5 ENVIRONMENTAL JUSTICE

5.1 Introduction

This section describes the regulatory setting and the affected environment used for the analysis of impacts to minority and low-income populations; the impacts that would result from implementation of the Fresno to Bakersfield Locally Generated Alternative (F-B LGA); and avoidance and minimization measures and mitigation measures applicable to the F-B LGA that would reduce these impacts. Demographic analysis of socioeconomics, communities, and environmental justice, including race, ethnicity, income, and housing characteristics, is provided in the *Fresno to Bakersfield Draft Supplemental Community Impact Assessment Technical Report* (F-B LGA CIA) (California High-Speed Rail Authority [Authority] and Federal Railroad Administration [FRA] 2017).

Federal agencies, to the greatest extent practicable and permitted by law, are required to achieve environmental justice, by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental impacts, including interrelated social and economic effects, of their programs, policies, and activities on minority and low-income populations. Related topics that affect communities are also discussed in the various resource areas in Chapter 3 of this Draft Supplemental EIR/EIS.

The analysis in this chapter also references and uses information contained in Section 3.12 of the *Fresno to Bakersfield Section California High-Speed Train Final Project EIR/EIS* (Authority and FRA 2014)[1] and the *Fresno to Bakersfield Section Community Impact Assessment Technical Report* (Fresno to Bakersfield CIA) (Authority and FRA, July 2012).

5.2 Regulatory Setting

Federal, state, and other laws, regulations, orders, or plans relevant to environmental justice are presented below. The environmental justice analysis is required by federal law but not required by the California Environmental Quality Act (CEQA).

5.2.1 Federal

5.2.1.1 Title VI of the Civil Rights Act (United States Code Title [U.S.C.] 42, Part 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 Americans with Disabilities Act (United States Code [U.S.C.] Title 42, Sections 12101 to 12213)

The Americans with Disabilities Act prohibits discrimination based on disability.

5.2.1.3 U.S. Executive Order 13045

U.S. Executive Order (USEO) 13045 requires federal agencies to minimize environmental health and safety risks to children, and to prioritize the identification and assessment of environmental health and safety risks that may have a disproportionate impact on children.

[1] No separate Environmental Justice chapter was included in the Fresno to Bakersfield Section Final EIR/EIS. The analysis of Environmental Justice is discussed in Section 3.12 of the Fresno to Bakersfield Section Final EIR/EIS.

5.2.1.4 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (USEO 12898)

USEO 12898 outlines the federal government's environmental justice 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 minority and low-income populations in the United States.

5.2.1.5 Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (U.S. DOT Order 5610.2[a])

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

5.2.1.6 Presidential Memorandum Accompanying USEO 12898

The Presidential Memorandum accompanying USEO 12898 calls for specific actions to be directed in National Environmental Policy Act (NEPA)-related activities. These actions include:

- Analyzing environmental effects, including human health, economic, and social effects, on minority and 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 and 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 access to public meetings, official documents, and notices for affected communities.

5.2.1.7 Improving Access to Services for Persons with Limited English Proficiency (USEO 13166)

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

5.2.1.8 Uniform Relocation Assistance and Real Property Acquisition Policies Act (U.S.C. Title 42, Part 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 2012c). 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, Presidential Executive Order 12898, and California State law—Government Code Section 65040.2 et seq. and Public Resources Code (Public Res. Code) Section 1110 et seq.
- The Authority will promote environmental justice 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 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 High-Speed Rail (HSR) project planning, development, operations, and maintenance.
- The Authority will engage the public through public participation forums so that decisions are mitigated and reflect Environmental Justice 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 Program 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 (Authority 2012).

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) (Authority 2012a); Resolution 12-15 (Authority 2012b).

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 (CDOF), 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 CDOF, 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 CDOF, and the CDOF is required to include, in a specified report to the state 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

As the HSR is a state project, there is no commitment on the part of the state to be fully in compliance with local regulations. Rather, local and regional plans were reviewed to ensure compatibility. Local regulations related to environmental justice are generally included in general plans, ordinance codes, local housing assessments, and county transportation plans. General plans were reviewed for those elements relevant to environmental justice, including land use, transportation and circulation, housing, open space and conservation, community facilities and services, and economic development. Other local plans were also summarized to the extent that they relate to these elements within the study area. Generally, these regulations promote the character, health, safety and the general welfare of communities.

Section 3.0, Regulatory Setting, in the Fresno to Bakersfield Section CIA (Authority and FRA 2012) provides a discussion of applicable regional and local regulations related to socioeconomic, community and environmental justice issues applicable to the HSR project, including the F-B LGA. Such regulations include the Kern County General Plan (2009a and 2009b), Kern County Bicycle Master Plan (2010a), the Kern County Economic Development Strategy (2010b), the Kern Council of Governments' Regional Housing Needs Allocation Plan (2014), City of Shafter General Plan (2005), City of Shafter Municipal Code (2017), Metropolitan Bakersfield General Plan (2007), the Downtown Bakersfield Redevelopment Plan (in progress; 2017), and Southeast Bakersfield Redevelopment Plan (2010). Detailed review and a list of local regulations associated with environmental justice from those agencies within the F-B LGA study area that were changed, updated, or added since publication of the Fresno to Bakersfield Section CIA (Authority and FRA 2012) is provided in the F-B LGA CIA (Authority and FRA 2017).

5.3 Methodology for Data Collection and the Identification of Low-Income and Minority Communities

5.3.1 Data Collection

The methodologies used to collect and compile the data for the affected environment section are summarized here and detailed in Appendix A of the F-B LGA CIA (Authority and FRA 2017). The detailed data used to develop this description of the affected environment are presented in the community profiles provided in Appendix B of the F-B LGA CIA (Authority and FRA 2017).

The process for identifying minority and low-income populations for the F-B LGA followed the methodology that was used for the Fresno to Bakersfield CIA, in order to maintain comparability between the F-B LGA and the May 2014 Project. No variations from these procedures were made

for the May 2014 Project and the F-B LGA analysis, but United States Census (U.S. Census) data was updated.

Data sources include the 2000 and 2010 decennial U.S. Censuses and 2013 American Community Survey (ACS). As the decennial census has the largest data set (100 percent of the population), it is considered the most reliable. Decennial census data was, therefore, used for this analysis whenever possible. For information not available from the decennial census (e.g., poverty, disability, and language statistics), 2013 ACS 5-Year estimates data was used. Although the sample size for the ACS is smaller, based on a survey of approximately one-sixth of the population, the 5-year data is released annually and generally provides the most up-to-date information available. The 5-year estimates data is also appropriate because it provides 5-year averages, which provide more accuracy than annual data when considering small areas where annual data may have a high margin of error.

In order to make comparisons between data from different years, the correct data sets must be used. The U.S. Census compiles data from its decennial surveys into Summary Files (SF). This analysis uses data from the SF1 and SF3 data sets. SF1 provides data from 100 percent of the responding population refined to the Census Block level and contains information on age, sex, race, Hispanic/Latino origin, and household relationship, type, and size. SF3 provides population and housing information for a smaller sample of the population – 1 in 6 – at the Census Block Group level.[2] Data is generally comparable between the 2000 and the 2010 decennial U.S. Censuses SF1 100-percent data sets. However, more detailed SF3 data from the 2000 decennial U.S. Census is comparable to the ACS 5-Year estimates data sets from 2009 and later. This comparability is because the SF3 sample data set includes more detailed socioeconomic information than the SF1 and SF2 100-percent data sets as the SF3 data was collected via the "long-form" questionnaire and the U.S. Census Bureau stopped collecting SF3 sample data as part of the decennial census after the 2000 U.S. Census. The 5-Year ACS includes this long-form community data, however, and has been published every year since 2009. Most data is comparable between the two data sets, with the exception of disability information, as the questions used to generate these statistics were updated in 2008.

The analysis in this Chapter uses SF1 100-percent data and SF3 sample data from 2000 in order to provide information on changes that occurred between that time and preparation of this analysis (2010 for the U.S. Census or 2013 for ACS data).

For the incorporated Cities of Shafter and Bakersfield, changes in census data between 2000 and later years are based on: (1) changes that occurred within the cities' incorporated boundaries, as defined in 2000; and (2) changes related to the expansions of these boundaries that occurred after 2000. The Cities of Shafter and Bakersfield annexed large areas of land into their incorporated boundaries between 2000 and 2010, 10.0 and 29.1 square miles, respectively,[3] and are continuing to expand geographically. As a result, census data showing population increases between 2000 and 2010 for these two cities reflect increases beyond those related to changes within the cities' jurisdictional boundaries in 2000, and are therefore higher than those related purely to births, deaths, and relocations.

5.3.2 Identification of Minority and Low-Income Communities

The resource study area for environmental justice is located within Kern County and is defined as the project corridor for the F-B LGA, which runs south from the north end of the City of Shafter to the southeast end of Bakersfield, and includes the census blocks and block groups that lie

[2] A census block group is a geographical unit used by the U.S. Census Bureau that is comprised of a collection of census blocks. It is the second smallest geographical unit used by the Census Bureau next to the census block, and the smallest geographical unit for which the bureau publishes sample data (i.e., data which is only collected from a fraction of all households).

[3] The incorporated boundary for the City of Shafter expanded from 17.9 to 27.9 square miles between 2000 and 2010, while the incorporated boundary for the City of Bakersfield expanded from 114.6 to 143.7 square miles over the same period.

completely or partially within a 0.5-mile radius of the F-B LGA, proposed F Street station and maintenance of infrastructure facility (MOIF).

Consistent with the methodology used in the Fresno to Bakersfield Section Final EIR/EIS, minority and low-income areas are defined as census block and block group populations that meet either or both of the following criteria:

- The census block contains 50 percent or more minority persons and/or the census block group contain 25 percent or more low-income persons.
- The percentage of minority and/or low-income persons in any census block or census block group is more than 10 percentage points greater than county average (Authority and FRA 2017).

Because the study area for this analysis is entirely contained within Kern County, data from the county was used to determine whether an area qualifies as a minority or low-income area under the second criterion above. Given that 61.4 percent of Kern County residents qualify as minorities and 22.9 percent of the population is below the poverty line, under the secondary criterion, communities with a minority population of 71.4 percent and/or a low-income population of 32.9 percent (Table 5-1) would be considered minority or low-income communities. Any area meeting this second criterion would have already met the first criterion for qualifying as a minority or low-income community; this analysis, therefore, only considers the first criterion of 50 percent or more minority persons and/or 25 percent or more low-income persons.

Table 5-1 Community Demographic Characteristics

Characteristics	State of California	Four County Region[1]	Reference Community: Kern County	City of Shafter	Community of Oildale	City of Bakersfield
Size in square miles	155,779	20,405	8,163	27.9	6.5	143.6
Total population[2] (2010)	37,253,956	2,365,242	839,631	16,988	32,684	347,483
Total households[2] (2010)	12,577,498	715,586	254,610	4,230	12,023	111,132
% population minority[3] (2010)	15.9	65.1%	61.4%	83.0%	24.9%	62.2%
% population low-income[4] (2013)	15.9	24.6%	22.9%	19.1%	30.8%	20.4%
% of limited English speaking households[5] (2013)	9.9%	10.3%	9.1%	23.5%	1.7%	6.7%
% children under 18 years[2] (2010)	25.0%	30.4%	30.3%	36.0%	28.8%	31.5%
% over 65[2] (2010)	11.4%	9.4%	9.0%	6.6%	10.0%	8.4%
% unemployed (2013)	11.5%	14.3%	13.7%	11.8%	17.4%	12.3%

Sources: U.S. Census Bureau 2013b, 2013c, and 2013d
[1] The Four-County Region consists of Fresno, Kings, Tulare, and Kern counties.
[2] U.S. Census Bureau 2010.
[3] The minority population was calculated as the entire population minus all individuals who are White and non-Hispanic/Latino.
[4] The percentage of the population that qualifies as low-income is based on the number of people for whom poverty status was determined in 2013.
[5] A limited English-speaking household is defined as one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English "very well." In other words, all members 14 years old and over have at least some difficulty with English.
U.S. = United States

For this environmental justice analysis, minority persons are defined as all individuals who are not identified as both White only and non-Hispanic/Latino in the 2010 U.S. Census. Low-income persons are defined as individuals with household incomes below the U.S. Census Bureau poverty threshold, as discussed in the environmental justice methodology in Appendix A of the F-B LGA CIA (Authority and FRA 2017).

Although 2010 U.S. Census data is now over 5 years old, the decennial census is considered the most reliable source of data on race and ethnicity because it is based on a 100 percent population survey of all geographical areas, rather than sampling or estimating techniques as are used in the more recently published ACS data. The California Department of Transportation has reported that minority and low-income characteristics are slow to change in California communities, making the data relevant and reliable over a relatively long period of time (California Department of Transportation 1997). These assumptions were confirmed as part of the analysis of the Fresno to Bakersfield CIA (Authority and FRA 2012).

This analysis uses the 2010 U.S. Census data for minority populations and the 2013 ACS data for poverty status. These data sets were selected for the following reasons:

- **Minority Population:** The 2010 decennial U.S. Census was selected for the determination of minority population because it has the largest sample set (100 percent of the population) and therefore provides the most accurate data.
- **Low-Income Population:** Poverty status is no longer reported in the decennial census and must therefore be obtained from the ACS, which has included poverty status information since 2009. Since poverty status is only surveyed in the ACS and the most recent data is from 2013, the 2013 ACS represents the best available data.

5.4 Affected Environment

5.4.1 Reference Community and Resource Study Area Definition

To establish a context for the environmental justice analysis, it is necessary to identify the reference community.[4] Because the F-B LGA and the May 2014 Project are located entirely within Kern County, the reference community for this analysis is Kern County, which includes the population that could be impacted (both adverse and beneficial) from implementation of the May 2014 Project or F-B LGA.[5] The resource study area is the F-B LGA and the area (U.S. Census Blocks and Block Groups) within 0.5 mile of the F-B LGA (including alignment, station and MOIF), running south from the north end of the City of Shafter to the southeast end of Bakersfield. To determine the area comprising the general population that will be affected by the project, this resource study area also includes all U.S. Census Blocks that fully or partially overlie the F-B LGA study area, which includes Kern County, City of Shafter, Community of Oildale, and, City of Bakersfield, as defined above. Note that the community of Crome, which would be affected by the May 2014 Project, is not in the study area because the F-B LGA alignment would not affect this community. Figure 5-1 shows the environmental justice resource study areas for the May 2014 Project and the F-B LGA. Table 5-1 shows the demographic characteristics of the reference community.

[4] A reference community represents the general population that could be affected positively or negatively by the project. Examples of reference communities include counties, transit service districts, councils of government, and metropolitan planning organizations.

[5] The reference community for the Fresno to Bakersfield Section was defined as the four counties of Fresno, Kings, Tulare, and Kern, within the San Joaquin Valley.

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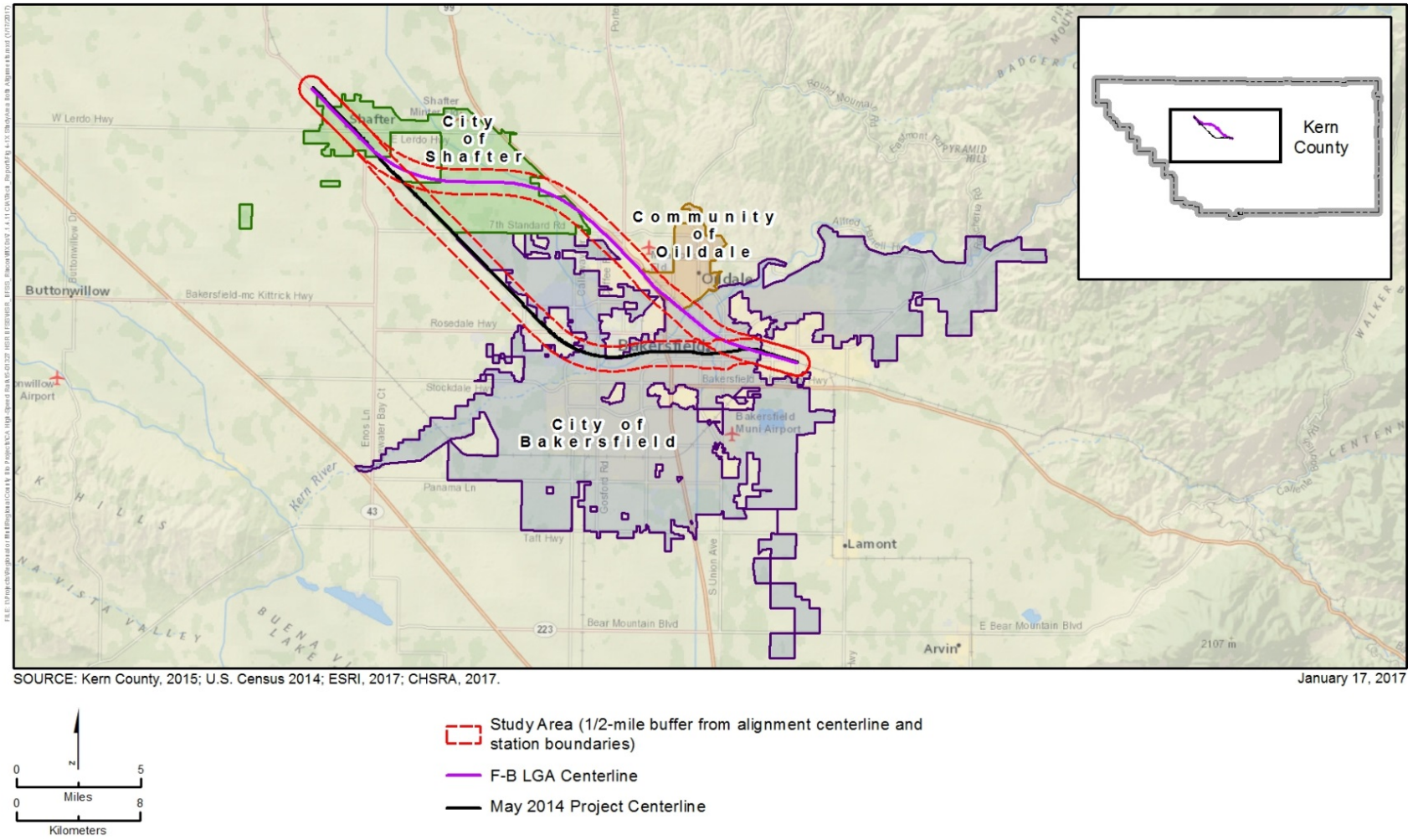

Figure 5-1 Study Area and Geographic Areas Considered for the F-B LGA

5.4.2 Summary of the May 2014 Project Affected Environment

For the May 2014 Project, the Affected Environment consists of a comparison of the F-B LGA to the complementary portion of the Preferred Alternative that was identified in the Fresno to Bakersfield Section Final EIR/EIS. As discussed in Section 1.1.3 of this Draft Supplemental EIR/EIS, the complementary portion of the Preferred Alternative consists of the portion of the BNSF Alternative from Poplar Avenue to Hageman Road and the Bakersfield Hybrid from Hageman Road to Oswell Street (further referenced as the "May 2014 Project" in this Draft Supplemental EIR/EIS). Since the Fresno to Bakersfield Section Final EIR/EIS does not evaluate the May 2014 Project as a discrete subsection of the Fresno to Bakersfield Project (as it did for example for the Allensworth Bypass), affected environment and impact summary discussion included in this section for the May 2014 Project has been extrapolated from the available information contained within the Fresno to Bakersfield Section Final EIR/EIS.

Within Kern County, the May 2014 Project directly affects two urban areas and one suburban area: the incorporated Cities of Shafter and Bakersfield, and the unincorporated community of Crome. Unincorporated portions of Kern County are also included in the resource study area. A total of 72,009 people reside within the environmental justice resource study area for the May 2014 Project. Of that population, 70.1 percent are minority and 24.2 percent are low-income.[6]

Figure 5-2 provides an overview of the location of minority or low-income populations in the region. Light orange is used to indicate U.S. Census Blocks containing minority or low-income populations, and darker orange is representative of minority or low-income blocks with higher population densities. The red dashed lines represent the study area, and the purple line and shaded areas represent the May 2014 centerline and the footprint of the proposed station. Minority or low-income populations located outside the May 2014 Project study area are displayed to add regional context to the results and to show that the concentration of minority or low-income populations in the study area is similar to concentrations found in surrounding areas.

As shown in Figure 5-2, minority, and low-income populations in the May 2014 Project study area are located primarily in the urban areas of Shafter and Bakersfield. Within Shafter, the existing BNSF railroad represents a dividing line through the city. The high school and newer, higher income housing are located to the northeast of the BNSF railway, and the low-income neighborhoods and downtown area are located to the southwest. No concentrations of minority and low-income populations were identified in the Bakersfield Northwest District. Central Bakersfield contains a number of areas with minority and low-income populations, particularly south of Truxtun Avenue. The environmental justice study area in the Bakersfield Northeast District also contains areas of minority and low-income populations moving west to east from Central Bakersfield through Oswell Street. For a description of minority and low-income areas affected by the May 2014 Project, refer to the Fresno to Bakersfield CIA (Authority and FRA 2012: pages 4-30 through 4-39).

[6] The percentage of the population that qualifies as low-income is based on the number of people for whom poverty status was determined in 2013 in the area comprised of all Census block groups that fully or partially overlie the study area. This data was used because 2013 data was the most recently available at the time of this study and the block group level is the smallest geographic area for which income status is provided.

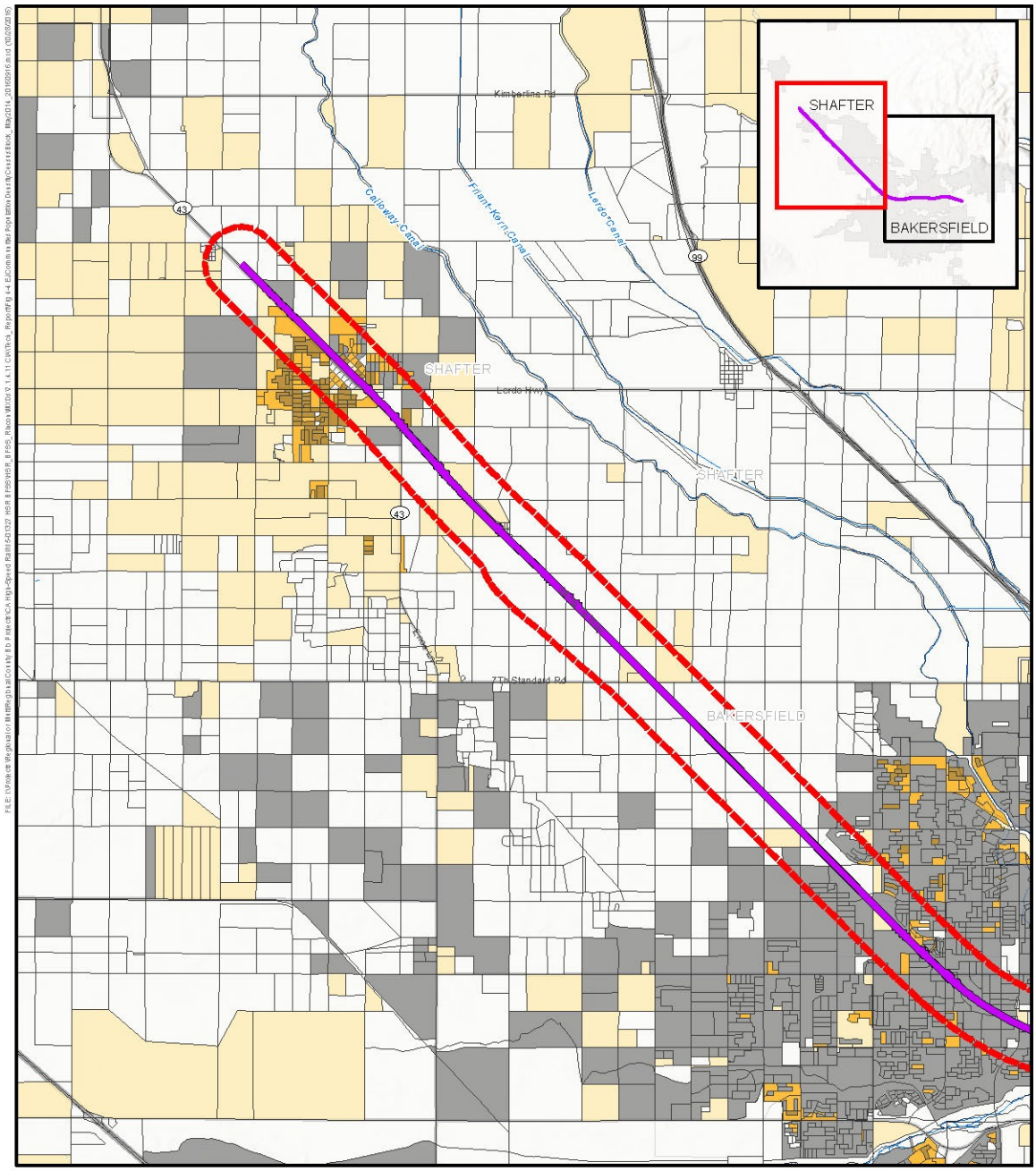

Figure 5-2 Minority or Low-Income Communities by Census Block for the May 2014 Project

(Sheet 1 of 2)

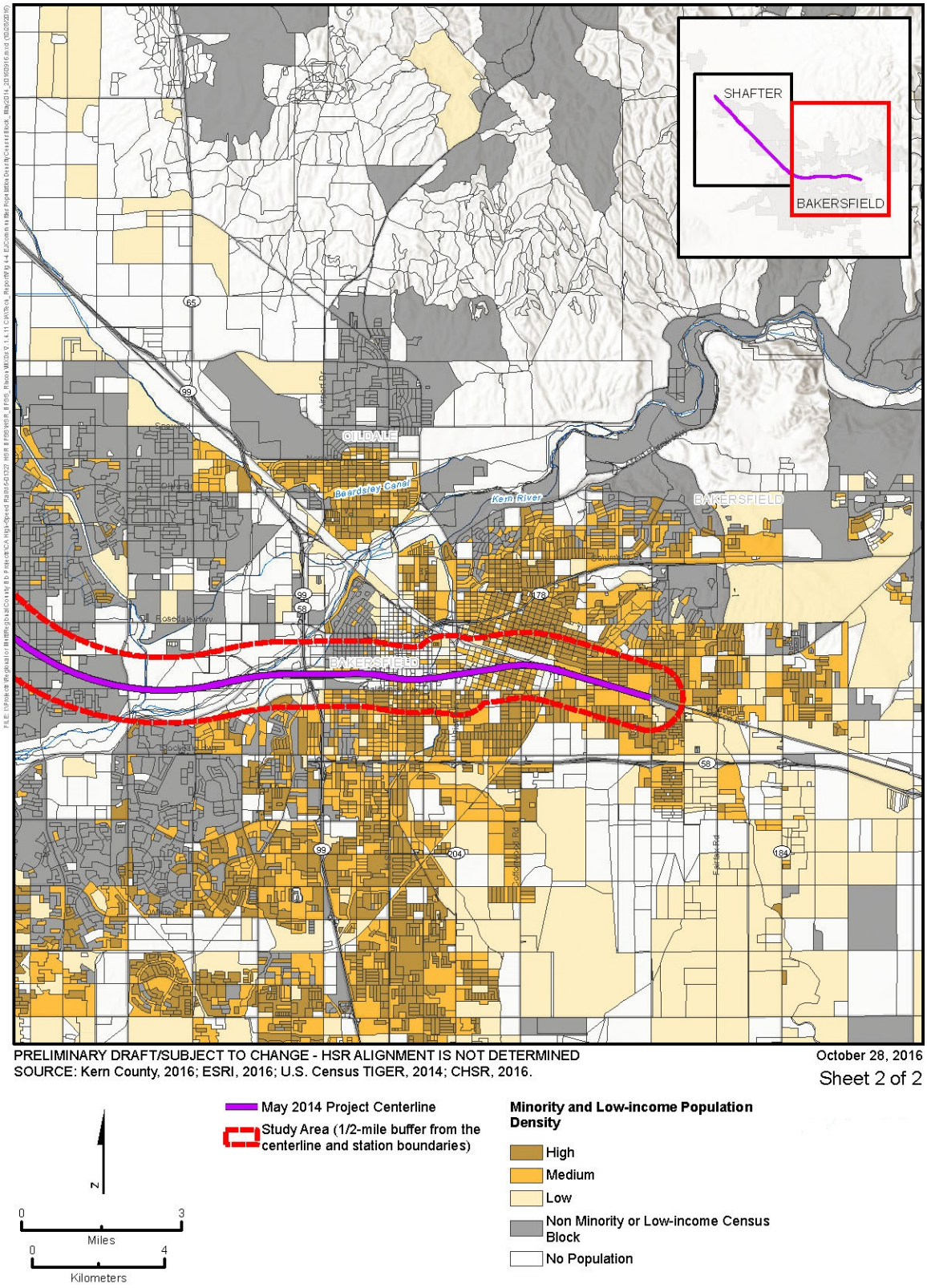

Figure 5-2 Minority or Low-Income Communities by Census Block for the May 2014 Project

(Sheet 2 of 2)

5.4.3 Fresno to Bakersfield Locally Generated Alternative

Within Kern County, the F-B LGA directly affects three urban areas: the incorporated Cities of Shafter and Bakersfield, and the unincorporated community of Oildale. Unincorporated portions of Kern County are also included in the resource study area. In order to describe the existing setting, the two cities, the unincorporated community of Oildale, and unincorporated Kern County areas were each summarized based on census data for each of these areas. Table 5-2 shows the demographics of the F-B LGA resource study area.

Table 5-2 Minority and Low-Income Percentages in the Reference and Resource Study Area

Area	Total Area			Environmental Justice Resource Study Area			
	Population in 2010	% Minority	% Low-Income[1]	Population in 2010	% Minority	% Low-Income[1]	Key Minority Demographic
Reference Community: Kern County	839,631	61.4%	22.9%	61,197	76.0%	33.6%	Hispanic
City of Shafter	16,988	83.0%	19.1%	11,087	78.6%	19.7%	Hispanic
Community of Oildale	32,684	24.9%	30.8%	5,568	25.1%	42.1%	Hispanic
City of Bakersfield	347,483	62.2%	20.4%	18,698	78.8%	38.7%	Hispanic

Sources: U.S. Census Bureau 2010 and 2013c

[1] The percentage of the population that qualifies as low-income is based on the number of people for whom poverty status was determined in 2013. These preliminary numbers are based on the F-B LGA, as defined on September 16, 2015. They will need to be amended based on any further updates to the project footprint.

F-B LGA = Fresno to Bakersfield Locally Generated Alternative

U.S. = United States

In the F-B LGA CIA (Authority and FRA 2017)), the City of Bakersfield was not divided into districts as was done for the Fresno to Bakersfield CIA (2012) because the F-B LGA does not traverse the City's neighborhoods. The F-B LGA would primarily follow existing and long-established highway and railroad corridors that traverse the study area. The alignment would pass through the cities of Shafter and Bakersfield and unincorporated areas of Kern County, including the community of Oildale. Historically, these communities have grown on either side of the existing heavy rail corridors and on either side of the area's major highways, which currently act as natural dividers between neighborhoods. When the F-B LGA first enters Bakersfield, it runs along State Route (SR) 99, between Bakersfield's northwest and northeast districts, as shown in Figure 3.12-3 in the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: page 3.12-26) and defined in the Fresno to Bakersfield CIA (2012). As the F-B LGA continues across the central district and into the eastern portion of the northeast district, it follows SR 204 and then the existing railroad corridor that traverses the city. Because of the existing transportation features (i.e., SR 99, SR 204, and the Union Pacific Railroad corridor) dividing communities along this section, it is not necessary to organize the analysis by district. The F-B LGA would be located on the edges of neighborhoods that have been developed in the vicinity of the existing rail corridor and highways over the past decades. Further, the F-B LGA would be elevated on a viaduct structure and would not, therefore, block passage on any of the streets that cross the alignment through the city, and existing connections and linkages between neighborhoods would be maintained. Baseline data for the city was, therefore, presented as a whole. Although the analysis provides Census data for the city as a whole, a qualitative analysis was performed at the community scale for the F-B LGA regarding the potential division of neighborhoods. Additionally, a quantitative analysis of minority and low-income communities was performed for all U.S. Census Blocks along the proposed alignment as described in the F-B LGA CIA, with the results of this analysis presented here (Authority and FRA 2017).

Table 5-2 presents population estimates with minority and low-income percentages for the geographic areas in the vicinity of the study area and for the population living in the environmental justice resource study area (i.e., within the U.S. Census Blocks that are fully or

partially included in the 0.5-mile radius from the centerline of the F-B LGA and the footprint of the station). A total of 61,197 people reside within the environmental justice resource study area for the F-B LGA. Of that population, 76.0 percent are minority and 33.6 percent are low-income.[7] The total population within the environmental justice study area represents a count of individuals potentially affected by the F-B LGA. The actual number of individuals affected may be much smaller than these baseline totals, as the environmental justice study area extends beyond the 0.5-mile buffer from the centerline in some places and would likely not be affected across its entirety.

Within the environmental justice resource study area, 30.8 percent of the population resides in the City of Bakersfield, 19.1 percent in the City of Shafter, 9.1 percent in the community of Oildale, and the remaining 42.2 percent in unincorporated areas of Kern County that are outside Shafter, Bakersfield, and Oildale. Each of these jurisdictions include populations that meet the thresholds of either 50 percent minority or 25 percent low-income, as shown in Table 5-2.

Environmental Justice Population

Of the 61,197 residents in the environmental justice study area, 57,043 (93.2 percent) reside in U.S. Census Blocks that are identified as minority or low-income based on minority composition and/or poverty status.

The reference community has a high percentage of minority and low-income individuals. According to the 2010 U.S. Census, 61.4 percent of the total county population is minority and 22.9 percent is living below the U.S. Census Bureau poverty threshold. Within the environmental justice study area, these percentages are even higher, with minority and low-income individuals totaling 76.0 percent and 33.6 percent of the environmental justice study area population, respectively. Persons of Hispanic and Latino ethnicity are the predominant minority in the environmental justice study area, accounting for 89.4 percent of the minority population.

The environmental justice study area totals 38.6 square miles, and 12.4 square miles (or 32.2 percent) are identified as U.S. Census Blocks, which have disproportionately high minority or low-income populations.[8] Of the area identified as minority or low-income U.S. Census Blocks, approximately half is rural with low-density populations (6.3 of the 12.4 square miles), with the remaining area (6.1 square miles) containing more urban, medium- to high-density populations. Given that the study area crosses both highly urbanized and very rural areas (e.g., the Cities of Bakersfield and Shafter and the unincorporated agricultural lands between these communities), it is important to identify minority or low-income populations according to population density, as it provides insight into the number of potentially affected individuals in these areas. The region's urban Cities of Bakersfield and Shafter have higher population densities; therefore, impacts to those minority or low-income populations would affect more individuals than impacts to minority and low-income populations in less dense (e.g., rural) areas.

[7] The percentage of the population that qualifies as low-income is based on the number of people for whom poverty status was determined in 2013 in the area comprised of all Census block groups that fully or partially overlie the study area. This data was used because 2013 data was the most recently available at the time of this study and the block group level is the smallest geographic area for which income status is provided.

[8] The area calculated for the environmental justice study area is different from the study areas presented for other resource topics in this Draft Supplemental EIR/EIS because it includes all U.S. Census Blocks that are completely or partially contained within the 0.5-mile radius from the centerline of the F-B LGA and the footprints of the station and MOIF. Therefore, the areas of partially contained U.S. Census Blocks outside the 0.5-mile radius are included, resulting in a slightly larger study area for environmental justice than for other resource topics. This difference will be greater in rural areas, where the U.S. Census Blocks are larger.

Figure 5-3 provides an overview of the location of minority or low-income populations throughout the region. The red dashed lines represent the F-B LGA study area, and the purple line and shaded areas represent the F-B LGA centerline and the footprint of the proposed station. Minority or low-income populations located outside the study area are displayed to add regional context to the results and to show that the concentration of minority or low-income populations in the study area is similar to concentrations found in surrounding areas.

5.5 Engagement with Potential Environmental Justice Populations

USEO 12898 requires that federal agencies ensure effective public participation and access to information. An extensive public and agency outreach program was conducted through the EIR/EIS process and will continue through the design and construction phases. Since 2007, over 170 meetings were held regarding the Fresno to Bakersfield Section of the HSR project, including meetings to identify minority and low-income areas and with various community leaders to identify strategies for outreach to those communities and gain their input. More recently, since 2014, additional meetings targeted at minority and low-income populations have been held to inform the F-B LGA and the analysis of environmental impacts identified in this Draft Supplemental EIR/EIS. A summary of all meetings conducted for the F-B LGA is provided in Chapter 9, Public and Agency Involvement, of this Draft Supplemental EIR/EIS.

5.5.1 Affected Populations and Communities

The purpose of the outreach was to receive input on minority and low-income populations regarding the project; to obtain their comments as part of the public record; to identify potential impacts and mitigation to avoid, minimize, or mitigate disproportionately high and adverse effects on these populations; to ensure the full and fair participation by minority and low-income populations in the planning process; and to prevent denial of, reduction in, or significant delay in the receipt of project benefits by minority and low-income populations. During the analysis of impacts, FRA and the Authority identified whether any of the minority and low-income populations would potentially be disproportionately affected by the project, taking into consideration the potential benefits to the community.

A description of the outreach process and a list of all public outreach meetings are provided in the F-B LGA CIA (Authority and FRA 2017). Generally, the outreach process consisted of the following steps:

- Identify and engage minority and/or low-income interest groups within the study area;
- Engage community leaders and organizations;
- Identify how HSR Project information would be made available to the community;
- Conduct environmental justice-specific community meetings to inform community members about the HSR Project, solicit input about community-based concerns, and establish opportunities for participation by community members in potentially affected minority and low-income areas;
- Develop modifications to avoid or minimize impacts on minority and low-income areas; and
- Document public information meetings and other outreach to minority and low-income populations.

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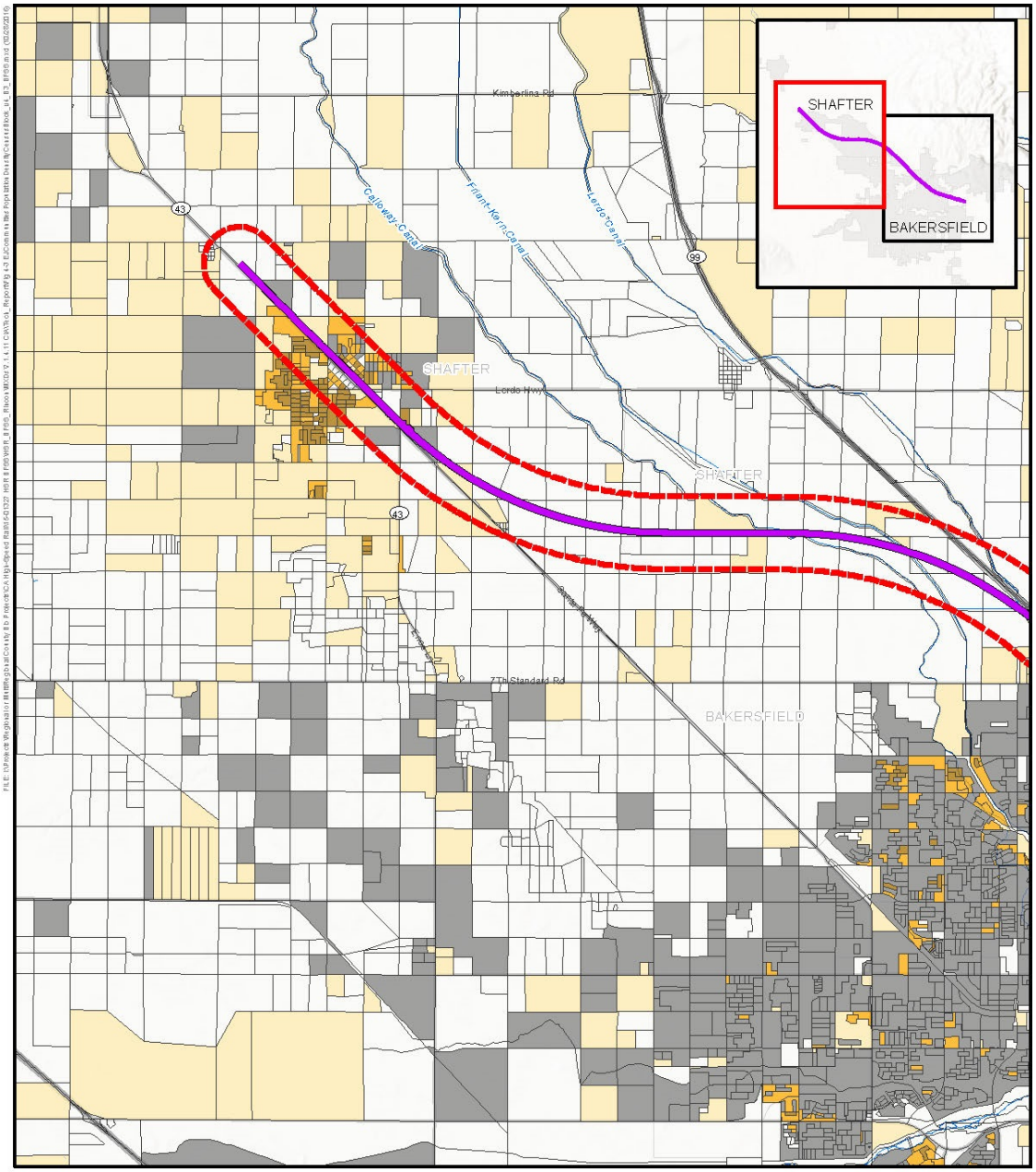

Figure 5-3 Minority or Low-Income Communities by Census Block for the F-B LGA

(Sheet 1 of 2)

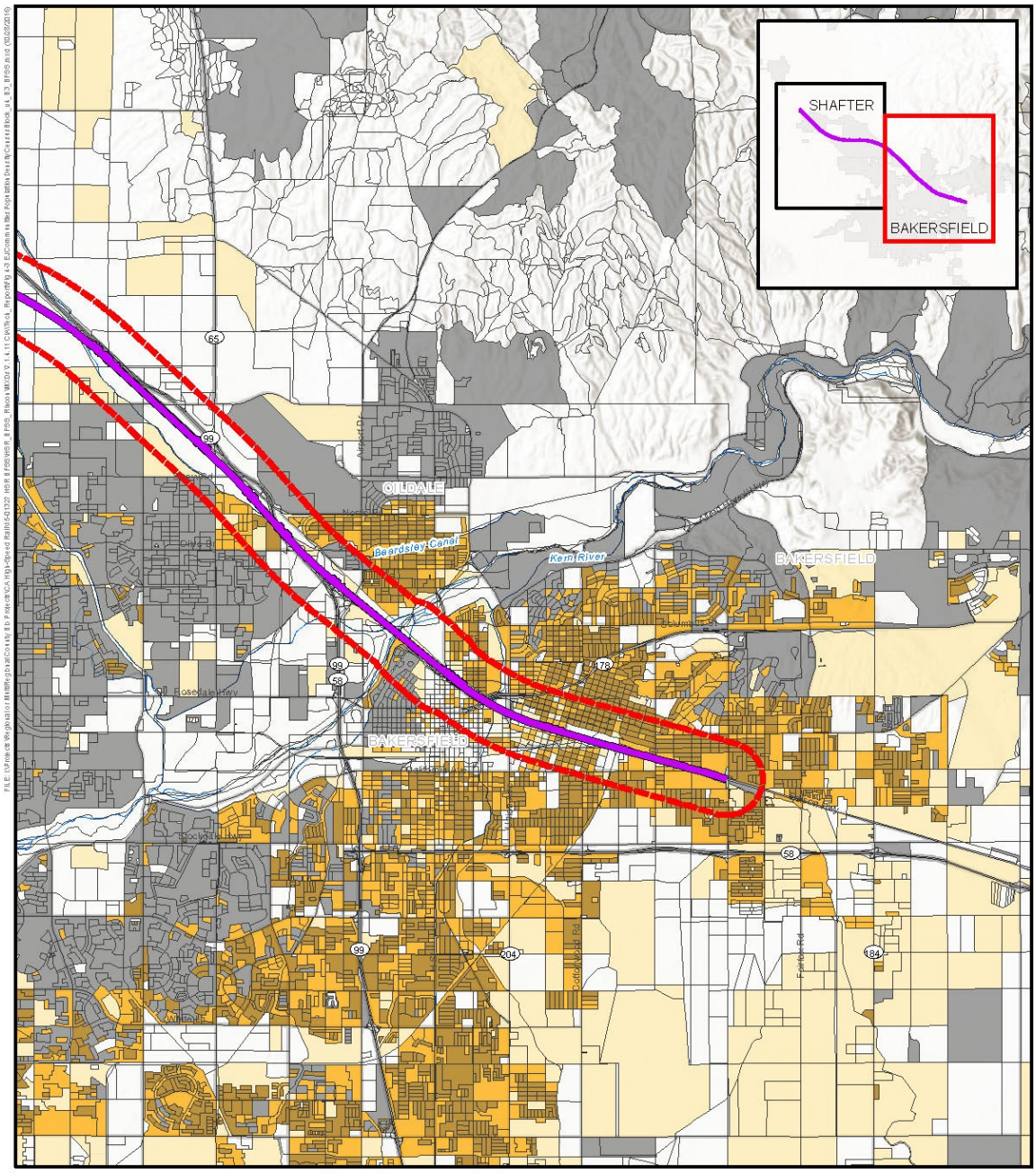

Figure 5-3 Minority or Low-Income Communities by Census Block for the F-B LGA

(Sheet 2 of 2)

5.5.1.1 Engagement Methods

The Authority conducted specific outreach efforts to low-income and minority populations and to communities of concern, including Limited English Proficiency persons. Environmental justice populations were identified using year 2000 and 2010 data from the U.S. Census Bureau, as well as 2013 ACS data. The F-B LGA CIA (Authority and FRA 2017) contains a list of environmental-justice-related interest groups that have been engaged through outreach efforts.

The public outreach program utilized a variety of different methods and activities to reach these communities, including: community open house meetings, one-on-one stakeholder meetings, presentations to major groups and organizations, activity center outreach, and stakeholder working group meetings. A summary of the outreach activities conducted between May 2015 and October 2016 that targets and/or included minority and low-income populations and communities is provided in Section 5.5.1.2. The goals of these activities were to provide updates on the statewide HSR program, to provide information about the F-B LGA and the proposed F Street station location, to inform the public about the release of the environmental document, and directing outreach to stakeholders in proximity to the F-B LGA. In summary, as part of the F-B LGA planning process the Authority held more than 65 one-on-one stakeholder meetings, five community open houses, and information sessions with several organizations, working groups, and community representatives.

Informational materials including statewide fact sheets, the F-B LGA fact sheet, and the F-B LGA map, were made available at each public meeting. Special outreach conducted for minority and low-income populations in these communities included availability of Spanish-language versions of presentation materials and availability of Spanish-language interpreters at public meetings. Flyers were delivered or emailed to advertise each open house to several community and public spaces serving potentially impacted low-income and minority populations, including schools, business groups, and other local groups.

5.5.1.2 Outreach Events

Statewide agency meetings were held starting in 2007 for the Fresno to Bakersfield Section. Public workshops, open houses, and other informational sessions were held, public comments were accepted, and draft documents were widely circulated. Details on public outreach, including outreach to minority and low-income communities, conducted for the Fresno to Bakersfield Section can be found in Chapter 8 of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 8-2 through 8-4). Table 8-1 of the Fresno to Bakersfield Section Final EIR/EIS lists the meetings held through March 2014 as part of the lead agencies' outreach effort for the Fresno to Bakersfield Section (Authority and FRA 2014: pages 8-19 through 8-63).

Since May 2015, the Authority has conducted five community open house meetings to present updates about the overall HSR program and the proposed F-B LGA and provide the community an opportunity to ask questions and provide comments about the F-B LGA. Events were held in impacted areas at centralized facilities that were accessible to surrounding residents and businesses. Community open house meetings were held at the Bakersfield Marriott at the Convention Center in Bakersfield (August 25, 2015), the Shafter Veterans Hall (September 17, 2015), the Rabobank Arena Convention Center in Bakersfield (November 5, 2015), the Riverview Community Center in Oildale (June 22, 2016), and the Shafter Veterans Hall (August 25, 2016). Outreach activities for these meetings included: canvassing of Sumner Street and the El Mercado Latino Area; mailing bilingual postcards to adjacent buildings,[9] buildings within 0.5 mile of the proposed stations, elected officials and key stakeholders, and people who previously commented on the F-B LGA Section; e-blast notifications to database contacts; delivering flyers to organizations including faith-based and environmental justice groups, social service agencies, local libraries, and community centers; and print and internet advertising (Martinez 2016).

[9] Addresses for buildings 500 feet from the centerline on either side of the F-B LGA and May 2014 Project.

In addition, as part of the outreach for the F-B LGA, the Authority hosted an activity center at El Mercado Latino Tianguis on August 23, 2015. The event was staffed by Spanish speakers and offered vendors and El Mercado Latino Tianguis patrons an opportunity to learn about the proposed F-B LGA. The activity center consisted of an information table in the Mercado, a marketplace predominantly frequented by Spanish-speaking patrons, where Spanish-speakers were able to obtain information and ask questions about the HSR project. The activity center was set up for several hours on a Sunday, which is believed to be the busiest day of the week for the Mercado, and was an effective way of reaching out to the Spanish-speaking community in Bakersfield.

As described above, the Authority and the City of Bakersfield hosted community open house meetings on August 25, 2015 and November 5, 2015, and the Authority hosted a community information event in Shafter on September 17, 2015, to discuss the F-B LGA and to provide an opportunity for the community to ask questions and provide comments about the alignment that is being studied (Authority and City of Bakersfield 2015). Additionally, the Authority held a community open house meeting in the City of Shafter on August 25, 2016, to present the proposed F-B LGA alignment and the retained fill design feature and gather community feedback.

As part of the overall public outreach for the F-B LGA, the Authority has conducted more than 65 one-on-one stakeholder meetings, including the following stakeholders who are identified, either because of location, clientele, or socioeconomic background, as having minority or low-income status:

- Bakersfield City School District
- Fairfax School District
- Mercado Latino Tianguis Owner
- Titan Cold Storage
- Bakersfield Cotton Warehouse (Jess Smith & Sons Cotton and Almonds)
- Beardsley School District
- Rain for Rent
- Kern High School District
- Jaco Oil
- Rain for Rent
- Golden Empire Gleaners
- Kern County Farm Bureau (presentation by Steve Milton)
- Bakersfield Rotary Club
- Bakersfield Homeless Shelter
- Pensinger Trailer Rentals
- Steeler Construction Supply (6022 State Road, Oildale)
- Brian Hall Properties (5801, 5940, 5950, 5960 State Road, Oildale)
- Kern 4HMF

The Authority also gave presentations to both the Greater Bakersfield Chamber of Commerce and the Shafter Chamber of Commerce and conducted working group meetings with the Sumner Street Businesses.

An F-B LGA-specific environmental justice-focused outreach community meeting, the Oildale Community Meeting, was held on June 22, 2016 at the Riverview Community Center-Gymnasium in Bakersfield. This meeting included a formal presentation by the Authority, followed by a question and answer session. A Comments and Jobs Station was available, and factsheets were provided in both English and Spanish.

Oildale was determined to be a prime area for a community outreach meeting because of its proximity to the F-B LGA alignment and proposed F Street station, and its socioeconomic makeup (e.g., 31.9 percent of the community is living below the poverty level). Approximately 20 people attended the meeting, eleven of which identified themselves as Oildale residents, four identified themselves as from within a 500-foot radius of the proposed track, and four identified themselves as business owners near the alignment in the Oildale area (Martinez 2016).

A number of opportunities for public involvement have been made available through the F-B LGA with the purpose of ensuring minority and low-income populations had access to information on the project and to solicit their input about community-based concerns. Throughout this outreach effort, the Authority identified potentially disproportionate impacts on minority and/or low-income populations and developed ways to avoid, minimize, or mitigate for the impacts. A list of the meetings that pertain to the F-B LGA is provided in F-B LGA CIA (Authority and FRA 2017) and in Chapter 9.0, Public and Agency Involvement, of this Draft Supplemental EIR/EIS. Specific efforts aimed at outreach to the environmental justice communities in the study area are ongoing, as described in SO-MM#6 in Section 5.8.1.2. Additional outreach efforts will be incorporated here as such outreach occurs.

5.5.2 Issues and Concerns

5.5.2.1 Areas of Concern

Many concerns expressed during outreach efforts for the F-B LGA are similar to those identified during outreach efforts for the Fresno to Bakersfield Section of the HSR project. A list of previously identified concerns can be found in Section 4.3.2 of the Fresno to Bakersfield CIA (Authority and FRA 2012: pages 4-41 and 4-42). Concerns raised during the public outreach conducted for the F-B LGA include: impacts to homes, businesses and public facilities; construction costs; job creation; station connectivity to other transportation modes; safety and security concerns; and electromagnetic field and noise impacts. Issues raised during outreach activities for the Fresno to Bakersfield Section EIR/EIS that were not raised during the outreach for the F-B LGA, include: concerns that the HSR would divide or further divide communities; lack of access to appropriate job training; concerns that the HSR will not benefit the Central Valley traveler; impacts to local churches, schools, and local landmarks/facilities; and concerns regarding the ability of low-income or unemployed community members to relocate if impacted.

Specific questions raised by the Oildale Community Meeting participants included the rail's operation, practicability, and local impact. Other inquiries were broad in scope. Specific questions from Oildale residents and business owners included the following:

- How many farmers will be displaced between here and Fresno?
- Where is the water going to come from?
- What is the contact information for small business owners who would like to work on contracts related to the project?

Questions from other attendees included the following:

- Noise and vibration concerns
- Operation hours and cost
- Viability for commuting to work
- Overall project cost and funding sources
- Route's effect on Shafter, California
- Cost benefit of HSR compared to freeways
- Alignment specifics
- The Authority's environmental process

No other specific environmental justice related comments have been raised during the public outreach conducted for the F-B LGA. The Authority will continue to coordinate with the affected communities to gather information regarding their concerns.

5.6 Assessment of Adverse Effects and Disparate Impacts

This section describes the impact analysis relating to environmental justice for the F-B LGA and summarizes the impact analysis for the May 2014 Project.

5.6.1 Methodology for the Assessment of Adverse Effects and Disparate Impacts

This section summarizes the approach the Authority and FRA used to identify potential effects on minority and low-income communities under the May 2014 Project and the F-B LGA. This examination took a detailed, step-by-step approach to identify areas with minority and low-income populations and then evaluate the potential for the project to result in disproportionately high and adverse effects on minority or low-income populations in the environmental justice study area, by comparing the impacts experienced by the minority and low-income populations to the non-minority and/or non-low-income population and the reference community, which are tools to compare the proportionality of impacts.

The analysis presented in Section 5.3.3, Identification of Minority and Low-Income Communities, identified the locations of potential environmental justice populations within the project study area (see Appendix A of the F-B LGA CIA (Authority and FRA 2017 for a detailed description of the environmental justice methodology).

This Chapter uses the analysis of potential adverse project-related effects on human health and environmental resources in the study area, including transportation and traffic congestion; air quality and global climate change; noise and vibration; electromagnetic fields and electromagnetic interference; public utilities and energy; biological resources and wetlands; hydrology and water resources, including water pollution; geology, soils, and seismicity; hazardous materials/wastes; safety and security, including bodily impairment, infirmity, illness or death; socioeconomics and communities, including disruption of community cohesion, displacement of residents and businesses, adverse employment effects, and isolation/separation of individuals from the community; local growth, station planning, and land use; agricultural lands; parks, recreation, and open space; aesthetics and visual resources; and cultural resources. These effects were identified by geographic area and type of impact. The analysis also considered the access of minority and low-income communities to project benefits.

When minority or low-income populations were identified, the impacts experienced by that population were compared with the resource study area and the larger reference community (Kern County) to determine whether the project would result in a disproportionately high and adverse impact. A disproportionately high and adverse effect on minority and low-income populations is defined as an impact that is predominantly borne by a minority and/or low-income population or will be suffered by the minority and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect suffered by the non-minority and/or non-low income population in the affected area and the reference community. In addition, in determining whether the impact would be disproportionately borne by a minority and/or low-income population, the analysis considered if the project would implement measures to avoid or reduce the adverse effect, and/or provide benefits that would affect the minority and low-income populations.

The following sections describe the potential for project-related effects in the environmental justice study area for the May 2014 Project and the F-B LGA. After these effects are described, the discussion examines the effects for their potential to be disproportionately high and adverse for minority or low-income communities along these alignments. Benefits of the HSR project are also considered when evaluating impacts to minority or low-income communities. These benefits are similar for all HSR alternatives, and are discussed in Section 5.3.3.5, Project Benefits, of the Fresno to Bakersfield CIA (Authority and FRA 2012: page 5-95).

5.6.2 Summary of Analysis for the May 2014 Project

The May 2014 Project traverses areas with minority and low-income populations and would result in disproportionately high and adverse effects on these populations. For additional information regarding effects to minority and low-income communities under the May 2014 Project, refer to Section 3.12.8.2, High-Speed Train Alternatives, of the Fresno to Bakersfield Section Final EIR/EIS, Section 3.12 Socioeconomics, Communities and Environmental Justice (Authority and FRA 2014: 3.12-107 to 3.12-135).

As shown in Figure 5-2 and described above, minority and low-income populations in the May 2014 Project study area are located primarily in the urban areas of Shafter and Bakersfield. The communities around the proposed Truxtun Avenue Station contain many minority and low-income populations. The MOIF would be located along the May 2014 Project alternative just north of the City of Bakersfield and 7th Standard Road. The communities south and east of the proposed MOIF site for the May 2014 Project contain minority and low-income populations.

5.6.2.1 Construction Period Impacts

Construction activities associated with the May 2014 Project would have impacts on all the communities in the May 2014 Project study area, including minority and low-income populations. However, application of mitigation measures, as described further below, would achieve a reduction in impacts and eliminate the adverse impacts on all communities. Consequently, construction activities associated with the May 2014 Project would not result in disproportionately high and adverse effects on minority and low-income populations. A summary of construction-related impacts by resource topic is provided below.

Transportation

Construction activities would result in additional traffic in the study area as a result of temporary road or lane modifications. However, temporary road closures and detours would not impact traffic circulation, create operational hazards, or incompatible uses. Existing or planned Safe Routes to Schools would not be impacted by construction activities. The temporary increase in traffic would impact all communities in both urban and rural areas, including minority and low-income populations.

Impacts experienced by minority and low-income populations would be the same as impacts experienced by the non-minority and/or non-low-income populations in the affected area and are not unique to minority and low-income populations when compared to the reference community. Therefore, these adverse impacts would not be borne primarily by minority and low-income populations and consequently, construction activities would not result in disproportionately high and adverse effects on minority and low-income populations.

Implementation of the project design features described in Section 3.2.6 of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.2-121 through 3.2-124), including the development of a construction transportation plan (CTP) in coordination with the appropriate city and county engineering departments, would minimize all potential impacts, including those that would be experienced by minority and low-income populations, since the design features are applied equally throughout the project area during construction.

Therefore, transportation impacts during construction of the May 2014 Project would not have disproportionately high and adverse effects on minority and low-income populations.

Air Quality and Global Climate Change

Emissions associated with the concurrent construction of track, station, and maintenance facilities under the May 2014 Project would exceed the San Joaquin Valley Air Pollution Control District pollutant emissions thresholds for construction. The San Joaquin Valley Air Basin is not in attainment of federal and state air quality standards for ozone and PM2.5 and not in attainment of state standards for respirable particulate matter (PM_{10}). As described in Section 3.3.6.3 of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.3-46 through 3.3-53), project construction emissions would not cause state or federal ambient air quality standards to be exceeded locally and would not exceed applicable thresholds for health risks and exposure to toxic air contaminants. Therefore, construction of the May 2014 Project would not cause local air quality impacts to any population in the study area, including minority and low-income communities.

Implementation of mitigation measures, AQ-MM#1, AQ-MM#2, and AQ-MM#4, identified in the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.3-86 through 3.3-89) will ensure that construction of the May 2014 Project will result in no net increase in regional pollutant concentrations. Therefore, May 2014 Project construction would not result in air quality

impacts to any regional population. In addition, May 2014 Project construction emissions would not cause local air quality or health risk impacts to any population in the study area. Furthermore, the Authority will implement the appropriate project design features to further reduce any potential air quality impacts during construction (see Section 3.3, Air Quality and Global Climate Change, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.3-85 and 3.3-86]). Therefore, because the application of mitigation will ensure no net increase in regional emissions and because no communities will experience any localized adverse air quality or health impacts during construction, no communities within the study area, including low-income and minority populations, will experience disproportionately high or adverse impacts resulting from May 2014 Project construction.

Therefore, air quality and global climate change impacts during construction of the May 2014 Project would not have disproportionately high and adverse effects on minority and low-income populations.

Noise and Vibration

Noise from construction activities would temporarily exceed noise standards along the entire May 2014 Project study area and adversely affect sensitive receivers (e.g., residences, schools, hospitals, parks). Construction vibration only has the potential to result in damages to buildings within 50 feet of pile driving activities. The increase in noise and vibration would impact all communities near construction activities, including minority and low-income populations.

Implementation of mitigation measures, N&V-MM#1 and N&V-MM#2, identified in Section 3.4.7.1 of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.4-56 to 3.4-57) will minimize potential construction noise impacts, including those that would be experienced by minority and low-income populations, since the mitigation measures are applied equally throughout the project area during construction. Therefore, noise impacts during construction of the May 2014 Project would not have disproportionately high and adverse effects on minority and low-income populations.

Electromagnetic Frequency/Electromagnetic Interference

There would be no adverse Electromagnetic Frequency (EMF)/Electromagnetic Interference (EMI) construction impacts on communities because construction equipment would generate low EMF and EMI levels (see Section 3.5 Electromagnetic Fields and Electromagnetic Interference of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: page 3.5-14]). Therefore, EMF/EMI impacts associated with construction of the May 2014 Project would not have disproportionately high and adverse effects on minority and low-income populations.

Public Utilities and Energy

There would be no adverse public utility and energy impacts because phasing of construction activities would avoid or minimize temporary interruptions of utility services (see Section 3.6, Public Utilities and Energy, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.6-44 through 3.6-50]). Because no adverse public utility and energy impacts would occur during construction, no minority or low-income populations would be adversely impacted.

Biological Resources and Wetlands

Construction activities would impact special status plants, wildlife, and habitats of concern, but would not result in adverse effects on human health or environments in any communities, including those with minority and low-income populations (see Section 3.7, Biological Resources and Wetlands, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.7-51 through 3.7-103]). While some adverse effects to biological resources and wetlands are likely to occur during May 2014 Project construction, the resources affected are not related to human health or specific areas or resources used by the general public, including minority or low-income populations. Therefore, these impacts would not result in adverse impacts to minority and low-income populations.

Hydrology and Water Resources

Construction activities such as excavation and dewatering in work areas have the potential to degrade water quality. However, in accordance with Construction General Permit (Order No. 2009-0009 DWQ, NPDES No. CAS000002), a Stormwater Pollution Prevention Plan (SWPPP) will be prepared and implemented for May 2014 Project construction, which will provide best management practices (BMP) to minimize potential short-term increases in sediment transport caused by construction, including erosion control requirements, stormwater management, and channel dewatering for affected stream crossings (see Section 3.8, Hydrology and Water Resources, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.8-72 through 3.8-75]). These BMPs will include measures to provide permeable surfaces where feasible and to retain or detain and treat stormwater onsite. Other BMPs include strategies to manage the overall amount and quality of stormwater runoff. The SWPPP will be implemented uniformly throughout the project alignment and will effectively reduce the potential adverse impacts to water resources to all communities during construction, including minority and low-income populations.

Best management practices called for in the SWPPP will be implemented uniformly at all construction locations and will effectively reduce potential construction impacts. Therefore, as a result, construction impacts (as well as the associated avoidance of such impacts from project design features) would be the same as experienced by all communities in the study area and are not unique to minority and low-income populations. Consequently, construction activities associated with the May 2014 Project would not result in disproportionately high and adverse effects on minority and low-income populations.

Geology, Soils, Seismicity, and Paleontological Resources

Construction activities could deposit unstable soils and contribute to soil erosion, but would not result in adverse effects on human health or environments in any communities, including those with minority and low-income populations (see Section 3.9, Geology, Soils and Seismicity, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.9-28 through 3.9-33]). Therefore, construction impacts related to geology, soils, seismicity, and paleontological resources for the May 2014 Project would not have disproportionately high and adverse effects on minority and low-income populations.

Hazardous Materials and Wastes

Construction activities would be similar along the entire May 2014 Project area and would involve transporting, using, and disposing of hazardous materials and wastes and have the potential to result in accidental spills or releases and result in temporary hazards at all locations near construction activities, including at schools. The segment of the May 2014 Project with the highest risk for existing hazardous waste sites and for the accidental release of hazardous wastes is in Shafter, where low-income and minority populations are located adjacent to the alignment. Such an accident could disproportionately affect the low-income and minority populations of these cities. However, remediation of hazardous waste sites in accordance with federal, station, and local regulations would be applied equally throughout the alignment prior to initiating construction and would reduce the potential risk for such an accident to a very low level in all communities along the alignment, including minority and low-income communities.

Construction staging areas would have the highest concentrations of hazardous materials used for the May 2014 Project and therefore the greatest risk for accidental spills. Construction staging areas are distributed roughly equally throughout the alignment primarily in agricultural areas and vacant or underutilized lands in urban areas and are not specifically located in minority and low-income communities. Because construction staging areas would be distributed roughly equally throughout the alignment, accidental spills of hazardous materials during construction would not occur disproportionately in low-income and/or minority communities. Adherence to federal, state, and local regulations will minimize the risk of a spill or accidental release of hazardous materials; see Section 3.10.6, Project Design Features, of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.7-37 and 3.7-38).

Schools are particularly sensitive locations for the accidental release of hazardous materials due to the potential impacts on children's health and safety. Schools within 0.25 mile of construction activities that could be at risk for hazardous waste spills are located in both Shafter and Bakersfield. These schools are distributed among low-income and minority populations, as well as among non-minority and/or non-low-income populations. The application of Mitigation Measure HMW-MM#1 will reduce the risk of a hazardous materials spill near any of these schools (Authority and FRA 2014: page 3.7-38). Therefore, the impacts experienced by minority and low-income populations would be the same as experienced by the rest of the population within the reference community.

Consequently, construction activities associated with the May 2014 Project would not result in disproportionately high and adverse effects on minority and low-income populations.

Safety and Security

As discussed in Section 3.11, Safety and Security, of the Fresno to Bakersfield Section Final EIR/EIS, construction activities would result in temporary road closures and rerouting that could pose safety risks to communities (Authority and FRA 2014: pages 3.11-26 through 3.11-28). At these sites, lane closures and detours could potentially create a distraction to automobile drivers, pedestrians, and cyclists. Distraction and unfamiliarity with detours could lead to accidents. In addition, the road closures, detours, and localized automobile congestion could increase the response time for law enforcement, fire, and emergency services personnel and school buses. The temporary increase in traffic would impact all communities in both urban and rural areas, including minority and low-income populations.

Impacts associated with construction of the May 2014 Project will be mitigated through the development of a CTP, which will reduce the impact throughout the affected area and eliminate the adverse effect (Authority and FRA 2014: page 3.11-43). Consequently, construction activities would not result in disproportionately high and adverse effects on minority and low-income populations.

Socioeconomics and Communities

Construction activities associated with the May 2014 Project could impact community cohesion by affecting important facilities providing services and altering social interactions through temporary increases in noise, visual changes, and road closures. Construction activities would be disruptive to all communities near construction areas, including minority and low-income populations.

Minority and low-income populations in the study area would experience adverse community cohesion impacts as a result of project construction. In most cases, these impacts would also be experienced by the non-minority and/or non-low-income populations in the affected area. However, access to important community facilities, such as the Mercado Latino Tianguis, which is used primarily by low-income and minority populations, could be modified temporarily during construction resulting in an inconvenience to minority and low-income patrons in Bakersfield. In addition, Bakersfield High School could be impacted, which is a facility used by the community as a whole, including minority and low-income populations.

However, the application of project design features and mitigation measures to address transportation, noise and vibration and visual effects, including TR-MM#1, which would provide alternate access for properties impacted by road closures, will reduce the impact throughout the affected area and eliminate the adverse effect (Authority and FRA 2014: pages 3.2-125 and 3.2-126). Through the implementation of these project design features and mitigation measures, the impacts to important community facilities serving low-income and minority populations would be greatly reduced to a level similar to impacts experienced by the reference community as a whole. Consequently, construction activities associated with the May 2014 Project would not result in disproportionately high and adverse effects on minority and low-income populations.

Station Planning, Land Use, and Development

There would be no adverse land use impacts because lands used for temporary construction would be acquired from willing landowners and restored to their previous condition at the end of the construction period. Temporary use of this land would not change the long-term pattern or intensity of land use or cause incompatibility with adjacent land uses (see Section 3.13, Station Planning, Land Use, and Development, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.13-36 and 3.13-37]). Because no adverse land use impacts would occur during construction of the May 2014 Project, no minority or low-income populations would be adversely impacted.

Agricultural Lands

Construction activities for the May 2014 Project would require the temporary use of agricultural land, but would not result in adverse effects on human health or environments in any communities, including those with minority and low-income populations (see Section 3.14, Agricultural Lands, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.14-42 through 3.14-46]). Therefore, these impacts would not result in adverse impacts to minority and low-income populations.

Parks, Recreation, and Open Space

Construction activities for the May 2014 Project would result in temporary closures, access restrictions, noise, and visual impacts at parks and school district play areas near construction areas, including in communities with minority and low-income populations. The greatest effects would be experienced at Kern River Parkway and Bakersfield High School recreation facilities in Bakersfield.

Construction activities that result in increases in noise and vibration and visual disturbances would be reduced through mitigation measures described in Section 3.4, Noise and Vibration, and Section 3.16, Aesthetics and Visual Resources, of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.4-56 to 3.4-57 and 3.16-141 to 3.16-142). Mitigation Measure PP-MM#1 would reduce the impact of partial park closures by providing alternative access that allows for continued use of the impacted parks (see Section 3.15, Parks, Recreation, and Open Space, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: page 3.15-48]).

Impacts on parks and school district play areas would be distributed along the entire study area, and would be experienced by all park visitors, including minority and low-income populations. However, the greatest impacts to parks and play areas would occur in urban areas with minority and low-income populations along the project study area, including Bakersfield. The application of mitigation measures to address noise and vibration and visual disturbances, as well as PP-MM#1, will reduce the impact and eliminate the adverse effect. After the implementation of mitigation measures, all community members including minority and low-income populations will continue to have access to parks and recreation areas during construction and their use will not be substantially impaired by construction activities. Consequently, construction activities associated with the May 2014 Project would not result in disproportionately high and adverse parks, recreation, and open space effects on minority and low-income populations.

Aesthetics and Visual Resources

Construction activities associated with the May 2014 Project would reduce the visual quality of scenic vistas and existing landscapes, and introduce new sources of light and glare. The visual impacts would impact all communities in both urban and rural areas, including minority and low-income populations. These impacts are the same as experienced by the non-minority and/or non-low-income populations in the affected area and are not unique to minority and low-income populations. Therefore, these adverse impacts would not be borne primarily by minority and low-income populations.

Mitigation measures AVR-MM#1a and AVR-MM#1b would reduce the visual disruption from construction activities by preserving vegetation and using temporary fencing and walls to screen

views (see Section 3.16, Aesthetics and Visual Resources, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.16-141 and 3.16-142]). Implementation of these mitigation measures will minimize all potential impacts, including those that would be experienced by minority and low-income populations, since the mitigation measures are applied equally throughout the project area during construction. Therefore, construction activities associated with the May 2014 Project would not result in disproportionately high and adverse visual effects on minority and low-income populations.

Cultural Resources

Construction activities would result in noise and vibration and visual impacts to structures that have been determined to be eligible for the National Historic Preservation Act. Historic architectural resources would be impacted in all communities near construction areas, including minority and low-income populations. However, adverse effects to historical properties, as discussed in Section 3.17, Cultural and Paleontological Resources, of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.17-102 through 3.17-127) pertain solely to the structure itself, and not to the cultural environment. Consequently, these impacts would not result in adverse impacts to minority and low-income populations.

5.6.2.2 Operation Period Impacts

The May 2014 Project would result in disproportionately high and adverse effects on minority and low-income populations. As described below, for most resource topics, implementation of avoidance and minimization measures, as well as mitigation measures would reduce identified impacts such that disproportionately high and adverse effects on minority and low-income populations would not occur. However, for noise and vibration, socioeconomics and communities, land use, parks and recreation, and visual resources, the mitigation measures would not completely reduce impacts resulting from operation of the May 2014 Project in communities with minority and low-income populations. Because the mitigation measures do not eliminate the adverse impacts and because the noise and vibration, socioeconomics and communities, land use, parks and recreation, and visual impacts would be greater for minority and low-income populations when compared to the reference community, operation of the May 2014 Project would have a disproportionately high and adverse effect on minority and low-income populations.

May 2014 Project Operation Impacts Not Resulting in Disproportionately High and Adverse Effects

In cases where no effects were identified or impacts were less than significant under CEQA, no further analysis was conducted on the potential of the May 2014 Project to affect a minority or low-income population. The resources that were found to have no effects or less than significant impacts to minority or low-income populations included: transportation; air quality and global climate change; EMF/EMI; public utilities and energy; biological resources and wetlands; hydrology and water resources; geology, soils, and seismicity; hazardous materials and wastes; safety and security; agricultural lands; and cultural resources. A brief discussion of these topics is provided below.

Transportation

The May 2014 Project would provide benefits to the regional transportation system by reducing vehicle trips on freeways by providing another mode of transportation for intercity passenger trips. All communities, including minority and low-income populations, would benefit from the reduction in roadway congestion and an increase in transportation options.

Operation of the May 2014 Project would require the construction of roadway crossings and the permanent closure of some roads. The road closures have the potential to result in a loss of property access. The adverse impacts to roadways, intersections and property access would impact all communities near the May 2014 Project, including minority and low-income populations. Therefore, these adverse impacts would not be borne primarily by minority and low-income populations and consequently, project operation would not result in disproportionately high and adverse effects on minority and low-income populations.

Mitigation measures TR-MM #2, TR-MM #3, TR-MM#4, TR-MM#5, TR-MM#6, TR-MM#7, and TR-MM#8, as described in Section 3.2, Transportation, of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.2-124 through 3.2-141), would reduce the impacts on roadways and intersections by improving traffic signals and adding new lanes. Mitigation measure TR-MM#1 would reduce the potential impact from loss of property access as a result of road closures by providing alternate access via new or existing road connections or, where necessary, replacement of the property. Implementation of these mitigation measures will minimize all potential impacts, including those that would be experienced by minority and low-income populations, since the mitigation measures are applied equally throughout the project area. Therefore, May 2014 Project operation transportation impacts would not have disproportionately high and adverse effects on minority and low-income populations.

Air Quality and Global Climate Change

At the regional level, operation of the May 2014 Project would result in lower pollutant emissions, reduce statewide greenhouse gas emissions by 2020 and would be a net benefit to regional air quality (see Section 3.3, Air Quality and Global Climate Change, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.3-57 through 3.3-84]). This impact would benefit all communities in the region, including minority and low-income populations.

As described in Section 3.3.6.3 of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.3-57 through 3.3-84), operational-related emissions at and in the vicinity of the Truxtun Avenue Station and MOIF site will not result in local exceedance of ambient air quality standards and will not increase health risks to any of the nearby communities.

All communities would experience the regional air quality benefits, including minority and low-income populations. Because May 2014 Project operation would result in an overall beneficial impact to minority and low-income populations and would not result in localized air quality impacts, the impacts would not be disproportionately high and adverse impacts on minority and low-income populations.

Electromagnetic Frequency/Electromagnetic Interference

There would be no adverse EMF/EMI operation impacts on communities because EMF/EMI impacts on schools, hospitals, businesses, colleges and residences would be below industry standard limits and prevented by dedicated frequency blocks (see Section 3.5, Electromagnetic Fields and Electromagnetic Interference, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.5-15 through 3.5-21]). Because no adverse EMF/EMI impacts would occur during project operation, no minority or low-income populations would be adversely impacted.

Public Utilities and Energy

There would be no adverse public utilities and energy impacts associated with project operation because May 2014 Project facilities would not permanently disrupt existing utility infrastructure or the services that the utility providers' customers rely on (see Section 3.6, Public Utilities and Energy, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.6-50 through 3.6-77]). Because no adverse public utility and energy impacts would occur during project operation, no minority or low-income populations would be adversely impacted.

Biological Resources and Wetlands

Operation of the May 2014 Project would affect special status plants, wildlife and habitats of concern, but would not result in adverse effects on human health or environments in any communities, including those with minority and low-income populations (see Section 3.7, Biological Resources and Wetlands, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.7-103 through 3.7-169]). While some adverse effects to biological resources and wetlands are likely to occur during project operation, the resources affected are not related to human health, specific areas or resources used by the general public, including minority or low-income populations. Therefore, these impacts would not result in adverse impacts to minority and low-income populations.

Hydrology and Water Resources

There would be no adverse water quality impacts associated with operation of the May 2014 Project on any communities because the regenerative braking technology of the HSR would reduce the potential amount of metal particles deposited into the environment. In addition, any runoff from the right-of-way would be collected and treated, where required, prior to being discharged to a stormwater drainage system (see Section 3.8, Hydrology and Water Resources, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.8-50 through 3.8-71]). Additionally, existing municipal treatment systems would prevent any potential water pollutants from affecting the municipal water supplies in the region. Because no adverse water quality impacts would occur in any communities during May 2014 Project operation, no minority or low-income populations would be adversely impacted.

Geology, Soils, Seismicity, and Paleontological Resources

There would be no adverse geology, soils, and seismicity impacts associated with operation of the May 2014 Project on any communities because the exposure of people to the potential effects from seismically induced surface fault rupture would be avoided by repairs that would occur with routine maintenance of the HSR (see Section 3.9, Geology, Soils and Seismicity, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.9-33 through 3.9-38]). Because no adverse geology, soils, and seismicity impacts would occur in any communities during May 2014 Project operation, no minority or low-income populations would be adversely impacted.

Hazardous Materials and Wastes

Operation of the May 2014 Project would involve transporting, using, and disposing of minor amounts of hazardous materials and wastes for routine maintenance. The potential for accidental spills or releases would impact all communities near the project, including minority and low-income populations. However, the extent of the impact would be determined by the location of the spill or release. The risk of such spill or release and therefore the potential impacts are the same as experienced by the non-minority and/or non-low-income populations in the study area and are not unique to minority and low-income populations. Therefore, these adverse impacts would not be borne primarily by minority and low-income populations and consequently, project operation would not result in disproportionately high and adverse effects on minority and low-income populations.

Adherence to the federal, state, and local regulations will minimize the risk of a spill or accidental release of hazardous materials (see Section 3.10, Hazardous Materials and Wastes, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.10-37 and 3.10-38]), including those that would be experienced by minority and low-income populations, since adherence to federal, state and local regulations will occur throughout the project area. Therefore, hazardous materials and waste impacts associated with operation of the May 2014 Project would not have disproportionately high and adverse effects on minority and low-income populations.

Safety and Security

Operation of the May 2014 Project would provide a safety benefit because the system would use contemporary safety and signaling and be fully grade-separated to prevent conflicts with vehicles, pedestrians, and bicyclists. This impact would benefit all communities in the region, including minority and low-income populations.

Nonetheless, operation of the May 2014 Project could impact the health and safety of populations near the right-of-way due to the possibility of train accidents. Emergency response times by law enforcement, fire, and emergency services personnel could be impacted as a result of permanent road closures or the need to access elevated track portions in the case of an accident.

All populations in the study area could be exposed to adverse safety and security impacts as a result of project operation, including minority and low-income populations. In addition, the entire study area would experience the safety benefits from the grade-separated system. Neither the adverse impacts nor project benefits are unique to minority and low-income populations but would

be experienced by the community as a whole. Therefore, these adverse impacts would not be borne primarily by minority and low-income populations.

The system safety and security measures will minimize safety and security risks by design features that would contain train sets within the operational corridor if a derailment were to occur, procedures to protect passenger and employee health, safety features to facilitate safe evacuations on elevated tracks, and coordination with emergency responders to incorporate roadway modifications that maintain existing traffic patterns and fulfill response route needs (see Section 3.11, Safety and Security, of the Fresno to Bakersfield Section Final EIR/EIS (see Section 3.8, Hydrology and Water Resources, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.11-43 through 3.11-45]). These project design features will minimize all potential impacts, including those that would be experienced by minority and low-income populations, since the system safety and security measures will be applied throughout the project area. Therefore, safety and security impacts associated with operation of the May 2014 Project would not have disproportionately high and adverse effects on minority and low-income populations.

Agricultural Lands

Operation of the May 2014 Project would result in the permanent conversion of agricultural land to nonagricultural use and conflict with farmland protection contracts (e.g., Williamson Act contracts). The impacts to agricultural lands would impact rural agricultural communities along the project area, which contain few minority and low-income populations (see Section 3.14, Agricultural Lands, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.14-46 through 3.14-60]).

Agricultural land impacts would be distributed along rural agricultural areas in the May 2014 Project study area. As shown in Figure 5-2, these areas have the lowest numbers of minority and low-income populations in the affected area and within the reference community. A few scattered, low-density minority and/or low-income populations are located between the urban areas of Shafter and Bakersfield, but most of the area impacted does not contain minority and/or low-income populations. Therefore, these adverse impacts would not be borne primarily by minority and low-income populations and consequently, May 2014 Project operation would not result in disproportionately high and adverse effects on minority and low-income populations.

Cultural Resources

There would be no adverse impacts on cultural resources associated with project operation because operational noise and vibration levels would not damage historic architectural resources (see Section 3.17, Cultural and Paleontological Resources, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: page 3.17-127). Because no adverse cultural resource impacts would occur during project operation, no minority or low-income populations would be adversely impacted.

May 2014 Project Operation Impacts Resulting in Potential Disproportionately High and Adverse Effects

This section describes the potential for operation period effects on environmental resources in the environmental justice study area for the May 2014 Project. Effects that were found to be significant before mitigation are described below. These effects were compared to the geographic locations of minority and low-income populations within the study area. This comparison was done to determine if any of these effects occurred disproportionately in minority or low-income communities or were of a disproportionately high magnitude within such communities, placing a potentially high burden of effect on minority and low-income populations. Impacts associated with noise and vibration; socioeconomics and communities; station planning, land use, and development; parks and recreation; and aesthetics and visual resources would have disproportionately high and adverse effects on minority and low-income populations. These impacts are described in further detail below.

Noise and Vibration

Operation of the May 2014 Project would increase ambient noise and vibration levels above standards and would affect sensitive receivers (e.g., residences, schools, hospitals, and parks) along the May 2014 Project alignment. These effects would be substantial and significant. Noise and vibration impacts would be distributed along the entire study area and mitigation measures would be applied, as appropriate. Implementation of mitigation measures, N&V-MM#, N&V-MM#7, and N&V-MM#8, would reduce many of the impacts to less than significant under CEQA (see Section 3.4, Noise and Vibration, of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.4-57 through 3.4-77]). However, 305 sensitive receptors would still experience substantial and significant operational noise or vibration impacts even with the implementation of proposed mitigation. These sensitive receptors are primarily located within urban areas in Shafter and Bakersfield containing minority and low-income populations. Because the mitigation measures do not eliminate the adverse effects, and because these areas are more likely to experience severe adverse noise and vibration impacts resulting from project operation, operational noise and vibration would have disproportionately high and adverse effects on minority and low-income populations in these areas.

Socioeconomics and Communities

Implementation of the May 2014 Project would divide communities in the northeast and northwest neighborhoods in Bakersfield, as well as rural areas such as Crome; remove 384 homes, 392 businesses, and 11 community services or amenities; directly affect an additional 9 community facilities; and permanently alter the character of existing communities or neighborhoods. The displacements and residual community impacts associated with operation of the May 2014 Project Alternative would affect the minority and low-income populations in the urban communities, particularly in Bakersfield's northwest and northeast districts (as defined in the Fresno to Bakersfield Community Impact Assessment [Authority and FRA 2012; pages 4-9 and 4-10), as well as in the rural communities, especially in Crome. These effects would remain even with implementation of proposed mitigation measures. As detailed in the Fresno to Bakersfield CIA, high concentrations of residential displacements would occur under the May 2014 Project. The analysis suggests that relocation of residents may affect high numbers of disabled, female heads of households, and linguistically isolated populations.

Important community facilities would also be displaced as a result of project operation. The May 2014 Project would displace the Industrial Arts building at Bakersfield High School, which is attended by predominantly minority and low-income students. Further, the May 2014 Project would displace the Bakersfield Homeless Shelter, which serves low-income families, as well as the Mercado, which serves a minority community, and several buildings of the Mercy Hospital medical complex, which has programs dedicated to low-income communities. Although all community facilities would be relocated, the displacement still represents an adverse impact. Given that the communities that would be divided by the alignment are predominantly minority and low-income communities and the project would affect community facilities that primarily serve minority and low-income communities, implementation of the May 2014 Project would disproportionately affect minority and low-income communities.

Station Planning, Land Use, and Development

Land use impacts would be distributed along the entire study area, but the adverse effects would be highest in places where the May 2014 Project would be incompatible with adjacent land uses, including urban areas in Bakersfield. Although there is already an incompatibility between the existing freight rail line and adjacent residential uses in these areas, the May 2014 Project would enhance the existing incompatibility by increasing the intensity of the use of the land, which would be incompatible with adjacent residential uses. However, the May 2014 Project would not induce development along the project area. Many high-density minority and low-income populations are located in Bakersfield. Because the urban areas in Bakersfield containing minority and low-income populations are more likely to experience severe land use impacts resulting from implementation of the May 2014 Project, when compared to the larger reference community, land

use conversion would have disproportionately high and adverse effects on minority and low-income communities in Bakersfield.

Parks, Recreation, and Open Space

The May 2014 Project would impact the character of Kern River Parkway, Mill Creek Linear Park, the Bakersfield Amtrak Station playground, and the recreational facilities at Bakersfield High School due to increases in noise, visual disturbance, and facility use. Mitigation measures would be applied to address these impacts as discussed in Section 3.4, Noise and Vibration; 3.15, Parks, Recreation, and Open Space; and 3.16, Aesthetics and Visual Resources, of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: pages 3.4-57 through 3.4-77, 3.11-43, 3.15-48 and 3.15-49, and 3.16-142 through 3.16-145]). However, these mitigation measures would not completely reduce the impacts to park and recreation resources in Bakersfield. Many of the parks that may be affected in Bakersfield are utilized by nearby minority and low-income populations. Because the mitigation measures do not eliminate the adverse impacts within areas containing minority and low-income populations and these populations would experience greater adverse impacts when compared to the larger reference community, operation of the May 2014 Project would have disproportionately high and adverse effects on minority and low-income populations in these locations.

Aesthetics and Visual Resources

The May 2014 Project would result in aesthetics and visual resources effects, including the introduction of permanent project features that would impact the existing visual character and quality and new sources of light and glare. The visual effects would occur in those areas where the alignment would be elevated, which would occur primarily in urban areas of Shafter and Bakersfield where minority and low-income populations reside. Nighttime lighting would be required, and the introduction of elevated viaducts into the viewshed and the resulting visual impacts would not be mitigated to less than significant under CEQA with the proposed mitigation measures. Therefore, implementation of the May 2014 Project would have a disproportionately high and adverse effect on minority and low-income populations.

Because the mitigation measures do not eliminate the adverse impacts within areas containing minority and low-income populations and because these communities would bear a higher burden from these impacts when compared to the larger study area, implementation of the May 2014 Project would have disproportionately high and adverse effects on minority and low-income populations in these locations.

5.6.3 Fresno to Bakersfield Locally Generated Alternative

A complete definition of the F-B LGA is provided in Chapter 2 of this Draft Supplemental EIR/EIS.

5.6.3.1 Construction Period Impacts

Impact EJ#1 –Effects of Project Construction on Minority or Low-Income Populations

Like the May 2014 Project, construction activities associated with the F-B LGA would have impacts on all the communities in the study area, including minority and low-income populations. However, application of mitigation measures, as described further below, would achieve a reduction in impacts and eliminate the adverse impacts on all communities. Consequently, construction activities associated with the F-B LGA would not result in disproportionately high and adverse effects on minority and low-income populations. A discussion of construction-related impacts by resource topic is provided below.

Transportation

In rural areas, the primary traffic impacts during construction would occur at locations where overcrossings are needed to carry minor roadways over the tracks. At these locations, the affected roadway would either be rerouted onto a temporary alignment or temporarily closed. Because detours would be limited in rural areas and would affect few travelers, only small effects to traffic circulation would occur. Moreover, few minority or low-income communities are located

in these rural areas. Therefore, construction-related traffic impacts in rural areas would not have disproportionately high and adverse effects on minority and low-income communities in rural areas.

In urban areas, project-related construction traffic would contribute to interference with pedestrians, bicyclists, and transit where existing sidewalks, paths, and transit stops need to be temporarily closed or relocated to allow for construction of new facilities. Similarly, construction activities may create a temporary operational hazard or loss of access to community facilities, although emergency access would be maintained. Construction activities could require temporary lane or road closures and underground utility work. Construction activities could also lead to both temporary disruption of transportation system operations and possible damage to elements of the roadway system, such as pavement and bridges.

During construction of the proposed F Street Station, approximately 170 peak-hour trips would be added to the transportation infrastructure, resulting in impacts to nine intersections in the vicinity of the proposed station. :

- F Street/SR 204
- Chester Avenue/30th Street-SR 204 South Frontage Road
- Chester Avenue/34th Street
- M Street/30th Street
- Jewett Avenue/30th Street
- Jewett Avenue/34th Street
- Brown Street/Truxtun Avenue
- Quantico Avenue/Edison Highway
- Oswell Front Street West/Edison Highway

Many of these intersections are located in proximity to minority and low-income communities. All other construction activities on major roadways are being planned during non-peak hours of traffic operation and no closures or lane reductions are anticipated.

Although some of these effects would be located within or in proximity to identified minority and/or low-income populations, all travelers through these areas would be affected by increased traffic congestion. However, implementation of the CTP and all other impact avoidance and minimization measures (TRA-AM#1 through TRA-AM#11) as described in Section 3.2 of this Draft Supplemental EIR/EIS would minimize all potential impacts, including those that would be experienced by minority and low-income populations, since the design features are applied equally throughout the study area during construction. Therefore, transportation impacts during construction of the F-B LGA would not have disproportionately high and adverse effects on minority and low-income populations.

Air Quality and Global Climate Change

Emissions associated with the construction of track, station, and maintenance facilities under the F-B LGA would exceed the San Joaquin Valley Air Pollution Control District pollutant emissions thresholds for construction. The San Joaquin Valley Air Basin is not in attainment of federal and state air quality standards for ozone and PM2.5 and not in attainment of state standards for respirable particulate matter (PM_{10}). As described in Section 3.3, Air Quality and Global Climate Change, of this Draft Supplemental EIR/EIS, project construction emissions would not cause state or federal ambient air quality standards to be exceeded locally, and would not exceed applicable thresholds for health risks and exposure to toxic air contaminants. Therefore, construction of the F-B LGA would not cause local air quality impacts to any population in the study area, including minority and low-income communities.

With implementation of mitigation measures AQ-MM#1, AQ-MM#2, AQ-MM#4, and AQ-MM#5 identified in Section 3.3, Air Quality and Global Climate Change, of this Draft Supplemental EIR/EIS, construction of the F-B LGA will result in no net increase in regional pollutant concentrations. Therefore, project construction would not result in air quality impacts to any regional population. In addition, project construction, emissions would not cause local air quality or health risk impacts to any population in the study area. Like the May 2014 Project, air quality

and global climate change impacts associated with construction of the F-B LGA would not have disproportionately high and adverse effects on minority and low-income populations.

Noise and Vibration

Noise from construction activities would temporarily exceed noise standards evenly along the entire project corridor and adversely affect sensitive receivers (e.g., residences, schools, hospitals, and parks). Vibration from construction, including pile driving, would cause adverse impacts to sensitive receivers in the area. The increase in noise and vibration would impact all communities near construction activities, including minority and low-income populations. These effects would be temporary during construction and would be reduced with implementation of mitigation measures N&V-MM#1 and N&V-MM#2 described in Section 3.4 of this Draft Supplemental EIR/EIS. Therefore, construction activities for the F-B LGA would not result in disproportionately high and adverse noise and vibration effects on minority and low-income populations.

Electromagnetic Frequency/Electromagnetic Interference

There would be no adverse EMF/ EMI construction impacts on communities because construction equipment would generate low EMF and EMI levels at or near existing background levels (see Section 3.5, Electromagnetic Fields and Electromagnetic Interference, of this Draft Supplemental EIR/EIS). Therefore, EMF/EMI impacts associated with construction of the F-B LGA would not have disproportionately high and adverse effects on minority and low-income populations.

Public Utilities and Energy

The construction of the F-B LGA could result in planned temporary interruption of utility service, accidental disruption of services, increased water use, increased waste generation, and increased energy consumption. However, planned interruptions would be of short duration and with implementation of avoidance and minimization measure PUE-IAMM#1 (see Section 3.6 Public Utilities and Energy, of this Draft Supplemental EIR/EIS), as well as measures for stormwater management (see Section 3.6.6 of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.6-77 and 3.6-78]), the F-B LGA would not result in prolonged disruption of services, would not result in the loss of or reduced access to public utility lines or pipes, or require or result in new water, wastewater treatment, solid waste disposal, or energy facilities or expansion of existing facilities. Because no adverse public utility and energy impacts would occur during construction of the F-B LGA, no minority or low-income populations would be adversely impacted.

Biological Resources and Wetlands

Construction activities would result in temporary and permanent impacts to special -status plant and wildlife species, special-status plant communities (black willow thickets), jurisdictional waters, protected trees, and wildlife corridors (see Section 3.7, Biological Resources and Wetlands, of this Draft Supplemental EIR/EIS).While some adverse effects to biological resources and wetlands are likely to occur during project construction and operation, the resources affected are not related to human health and are not specific areas or resources used by the general public, including minority or low-income populations. Therefore, no minority or low-income populations would be adversely impacted by construction of the F-B LGA.

Hydrology and Water Resources

Construction activities such as grading, excavation, and dewatering in work areas could alter existing drainage patterns, degrade water quality, and temporarily impede and/or redirect flood flows (see Section 3.8, Hydrology and Water Resources, of this Draft Supplemental EIR/EIS). In accordance with the Construction General Permit (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWG and 2012-0006-DWQ, NPDES No. CAS000002), a SWPPP would be prepared and implemented for project construction, which would provide BMPs, including but not limited to, erosion and sediment control BMPs to minimize erosion and retain sediment on site and good housekeeping BMPs to prevent spills, leaks, and discharges of construction debris and waste into

receiving waters. Standard measures would be implemented during construction to minimize impacts to floodplains consistent with the Central Valley Flood Protection Board requirements.

Best management practices called for in the SWPPP will be implemented uniformly at all construction locations and will effectively reduce potential construction impacts. Consequently, construction of the F-B LGA would not result in disproportionately high and adverse effects on minority and low-income populations.

Geology, Soils, Seismicity, and Paleontological Resources

Construction activities could encounter unstable soils and localized deposits of soft/loose soils and contribute to soil erosion. Areas with high potential for soil erosion have been identified in the southeastern portion of Bakersfield where minority and low-income communities occur. Standard construction practices, such as those listed in the *Caltrans Construction Site Best Management Practices (BMP) Manual* (Caltrans 2003a), the *Construction Site Best Management Practice (BMP) Field Manual and Troubleshooting Guide* (Caltrans 2003b), and the *California Stormwater Quality Association BMP Handbook* (CASQA 2015) will be implemented to reduce the potential for erosion. In areas with high paleontological sensitivity, ground-disturbing activities could result in adverse effects to paleontological resources. However, the resources affected are not related to human health and are not specific areas or resources used by the general public, including minority or low-income populations.

With implementation of standard construction practices, no adverse geology, soils, and seismicity impacts would result from construction or operation of the F-B LGA (see Section 3.9 of this Draft Supplemental EIR/EIS). Therefore, construction impacts related to geology, soils, seismicity, and paleontological resources would not have disproportionately high and adverse effects on minority and low-income populations.

Hazardous Materials and Wastes

Construction activities would be similar along the entire F-B LGA alignment and would involve the temporary transport, use, storage, and disposal of hazardous materials and wastes associated with construction. There is also the potential for disturbance of contaminants at potentially explosive chemical sites that are located within the construction footprint or for accidental release of hazardous materials, creating a hazard to the public.

The segments of the alignment with the highest risk for disturbing existing hazardous waste sites are located in Bakersfield and Shafter. Low-income and minority populations are located adjacent to the alignment in both of these areas. However, remediation of hazardous waste sites in accordance with federal, state, and local regulations would be applied equally through the alignment prior to initiation of project construction and this would reduce the potential risk for such as accidents to a very low level in all communities along the alignment, including those with minority and low-income populations.

Schools are particularly sensitive locations for the accidental release of hazardous materials due to the potential impacts on children's health and safety. Sixteen educational facilities are located within 0.25 mile of the construction footprint for the F-B LGA. These schools are distributed among low-income and minority populations as well as among non-minority and/or non-low-income populations. Mitigation Measure HMW-MM#1, *Limit use of extremely hazardous materials near schools during construction* would be implemented to avoid or minimize potentially adverse effects associated with schools (see Section 3.10.5.1 of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: page 3.10-34]).

Adherence to federal, state, and local regulations would minimize the risk of a spill or accidental release of hazardous materials and remediation of hazardous waste sites in accordance with federal, state, and local regulations would be applied equally through the alignment prior to initiation of project construction. Further, a spill prevention, containment, and countermeasures control plan or, for smaller quantities, a spill prevention and response plan, which identifies BMPs for spill and release prevention and provides procedures and responsibilities for rapidly, effectively, and safely cleaning up and disposing of any spills or releases, would be established

for the F-B LGA. Compliance with existing laws and regulations, as well as the implementation of avoidance and minimization measures would reduce the potential risk for hazardous materials effects to a very low level in all communities along the alignment (see Section 3.10, Hazardous Materials and Wastes, of this Draft Supplemental EIR/EIS), including those with minority and low-income populations.

Safety and Security

Construction of the F-B LGA could result in accidents at construction sites and in temporary increases in risks to motor vehicles, pedestrians, and bicycle safety from traffic detours, as well as increase response times for law enforcement, fire, and emergency services. The risk of accidents associated with construction-related detours would be highest in the cities of Bakersfield and Shafter (where low-income and minority populations are located) because of the relatively high traffic volumes and the large number of detours that would take place in these cities. Impact avoidance and minimization measures include the development of a detailed CTP, as discussed in Section 3.11.5.1, of Section 3.11 Safety and Security, of the Fresno to Bakersfield Section Final EIR/EIS (Authority and FRA 2014: page 3.11-29), which would establish procedures for temporary road closures and require coordination with local jurisdictions on emergency vehicle access. Implementation of the CTP would reduce the impact throughout the affected areas; consequently, construction activities for the F-B LGA would not result in disproportionately high and adverse effects on minority and low-income populations.

Section 3.9, Geology, Soils, Seismicity, and Paleontological Resources, of this Draft Supplemental EIR/EIS describes a total of nine oil and gas wells that are within the F-B LGA study area or 150 feet of the study area. Unless existing oil and gas wells as well as ancillary and appurtenant facilities necessary to maintain oil field operations are identified and remediated within the F-B LGA study area, they could be disrupted and have environmental consequences during construction. Contractors would use safe and explosion-proof equipment during project construction in areas where explosion hazards exist, and would test for gases regularly. Implementation of these measures would reduce the impact throughout the affected areas; consequently, construction activities would not result in disproportionately high and adverse effects on minority and low-income populations.

Construction activities have the potential to generate exposure to the fungus *Coccidioides* spores that cause Valley Fever via inhalation of fugitive dust and soil. Valley Fever tends to infect people with jobs requiring digging in soil that contains the fungus. The fungus enters a person's lungs causing cold and flu like symptoms and occasionally rashes. Implementation of impact avoidance and minimization measures, specifically S&S- AM#4b and S&S-AM#4c, will minimize exposure to those at risk from construction activities disturbing naturally occurring *Coccidioides* spores (see Section 3.11 of this Draft Supplemental EIR/EIS).

Socioeconomics and Communities

Construction of the F-B LGA would result in temporary impacts to communities, such as disruption of established patterns via noise and visual changes, as well as traffic circulation; disruption of access to community facilities and emergency services; additional demand for services due to purchase of materials and equipment necessary for construction and construction workers; and the introduction of construction-period workers on the HSR alignment and station areas. These potential impacts are discussed below.

Construction activities could impact community cohesion by affecting important facilities providing services and altering social interactions through temporary increases in noise, visual changes, and road closures. This disruption could include interference with established patterns of interactions among community residents, isolation of one part of a community from another, or disruption of residents' access to community facilities and services. In general, construction would occur primarily outside (but in some areas adjacent to) established residential neighborhoods, in

areas associated with agricultural, commercial, or industrial uses.[10] Construction activities would be disruptive to all communities near construction areas, including minority and low-income populations. In most cases, these impacts would also be experienced by the non-minority and/or non-low-income populations in the affected area. However, access to community facilities, such as the Kern County Parks and Recreation Department, Kern County Veterans Service Department, Iglesia de Dios Pentecostes La Hermosa, and State of California and Kern County offices that serve minority and low-income communities could be temporarily modified during construction, resulting in an inconvenience to minority and low-income patrons in these areas.

Construction impacts associated with noise, dust and glare are addressed in other sections of this Draft Supplemental EIR/EIS and would be mitigated to less than significant with measures identified in those sections (see Section 3.3 Air Quality and Global Climate Change, Section 3.4 Noise and Vibration, and Section 3.16 Aesthetics and Visual Resources, of this Draft Supplemental EIR/EIS). Through the implementation of project design features and mitigation measures, the impacts to important community facilities serving low-income and minority populations would be greatly reduced to a level similar to impacts experienced by the reference community as a whole. Consequently, construction activities would not result in disproportionately high and adverse effects on minority and low-income populations.

Construction would require a large number of employees but is not expected to have any negative effects related to temporary population increases such as overcrowding, housing shortages, or inadequate services, and there is not a projected need for increased housing and services that could disrupt existing community cohesion. Unemployment in the region remains relatively high (14.3 percent in the region and 11.8 to 17.4 percent in the local communities) (U.S. Census Bureau 2013a), so project-related construction jobs are expected to be filled by residents in the region who have the necessary skills. Because most of the jobs would be filled by area residents, no additional housing or services would be required, therefore avoiding the strain of an influx of new workers to communities in the area that would disrupt existing community cohesion.

Construction activities would also result in additional revenues collected from related property and sales tax and temporary improvement in the employment rate for construction workers and workers in support service industries. These additional revenues and access to employment would benefit the communities within the study area, including low-income and minority populations.

Station Planning, Land Use, and Development

There would be no adverse land use impacts because land used temporarily for construction staging, laydown and fabrication areas would be acquired from willing landowners and restored to their previous condition at the end of the construction period. These activities would not change the long-term pattern or intensity of land use or cause incompatibility with adjacent land uses (see Section 3.13 of this Draft Supplemental EIR/EIS). Because no adverse land use impacts would occur during construction, no minority or low-income populations would be adversely impacted.

Agricultural Lands

Construction activities for the F-B LGA would require the temporary use of agricultural land outside the permanent right-of-way and would result in disruption of some utilities and infrastructure in those areas. Appendix 3.12-A in the Fresno to Bakersfield Section Final EIR/EIS describes the process for right-of-way acquisition and the rights of property owners under the Uniform Relocation Assistance Program. Because utility disruptions would be avoided or resolved, or the landowner would be compensated for losses during the right-of-way acquisition process, these disruptions would not result in the permanent conversion of Important Farmland to nonagricultural use (see Section 3.14 of this Draft Supplemental EIR/EIS). Further, these impacts would not result in adverse effects on human health or environments in any communities,

[10] Impacts associated with displacement and relocation are addressed in Section 5.1.1, Property Displacements and Relocations.

including those with minority and low-income populations. Therefore, these impacts would not result in adverse impacts to minority and low-income populations.

Parks, Recreation, and Open Space

Construction activities for the F-B LGA would result in temporary closures, access restrictions, noise, dust, and visual impacts at parks and school district play areas near construction areas, including in communities with minority and low-income populations. The greatest impacts would be experienced at the Kern River Parkway, Weill Park, and the Metropolitan Recreation Area in Bakersfield. At the Kern River Parkway, which consists of an asphalt bike path on top of an earthen levee, there would a temporary bike and footpath detour; Weill Park, which consists of open grass areas and trees, would be closed during construction (approximately three to six months); users of the Metropolitan Recreation Area, which consists of ball fields, a recreational center, a picnic area, would experience temporary noise and dust impacts during construction. All three of these facilities are located in proximity to minority and low-income populations. However, both the Kern River Parkway and the Metropolitan Recreation Area are regional facilities that provide facilities for the entire Bakersfield area, not just adjacent neighborhoods. Weill Park is a small neighborhood park; however, it provides no recreational facilities and is not widely used.

Construction activities that result in increases in noise and vibration, dust, and visual disturbances would be reduced through avoidance and minimization measures, PRO-IAMM#1, NV-IAMM#1, AQ-IAMM#2, and AVR-IAMM#1, as described in Sections 3.2, Transportation; 3.3, Air Quality; 3.4, Noise and Vibration; and 3.16, Aesthetic and Visual Quality, of this Draft Supplemental EIR/EIS. Mitigation measure, PP-MM#1, would reduce the impact of temporary park closures by providing alternate access that allows for continued use of the impacted parks (see Section 3.15, Parks, Recreation, and Open Space, of this Draft Supplemental EIR/EIS). In addition, as discussed in the Constructability Assessment Report (Authority 2016: page 6-2), as the alignment passes through the cities of Shafter and Bakersfield, pedestrian detouring and access will be required. With implementation of these measures, all community members, including minority and low-income populations would continue to have access to parks and recreation areas during construction and their use would not be substantially impaired by construction activities. Consequently, construction activities for the F-B LGA would not result in disproportionately high and adverse effects on minority and low-income populations.

Aesthetics and Visual Resources

Construction activities for the F-B LGA would reduce the visual quality of scenic vistas and existing landscapes, and introduce new sources of light and glare. The visual impacts would impact all communities in both urban and rural areas, including minority and low-income populations. These impacts are the same as experienced by the non-minority and/or non-low-income populations in the affected area and are not unique to minority and low-income populations. Therefore, these adverse impacts would not be borne primarily by minority and low-income populations.

Mitigation measures AVR-MM#1a and AVR-MM#1b would reduce the visual disruption from construction activities by preserving vegetation and using temporary fencing and walls to screen views (see Section 3.16, Aesthetics and Visual Resources, of this Draft Supplemental EIR/EIS). Implementation of these mitigation measures will minimize all potential impacts, including those that would be experienced by minority and low-income populations, since the mitigation measures are applied equally throughout the project area during construction. Therefore, construction activities would not result in disproportionately high and adverse visual effects on minority and low-income populations.

Cultural Resources

Construction of the F-B LGA would indirectly affect four historic architectural resources from the introduction of visual elements that would alter the historic setting of these historic properties. In addition, the F-B LGA is proposed directly over or adjacent to seven historic architectural resources. Mitigation measures would reduce the noise and vibration and visual effects, as well

as require the inventory and monitoring of historic architectural resources (see Section 3.17 of this Draft Supplemental EIR/EIS).

Although the F-B LGA will not affect any known archaeological resources that are considered historic properties or resources, it could potentially affect unknown archaeological resources. The Memorandum of Agreement establishes mitigation measures to be implemented before, during, and after construction to ensure that construction activities would avoid and minimize adverse effects or changes to such resources.

With implementation of these measures, construction of the F-B LGA would not result in adverse effects to the cultural environment. Consequently, these impacts would not result in adverse impacts to minority and low-income populations.

5.6.3.2 Operation Period Impacts

Impact EJ#2 –Effects of Project Operation on Minority or Low-Income Populations

The F-B LGA would result in disproportionately high and adverse effects on minority and low-income populations. For most resource topics, implementation of avoidance and minimization measures, as well as mitigation measures would reduce identified impacts such that disproportionately high and adverse effects on minority and low-income populations would not occur. As described below, impacts associated with transportation; station planning, land use and development, and parks, recreation, and open space would be sufficiently mitigated such that the project would not result in disproportionately high and adverse effects on minority and low-income populations. However, for noise and vibration, socioeconomics and communities, and visual resources, the mitigation measures would not completely reduce impacts resulting from operation of the F-B LGA in communities with minority and low-income populations. Because the mitigation measures do not eliminate the adverse impacts and because the noise and vibration, socioeconomics and communities, land use, parks and recreation, and visual impacts would be greater for minority and low-income populations when compared to the reference community, operation of the F-B LGA would have disproportionately high and adverse effect on minority and low-income populations.

Operation Impacts Not Resulting in Disproportionately High and Adverse Effects

In cases where no effects were identified or impacts were less than significant under CEQA, no further analysis was conducted on the potential of the F-B LGA to affect a minority or low-income population. The resources that were found to have no effects or less than significant impacts to minority or low-income populations include: air quality and global climate change; EMF/ EMI; public utilities and energy; biological resources and wetlands; hydrology and water resources; geology, soils, and seismicity; hazardous materials and wastes; safety and security; agricultural lands; and cultural resources. A discussion of these topics is provided below.

Air Quality and Global Climate Change

At the regional level, operation of the F-B LGA would result in lower pollutant emissions, reduce statewide greenhouse gas emissions by 2020 and would be a net benefit to regional air quality (see Section 3.3, Air Quality and Global Climate Change, of this Draft Supplemental EIR/EIS). This impact would benefit all communities in the region, including minority and low-income populations.

As described in Section 3.3, Air Quality and Global Climate Change, of this Draft Supplemental EIR/EIS, operational-related emissions at and in the vicinity of the F Street Station and MOIF site will not result in local exceedance of ambient air quality standards and will not increase health risks to any of the nearby communities.

All communities would experience the regional air quality benefits associated with the F-B LGA, including minority and low-income populations. Because F-B LGA operation would result in an overall beneficial impact to minority and low-income populations and would not result in localized air quality impacts, the impacts would not be disproportionately high and adverse impacts on minority and low-income populations.

Electromagnetic Fields/Electromagnetic Interference

There would be no adverse EMF/EMI operation impacts on communities because operation EMF/EMI levels to which members of the general public, schools, hospitals, businesses, colleges, and residences would be exposed would be below industry standard limits (see Section 3.5 of this Draft Supplemental EIR/EIS). Because no adverse EMF/EMI impacts would occur during project operation, no minority or low-income populations would be adversely impacted.

Public Utilities and Energy

As with the May 2014 Project, the F-B LGA right-of-way would be fenced and secured after construction, including after the relocation or in-place protection of any utilities located within or through the right-of-way. F-B LGA facilities would not permanently disrupt existing utility infrastructure or the services that the utility providers' customers rely on (see Section 3.6, Public Utilities and Energy, of this Draft Supplemental EIR/EIS).With implementation of standard engineering and utility access practices, and avoidance and minimization measures described in Section 3.6, Public Utilities and Energy, of this Draft Supplemental EIR/EIS, the effects of F-B LGA on existing utilities during operation and maintenance would be less than significant.

As with the May 2014 Project, based on existing capacity for water, wastewater, and waste disposal facilities and existing rates of use along the F-B LGA, operation and maintenance of the F-B LGA would not require or result in new water, wastewater treatment, solid waste disposal, or energy facilities or expansion of existing facilities. Because no adverse public utility and energy impacts would occur during operation of the F-B LGA, no minority or low-income populations would be adversely impacted.

Biological Resources and Wetlands

Operations and maintenance activities associated with the F-B LGA would affect special status plants, wildlife and habitats of concern, but to a lesser degree than construction activities, as operational activities have a smaller footprint than construction activities (see Section 3.7, Biological Resources and Wetlands, of this Draft Supplemental EIR/EIS). Impacts to biological resources and wetlands would not result in adverse effects on human health or environments in any communities, including those with minority and low-income populations While some adverse effects to biological resources and wetlands are likely to occur during project operation, the resources affected are not related to human health, specific areas or resources used by the general public, including minority or low-income populations. Therefore, these impacts would not result in adverse impacts to minority and low-income populations.

Hydrology and Water Resources

The F-B LGA alignment, station, MOIF, and other associated improvements would consist of impervious surfaces, thereby resulting in a permanent increase in impervious surface in the study area. Water quality impacts could result from runoff associated with increases in new impervious surface area. However, site design, source control, and treatment BMPs, including biofiltration swales, biofiltration strips, infiltration devices, and detention devices, would be implemented to remove pollutants that have entered storm water runoff; therefore, no adverse water quality impacts would result from operation of the F-B LGA on any communities (see Section 3.8 of this Draft Supplemental EIR/EIS), including those with minority and low-income populations.

Design of floodplain crossings would include measures (e.g., columns would be placed and designed to minimize backwater effects and local scouring) to minimize the effects of placing concrete columns in the floodplains. In addition, a 250-foot span bridge would be used across the Kern River to reduce impacts to the Kern River floodplain, as described in Section 3.8, Hydrology and Water Resources, of this Draft Supplemental EIR/EIS. Because no adverse water quality impacts would occur in any communities during construction and operation of the F-B LGA, no minority or low-income populations would be adversely affected.

Geology, Soils, Seismicity, and Paleontological Resources

Operation of the F-B LGA could be affected by creep- or groundwater-related soil failures associated with the presence of unstable soils, soil settlement due to regional subsidence, shrink-swell impacts resulting from expansive soils, corrosion, and slope failure. Standard engineering and design features would be implemented to avoid these long-term impacts and meet building code requirements. The exposure of people to the potential effects from seismically induced surface fault rupture and ground shaking would be avoided by repairs that would occur with routine maintenance of the F-B LGA. Because no adverse geology, soils, and seismicity impacts would occur in any communities during F-B LGA operation, no minority or low-income populations would be adversely impacted.

Hazardous Materials and Wastes

Operation of the F-B LGA would require minimal temporary transport, use, and disposal of hazardous materials associated with preparation and installation of the rail facilities. No acutely hazardous materials would be required to operate the passenger rail service, except potentially at the MOIF. Similar to the May 2014 Project, long-term use and storage of hazardous materials (such as those from the routine use and disposal of hazardous materials and wastes for HSR System operation and maintenance at an MOIF) would be governed by regulations that prescribe the proper use and disposal of such materials (see Section 3.10 of this Draft Supplemental EIR/EIS).

Although the transport and use of hazardous materials are governed by numerous regulations, there is a chance that a spill or accidental release could occur. All populations in the study area could be exposed to the potential for adverse impacts if there was an accidental spill or release of hazardous materials and wastes, including minority and low-income populations. However, the extent of this impact would be determined by the location of the spill or release. The risk of such a spill or release and the associated potential impacts are the same as experienced by the non-minority and/or non-low-income populations in the study area, and are not unique to the minority and low-income populations. Because adverse impacts would not be borne primarily by minority and low-income populations, F-B LGA construction and operation would not result in disproportionately high and adverse effects on minority and low-income populations.

Safety and Security

Like the May 2014 Project, operation of the F-B LGA would provide a safety benefit because the system would use contemporary safety and signaling and be fully grade-separated to prevent conflicts with vehicle, pedestrians, and bicyclists. This impact would benefit all communities in the region, including minority and low-income populations.

The F-B LGA would occupy parcels that have been identified by the Authority as a potential safety and security concern, specifically with the potential for fire and explosions that could impact the HSR operation. Parcels of concern are the Halliburton Facility (34722 7th Standard Road), the Rain-for-Rent Facility (3404 State Road), and the Golden Empire Gleaners Facility (1326 30th Street), all of which are in the City of Bakersfield. However, only one, the Golden Empire Gleaners Facility, is located in proximity to minority and low-income communities. Implementation of mitigation measures S&S #2, S&S #3, and S&S #4 would reduce risks to human health resulting from fire and explosion (see Section 3.11 of this Draft Supplemental EIR/EIS).

F-B LGA operation could result in increased response time by law enforcement, fire, and emergency services personnel. The Authority would coordinate with emergency responders to incorporate roadway modifications for the F-B LGA that maintain existing traffic patterns and fulfill response route needs. Implementation of ground access design features and features that allow for emergency passenger evacuation from portions of the HSR System that would be elevated would reduce the potential for delayed or hampered response to emergencies on elevated track portions of the F-B LGA. Implementation of impact avoidance and minimization measures in conjunction with the HSR Systems Operation Control Center operational control, as discussed in Section 3.11.6, Safety and Security, of the Fresno to Bakersfield Section Final EIR/EIS, would

reduce the risks to human health associated with response times for law enforcement, fire, and emergency services personnel for the F-B LGA (Authority and FRA 2014: pages 3.11-43 through 3.11-45).

Neither the adverse impacts nor benefits associated with operation of the F-B LGA are unique to minority and low-income populations but would be experienced by the community as a whole. In addition, the avoidance and minimization measures, as well as mitigation measure S&S-MM#1, described in Section 3.11 of this Draft Supplemental EIR/EIS would minimize potential impacts, including those that would be experienced by minority and low-income populations, since the system safety and security measures would be applied throughout the study area.

Agricultural Lands

Project operation would result in the direct, permanent conversion of agricultural land, including 461 acres of Important Farmland, to nonagricultural use, including potential conversion from parcel severance, permanent access severance, and conflicts with farmland protection contracts (e.g., Williamson Act contracts). These impacts to agricultural lands would affect rural agricultural communities. The rural area between Shafter and Bakersfield, however, contains few Census blocks identified as minority and/or low-income.

The F-B LGA would have moderate short-term impacts on agricultural production in Kern County, with total estimated annual losses of $3.7 million in agricultural production value and 17 agricultural jobs**.** This estimated dollar value loss represents a small percentage (0.1 percent) of the total annual agricultural production in Kern County. In addition, consistent with the *Statewide Program EIR/EIS* mitigation strategy, that was approved under the *Fresno to Bakersfield Section Mitigation Monitoring and Enforcement Plan* (Authority and FRA 2014b) found in Appendix C of the Record of Decision for California High-Speed Train Fresno to Bakersfield, the Authority would place lands that are currently not under any type of farmland conservation easement into a new easement that would permanently protect the farmland from future conversion to nonagricultural uses. The performance standards for this measure are to preserve Important Farmland in an amount commensurate with the quantity and quality of the converted farmlands, within the same agricultural regions as the impacts occur, at a replacement ratio of not less than 1:1 for lands that are permanently converted to nonagricultural use by the project.

Agricultural land impacts would be distributed along rural agricultural areas in the study area. These areas have the lowest number of Census blocks identified as minority and/or low-income in the affected area and within the reference community. There are scattered, low-density minority and/or low-income populations in the area between Shafter and Bakersfield, but most of the impacted area does not contain minority and/or low-income populations. Therefore, these adverse impacts would not be borne primarily by minority and low-income populations, and consequently, F-B LGA operation would not result in disproportionately high and adverse effects on minority and low-income populations.

Cultural Resources

There would be no adverse impacts on cultural resources associated with F-B LGA operation because operational noise and vibration levels would not damage historic architectural resources (see Section 3.17, Cultural and Paleontological Resources, of this Draft Supplemental EIR/EIS). Because no adverse cultural resource impacts would occur during project operation, no minority or low-income populations would be adversely impacted.

Operation Impacts Resulting in Potential Disproportionately High and Adverse Effects

This section describes the potential for operation period effects on environmental resources in the environmental justice study area for the F-B LGA. Effects that were found to be substantial and significant before mitigation are described below. These effects were compared to the geographic locations of minority and low-income populations within the study area. This comparison was done to determine if any of these effects occurred disproportionately in minority or low-income communities or were of a disproportionately high magnitude within such communities, placing a potentially high burden of effect on minority and low-income populations. Impacts associated with

noise and vibration; socioeconomics and communities; and aesthetics and visual resources would have disproportionately high and adverse effects on minority and low-income populations. As described below, impacts associated with transportation; station planning, land use and development, and parks, recreation, and open space would be sufficiently mitigated such that the project would not result in disproportionately high and adverse effects on minority and low-income populations. All of these resource topics are described in further detail below.

Transportation

Operation of the F-B LGA would provide benefits to the regional transportation system by reducing vehicle trips on freeways by providing another mode of transportation for intercity passenger trips and by providing traffic safety benefits in areas where the F-B LGA would provide grade separation of existing at-grade rail crossings. All communities, including minority and low-income populations, would benefit from the reduction in roadway congestion and an increase in transportation options.

The F-B LGA would not generate any new trips that would contribute to the regional circulation network with the exception of the MOIF and the HSR station. However, due to the proposed alignment, modifications would be required to the existing circulation system that includes roadway closures, realignment, redesign of existing interchanges, addition of new traffic signals and roadway widening. At a local level, the F-B LGA would decrease the level of service on some roadway segments and at intersections in the vicinity of the F-B LGA. The adverse impacts to roadways, intersections, and access would impact all communities near the alignment, including minority and low-income populations.

Mitigation measures for operational impacts include a wide variety of roadway improvements including restriping, installation of signals, modification of signal timing, and roadway widening. Following mitigation, the traffic effects at all intersections and roadway segments would be less than significant.

Effects on the local circulation would occur in the congested areas of Bakersfield from the extension of the duration of peak periods of congestion. Affected intersections include: Mohawk Street/Rosedale Highway, Mohawk Street/ Hageman Road, Oak Street/Rosedale Highway-24th Street, Oak Street/Truxtun Avenue, F Street/24th Street, F Street/23rd Street, M Street/SR 204/28th Street, Union Avenue/California Avenue, and Beale Avenue/Jefferson Street-SR 178 Westbound Ramps. Some of these intersections are located within or in proximity to minority and/or low-income communities. As stated in Section 3.2, Transportation, of this Draft Supplemental EIR/EIS, the effect of this increased congestion would be considered less than significant.

Like the May 2014 Project, all populations in the study area would experience adverse transportation impacts as a result of project operation, including minority and low-income populations. Although some of these effects would be located within or in proximity to identified minority and/or low-income populations, all travelers through these areas would be affected by increased traffic congestion. Further, implementation of mitigation measures, TR-MM#2 through TR-MM#10 (see Section 3.2, Transportation of this Draft Supplemental EIR/EIS) would reduce traffic impacts throughout the affected areas. Therefore, these impacts would not be disproportionately high or adverse for minority and low-income populations.

Noise and Vibration

During operation, noise and vibration from the F-B LGA would exceed noise standards and affect sensitive receivers along the project corridor due to an increase in ambient noise levels and excessive vibration for building occupants. The increase in noise and vibration would impact all communities near the project, including minority and low-income populations. The implementation of mitigation measures (N&V-MM#3 through N&V-MM#7 as described in Section 3.4 of this Draft Supplemental EIR/EIS) would reduce project noise impacts. However, the construction of noise barriers may not be feasible or economically reasonable, sound insulation may not be acoustical feasible or practical for certain structures, and special track work may not reduce all noise impacts. Therefore, 152 sensitive receptors would still experience substantial and significant

operational noise impacts even with the implementation of proposed mitigation. As discussed in Section 3.4 Noise and Vibration, the final location and design of noise barriers would be determined during the testing and certification phase of the project. Once trainsets are operable (at the outset of the testing and certification phase), noise measurements would be taken at nearby sensitive receptors to acquire baseline noise measurements. Where severe noise impacts would remain with the installation of noise barriers, noise measurements during the testing and certification phase would indicate whether sound insulation would reduce noise impacts in interior spaces to an acceptable level. If noise impacts would remain severe after the installation of sound insulation, then a noise easement would be negotiated with the property owner.

Of the 152 sensitive receptors referenced above, most are located within urban areas in Shafter and Bakersfield containing minority and low-income populations. Because the mitigation measures do not eliminate the adverse effects, and because these areas are more likely to experience severe adverse noise and vibration impacts resulting from operation of the F-B LGA, operational noise and vibration would have disproportionately high and adverse effects on minority and low-income populations in these areas.

Socioeconomics and Communities

Implementation of the F-B LGA could result in the division/disruption of some communities through physical removal of homes, business, and important community facilities that would disrupt established patterns of interactions among community residents, as well as residents' access to community facilities and services.

The F-B LGA would primarily follow existing and long-established highway and railroad corridors that traverse the study area and divide existing neighborhoods. The F-B LGA primarily traverses areas zoned for industrial or commercial use that further divide communities located on either side of the highways and/or railroad tracks, reducing the effect to community division associated with the F-B LGA.

The F-B LGA would displace an estimated 86 residential units throughout the study area, with 29 of these displacements occurring in the city of Bakersfield. The other locations that could experience displacements are the city of Shafter (3 units), community of Oildale (23 units), and the remaining portions of unincorporated Kern County (31 units). The majority of these residential displacements would occur within areas that contain minority and low-income populations (see Section 3.12 of this Draft Supplemental EIR/EIS for more information). The displacement of residents and businesses in these communities could lead to the isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community. In addition, the F-B LGA would displace seven community facilities and directly affect an additional eight community facilities. These facilities include the Bakersfield Homeless Center, Golden Empire Gleaners, and the Mercado, which are used primarily by low-income and minority populations. The displacement of these important community facilities would disproportionately affect minority and low-income communities.

Community impacts due to project operation would be distributed along the entire study area and avoidance and minimization measures and mitigation measures, SO-MM#1 and SO-MM#3, would be applied as appropriate, as described in Section 3.12 of this Draft Supplemental EIR/EIS. Proposed mitigation measures would ensure that displaced residents would be relocated in the immediate vicinity, if possible, to reduce the potential for individuals to be isolated, excluded or separated within a given community or from the broader community. However, mitigation measures would not completely reduce the impacts in locations where many residential and community facility displacements would occur. The displacements and the residual community impacts during operation of the F-B LGA would affect minority and low-income populations in the urban communities, especially in the community of Oildale and City of Bakersfield.

Because the areas containing minority and low-income populations are more likely to experience greater displacement and community disruption and/or division impacts resulting from implementation of the F-B LGA, when compared to the larger reference community,

socioeconomic and community impacts would have disproportionately high and adverse effects in these locations.

Station Planning, Land Use, and Development

There would be no adverse station planning, land use and development impacts associated with project operation on any communities (see Section 3.13 of this Draft Supplemental EIR/EIS).

In urban areas such as Bakersfield, Shafter, and Oildale, which contain minority and low-income populations, implementation of the F-B LGA would convert commercial, industrial, and residential land uses adjacent to the F-B LGA to transportation uses, increasing the intensity of the use of this land. However, because the alignment would be adjacent to existing railroad corridors (e.g., BNSF Railway, Union Pacific Railroad), the conversion of this land would not substantially change the pattern and intensity of the use of the land and would be largely compatible with adjacent land uses and existing plans and policies.

In rural areas, such as the unincorporated rural agricultural areas in Kern County, implementation of the F-B LGA would convert agricultural land uses to transportation uses. The F-B LGA would substantially increase the intensity of the use of this land but would not change adjacent land uses. Existing adjacent agricultural land would continue in agricultural use, and the alignment would not have an indirect effect on adjoining agricultural uses. These rural areas have few scattered low-density minority and/or low-income populations.

The proposed Bakersfield F Street Station would be compatible with local zoning for higher density development and would be designed under the guidance of the HSR Station Area Development: General Principles and Guidelines (2010). The station would not cause an adverse effect on existing adjacent development, nor would it impair the ability to continue to use adjacent property. The proposed station would attract more people to the area and create opportunity for revitalization with new commercial and residential uses. The area affected by the potential for transit-oriented development near the proposed Bakersfield F Street Station and the surrounding region would realize beneficial effects, including increased employment, recreation, and community cohesion. All communities in proximity to the station would experience these benefits, including minority and low-income populations.

Because operation of the F-B LGA would not substantially change the pattern and intensity of the use of land and would be largely compatible with adjacent land uses and existing plans and policies, the impacts would not be disproportionately high and adverse impacts on minority and low-income populations.

Parks, Recreation, and Open Space

Implementation of the F-B LGA would include the acquisition of parklands for placement of infrastructure (e.g. viaduct footings). In addition, the project would require acquisition of easements along the alignment, but in viaduct areas these would be accessible for use by the public. The F-B LGA would require the permanent acquisition of approximately 0.099 acre of Weill Park, along with a 0.6-acre easement (approximately 6 percent of the total park area), and the permanent acquisition of 0.66 acre of Kern River Parkway, along with a 2.6-acre easement for the area spanning the Kern River Parkway (approximately 0.058 percent of the total park area). Mitigation includes requirements for the Authority to work with the affected jurisdiction (City of Bakersfield) and will provide appropriate compensation for permanently acquired park lands (see Section 3.15, Parks and Recreation, of this Draft Supplemental EIR/EIS). In addition, the proposed Bakersfield F Street Station would include new park space that would at least partially offset the parkland that would be acquired for the project, and would be located in generally the same area as the parkland being acquired. The F-B LGA is not anticipated to result in a substantially diminished capacity to use park resources or substantially reduce the recreational value of that resource, and replacement acreage would be provided for the acquired parkland. Therefore, impacts to parks would be sufficiently mitigated such that the project would not result in disproportionately high and adverse effects on minority and low-income populations.

The F-B LGA has the potential to permanently impact the character of the Kern River Parkway, Weill Park, Metropolitan Recreation Area and Uplands of the Kern River Parkway due to permanent increases in noise, visual disturbance, and facility use. However, as described in Section 3.15, Parks and Recreation, operation and maintenance of the F-B LGA would not significantly change the park character due to: the existing visual character of the surrounding area (e.g., largely urban in nature with limited aesthetic value); restoration of the affected Kern River Parkway section to pre-construction conditions or better; the intermittent operation noise associated with the F-B LGA; the location of the affected parks within an existing rail transport corridor (e.g., the context of the ambient noise environment would remain substantially the same as existing conditions); and the lack of sensitive vibration receivers. The project would not pass within 100 feet of any school district play areas or recreational facilities; therefore, no lands would be acquired from schools and no impact would occur on school district play areas or recreational facilities. Visual impacts and permanent increase in noise and vibration at parks would be reduced through the implementation of mitigation measures and impact avoidance and minimization measures for these topics. Therefore, impacts to parks would be sufficiently mitigated such that the project would not result in disproportionately high and adverse effects on minority and low-income populations.

Aesthetics and Visual Resources

Project implementation would result in permanent changes to areas adjacent to or in viewing range of the F-B LGA. These visual changes would occur with the introduction of new features, including both elevated and non-elevated HSR guideways, guideway support columns, and other HSR infrastructure (e.g., traction power supply stations, HSR alignment fencing), and visual intrusion and potential blocking of view from the use of sound barriers up to 14 feet high in some locations. The F-B LGA would also introduce new sources of light. The changes in visual quality would impact all communities in rural and urban areas near the F-B LGA, including minority and low-income populations.

As described in Section 3.16, Aesthetics and Visual Resources, of this Draft Supplemental EIR/EIS, significant impacts to visual quality would occur in Shafter, rural San Joaquin Valley, and North Bakersfield, along the Kern River (e.g., Kern River Parkway) and in East Bakersfield. The Shafter, Kern River and East Bakersfield areas contain predominantly minority and low-income populations, which would be affected by these changes in visual quality.

Impacts on aesthetics and visual resources would be distributed along the entire study area and mitigation measures would be applied. However, the mitigation measures would not achieve a complete reduction in impacts due to introduction of elevated structures and sound barriers (see Section 3.16 of this Draft Supplemental EIR/EIS) in areas containing minority and low-income populations. Because the mitigation measures do not eliminate the adverse impacts within areas containing minority and low-income populations and because these communities would bear a higher burden from these impacts when compared to the larger reference community, implementation of the F-B LGA would have disproportionately high and adverse visual effects on minority and low-income populations in these locations.

5.6.4 Summary of Disproportionately High and Adverse Effects

As shown in Figure 5-2 and described in Section 5.4, Affected Environment, minority and low-income populations in the May 2014 Project study area are located primarily in the urban areas of Shafter and Bakersfield. Within Shafter, minority and low-income communities are located primarily to the southwest of May 2014 Project alignment. In Bakersfield, areas with minority and low-income populations are concentrated south of Truxtun Avenue and around the May 2014 Project alignment at its southern terminus near Oswell Street.

Like the May 2014 Project, minority and low-income populations in the F-B LGA study area are located primarily in the urban areas of Shafter and Bakersfield. Within the F-B LGA study area, the community of Oildale also includes minority and low-income populations, and scattered areas of low-density minority and low-income populations are located in the rural areas of Kern County between Shafter and Bakersfield. Around the F Street Station, minority and low-income

populations are located primarily east/northeast of the station site (east of Chester Avenue) and south of SR 99. For the F-B LGA, one MOIF is proposed to be located in the city of Shafter between Poplar Avenue and Fresno Avenue. The communities south and east of the proposed MOIF site contain minority and low-income populations.

The F-B LGA would have disproportionately high and adverse effects on minority and low-income populations in similar resource areas as the May 2014 Project. However, a comparison between the impacts of the F-B LGA and May 2014 Project reveals that the degree of effects in each resource area differs. The F-B LGA would primarily follow existing and long-established highway and railroad corridors that traverse the study area and divide existing neighborhoods. The F-B LGA primarily traverses areas zoned for industrial or commercial use, minimizing the impacts to residentially-zoned properties that include minority and low-income populations as compared to the May 2014 Project. As shown in Table 5-3 below, for Noise and Vibration, Socioeconomics and Communities, Land Use, and Parks and Recreation, the F-B LGA has lesser impacts when compared with the May 2014 Project. The two alternatives have comparable impacts for Aesthetics.

Table 5-3 Environmental Justice Impact Comparison between the May 2014 Project and the Fresno to Bakersfield Locally Generated Alternative

Resource	May 2014 Project	F-B LGA	Relative Difference
Noise and Vibration	Disproportionately high and adverse effects	Disproportionately high and adverse effects	Lesser impacts would occur under the F-B LGA, as severe operational noise impacts would affect 152 sensitive receivers, compared to 305 sensitive receivers under the May 2014 Project.
Socioeconomics and Communities	Disproportionately high and adverse effects	Disproportionately high and adverse effects	Lesser impacts would occur under the F-B LGA as it would result in the displacement of 86 residences compared to the May 2014 Project, which would displace 384 residences.
Land Use	Disproportionately high and adverse effects	No disproportionate effects	Lesser impacts would occur under the F-B LGA as it would result in permanent conversion of an estimated 844 acres of land currently in other uses to transportation-related uses compared to the 977 acres that would be converted by the May 2014 Project. Additionally, unlike the May 2014 Project, the F-B LGA would primarily follow existing transportation corridors and would result largely in the conversion of industrial/commercial uses to transportation. The conversion of land along the alignment to transportation uses would, therefore, not result in incompatible land use effects.
Parks, Recreation, and Open Space	Disproportionately high and adverse effects	No disproportionate effects	Lesser impacts would occur under the F-B LGA because fewer parks and schools are located in close proximity to project activities than under the May 2014 Project and mitigation would provide appropriate compensation for permanently acquired parklands.
Aesthetics and Visual Resources	Disproportionately high and adverse effects	Disproportionately high and adverse effects	Comparable operational impacts would occur under both alternatives, but the F-B LGA would be considered preferable based on reduced impacts to residential uses; impacts during construction would be the same for both alternatives

Source: Authority and FRA 2017

Mitigation measures that would minimize or avoid most of the impacts associated with F-B LGA construction and operation are similar to those prescribed for the May 2014 Project.

As described further in Section 5.6.5, Project Benefits, below, the Authority and FRA along with the Environmental Protection Agency, U.S. Department of Housing and Urban Development, and the Federal Transit Administration have entered into an Interagency Partnership and established a "Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System in California," which includes a common goal of integrating HSR station access and amenities into the fabric of surrounding neighborhoods (Authority et al. 2011). The principles of this partnership are to help improve access to affordable housing, increase transportation options, lower transportation costs, and protect the environment in communities nationwide. The implementation of the Memorandum of Understanding would be beneficial to all populations, and could help intensify project benefits in the urban areas most affected by project impacts, where many minority and low-income populations are located. For example, the Authority would establish a temporary relocation field office to help facilitate relocation efforts in areas with substantial relocation needs. In addition to providing services, the Authority would be required to coordinate its relocation activities with other agencies causing displacements to minimize impacts while ensuring that all persons displaced receive fair and consistent relocation benefits. The Memorandum of Understanding applies to both the May 2014 Project and F-B LGA.

5.6.5 Project Benefits

The Authority and FRA along with the U.S. Environmental Protection Agency, the U.S. Department of Housing and Urban Development, and the Federal Transit Administration have entered into an Interagency Partnership and established a "Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System in California," which includes a common goal of integrating HSR station access and amenities into the fabric of surrounding neighborhoods (Authority et al. 2011). The principles of this partnership are to help improve access to affordable housing, increase transportation options, lower transportation costs, and protect the environment in communities nationwide. The implementation of the Memorandum of Understanding would be beneficial to all populations but could help intensify project benefits in the urban areas most affected by project impacts, where many minority and low-income populations are located. For example, the Authority will establish a temporary relocation field office to help facilitate relocation efforts in areas with substantial relocation needs. In addition to providing services, the Authority is required to coordinate its relocation activities with other agencies causing displacements to minimize impacts while ensuring that all persons displaced receive fair and consistent relocation benefits.

As part of the outreach effort, the Authority conducted numerous stakeholder meetings in 2015 to discuss the F-B LGA and obtain feedback about community concerns, including three community open houses, one activity center, and a Stakeholder Working Group with an impacted group of businesses. The Authority will continue its outreach activities, such as the meetings that have been held in the City of Bakersfield on July 9 and 24, August 7, 14, 23, and October 23, 2015, to address the F-B LGA and the specific communities that would be affected by this alignment. Specific efforts aimed at outreach to the environmental justice communities in the study area are ongoing and will be performed through design, construction, and start of operation.

According to USEO 12898, the offsetting project benefits associated with the project were considered in the Environmental Justice analysis described in Impact EJ#1 and EJ#2. The F-B LGA, like all of the HSR alternatives, would provide benefits that would accrue to all populations in the region, including minority and low-income populations. These benefits include improved mobility within the region, a reduction in traffic congestion on freeways, improvements in regional air quality, and the creation of new employment opportunities during project construction and operation. For more additional information on the Project Benefits, see Technical Appendix 1-B, Benefits, of this Draft Supplemental EIR/EIS.

Jobs created by construction and operation of the project would likely be filled by workers in the region. To ensure these job opportunities benefit minority and low-income populations, the Authority has approved the development of a Community Benefits Policy to support employment

of individuals who reside in disadvantaged areas and those designated as disadvantaged workers. Through the Community Benefits Policy, the Authority will also work to help remove potential barriers to small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the HSR system.

Additionally, station construction and planned station area improvements at the F Street Station in Bakersfield would benefit the local minority and low-income populations by providing interregional connectivity with other metropolitan centers, inducing residential and commercial infill development and increasing property values in the surrounding area.

Although this project would result in benefits which would accrue to minority and low-income populations, it is not possible to determine whether these would outweigh the adverse effects of the project for all minority and low-income populations with certainty because project benefits would accrue differently for households along the project corridor, depending on factors such as proximity to the project, access to station areas, and frequency of use of the F-B LGA. Moreover, homeownership status could be a crucial determinant of whether a household near a station would benefit from the potential increase in property values resulting from revitalization and economic development. Impact avoidance and minimization measures and mitigation measures that will reduce the potential project impacts to minority and low-income populations are discussed in Section 5.7 below. However, even when applying these mitigation measures, there remains a disproportionately high and adverse impact on minority and low-income populations.

5.7 Measures to Minimize Harm

The evaluation of impacts in this section is based largely on impacts identified in other sections of this Supplemental EIR/EIS, with accompanying mitigation measures to minimize or avoid some of the impacts on minority and low-income populations, as detailed in Section 5.6. The Authority will ensure that the measures outlined below are implemented to reduce disproportionately high and adverse impacts on minority and low-income populations resulting from implementation of the F-B LGA. In addition, environmental commitments in response to specific input from members of environmental justice communities will be incorporated into the F-B LGA as a result of ongoing outreach to those communities.

5.7.1 Mitigation Measures and Avoidance and Minimization Measures

5.7.1.1 Avoidance and Minimization Measures

All of the avoidance and minimization measures (referred to as project design features in Chapter 3.12 of the Fresno to Bakersfield Section Final EIR/EIS [Authority and FRA 2014: pages 3.12-135 through 3.12-138]) are applicable to the F-B LGA. The applicable list is provided in Technical Appendix 2-G, Mitigation Monitoring and Enforcement Plan. Technical Appendix 2-H describes how implementation of these measures reduces environmental effects that may result in disproportionately high and adverse effects to minority and low-income populations. The following Avoidance and Minimization Measures would be applicable to the May 2014 Project as well as the F-B LGA:

- **SO-AM #1: Construction Management Plan.** Development and implementation of a detailed construction management plan to address communications, community impacts, visual protection, air quality, safety controls, noise controls, and traffic controls to minimize impacts on low-income households and minority populations. The plan will assure project access is maintained and include coordination with local transit providers to minimize impacts on local and regional bus routes in affected communities.
- **SO-AM #2: Uniform Act and California Relocation and Assistance Act Compliance**. Development and implementation of a relocation mitigation plan to minimize the economic disruption related to relocation, provide affected property owners with assistance, coordinate relocation activities with other agencies, minimize permanent closure of displaced businesses and non-profit agencies, and provide regulatory compliance assistance.

5.7.1.2 Mitigation Measures from May 2014 Project

During project design and construction, the Authority and FRA would implement measures to reduce impacts on minority and low-income populations. The following mitigation measure was approved under the *Fresno to Bakersfield Section Mitigation Monitoring and Enforcement Plan* (Authority and FRA 2014: 1-50). Mitigation Measure SO-MM#6, shown in Table 5-4, is applicable to the F-B LGA.

Table 5-4 Mitigation Measures Applicable to the F-B LGA

Number	Description
SO-MM#6	Continue outreach to disproportionately and negatively impacted environmental justice populations. Environmental Justice outreach activities will be conducted in adversely affected neighborhoods to obtain resident feedback on potential impacts and suggestions for mitigation measures. Input from these communities will be used to refine the alternatives during ongoing design efforts. In addition, to offset any disproportionate effects, the Authority will develop special recruitment, training, and job set-aside programs so that minority and low-income populations are able to benefit from the jobs created by the project. This type of outreach is common for large infrastructure projects with long construction periods and has been found to be effective.

Source: Authority 2014
F-B LGA = Fresno to Bakersfield Locally Generated Alternative
Authority = California High-Speed Rail Authority

Mitigation Measure SO-MM#6 would require the Authority, prior to and during project construction and operation, to meet with affected residents and property owners and design appropriate measures to minimize impacts. The Authority would also hold workshops and create reports based on workshop and design findings and develop projects to ensure minority and low-income populations benefit from the jobs created by the project.

5.7.1.3 Mitigation Measures Specific to the F-B LGA

With the implementation of Mitigation Measure SO-MM#6, described above, disproportionately high and adverse effects to minority and low-income populations would be reduced by providing opportunities for these communities to provide feedback on potential impacts and suggestions for mitigation measures. This input will inform the design process. Further, this mitigation measure requires the development of programs so that minority and low-income populations are able to benefit from the jobs created by the project. No new project mitigation measures apply solely to the F-B LGA. Mitigation measures that apply to both the F-B LGA and May 2014 Project are discussed in Section 5.8.1.1.

5.7.2 F-B LGA Enhancements

No enhancements have been identified for F-B LGA, but in coordination with the community, this discussion will be updated as enhancements are identified. The Authority will consider any enhancements proposed during the public review process for this Supplemental EIR/EIS.

5.8 Environmental Justice Determination

The proposed F-B LGA would result in adverse impacts on minority and low-income populations residing or conducting business in the project corridor. Implementation of proposed impact avoidance and minimization measures, best management practices and mitigation measures would not completely eliminate impacts resulting from operation of the F-B LGA related to noise and vibration, socioeconomics and communities, and visual resources. Those minority or low-income populations that would be disproportionately affected by the F-B LGA are the environmental justice populations for the project. These environmental justice populations are located in the urban areas along the project alignment, Shafter, Oildale, and Bakersfield, where the highest density of minority and low-income populations are located.

As described in Section 3.4, Noise and Vibration, of this Supplemental EIR/EIS, to mitigate operational noise impacts at sensitive receivers, noise barriers were evaluated for feasibility and reasonableness. Of the six noise barriers evaluated, all noise barriers were determined reasonable and feasible. However, even with implementation of these noise barriers, unmitigated severe noise impacts would remain for approximately 152 sensitive receivers. The majority of these unmitigated impacts would occur in minority or low-income areas along the project alignment. These receivers would be eligible for either sound insulation or payment of property for noise easements, consistent with N&V-MM#3 (see Section 3.4.4.3 of this Draft Supplemental EIR/EIS), which would help to reduce potential noise impacts, but would not completely eliminate the disproportionately high and adverse noise impact on minority and low-income populations. No additional practicable mitigation measures are available to reduce this impact.

As described in Section 3.12, Socioeconomics and Communities, of this Draft Supplemental EIR/EIS, Mitigation Measures SO-MM#1 through SO-MM#5 address relocation through locating suitable replacement properties comparable to those currently occupied by residents, as well as suitable replacement facilities, if necessary. Additionally in cases where residents wish to remain there are measures in place to purchase vacant land or buildings in the area, and outreach to determine how communities may be substantially altered by construction of the F-B LGA. Measures also include community workshops to identify contextual design responses and use options that could strengthen the community and minimize disruption of relocations. Implementation of these measures would help to reduce potential community impacts related to displacement of residents, businesses, and community facilities; but would not completely eliminate the disproportionately high and adverse impact on minority and low-income populations. No additional practicable mitigation measures are available to reduce this impact.

As described in Section 3.16, Aesthetics and Visual Resources, of this Draft Supplemental EIR/EIS, with implementation of Mitigation Measures AVR-MM#1a through AVR-MM#2h adverse visual effects associated with construction activities and the introduction of prominent HSR structures would be mitigated to the extent feasible. These mitigation measures would minimize or avoid significant adverse aesthetic impacts to the extent feasible; however, adverse impacts to visual quality related to the introduction of permanent physical infrastructure, particularly HSR guideways with elevated structures, raised embankments, and retaining walls, and associated overpasses, would remain substantial. No additional practicable mitigation measures are available to reduce this impact.

The minority and low-income populations in the study area would benefit from the transit improvements the F-B LGA would provide including improved mobility within the region, a reduction in traffic congestion on freeways, improvements in regional air quality, and the creation of new employment opportunities during project construction and operation. Moreover, these benefits would be equal to the benefits to the general public.

FRA and the Authority have been conducting targeted outreach activities for minority and low-income residents and businesses for the F-B LGA since 2015. These outreach efforts built on the previous efforts conducted for the Fresno to Bakersfield Section, which began in 2007 and continued through 2014. The F-B LGA CIA (Authority and FRA 2017) documents how minority and low-income populations have been engaged in project planning activities. Generally, members of minority and low-income populations have voiced similar concerns about the F-B LGA as the general public, as described in Section 5.5.2, Issues and Concerns, above.

This project would result in benefits which would accrue to minority and low-income populations and impact avoidance and minimization measures and mitigation measures will reduce most of the potential project impacts to minority and low-income populations. However, even when applying these mitigation measures, there remains a disproportionately high and adverse impact on minority and low-income populations from project operations and in the cumulative condition. Therefore, FRA has preliminarily concluded that the F-B LGA would result in disproportionately high and adverse environmental effects on minority and low-income populations. However, as described in Section 5.7, the F-B LGA has lesser impacts when compared with the May 2014 Project.