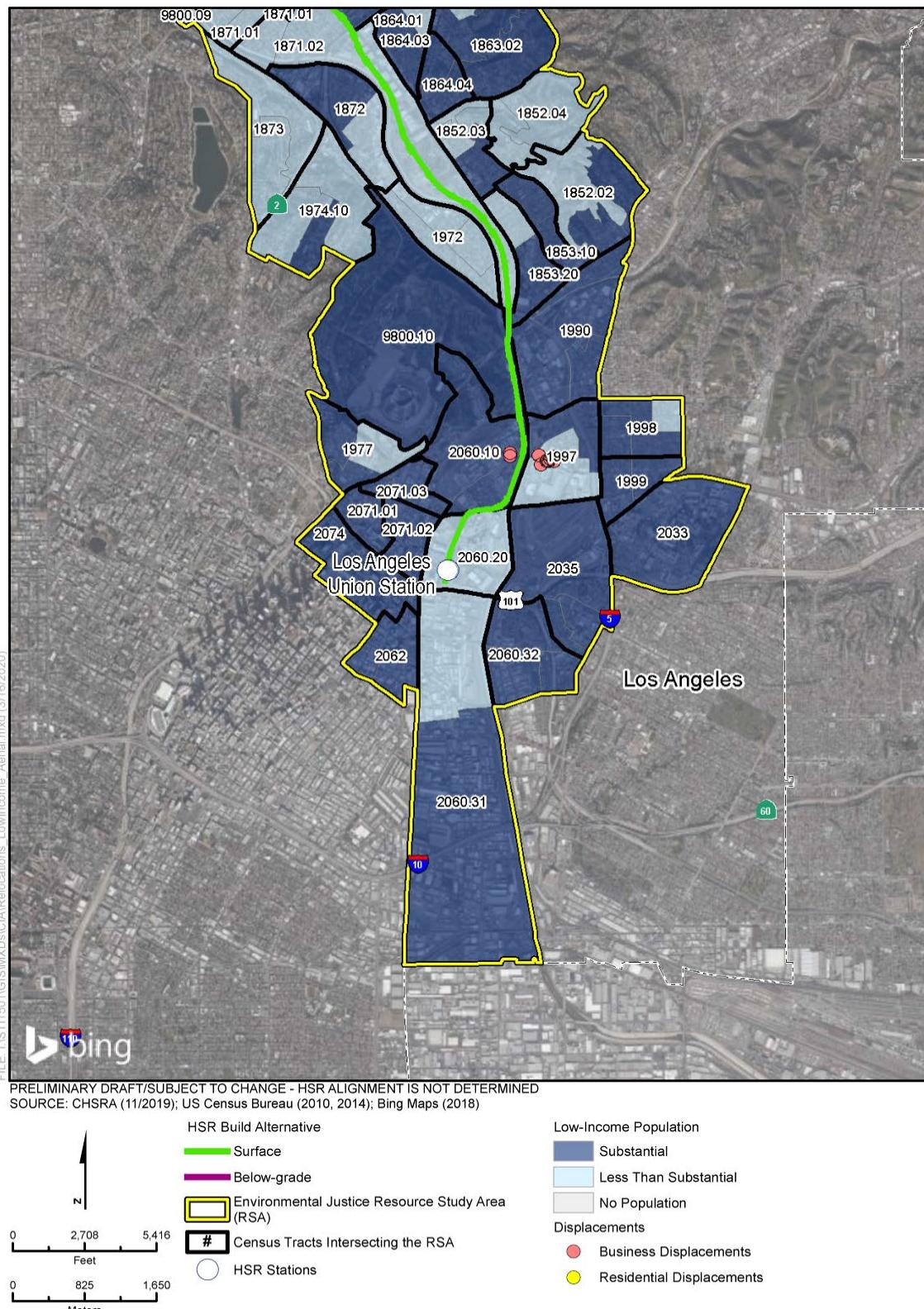
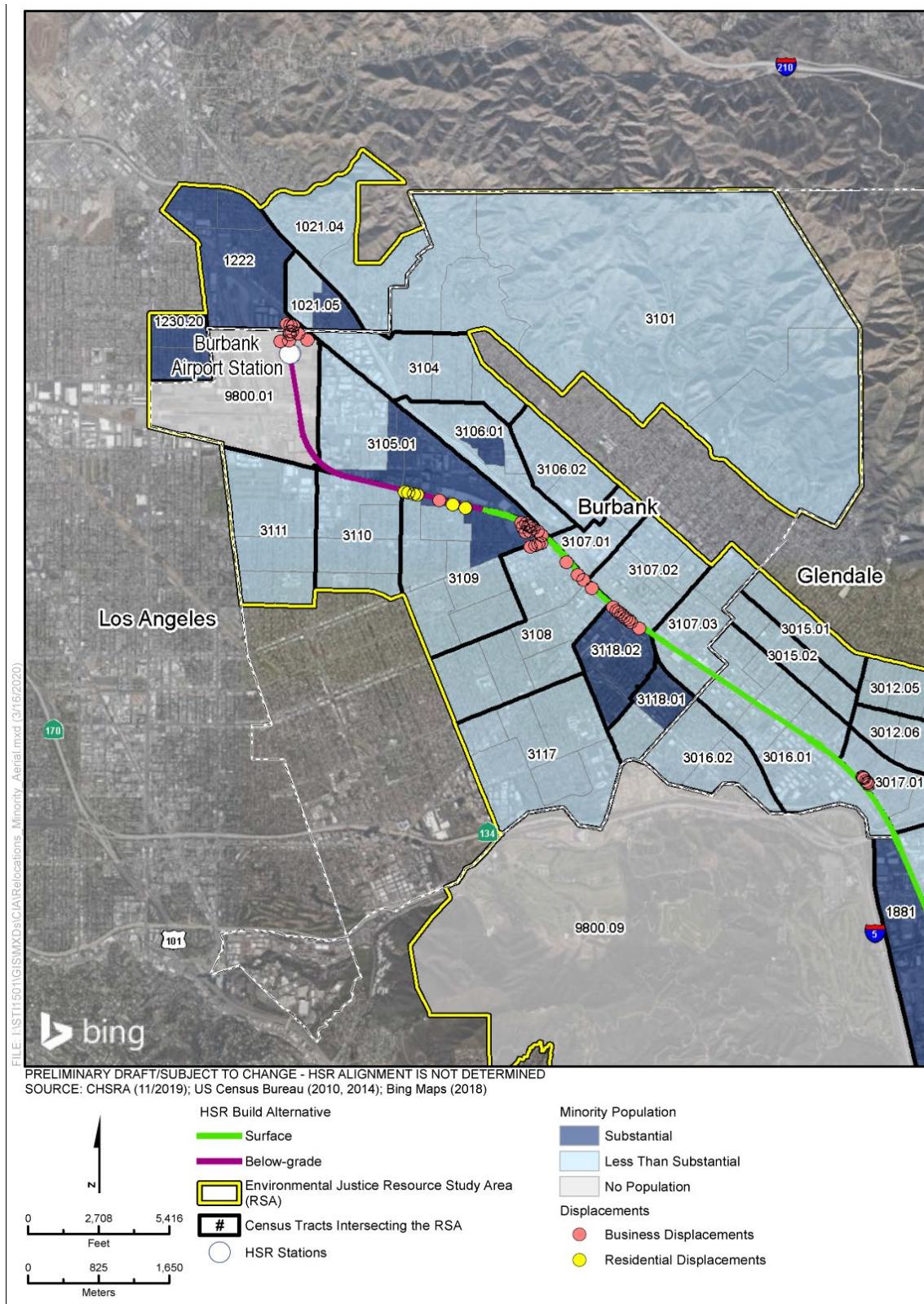


Figure 5-8 Displacements in Areas with Low-Income Populations
(Sheet 3 of 3)

**Figure 5-9 Displacements in Areas with Minority Populations**

(Sheet 1 of 3)

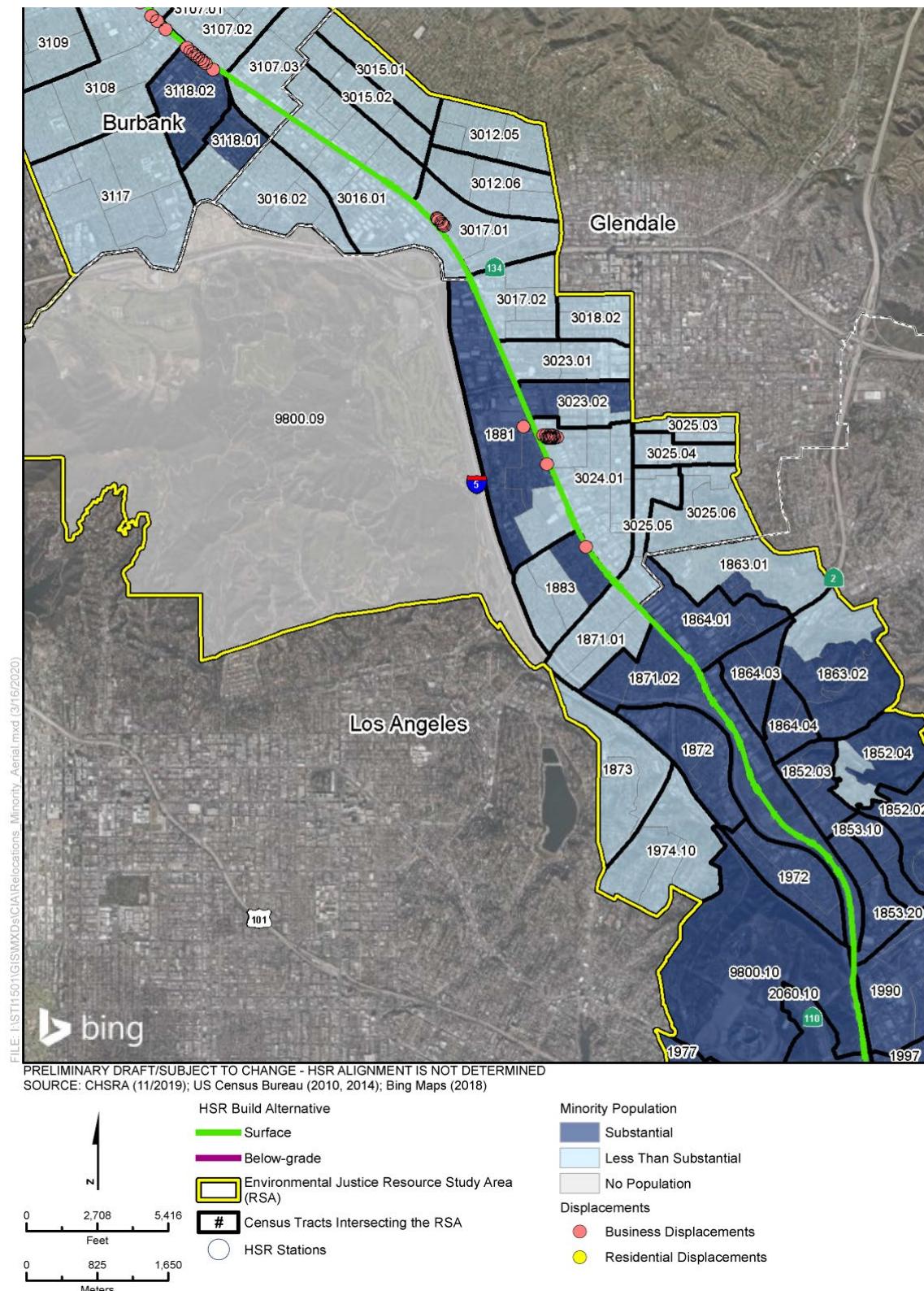


Figure 5-9 Displacements in Areas with Minority Populations

(Sheet 2 of 3)

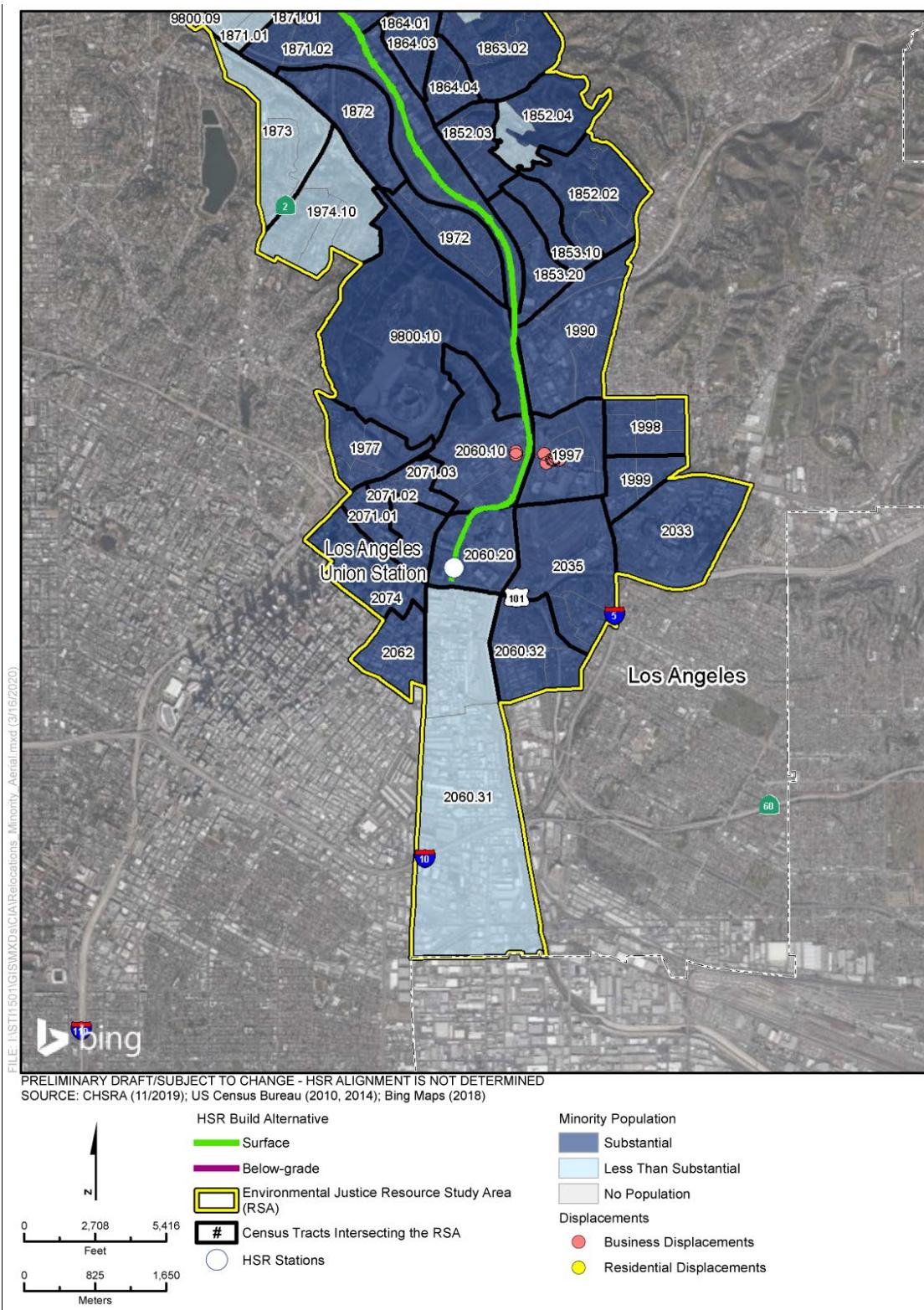


Figure 5-9 Displacements in Areas with Minority Populations
 (Sheet 3 of 3)

Residential displacements would include six single-family residences and six multifamily residences. A total of five residential displacements would occur within the city of Los Angeles and seven would occur within the city of Burbank. None of the full-parcel residential acquisitions are listed on the Assembly Bill 987 Affordable Housing Database rosters of affordability covenants in Los Angeles. Although none of the properties are subject to affordability covenants, low-income populations are often clustered along transportation corridors, where housing is less costly. As described in Section 5.4.3, substantial concentrations of low-income and/or minority residents exist within or adjacent to the EJ RSA where acquisitions would occur. Although the residential displacements would affect low-income and/or minority populations, approximately half of the residential relocations would be within communities with nonlow-income and/or nonminority populations. Therefore, the HSR Build Alternative would not result in disproportionately high, adverse effects on low-income or minority populations living within the EJ RSA.

The HSR Build Alternative would result in a total of 84 nonresidential displacements, including commercial, industrial, and retail businesses and affecting an estimated 1,747 employees. These displacements are shown on Figure 5-8 and Figure 5-9 and detailed in Table 5-9. Nonresidential displacements would occur in the city of Burbank (39 displaced businesses), the city of Glendale (20 displaced businesses), and the city of Los Angeles (25 displaced businesses). The construction of the HSR Build Alternative would not result in the displacement of any community facilities or other properties that provide public services. Approximately half of the nonresidential relocations would be in communities with low-income and/or minority populations. Therefore, the HSR Build Alternative would not result in disproportionately high, adverse effects on nonresidential displacements within the EJ RSA.

A Construction Management Plan (SOCIO-IAMF#1) will be prepared to establish measures that would help avoid and/or minimize impacts on low-income households and minority populations. Implementation of SOCIO-IAMF#2 and SOCIO-IAMF#3 would minimize the impacts from the displacement and relocation of residences and businesses from the construction of the HSR Build Alternative. With implementation of SOCIO-IAMF#2 and SOCIO-IAMF#3, measures will be taken to assist with relocation and expense compensation, but the potential impacts of displacement and relocation would remain. Therefore, construction of the HSR Build Alternative would result in impacts associated with residential and nonresidential displacements. Although the residential and nonresidential displacements would affect low-income and/or minority populations, approximately half of the residential relocations would be within communities with nonlow-income and/or nonminority populations. Therefore, the residential and nonresidential displacements under the HSR Build Alternative would not result in disproportionately high, adverse effects on low-income or minority populations living within the EJ RSA.

Impact EJ #7: Disruption to Parks, Recreation, and Open Space during Construction

The HSR Build Alternative would have temporary impacts to parks and recreation facilities through the temporary use of land from recreation areas or trails, temporary facility closures, and/or temporary detours during construction. Parks and recreation facilities that would experience these impacts during construction of the HSR Build Alternative include the Phase 3 of the San Fernando Road Bike Path (planned), the Burbank Western Channel Bike Path (planned), the Chandler Road Bikeway (planned), proposed Taylor Yard (G2 Parcel), and Albion Riverside Park.

Construction of the HSR Build Alternative would result in increased delays to some signalized intersections, unsignalized intersections, and changes to roadway segment volume-to-capacity ratios. The Authority would implement TR-IAMF#2, TR-IAMF#4, TR-IAMF#5, and TR-IAMF#7 to minimize construction-related traffic delays for public access. TR-IAMF#2 requires the contractor to prepare a Construction Transportation Plan for the purpose of minimizing the impacts of construction and construction traffic on adjoining and nearby roadways and providing safe vehicular and pedestrian access during construction. TR-IAMF#4 and TR-IAMF#5 require the contractor to prepare specific construction management plans to address the maintenance of pedestrian and bicycle access during the construction period where feasible (i.e., meeting design, safety, and Americans with Disabilities Act requirements). TR-IAMF#7 requires truck traffic, either for excavation or for transporting construction materials to the site, to use the designated truck

routes within each city. This would minimize the construction-related delays on local roadways. Although traffic delays would extend the travel time to recreational resources, with implementation of the IAMFs listed above, the delays would not prevent the use of the resources.

The Authority would also adhere to PK-IAMF#1, which requires the contractor to prepare and submit to the Authority a technical memorandum identifying project design features to be implemented to minimize impacts on recreational resources. However, construction activities associated with the HSR Build Alternative could still temporarily diminish access to the recreational resources identified above.

Mitigation measure PR-MM#1 requires the preparation of a technical memorandum documenting how connections to unaffected trail portions and nearby roadways would be maintained during construction. Mitigation measures PR-MM#3 and PR-MM#5 set conditions for the temporary use, closure, and/or detouring of existing recreation areas and include a requirement that all trail and bike path segments closed temporarily during construction and all park, recreation, or school play areas used temporarily during construction be returned to their original, or better, condition after completion of construction.

Implementation of PR-MM#1, PR-MM#3, and PR-MM#5 would reduce temporary adverse effects to parks and recreation facilities by maintaining connections to unaffected trail and park portions and nearby roadways, and would reduce the temporary use of parks and recreation facilities by limiting and reducing the sizes of temporary impact areas and restoring the parks and recreation facilities after construction is completed. Given the relatively minor intensity of the remaining impacts after IAMFs and mitigation measures are implemented, the HSR Build Alternative would not result in adverse effects. As a result, the HSR Build Alternative would not result in disproportionately high and adverse effects on low-income or minority populations related to the temporary use of land from recreation areas or trails, temporary facility closures, and/or temporary detours during construction.

The HSR Build Alternative would also have temporary impacts to parks and recreation facilities from short-term changes in access to intact areas of the impacted parks and recreation facilities, and short-term air quality, noise, and/or visual impacts during construction. These temporary impacts would occur to the parks and recreation facilities impacted under Impact PK-1, as well as a number of additional parks and recreation resources, as described in Section 3.15.6.3.

As described in the discussion of temporary transportation, air quality, and noise and vibration impacts, TR-IAMF#2, TR-IAMF#4, TR-IAMF#5, TR-IAMF#7, AQ-IAMF#1, AQ-IAMF#2, AQ-IAMF#4, AQ-IAMF#5, N&V-IAMF#1, AVQ-IAMF#1, and AVQ-IAMF#2 include measures to reduce the potential for temporary access, air quality, noise and vibration, and visual impacts during construction of the HSR Build Alternative.

Although the above IAMFs would reduce the potential for temporary transportation, air quality, noise and vibration, and visual impacts, construction activities would still have the potential to cause temporary transportation, air quality, noise and vibration, and aesthetics and visual quality impacts to parks and recreation resources within the EJ RSA.

As described in the discussion of temporary access, air quality, noise and vibration, and aesthetics and visual quality impacts, mitigation measures TRAN-MM#1, AQ-MM#1, N&V-MM#1, N&V-MM#2, AVQ-MM#1, and AVQ-MM#2 would minimize temporary air quality, noise and vibration, and aesthetic and visual impacts within the EJ RSA during construction of the HSR Build Alternative. In addition, mitigation measure PR-MM#1 requires the preparation of a technical memorandum documenting how connections to unaffected trail portions would be maintained during construction via temporary trail detours on existing roadways to ensure that alternative access, detour signage, and lighting is provided. PR-MM#3 requires the preparation of a Trail and Bicycle Lane Facilities Plan to address short-term project impacts to existing trails and bicycle lanes within the construction limits of the project; coordination with the directors of the appropriate jurisdictions' public works and/or parks departments prior to any temporary closures of trails and bicycle lanes; installation of directional and informational detour signage prior to temporary trail closures; installation of signage with contact information for members of the public;

restoration of impacted trail and bicycle segments to their original, or better, condition after completion of construction; and documentation of compliance with the Trails and Bicycle Lane Facilities Plan.

Although implementation of mitigation measures PR-MM#1, PR-MM#3, TRAN-MM#1, AQ-MM#1, N&V-MM#1, N&V-MM#2, AVQ-MM#1, and AVQ-MM#2 would reduce temporary access, air quality, noise and vibration, and aesthetics and visual quality impacts, impacts would remain after mitigation.

The affected parks and recreation facilities are within or close to areas with substantial minority and/or low-income populations. These parks and recreation facilities serve the population living and working within the EJ RSA, including minority and/or low-income populations and nonlow-income and/or nonminority populations. Therefore, the HSR Build Alternative would not result in disproportionately high and adverse effects on low-income or minority populations living within the EJ RSA.

The HSR Build Alternative would permanently convert property from parks and recreation facilities, including the Phase 3 of the San Fernando Road Bike Path (planned), the San Fernando Railroad Bike Path (planned), Rio de Los Angeles State Park, proposed Taylor Yard (G2 Parcel), and Albion Riverside Park (currently under construction).

Mitigation measure PR-MM#4 stipulates that compensation or land, or both, will be provided by the Authority, in consultation with the public agency with jurisdiction, for all permanent acquisitions of property for HSR improvements from publicly owned parks, consistent with the requirements of the California Park Preservation Act of 1971. PR-MM#4 also requires that the Authority consult with the officials with jurisdiction over existing or planned bicycle paths located on Los Angeles County Metropolitan Transportation Authority land that would be permanently converted to identify an alternative route for the continuation of the lost use and functionality of the resource.

Although implementation of mitigation measure PR-MM#4 would reduce impacts from the conversion of property currently used or planned for use for parks and recreation facilities, construction of the HSR Build Alternative would preclude construction of a portion of the planned Phase 3 of the San Fernando Railroad Bike Path. The loss of this segment of this planned resource as a result of the construction of the HSR Build Alternative would result in an impact associated with the loss of connectivity and planned recreation use.

The affected parks and recreation facilities are within or close to areas with substantial minority and/or low-income populations. The planned Phase 3 of the San Fernando Railroad Bike Path would serve the population living and working within the EJ RSA, including minority and/or low-income populations and nonlow-income and/or nonminority populations. Therefore, construction impacts to park, recreation, and open space resources under the HSR Build Alternative would not result in disproportionately high and adverse effects on low-income or minority populations living within the EJ RSA.

Impact EJ #8: Changes to Aesthetics and Visual Quality during Construction

Temporary construction impacts would occur from changes to visual quality during construction of the HSR Build Alternative and would impact all communities close to the project footprint. Construction activities would introduce heavy equipment and associated vehicles and temporary support structures that would alter the existing visual environment. Soil movement, such as grading or excavation, would release dust, which could affect visibility. Construction staging, equipment, lighting, and demolition activities would introduce new visual elements that may conflict with the existing natural and cultural environments. Lighting of temporary structures (e.g., trailers, fencing, and parking) and for nighttime construction could spill over to off-site areas, resulting in disturbance to nearby residents and motorists.

The visual effects from construction activities would affect all communities, particularly in the vicinity of the grade separations. The Goodwin Avenue undercrossing and Main Street overcrossing would involve construction in a community with low-income and/or minority populations. Because the Main Street grade separation is an overcrossing, construction of this feature would have a noticeable visual effect on the surrounding community. Although construction activities represent changes to

visual quality, these changes are considered to be temporary, as construction equipment, materials, and support structures would be installed at the beginning of the construction period and removed upon completion of construction. Proposed temporary construction activities would not contribute to a substantial change in overall visual quality.

AQ-IAMF#1 is included as part of the HSR Build Alternative to reduce potential adverse effects related to impaired visibility from dust generated during construction. AQ-IAMF#1 requires the preparation of a fugitive dust control plan that identifies measures such as covering all materials transported on public roads, watering exposed graded surfaces, and stabilizing all disturbed graded areas. This fugitive dust control plan would be reviewed and approved by the Authority.

Highly visible construction activities near sensitive viewers would temporarily cause impacts to visual quality. To minimize potential impacts associated with construction laydown areas during the construction period, the construction contractor would prepare a technical memorandum identifying how the HSR Build Alternative would minimize construction-related aesthetic and visual quality disruption, per the requirements included in mitigation measure AVQ-MM#1, Minimize Visual Disruption from Construction Activities.

To minimize disruption to nearby residents and motorists during the construction period due to nighttime lighting, the construction contractor would prepare a technical memorandum to verify how the construction contractor would shield nighttime lighting. Mitigation measure AVQ-MM#2, Minimize Light Disturbance during Construction, requires this technical memorandum to be reviewed and approved by the Authority.

Implementation of AQ-IAMF#1 and mitigation measures AVQ-MM#1 and AVQ-MM#2 would reduce temporary adverse effects relating to aesthetics and visual resources that would be experienced by the population living and working within the EJ RSA, including low-income and/or minority populations as well as nonlow-income and/or nonminority populations. The HSR Build Alternative would not result in disproportionately high and adverse effects on low-income or minority populations living within the EJ RSA.

Permanent aesthetic impacts would occur from changes in visual quality from the introduction of the HSR Build Alternative. Visual changes would impact all communities close to the project footprint. Changes in visual quality would have the greatest impact on the residents immediately adjacent to the HSR Build Alternative who have extended exposure to the visual landscape (refer to Section 3.16, Aesthetics and Visual Quality, for more information, including visual simulations).

Permanent construction impacts on aesthetics and visual quality from construction of the HSR Build Alternative would be minimized through compliance with AVQ-IAMF#1 and AVQ-IAMF#2. Through implementation of AVQ-IAMF#1, the Authority is seeking to balance a consistent aesthetic throughout the state with the local context for the nonstation structures within the Burbank to Los Angeles Project Section. Examples of aesthetic options that can be applied to nonstandard structures in the project section would be provided to the Cities of Burbank, Glendale, and Los Angeles. Through implementation of AVQ-IAMF#2, the Authority would consult with local jurisdictions on how best to involve the community in the process and work with the contractor and local jurisdictions to review designs and local aesthetic preferences and incorporate them into final design and construction.

Although the above IAMFs would reduce the potential for permanent adverse construction effects relating to aesthetics and visual resources, the HSR Build Alternative would still have the potential to cause permanent visual impacts to populations, including minority and/or low-income populations, living within the EJ RSA. AVQ-MM#3 and AVQ-MM#4 would be required to further reduce potential impacts. AVQ-MM#3 requires that the contractor work with the Authority and local jurisdictions to incorporate the Authority-approved aesthetic preferences for nonstation structures into final design and construction. AVQ-MM#4 requires that the contractor prepare a technical memorandum within 90 days of completing any construction section or segment to document the species of trees that were incorporated into the edges of the HSR right-of-way adjacent to residential uses.

As discussed in Section 3.16, Aesthetics and Visual Quality, AVQ-MM#3 and AVQ-MM#4 would reduce visual impacts at most key views within the RSA, and no impact would occur. However, even with implementation of AVQ-MM#3, the proposed Sonora Avenue grade separation, Grandview Avenue grade separation, and Flower Street grade separation would be out of scale with the surrounding commercial uses, and the project's scale would contrast with the existing cultural environment. Therefore, the HSR Build Alternative's overall visual character would be incompatible with the visual character of the existing cultural environment, resulting in visual quality impacts at these three locations.

The three locations where visual impacts would occur (the Sonora Avenue grade separation, the Grandview Avenue grade separation, and the Flower Street grade separation) are not within an area with a substantial minority or substantial low-income population. At the other key viewpoints analyzed, the IAMFs and mitigation measures (AVQ-MM#3 and AVQ-MM#4) would reduce permanent operations impacts relating to aesthetics and visual resources that would be experienced by the population living and working within the EJ RSA, including low-income and/or minority populations. Although substantial minority and low-income populations live within the EJ RSA, the only permanent aesthetics and visual construction impacts would occur at locations with less than substantial low-income and/or minority populations. Therefore, the new structures built as part of the HSR Build Alternative would not result in disproportionately high and adverse aesthetic effects on low-income or minority populations living within the EJ RSA.

Impact EJ #9: Disturbance or Destruction of Cultural Resources during Construction

Construction of the HSR Build Alternative has the potential to result in the partial or total physical destruction and/or removal of a known archaeological resource. In addition, construction of the HSR Build Alternative would potentially affect unknown archaeological resources during construction activities. In addition, construction of the HSR Build Alternative would have a direct adverse effect on three built historic properties (the Arroyo Seco Parkway Historic District, the Broadway Viaduct, and the Spring Street Viaduct), and both direct and indirect adverse effects on one built- historic property (the Main Street Bridge). IAMFs are incorporated in the project design to prevent accidental damage to cultural resources during construction. CUL-IAMF#1 and CUL-IAMF#2 require a geospatial data layer depicting the location of cultural resources on construction drawings and mandatory training for construction personnel to protect cultural resources during construction. CUL-IAMF#3 through CUL-IAMF#5 require the completion of archaeological surveys prior to any ground-disturbing activities, allow for the relocation of project features if archaeological sites are discovered during surveys, and require the preparation of an archaeological monitoring plan. CUL-IAMF#6 requires a pre-construction conditions assessment and plan for protection of historic built resources. CUL-IAMF#7 requires preparation of a built environment monitoring plan. With implementation of the above IAMFs, the exact location of the known archaeological resource, as well as of unknown archaeological resources, would be determined through field surveys. The resource could be recorded, and data recovery would commence if, through consultation or National Register of Historic Places evaluation testing, it is determined that an archaeological historic property is present in the Area of Potential Effects that could be adversely affected by the project and that the site cannot be completely avoided.

Although the above IAMFs would reduce the potential for permanent construction-related impacts, the HSR Build Alternative would still have the potential to permanently impact a known archaeological resource and unknown archaeological resources because there is a possibility that the resource(s) would be within the disturbance area of the HSR Build Alternative. Mitigation measure CUL-MM#1 requires compliance with the programmatic agreement and memorandum of agreement and mitigation of adverse effects to properties identified during field surveys, CUL-MM#2 requires that work be halted in the event of an archaeological discovery. CUL-MM#3 requires field surveys for archaeological resources once site access is granted, and that protocols for the identification, evaluation, treatment, and data recovery mitigation of as-yet-unidentified archaeological resources be addressed in the memorandum of agreement and Archaeological Treatment Plan. CUL-MM#7 requires the preparation of interpretive or educational information for the historic Main Street Bridge. Although CUL-IAMF#1, which requires preparation of a geospatial data layer depicting the location of cultural resources on construction drawings, and CUL-

IAMF#2, which requires mandatory training for contractors to protect cultural resources during construction, would reduce the potential for construction activities to have an adverse effect on built historic resources, the HSR Build Alternative would still have the potential to impact four known historic resources by encroaching on the historic property's boundaries and causing direct physical destruction of, or damage to, the historic property or altering the property in a way that is not consistent with the Secretary of the Interior's Standard for the Treatment of Historic Properties. The HSR Build Alternative includes one property-specific mitigation measure (CUL-MM#12) to address adverse impacts at three of the built historic resources—the Arroyo Seco Parkway Historic District, the Broadway Viaduct, and the Spring Street Viaduct.

However, even with implementation of CUL-MM#1 through CUL-MM#3, CUL-MM#7, and CUL-MM#12, construction of the HSR Build Alternative would still have the potential to permanently impact a known archaeological resource, unknown archaeological resources, and built historic properties.

The HSR Build Alternative would result in adverse effects to cultural resources. Any potential impacts to cultural resources would be experienced by the population living and working within the EJ RSA, including low-income and/or minority populations as well as nonlow-income and/or nonminority populations. Therefore, adverse impacts to cultural resources from construction of the HSR Build Alternative would not result in disproportionately high and adverse effects on low-income or minority populations living within the EJ RSA.

5.6.3.2 Operations Effects

Operation of the HSR Build Alternative would include inspection and maintenance along the track and railroad right-of-way, as well as on the structures, fencing, power system, train control, electric interconnection facilities, and communications system. Operations and maintenance are more fully described in Chapter 2, Alternatives.

Impact EJ #10: Changes to Traffic and Circulation Patterns during Operation

As discussed in Section 3.2, Transportation, 24 intersections and 7 roadway segments would exceed the identified thresholds for 2040 plus project conditions during operation of the HSR Build Alternative.

As part of the overall HSR system, the operation of the HSR Build Alternative would provide permanent beneficial effects through improved regional accessibility, reduced vehicle trips on freeways, and improvements to transportation infrastructure and roadway crossings. The HSR Build Alternative would be entirely grade-separated, meaning that crossings with roads, railroads, and other transportation facilities would be at different heights (overcrossings or undercrossings), so that the HSR Build Alternative would neither interrupt nor interface with other modes of transport. The grade separation projects included as part of the HSR Build Alternative would provide safety benefits to motorists, pedestrians, and bicyclists. Grade-separation projects would also improve safety and reduce travel delays when motorists, pedestrians, and bicyclists have to wait for passing trains. These permanent traffic effects would benefit all communities close to the project footprint. Within and in the vicinity of the station sites, the increased activity created by the added HSR facilities would increase the number of vehicle, pedestrian, and bicycle trips to and from the stations. Existing users of the LAUS facilities may experience an increase in travel delays due to increased congestion at intersections, additional pedestrian volumes at roadway crossing points or on sidewalk segments, or increased pedestrian congestion within the station site itself.

Overall, during operations, communities would experience permanent, beneficial effects, in particular from proposed improvements to roadway crossings. A dedicated pedestrian undercrossing would be provided at Chevy Chase Drive, which would be closed to vehicular traffic during operation. This pedestrian linkage would have a beneficial effect to the low-income and/or minority populations in the vicinity of Chevy Chase Drive by enhancing safe bicycle and pedestrian movement in this location.

The Burbank Airport Station site along San Fernando Boulevard would possibly alter the current pedestrian access along Arvilla Avenue, Lockheed Drive, Cohasset Street, Hollywood Way, and Ontario Street, and would provide new sidewalks, curb ramps, and crosswalks along the roadway

and at the intersection realignments with Arvilla Avenue, Hollywood Way, and Ontario Street. These access points are within or adjacent to areas with substantial populations of minority and/or low-income residents. Generally, substantial low-income populations within this area lie just north of the HSR Build Alternative and south of Cohasset Street. Substantial minority populations are both north and south of the HSR Build Alternative and north of Cohasset Street.

TRAN-MM#1 would minimize traffic and parking impacts associated with the HSR stations by supporting alternative transportation modes. Additionally, TRAN-MM#2 would implement improvements to intersections and roadways along the alignment by providing additional lanes or traffic signalization to reduce the delay and improve LOS for affected intersections.

As shown on Figure 5-10 and Figure 5-11 (each with Sheets 1 through 3), the population living and working within the EJ RSA would experience beneficial transportation effects from existing crossings that would be modified or new crossings that would be grade-separated from the train corridor. That population includes nonlow-income and/or nonminority populations as well as minority and/or low-income populations. These beneficial effects would also be experienced by the people traveling across the transportation corridors within the RSA, including low-income and/or minority populations.

Of the affected intersections and roadways, approximately half would either occur within areas with substantial minority and/or low-income populations and/or are outside of these areas but could affect nearby minority and/or low-income populations. Because low-income and/or minority populations would experience the same intersection and roadway traffic impacts as nonlow-income and/or nonminority populations, operations of the HSR Build Alternative would not result in disproportionately high and adverse transportation effects on low-income or minority populations living within the EJ RSA.

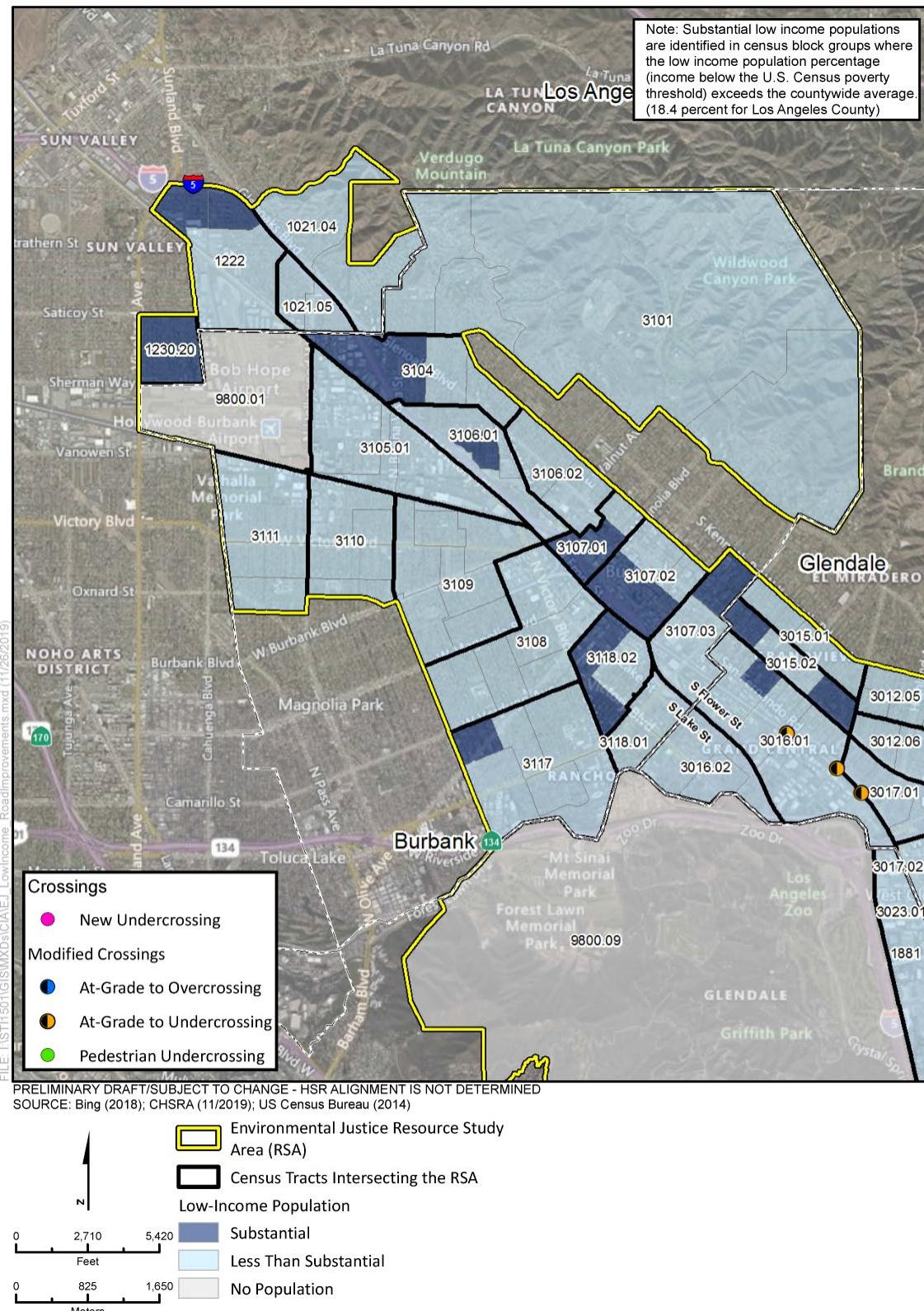
Impact EJ #11: Changes to Air Quality during Operation

Operation of the HSR Build Alternative would not result in permanent adverse effects to air quality in communities close to the project footprint. While operation of the HSR Build Alternative would result in some emissions in areas within the RSA (e.g., near stations), it is not expected to result in adverse effects due to the large reduction in greenhouse gas emissions associated with the reductions in automobile trips and air travel once HSR service begins.

Locally, operation of the Burbank Airport Station and LAUS would produce criteria pollutant and greenhouse gas emissions as a result of combustion sources used primarily for space heating and facility landscaping (backup emergency generators), energy consumption for facility lighting, minor solvent and paint usage, and employee and passenger traffic. Similar to the discussion of construction pollutants above, the census block groups adjacent to and surrounding the Burbank Airport Station site do not consist of predominantly low-income and/or minority populations.

The increased emissions in and around LAUS would affect substantial low-income and/or minority populations. However, implementation of the U.S. Environmental Protection Agency's vehicle and fuel regulations would reduce the localized emissions at both LAUS and the Burbank Airport Station. As discussed in Section 3.3, Air Quality and Global Climate Change, operation of the HSR Build Alternative would have no effect and, in some instances, a beneficial effect related to air quality or greenhouse gas emissions.

Overall, both low-income and/or minority populations and nonlow-income and/or nonminority populations would experience the beneficial effects associated with a reduction in statewide emissions of all applicable pollutants during operation of the HSR Build Alternative. Air quality emissions and benefits would affect both nonlow-income and/or nonminority and low-income and/or minority communities. Therefore, the air quality construction impacts under the HSR Build Alternative would not disproportionately impact or benefit low-income or minority populations living within the EJ RSA.

**Figure 5-10 Traffic Improvements in Areas with Low Income Populations**

(Sheet 1 of 3)

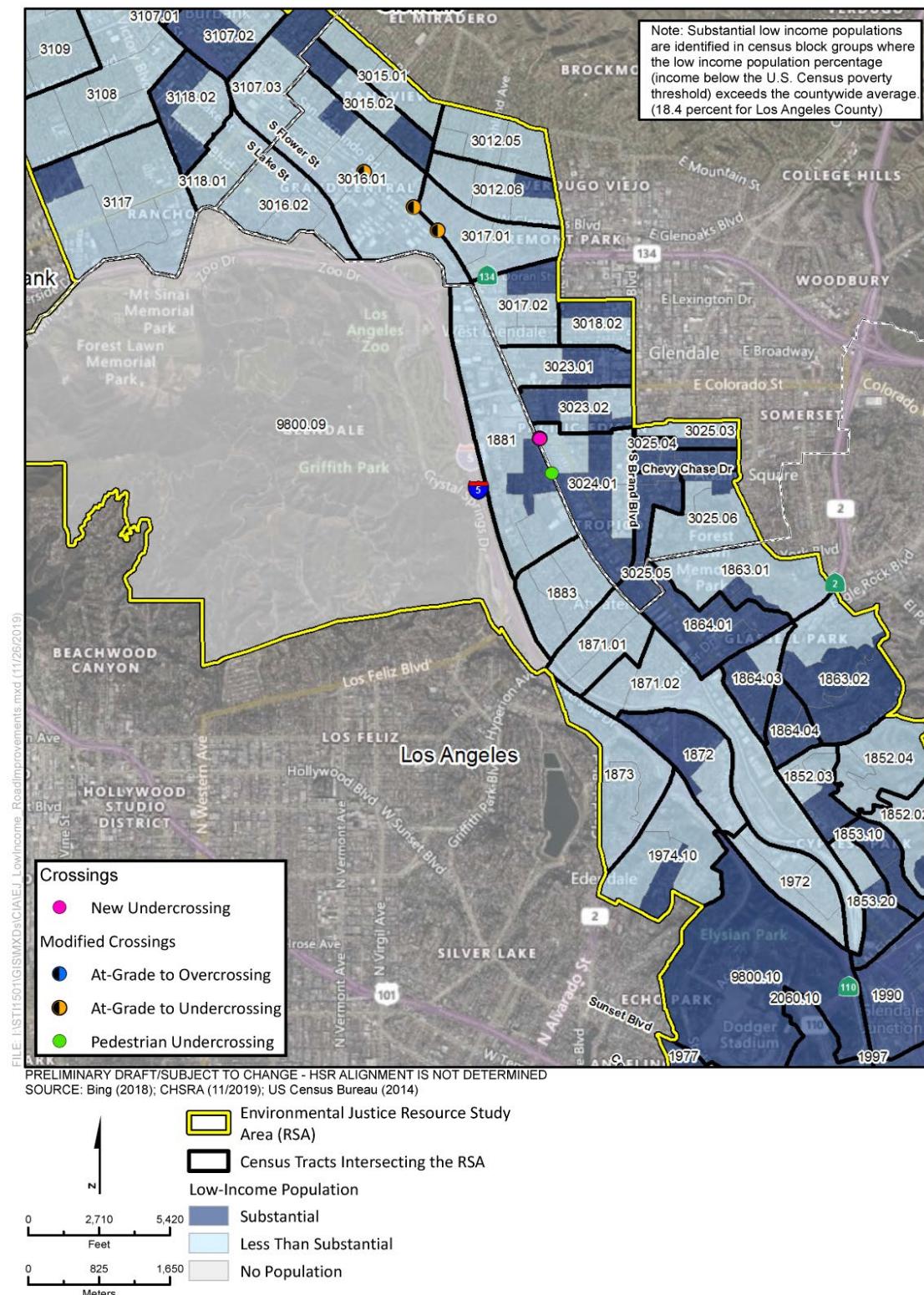


Figure 5-10 Traffic Improvements in Areas with Low Income Populations

(Sheet 2 of 3)

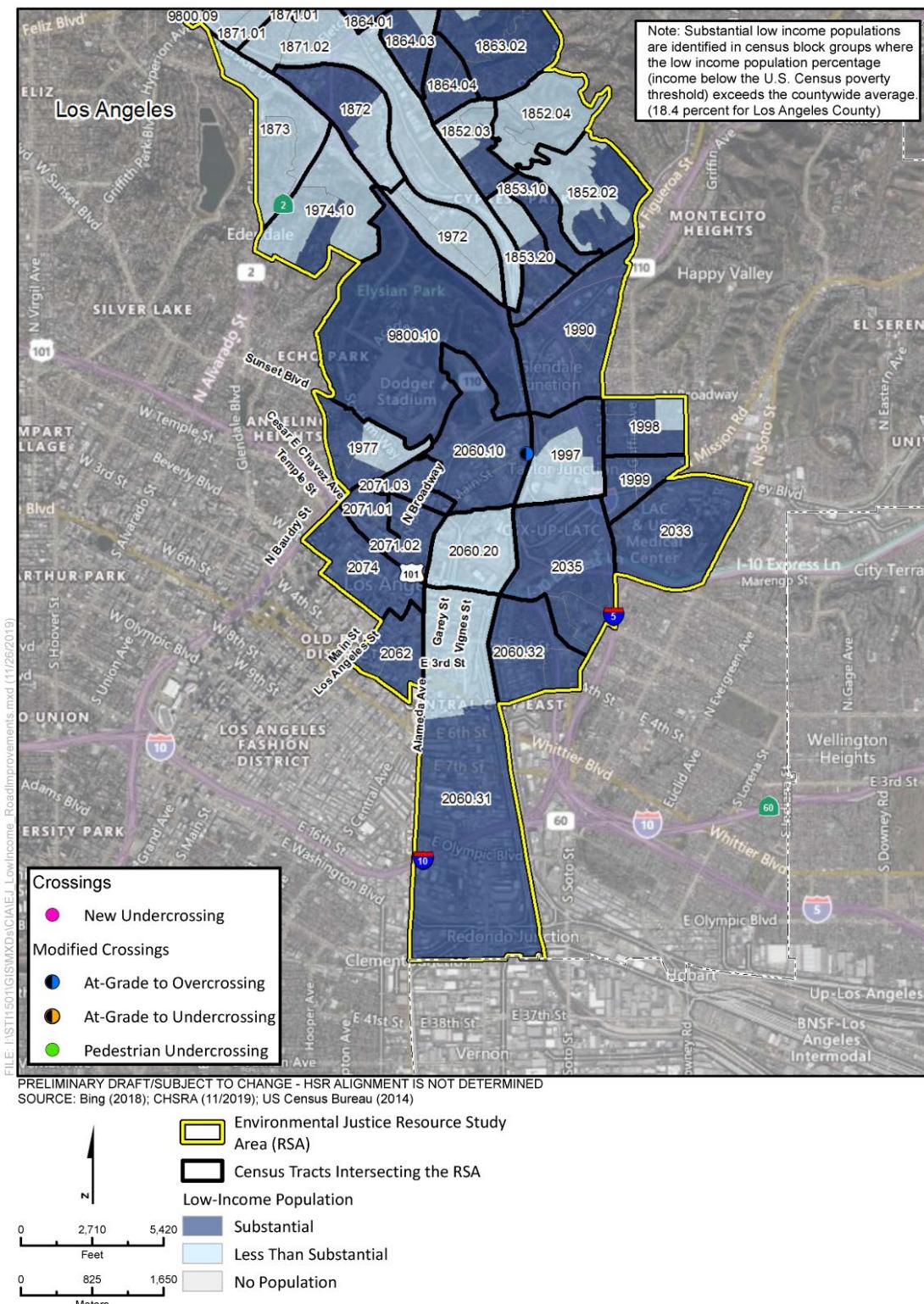


Figure 5-10 Traffic Improvements in Areas with Low Income Populations

(Sheet 3 of 3)

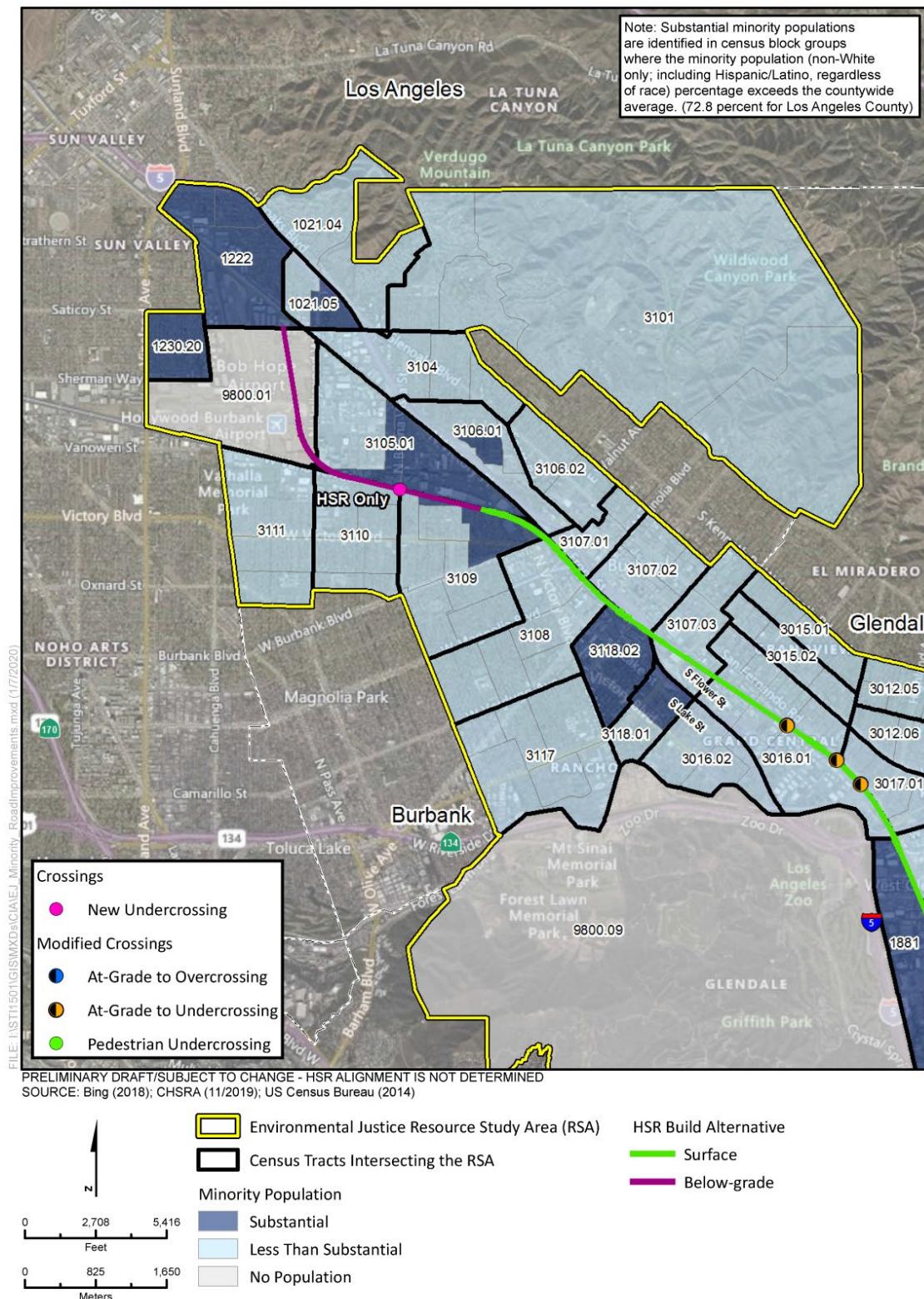
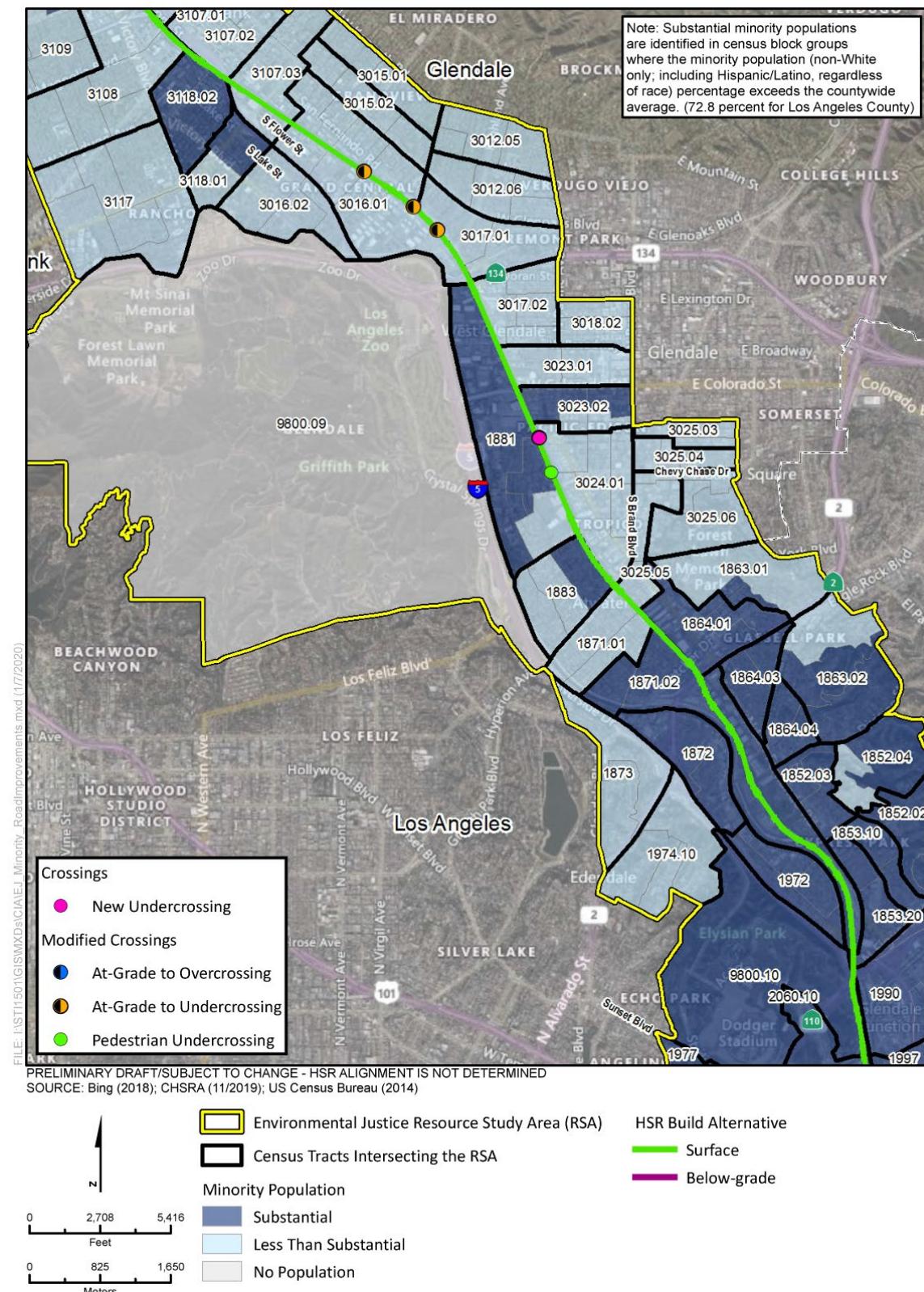


Figure 5-11 Traffic Improvements in Areas with Minority Populations

(Sheet 1 of 3)

**Figure 5-11 Traffic Improvements in Areas with Minority Populations**

(Sheet 2 of 3)

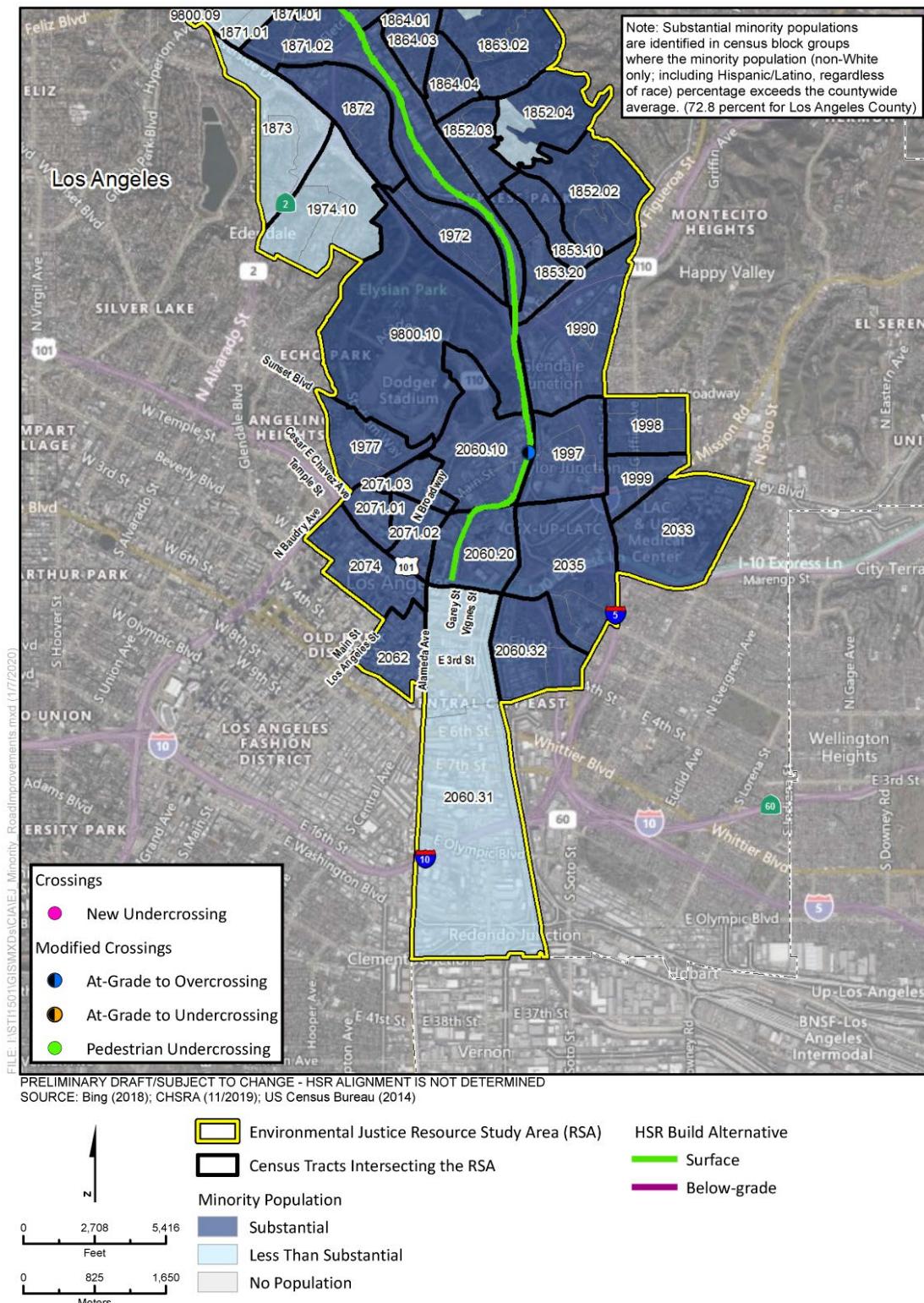


Figure 5-11 Traffic Improvements in Areas with Minority Populations
(Sheet 3 of 3)

Impact EJ #12: Generation of Noise and Vibration during Operation

Operation of the HSR Build Alternative would result in an intermittent increase in noise and vibration on communities close to the project footprint. Permanent noise impacts would result from increased traffic noise in areas surrounding each stationary facility, including the train stations, and increases in noise and vibration from passing high-speed trains. The operation of the HSR Build Alternative is anticipated to have severe noise impacts within the vicinity of the HSR Build Alternative before mitigation. Severe long-term noise effects would occur at 121 receivers (representing 209 single-family residences and 2 theaters) without implementation of mitigation measures. Twenty-six of the 121 receivers where severe noise effects would occur are within communities with substantial low-income populations. Ninety-eight of the 121 receivers where severe noise effects would occur are within communities with substantial minority populations. Ground-borne vibration effects could also occur to both low-income and/or minority and nonlow-income and/or nonminority populations during operation of the HSR Build Alternative.

As discussed above, the HSR Build Alternative would have the potential to result in permanent adverse effects relating to noise on low-income and/or minority populations within the EJ RSA. Mitigation measures N&V-MM#3 through N&V-MM#6 would be required to further reduce these adverse effects. N&V-MM#3 requires preparation of an HSR operation noise impact report that provides recommendations for measures to reduce operational noise, including identification of locations where noise barriers can be installed to reduce operational noise in the vicinity of sensitive noise receptors. Mitigation measure N&V-MM#4 requires compliance with federal noise standards for locomotives that would operate at speeds greater than 45 miles per hour. N&V-MM#5 requires preparation of an operational noise technical report to address minimization/elimination of rail gaps at turnouts.

As specified in mitigation measure N&V-MM#6, an updated noise and vibration assessment will be completed during final design and prior to the start of construction. The Authority will work with the communities to identify how to determine the location and the height of noise barriers. If noise barriers are not proposed or do not reduce sound levels to below a severe impact level, building sound insulation would be studied where approved by the property owner. If noise barriers or noise insulation are not effective, the Authority will acquire deed restrictions or other property agreements as worked out through the right-of-way acquisition process on properties severely affected by noise. This approach is usually taken only in isolated cases where other mitigation options are infeasible, impractical, or too costly. If all mitigation efforts are found to be not effective or reasonable and feasible, property acquisitions may occur.

Implementation of the above mitigation measures (N&V-MM#3, N&V-MM#4, N&V-MM#5, and N&V-MM#6) would reduce the potential for permanent impacts related to noise that would be experienced by the population living within the EJ RSA. The implementation of noise barriers would reduce the most severe noise impacts. The locations of the three reasonable and feasible noise barriers are also shown on Figure 5-12 and Figure 5-13 (each with Sheets 1 through 3). In areas where severe noise impacts would occur at sensitive receptors that do not meet the minimum requirements for a noise barrier, adverse effects would remain unmitigated after the implementation of noise barriers. Therefore, even with implementation of the above mitigation measures, long-term, severe noise impacts would remain at 68 residences and 2 theaters within the EJ RSA. As stated above, building sound installation would be studied at these locations where approved by the property owner. No vibration impacts are expected to occur as a result of operation of the HSR Build Alternative with implementation of N&V-MM#6, which requires the implementation of various measures either at the source (e.g., special track support systems) or at the receiver (e.g., building modifications).

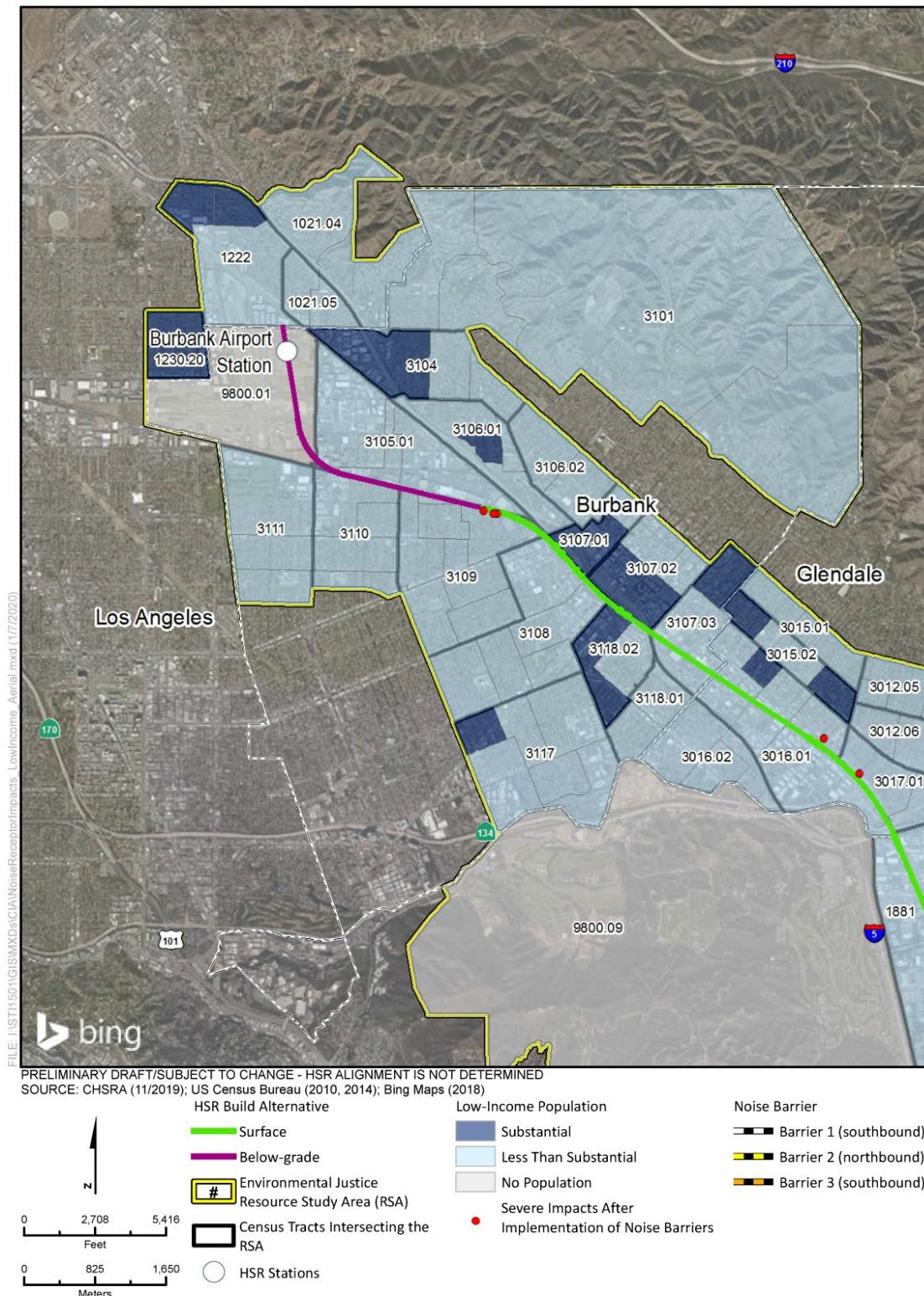


Figure 5-12 Noise Impacts to Low-Income Populations after Implementation of Noise Barriers

(Sheet 1 of 3)

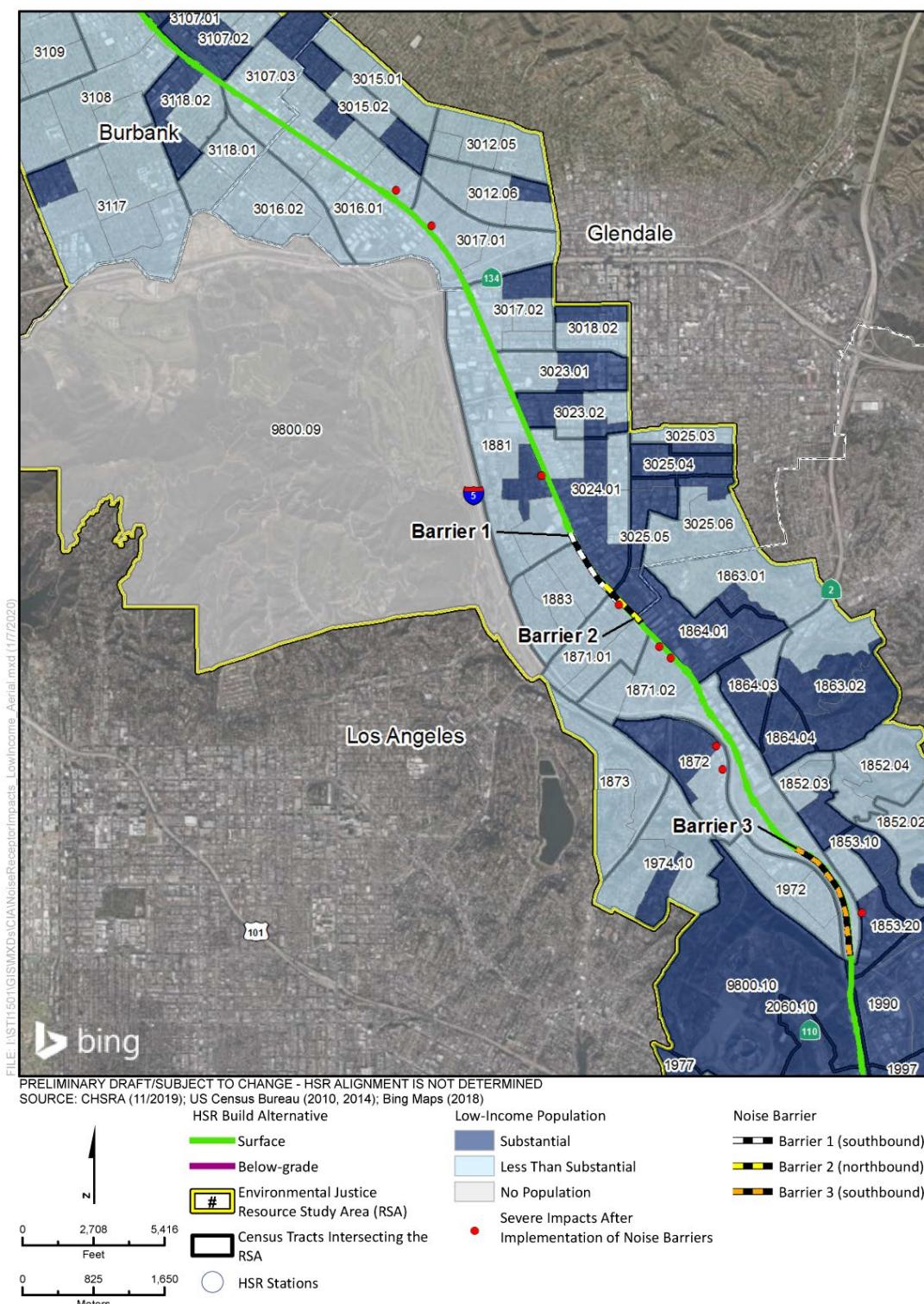


Figure 5-12 Noise Impacts to Low-Income Populations after Implementation of Noise Barriers

(Sheet 2 of 3)

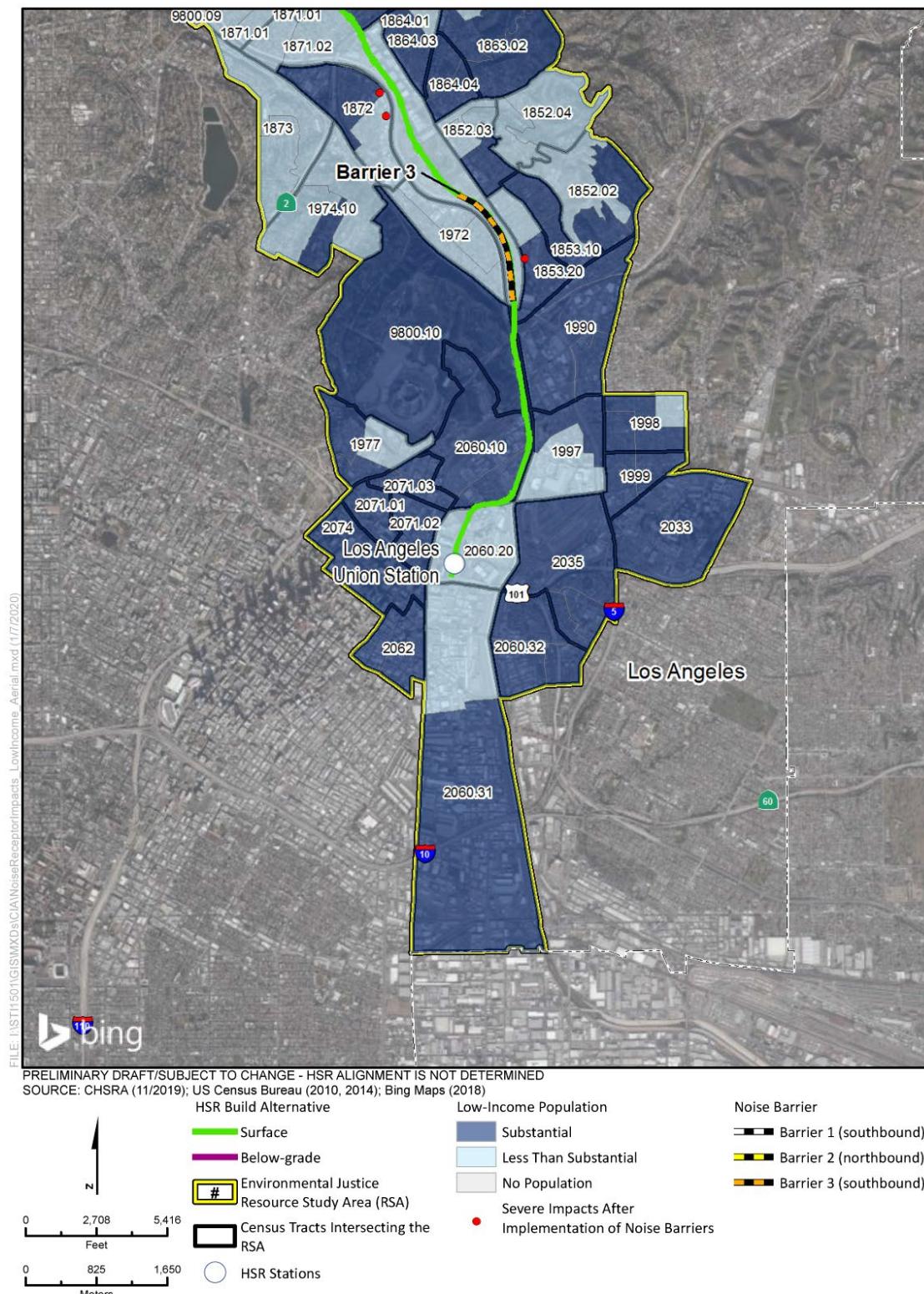


Figure 5-12 Noise Impacts to Low-Income Populations after Implementation of Noise Barriers

(Sheet 3 of 3)

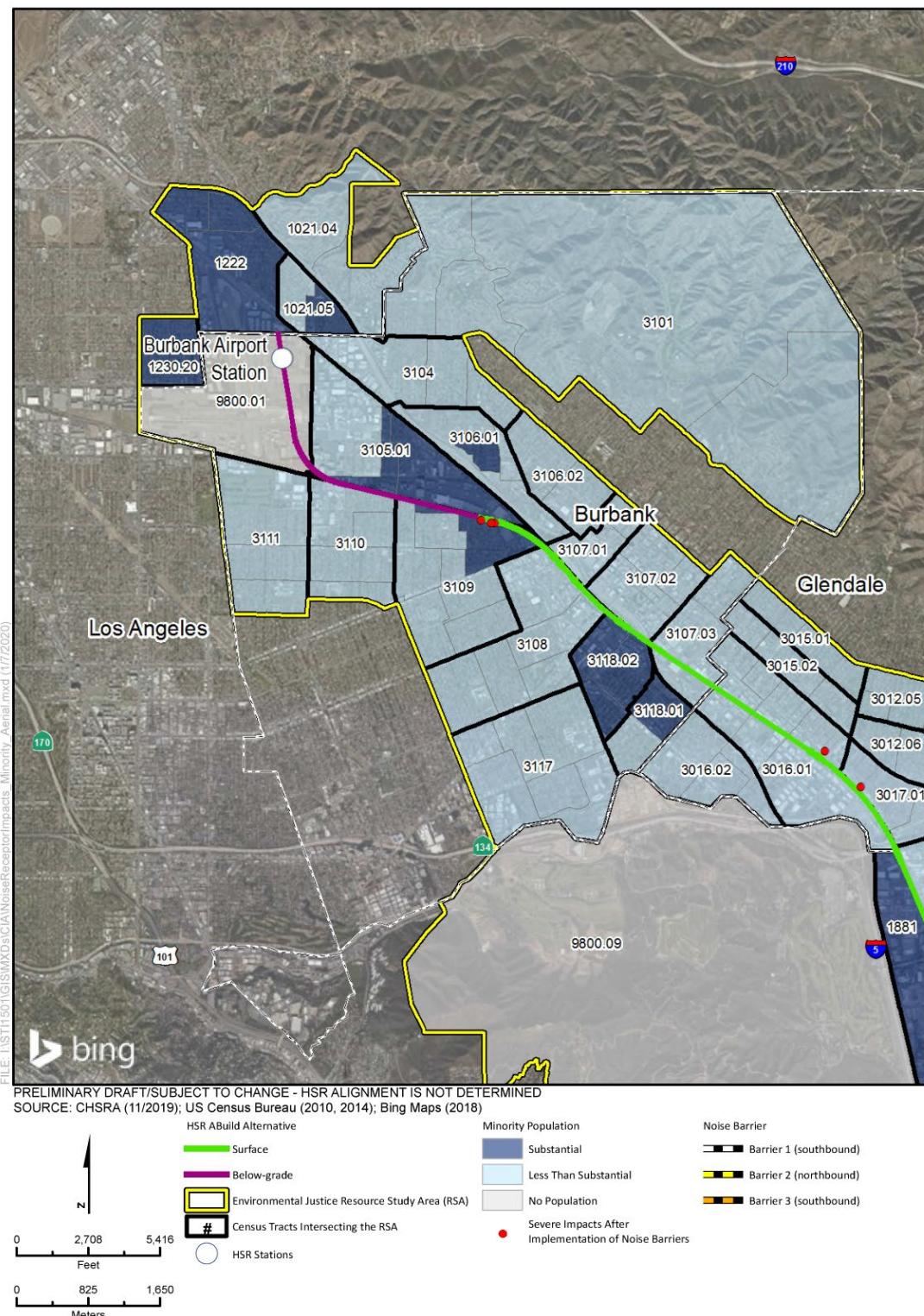


Figure 5-13 Noise Impacts to Minority Populations after Implementation of Noise Barriers

(Sheet 1 of 3)

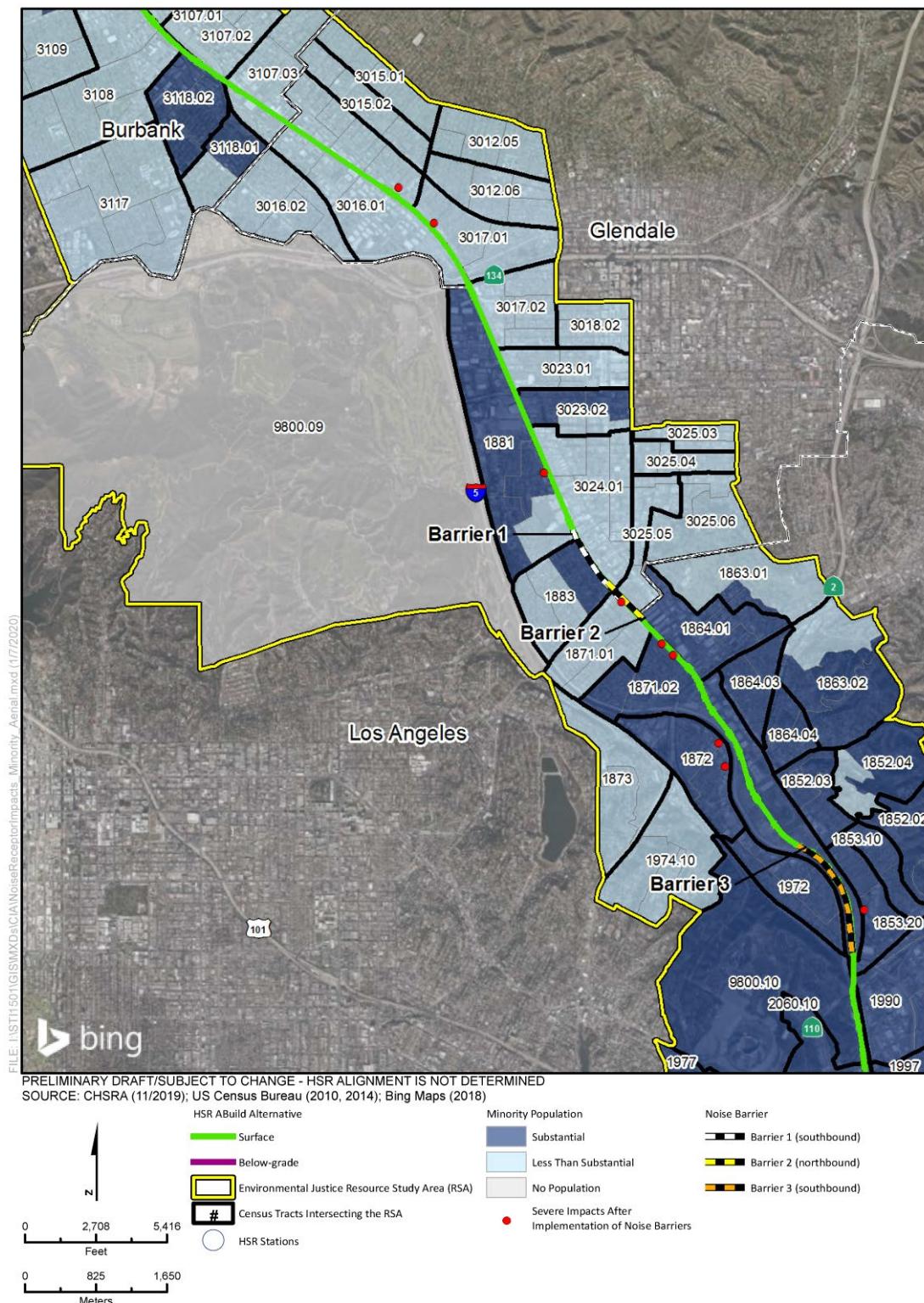


Figure 5-13 Noise Impacts to Minority Populations after Implementation of Noise Barriers

(Sheet 2 of 3)

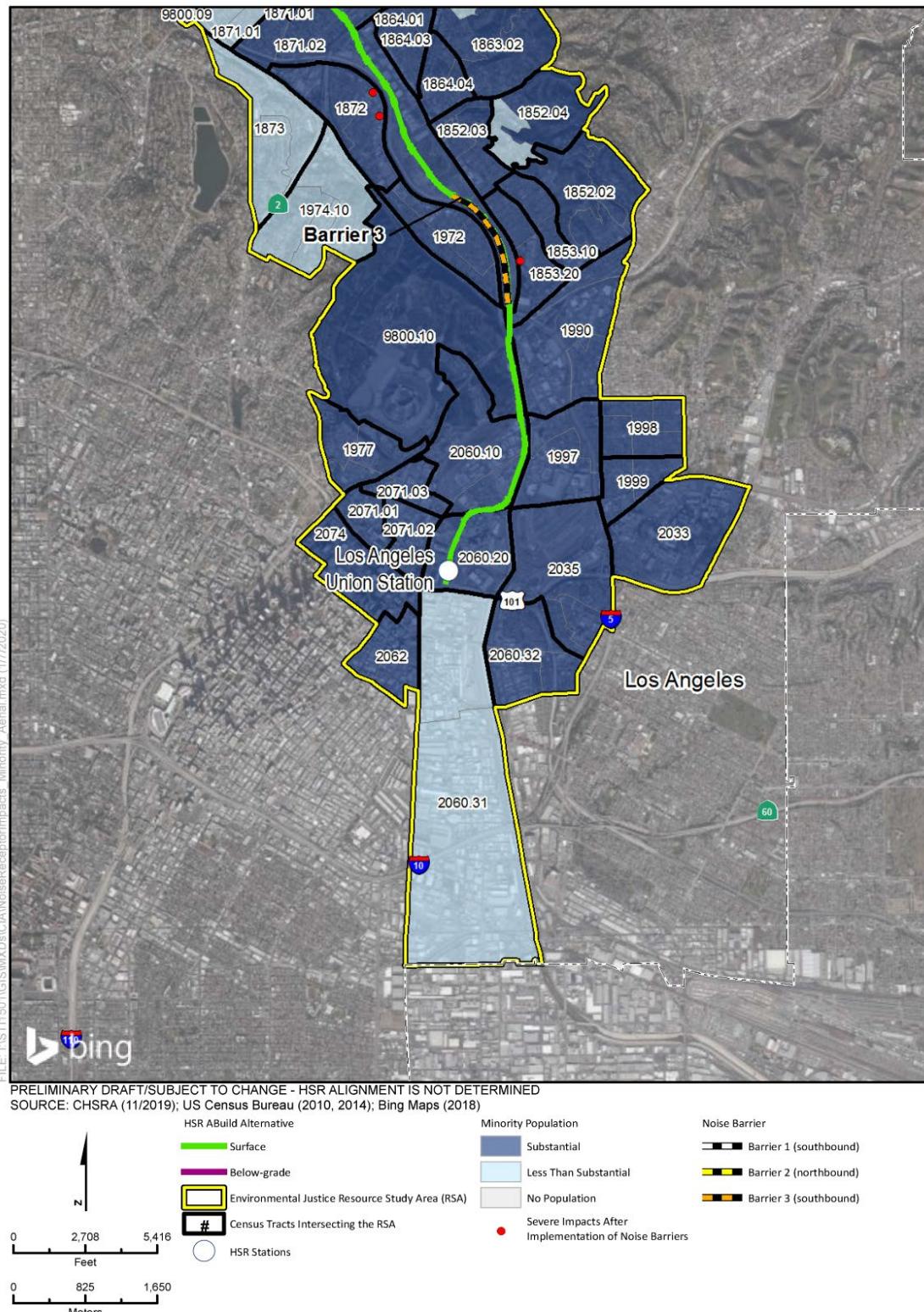


Figure 5-13 Noise Impacts to Minority Populations after Implementation of Noise Barriers

(Sheet 3 of 3)

The severe noise impacts would be experienced by the population living and working within the EJ RSA, including low-income and/or minority populations. As shown on Figure 5-12, 3 of the 70 receivers that would not be shielded by noise barriers and would experience severe noise impacts after implementation of noise barriers are within an area with a substantial low-income population. Therefore, the HSR Build Alternative would not result in disproportionately high and adverse noise and vibration effects on low-income populations living within the EJ RSA. As shown in Figure 5-13, less than half (24 of the 70) receivers that would not be shielded by noise barriers and would experience severe noise impacts are within an area with a substantial minority population. However, the number of receivers that would experience severe noise impacts after implementation of noise barriers may be further reduced after all mitigation measures are implemented. The geographic distribution of the 70 sensitive noise receivers that would not be shielded by noise barriers and would experience severe long-term impacts within the EJ RSA is such that minority populations living within the EJ RSA would not experience long-term, disproportionate adverse effects compared to nonminority populations living within the EJ RSA. As a result, the HSR Build Alternative would not result in disproportionately high, adverse noise and vibration effects on minority populations living within the EJ RSA.

Impact EJ #13: Disruption of Community Cohesion during Operation

Operation of the HSR Build Alternative has the potential to disrupt residents' access to community facilities and services and to cause permanent community cohesion impacts to all communities close to the project footprint. Impacts to community cohesion would, in part, be the result of impacts associated with traffic and access, aesthetics, and noise and vibration, which could disrupt patterns of interaction among community members. The quality-of-life perceptions stemming from an increase in use intensity of the existing rail corridor could also disrupt established patterns of interactions among community residents.

Operation of the HSR Build Alternative would bring social benefits to communities and the region by improving access to jobs and community amenities, reducing travel times, reducing traffic congestion, and providing new employment opportunities. The people who live or work in the general vicinity of the proposed station locations would likely benefit the most from the improved access provided by the new HSR facilities. Those who live along the portions of the HSR alignment without station access could also enjoy mobility and access benefits because the proposed grade separations would reduce conflicts between trains and other modes of transportation where roadways currently cross the railroad corridor at grade. These social benefits associated with operation of the HSR Build Alternative would result in a beneficial effect to communities, including some minority and/or low-income populations.

Operation of the HSR Build Alternative would require the conversion of land planned for two bike paths, one of which cannot be rerouted. Operation would also adversely impact seven intersections and seven roadways; however, as noted above, operation of the HSR Build Alternative would generate beneficial impacts associated with regional accessibility improvements, reduced vehicle trips on freeways, and improvements to transportation infrastructure and roadway crossings such as grade separations. Overall, the benefits to community cohesion associated with transportation and traffic improvements would be greater than the impacts. Therefore, operation of the HSR Build Alternative would not substantially increase disruptions to community cohesion or character.

Operation of the HSR Build Alternative would impact aesthetics and visual quality in the EJ RSA, including passenger access to and from stations, glare from passing trains, use of parking structures or lots, maintenance activities, infrequent security patrols, and nighttime lighting. No IAMFs exist that would avoid or reduce permanent aesthetic and visual quality impacts from operation of the HSR Build Alternative. However, as the alignment of the HSR Build Alternative generally runs within an existing rail corridor, light spillover and glare from HSR trains and structures would be similar to what exists today and would not disrupt community cohesion or character.

Operation of the HSR Build Alternative would result in permanent noise and vibration impacts to residents and other sensitive receptors. There are no IAMFs that would avoid or reduce permanent noise and vibration impacts to residences and other sensitive receptors during

operation of the HSR Build Alternative. The implementation of noise barriers that meet the requirements for noise reduction would reduce the most severe impacts to residents and sensitive receptors. Implementation of mitigation measures N&V-MM#3, N&V-MM#4, N&V-MM#5, and N&V-MM#6 would reduce the HSR project's long-term noise and vibration impacts on nearby properties, but severe residual noise and vibration impacts would still remain. However, because the alignment of the HSR Build Alternative generally runs within an existing rail corridor, noise and vibration impacts would not disrupt community cohesion and character. In addition, there would be a benefit associated with the new grade separations. Currently, the rail corridor within the RSA is at-grade with existing roadways, which requires horns to be sounded when passenger and freight trains approach the crossings. Because the HSR Build Alternative would grade-separate the rail corridor from these roadways, horn sounding would no longer be necessary. This would lower noise levels experienced by those receptors near these current at-grade crossings, providing a more desirable noise environment.

In summary, with incorporation of IAMFs and mitigation measures, there would be no permanent disruption to community cohesion from operation of the HSR Build Alternative relative to changes in traffic and access, aesthetics and visual quality, and noise and vibration. Therefore, the HSR Build Alternative would not result in disproportionately high and adverse effects related to community cohesion on low-income and/or minority populations living within the EJ RSA.

Impact EJ #14: Land Use Alteration during Operation

Operation of the HSR Build Alternative would increase the population in Los Angeles and Orange Counties by less than 1 percent beyond what is currently projected for 2040 under the No Project Alternative, which would result in the need for additional housing. The concentration of growth at transit hubs and high-density, sustainable development patterns encouraged by the HSR Build Alternative would support local government plans and policies to reduce the amount of land needed to accommodate project growth and growth associated with the HSR Build Alternative. Therefore, the HSR Build Alternative would not induce substantial unplanned growth and would have little to no effect on land use consumption. Under current city and county general plans in the Southern California Association of Governments planning area, communities in Los Angeles County have adequate space to accommodate planned growth by 2040 (under the No Project Alternative) and HSR-induced growth in their current spheres of influence.

As discussed in Section 3.18, Regional Growth, operation of the HSR Build Alternative would induce growth, which could affect the rate of implementation of local development plans in Burbank and Los Angeles in the areas surrounding the proposed station sites. Current land use trends would likely change because operation of the HSR Build Alternative and local government plans and policies would encourage denser, more compact urban development around the Burbank Airport Station and LAUS. However, key development constraints that affect both station sites would remain unaffected by the HSR Build Alternative. In the case of LAUS, land use changes would be limited, as LAUS is an existing transportation hub where transit-oriented development has already and is currently occurring. LAUS is also in a built-out area that includes several historic resources. In addition, the viability of transit-oriented development in the area surrounding LAUS is constrained by U.S. Route 101 to the south and the Los Angeles River to the east. With respect to the area surrounding the proposed Burbank Airport Station, any future development would not likely include residential uses due to the area's proximity to Hollywood Burbank Airport. As discussed in Section 5.6.2, No Project Alternative, gentrification may occur in the vicinity of the HSR alignment regardless of whether the HSR Build Alternative is constructed because the project is within an existing rail corridor where these trends are already occurring.

LU-IAMF#1 would require the Authority to prepare a memorandum for the Burbank Airport Station describing how the Authority's station-area development guidelines would be applied to achieve the anticipated benefits of station-area development. LU-IAMF#2 would require the Authority to prepare a memorandum for the Burbank Airport Station describing the local agency coordination and station-area planning conducted to prepare for HSR operations. Implementation of LU-IAMF#1 and LU-IAMF#2 would reduce potential impacts related to station-area land use incompatibilities and would create beneficial effects related to station planning through coordination with local agencies.

to prepare the station area for HSR operations and by implementing the Authority's station-area development principles and guidelines. LU-IAMF#2 would reduce potential impacts related to station-area land use incompatibilities and create beneficial effects. With implementation of LU-IAMF#1 and LU-IAMF#2, the potential for induced growth to accelerate implementation of local development plans in Burbank and Los Angeles would not substantially change land use patterns in a way that is incompatible with adjacent land uses. In fact, potential induced transit-oriented development would be consistent with planning documents in this urban area and would present an indirect land use benefit. Implementation of IAMFs would reduce the potential indirect impacts of the stations on surrounding land use patterns by ensuring that the stations would be compatible with surrounding development and vice versa; however, impacts would still occur under NEPA. Given the relatively minor intensity of the remaining impacts after IAMFs are implemented, the HSR Build Alternative would not result in adverse effects. As a result, the HSR Build Alternative would not result in disproportionately high and adverse effects on minority and/or low-income populations related to land use conflicts from induced growth.

Impact EJ #15: Disruption to Parks, Recreation, and Open Space during Operation

Operation of the HSR Build Alternative could result in access, noise and/or visual impacts, and/or an increase in physical deterioration at parks, schools, trails, and other recreation resources. The HSR Build Alternative could interfere with access to the San Fernando Bike Path, which would need to be rerouted for approximately 0.28 mile. Recreationists could experience increased noise from HSR operations and/or degradation of views to and from the park, recreation resource, or trail. Potential impacts to views include the permanent safety fencing around the HSR Build Alternative improvements and views of the proposed grade separations. During operation of the HSR Build Alternative, increases in resident and worker populations would occur, which could increase the use of recreational resources within the RSA. The HSR Build Alternative would reroute 0.28 mile of planned trail. Due to the proximity of recreational resources to the existing railroad, noise and visual impacts at parks and recreation areas would be similar to the existing setting. The increase in population from operation of the HSR Build Alternative would be minor; therefore, the increase in resident and worker population would not substantially impact parks and recreation areas. Permanent access impacts, noise and visual impacts, and impacts associated with the physical deterioration of recreation areas at parks, at schools, and/or along trails during operation of the HSR Build Alternative would be experienced by all populations using recreational resources in the RSA. Therefore, the HSR Build Alternative would not result in disproportionately high and adverse impacts on minority and/or low-income populations related to the use of recreational resources within the project section.

5.7 Summary of Disproportionate Effects

This section summarizes effects (including benefits) of the HSR Build Alternative and compares them to the anticipated impacts of the No Project Alternative.

Under the No Project Alternative, recent development trends within the Burbank to Los Angeles Project Section are anticipated to continue, leading to temporary and permanent effects on low-income and/or minority populations within the RSA. Existing land would be converted for residential, commercial, and industrial development, as well as for transportation infrastructure, to accommodate future growth. Population growth and associated development pressures could result in disturbances to low-income and/or minority populations during temporary construction activities and permanent operations. Planned development and transportation projects that would occur as part of the No Project Alternative would likely include the implementation of various forms of mitigation to avoid or minimize potential impacts on low-income and/or minority populations and the resources they rely upon.

As shown in Table 5-10, after the implementation of IAMFs and mitigation measures, the HSR Build Alternative would result in adverse construction and operations impacts pursuant to NEPA. The following impacts would be considered an impact under NEPA.

Table 5-10 Impacts under NEPA

Resource	Construction	Operation
Transportation		
Transportation	Temporary localized traffic impacts during construction	Permanent traffic impacts during operation
Air Quality		
Air Quality	Short-term localized air quality impacts during construction	Increased operational air quality emissions at the Burbank Airport Station and Los Angeles Union Station
Noise and Vibration		
Noise and Vibration	Temporary noise and vibration impacts during construction	Permanent noise impacts during operation
Parks and Recreation		
Parks and Recreation	<ul style="list-style-type: none"> • Temporary use of parks and recreation facilities during construction • Short-term air quality, noise, and/or visual impacts to parks and recreation facilities during construction • Permanent conversion of land planned for a bike path, loss of this planned recreation resource, and loss of connectivity 	Not applicable
Socioeconomics and Communities		
Socioeconomics and Communities	Not applicable	Operations impacts to community character and cohesion from changes in air quality, traffic and access, aesthetics, and noise
Displacements and Relocations		
Displacements and Relocations	Permanent business and residential displacements from construction	Permanent impacts to recreational facilities from operation
Station Planning, Land Use, and Development		
Station Planning, Land Use, and Development	Not applicable	Permanent alteration of existing land use patterns
Aesthetics and Visual Impacts		
Aesthetics and Visual Impacts	Temporary and permanent aesthetic and visual impacts from construction	Not applicable

All populations close to the project footprint, including minority and/or low-income populations, would experience these impacts. The context and intensity of these impacts would be similar for low-income and/or minority populations, as well as nonlow-income and/or nonminority populations. Therefore, disproportionate impacts to low-income and/or minority populations would not occur.

All populations in close proximity to the project footprint, including low-income and/or minority populations in the EJ RSA, would also benefit from the HSR Build Alternative as a result of improved regional accessibility, reduced vehicle trips on freeways, improvements to active transportation infrastructure, safety improvements for both pedestrians and bicyclists along the existing rail corridor, a reduction in statewide air quality and greenhouse gas emissions, and improved access and safety through grade separation of current at-grade crossings.

5.8 Measures to Minimize Harm

The evaluation of effects in this analysis is based on impacts identified in other resource sections of this EIR/EIS, including various measures to minimize or avoid impacts on low-income and/or minority populations, as applicable. The following sections describe these IAMFs, mitigation measures, and enhancements.

5.8.1 Impact Avoidance and Minimization Features

The Authority has pledged to integrate programmatic IAMFs consistent with the (1) *Final Program Environmental Impact Report/Environmental Impact Statement for the Proposed California High-Speed Train System* (Authority and FRA 2005), (2) *Bay Area to Central Valley High-Speed Train Program EIR/EIS* (Authority and FRA 2008), and (3) *Bay Area to Central Valley High-Speed Train Partially Revised Final Program EIR* (Authority 2012b) into the HSR project. The Authority would implement these features during project design and construction, as relevant to the HSR project section, to avoid or reduce effects. The HSR Build Alternative incorporates standardized HSR features to avoid and minimize impacts. As such, the analysis of impacts of the HSR Build Alternative factors in all applicable IAMFs. Appendix 2-B, Impact Avoidance and Minimization Features, provides a detailed description of IAMFs that are included as part of the HSR Build Alternative design. While no specific IAMFs have been identified for potential EJ impacts, applicable IAMFs include:

- AQ-IAMF#1, Fugitive Dust Emissions—Requires preparation of a fugitive dust control plan to identify the minimum features that would be implemented during ground-disturbing activity to reduce fugitive dust generation.
- AQ-IAMF#2, Selection of Coatings—Reduces overall construction emissions by limiting the types of paint used during construction to those with volatile organic compound content of less than 10 percent.
- AQ-IAMF#3, Renewable Diesel—Describes mandatory use of renewable diesel fuel, as included in the Authority's construction contracts.
- AQ-IAMF#4, Reduce Criteria Exhaust Emissions from Construction Equipment—Reduces criteria pollutant emissions from off-road equipment by utilizing equipment that meets U.S. Environmental Protection Agency Tier 4 emission standards.
- AQ-IAMF#5, Reduce Criteria Exhaust Emissions from On-Road Construction Equipment—Reduces criteria pollutant emissions from on-road equipment by utilizing model year 2010 or newer on-road engines.
- AQ-IAMF#6, Reduce the Potential Impact of Concrete Batch Plants—Requires the contractor to prepare a technical memorandum documenting the concrete batch plant siting criteria (including locating the plant at least 1,000 feet from sensitive receptors) and utilization of typical control measures.
- AVQ-IAMF#1, Aesthetic Options—Balances a consistent, project-wide aesthetic with the local context for the HSR nonstation structures.
- AVQ-IAMF#2, Aesthetic Review Process—Requires identification of key nonstation structures recommended for aesthetic compatibility treatment, consultation with local jurisdictions on how best to involve the community in the process, solicitation of input from local jurisdictions on their aesthetic preferences, and evaluation of aesthetic preferences for potential cost, schedule, and operations impacts.
- CUL-IAMF#1, Geospatial Data Layer and Archaeological Sensitivity Map—Requires that a geospatial layer of any archaeological sites be added to construction drawings.
- CUL-IAMF#2, Worker Environmental Awareness Program Training Session—Requires construction personnel to attend a worker environmental awareness program training session to be able to recognize potential cultural resources and to follow the appropriate procedures should a discovery be made during construction.

- CUL-IAMF#3, Pre-Construction Cultural Resource Surveys—Requires completion of archaeological surveys prior to any ground-disturbing activities.
- CUL-IAMF#4, Relocation of Project Features When Possible—Allows for the relocation of laydown sites if archaeological sites are discovered during survey.
- CUL-IAMF#5, Archaeological Monitoring Plan and Implementation—Requires the preparation of an archaeological monitoring plan.
- CUL-IAMF#6, Pre-Construction Conditions Assessment, Plan for Protection of Historic Built Resources, and Repair of Inadvertent Damage—Requires an assessment of the condition of construction-adjacent historic properties and preparation of a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage.
- CUL-IAMF#7, Built Environment Monitoring Plan—Requires preparation of a built environment monitoring plan prior to any ground-disturbing activities within 1,000 feet of a historic property or resource.
- LU-IAMF#1, HSR Station Area Development, General Principles and Guidelines—Requires preparation of a memorandum for each station describing how to achieve the anticipated benefits of station-area development.
- LU-IAMF#2, Station Area Planning and Local Agency Coordination—Requires preparation of a memorandum for each station describing the local agency coordination and station-area planning conducted to prepare the station area for HSR operations.
- LU-IAMF#3, Restoration of Land Used Temporarily during Construction—Requires preparation of a restoration plan for achievement of restoration for temporary impacts.
- NV-IAMF#1, Noise and Vibration—Reduces potential noise and vibration impacts from construction by requiring the contractor to document how federal guidelines for minimizing noise and vibration would be employed when construction is occurring near sensitive receptors.
- PK-IAMF#1, Parks, Recreation, and Open Space—Requires preparation of a technical memorandum that identifies design measures such as safe access to existing recreational facilities.
- SOCIO-IAMF#1, Construction Management Plan—Requires preparation of a Construction Management Plan that includes measures that minimize impacts on community residents and businesses.
- SOCIO-IAMF#2, Compliance with Uniform Relocation Assistance and Real Property Acquisition Policies Act—Requires adherence to the Uniform Relocation Assistance and Real Property Acquisition Act to reduce potential socioeconomic impacts by providing relocation assistance for people displaced through right-of-way acquisition.
- SOCIO-IAMF#3, Relocation Mitigation Plan—Requires development of a relocation mitigation plan to minimize the economic disruption related to relocation.
- SS-IAMF#1, Construction Safety Transportation Management Plan—Requires the contractor to prepare a construction safety transportation management plan that describes the contractor's coordination efforts with local jurisdictions for maintaining emergency vehicle access during construction of the HSR Build Alternative. The plan would include emergency vehicle access during temporary road closures.
- TR-IAMF#1, Protection of Public Roadways during Construction—Reduces potential impacts on transportation by requiring a photographic survey documenting the condition of public roadways along truck routes providing access to the construction sites.
- TR-IAMF#2, Construction Transportation Plan—Requires preparation of a Construction Transportation Plan for minimizing the impact of construction and construction traffic on adjoining and nearby roadways.

- TR-IAMF#3, Off-Street Parking for Construction-Related Vehicles—Identifies adequate off-street parking for all construction-related vehicles to reduce impacts on local on-street parking supply.
- TR-IAMF#4, Maintenance of Pedestrian Access—Prepares and implements specific construction management plans to address maintenance of pedestrian access during the construction period.
- TR-IAMF#5, Maintenance of Bicycle Access—Prepares and implements specific construction management plans to address maintenance of bicycle access during the construction period.
- TR-IAMF#6, Restriction on Construction Hours—Limits construction material deliveries and the number of construction employees arriving or departing the site during peak-period travel.
- TR-IAMF#7, Construction Truck Routes—Requires that delivery of all construction-related equipment and materials be on appropriate truck routes.
- TR-IAMF#8, Construction during Special Events—Requires a mechanism to prevent roadway construction activities from reducing roadway capacity during major athletic or other special events.
- TR-IAMF#11, Maintenance of Transit Access—Prepares and implements specific construction management plans to address the maintenance of public transit access during the construction period.
- TR-IAMF#12, Pedestrian and Bicycle Safety—Preserves and enhances pedestrian and bicycle accessibility across the HSR corridor, to and from stations, and on station property.

These measures are described in Chapter 2 under Section 2.5.2.10, High-Speed Rail Project Impact Avoidance and Minimization Features.

5.8.2 Mitigation Measures

Although no specific mitigation measures have been identified to reduce EJ impacts for the HSR Build Alternative, applicable mitigation measures include the following measures. These measures are described in Section 3.2.7, Section 3.3.7, Section 3.4.7, Section 3.13.7, Section 3.15.7, Section 3.16.7, and Section 3.17.8 of this EIR/EIS. It is assumed that the mitigation measures outlined below would be applied to all populations, including those that are low-income or minority. Additional mitigation may be considered if public input provided by affected low-income and/or minority populations during the public review process suggests that the existing mitigation measures set forth in this EIR/EIS do not fully address the community's concerns

- **Traffic**
 - TRAN-MM#1: In-Lieu Traffic and Parking Improvements
 - TRAN-MM#2: Intersection Improvements
- **Air Quality**
 - AQ-MM#1: Offset Project Construction Emissions through a South Coast Air Quality Management District (SCAQMD) Emission Offsets Program
- **Noise and Vibration**
 - N&V-MM#1: Construction Noise Mitigation Measures
 - N&V-MM#2: Construction Vibration Mitigation Measures
 - N&V-MM#3: Implement Proposed California High-Speed Rail Project Noise Mitigation Guidelines
 - N&V-MM#4: Vehicle Noise Specification
 - N&V-MM#5: Special Trackwork at Crossovers and Turnouts
 - N&V-MM#6: Additional Noise Analysis Following Final Design

- **Station Planning, Land Use, and Development**
 - LU-MM#1: HSR Station Area Development General Principles and Guidelines
- **Parks, Recreation, and Open Space**
 - PR-MM#1: Temporary Restricted Access to Park Facilities during Construction
 - PR-MM#2: Providing Park Access
 - PR-MM#3: Temporary Closures and Detours of Existing Trails and Bicycle Lanes
 - PR-MM#4: Replacement of Property Acquired from Existing or Planned Bicycle Routes
 - PR-MM#5: Temporary Use of Land from Park, Recreation, or School Play Areas during Construction
- **Aesthetics and Visual Resources**
 - AVQ-MM#1: Minimize Visual Disruption from Construction Activities
 - AVQ-MM#2: Minimize Light Disturbance
 - AVQ-MM#3: Incorporate Design Aesthetic Preferences into Final Design and Construction of Nonstation Structures
 - AVQ-MM#4: Provide Vegetation Screening along At-Grade and Elevated Guideways Adjacent to Residential Areas
- **Cultural Resources**
 - CUL-MM#1: Mitigate Adverse Effects to Archaeological and Built Environment Resources Identified during Phased Identification. Comply with the Stipulations Regarding the Treatment of Archaeological and Historic Built Resources in the Programmatic Agreement (PA) and Memorandum of Agreement (MOA)
 - CUL-MM#2: Halt Work in the Event of an Archaeological Discovery and Comply with the Programmatic Agreement (PA), Memorandum of Agreement (MOA), Archaeological Treatment Plan (ATP), and All State and Federal Laws, as Applicable
 - CUL-MM#3: Other Mitigation for Effects to Archaeological Sites
 - CUL-MM#7: Prepare Interpretive or Educational Materials
 - CUL-MM#12: Design of Intrusion Protection Railings for Historic Bridges

5.8.3 Enhancements

The Authority developed and is implementing a continuous community engagement program to support the development of alternatives for study during the environmental process. For the Burbank to Los Angeles Project Section, the Authority has held many meetings, briefings, and conversations to date with the community stakeholders, businesses, local agencies, and elected officials to gather, confirm, and understand key community concerns so that these concerns are incorporated into the development of alternatives, preliminary and final design, construction, and operation of the project.

The Authority used the feedback from these meetings, as well as the alternatives and design refinements shared with the public, during several rounds of alternative development and outreach efforts to refine the HSR Build Alternatives. As discussed in Section 2.4.2, Range of Potential Alternatives Considered and Findings, the Burbank to Los Angeles Project Section begins at the Burbank Airport Station (at Hollywood Burbank Airport) and crosses the Cities of Burbank, Glendale, and Los Angeles before terminating at LAUS in downtown Los Angeles, primarily within an existing, active railroad right-of-way. Overall, locating the project primarily within this right-of-way substantially reduced potential project impacts through this dense urban corridor.

The development of the alignment alternative in the Burbank to Los Angeles Project Section concluded with the *Burbank to Los Angeles Project Section Supplemental Alternatives Analysis* (Authority 2016), which also identified station options and design refinements to minimize

impacts. At that time, an elevated LAUS station option was withdrawn primarily due to cost/constructability, visual impacts, and cultural resource impacts, while the at-grade LAUS option was carried forward for further analysis. In 2017, after stakeholder input and based on concerns about community impacts, further refinement of the station options at Hollywood Burbank Airport was completed. The refinement included withdrawing one at-grade station option that would have had significant community effects, and revising alignments and the depth of the below-ground station option such that the intensity of construction would be reduced. Then, in 2018, the Burbank Airport Station Option Screening Report (Authority 2018) withdrew Option A primarily due to community and potential EJ concerns. Option A had the greatest amount of residential and business displacements and noise/vibration and visual impacts, as well as the worst intermodal connections. Station Option B was carried forward as part of the HSR Build Alternative and then further refined to minimize impacts. Option B Refined was designed to locate the platforms closer to the relocated Hollywood Burbank Airport terminal, reduce the station depth, improve constructability, reduce commercial and industrial property acquisitions, and eliminate the tunnel length underneath residential neighborhoods to the south.

After consideration of the adverse effects and potential benefits of the HSR Build Alternative, no further specific, practicable mitigation measures or design variations have been identified for the HSR Build Alternative that would avoid or further reduce adverse effects, including those on low-income and/or minority populations. Enhancements to the community that would be incorporated into the HSR Build Alternatives would include, but not be limited to, improved street lighting, landscape treatments and tree planting, and improvements to bicycle and pedestrian safety. The Authority will continue to coordinate with the public to obtain input and potentially identify additional enhancement measures, including those recommended by low-income and/or minority populations during the public review process over concerns that design and mitigation measures set forth in the EIR/EIS do not address the community's concerns.

5.9 California High-Speed Rail Authority's Draft Environmental Justice Determination

The proposed Burbank to Los Angeles Project Section would likely result in a limited set of adverse impacts on minority and/or low-income populations residing or conducting business in the project corridor. These impacts are expected to be the same in kind and magnitude as those that would be experienced by the general population living or working along the corridor. Mitigation measures would be implemented to reduce effects to levels below those considered high and adverse.

The low-income and/or minority populations in the study area would benefit from the transit improvements the Burbank to Los Angeles Project Section would provide, including improved regional accessibility, reduced vehicle trips on freeways, improvements to active transportation infrastructure, safety improvements to both pedestrians and bicyclists along the existing rail corridor, a reduction in statewide air quality and greenhouse gas emissions, and improved access and safety through grade separation of current at-grade crossings. Moreover, these benefits would be equal to the benefits to the general public.

The Authority has been conducting targeted outreach activities for low-income and/or minority residents and businesses across the state and within the Burbank to Los Angeles Project Section corridor since 2007, when this project section was part of the Palmdale to Los Angeles Project Section. Appendix 5-A documents how minority and/or low-income populations have been engaged in project planning activities. Significantly, members of minority and/or low-income populations have not voiced concerns substantially unlike comments from the general public.

When considering IAMFs, proposed mitigation measures, and benefits of the HSR Build Alternative, the Authority has preliminarily determined that the HSR Build Alternative would not result in disproportionately high and adverse environmental effects on low-income and/or minority populations.

The Authority's EJ determination in this Draft EIR/EIS is preliminary and is subject to change based on comments received during the public comment period on this document. In accordance with U.S. DOT Order 5610.2(a), if disproportionately high and adverse effects are identified, the

action will only be carried out if the Authority determines that “further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effect are not practicable.”