

CALIFORNIA HIGH-SPEED TRAIN

Project Environmental Impact Report /
Environmental Impact Statement

DRAFT

Fresno to Bakersfield

Draft Relocation Impact Report

July 2012



California High-Speed Train Project

Draft Relocation Impact Report

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URS/HMM/Arup Joint Venture

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Acronyms and Abbreviations

ACAIS	Air Carrier Activity Information System
AIP	Airport Improvement Plan
Authority	California High-Speed Rail Authority
BNSF	Burlington Northern Santa Fe
C.C.R.	Code of California Regulations
CDP	Census Designated Place
CFR	Code of Federal Regulations
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
DRIR	<i>Draft Relocation Impact Report</i>
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
EJ	environmental justice
FAA	Federal Aviation Administration
FRA	Federal Railroad Administration
GIS	Geographic Information System
HMF	heavy maintenance facility
HST	high-speed train
HUD	U.S. Department of Housing and Urban Development
mph	mile(s) per hour
NAICS	North American Industry Classification System
NEPA	National Environmental Policy Act
OCS	overhead catenary system
P.L.	Public Law
Region	the four-county study region
RTP	Regional Transportation Plan
SR	State Route
Statewide Program EIR/EIS	Final Program Environmental Impact Report/Environmental Impact Statement of the Proposed California High-Speed Train System
STIP	State Transportation Improvement Program

TPS	traction power substation
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USPS	U.S. Postal Service

Chapter 1.0

Summary

1.0 Summary

This report provides information on property displacements and resident and business relocations as well as on the availability and suitability of relocation resources within the study area. The term 'displacement' is used to represent property takings that result in the acquisition of a parcel or structure, while the term 'relocation' is used to represent the need to find new homes for the residents and institutions, such as businesses, that are located in affected structures.

The study region (Region) is composed of the four counties that make up the southern San Joaquin Valley—Fresno, Kings, Tulare, and Kern. In these counties, the project directly affects six urban areas—the cities of Fresno, Hanford, Corcoran, Wasco, Shafter, and Bakersfield. This study area is defined as those privately held residential, commercial, and industrial properties (parcels) that fall within the project footprint. The project footprint is defined as the alignment right-of-way, construction areas, borrow sites, and road crossings.

1.1 Project History

The California High-Speed Rail Authority (Authority) proposes to construct, operate, and maintain an electric-powered high-speed train (HST) system in California. When completed, the nearly 800-mile train system would provide new passenger rail service to more than 90% of the state's population. More than 200 weekday trains would serve the statewide intercity travel market. The HST would be capable of operating at speeds of up to 220 miles per hour (mph), with state-of-the-art safety, signaling, and automated train-control systems. The system would connect and serve the major metropolitan areas of California, extending from San Francisco and Sacramento in the north to San Diego in the south.

In 2005, the Authority and the Federal Railroad Administration (FRA) prepared a *Final Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) of the Proposed California High-Speed Train System* (Statewide Program EIR/EIS) that evaluated the HST's ability to meet the existing and future capacity demands on California's intercity transportation system (Authority and FRA 2005). This was the first phase of a tiered environmental review process (Tier 1) for the proposed statewide HST System. The Authority and the FRA completed a second Program EIR/EIS in May 2008 to identify a preferred alignment for the Bay Area to Central Valley Section (Authority and FRA 2008).

The Authority and FRA are now undertaking second-tier, project environmental evaluations for sections of the statewide HST System. This *Draft Relocation Impact Report (DRIR)* is for the Fresno to Bakersfield Section. The Fresno to Bakersfield Section begins at the proposed Fresno HST station in Downtown Fresno and extends to the proposed Bakersfield HST station in Downtown Bakersfield. Information from this report is summarized in the project EIR/EIS for the Fresno to Bakersfield HST Section and will be part of the administrative record supporting the environmental review of the proposed project.

1.2 Project Background

For the HST System, including the Fresno to Bakersfield Section, the FRA is the lead federal agency for compliance with the National Environmental Policy Act (NEPA) and other federal laws. The Authority is serving as a joint-lead agency under NEPA and is the lead agency for compliance with the California Environmental Quality Act (CEQA). The U.S. Army Corps of Engineers (USACE) is serving as a cooperating agency under NEPA for the Fresno to Bakersfield Section.

This DRIR is prepared in support of the Fresno to Bakersfield Section: Environmental Impact Report/Environmental Impact Statement (EIR/EIS), under the direction of the Authority. The Fresno to Bakersfield Project EIR/EIS will be developed as a stand-alone, second-tier, project-

level environmental document. It will be tiered from and will incorporate by reference the certified Statewide Program EIR/EIS in accordance with Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] Part 1508.28) and California Environmental Quality Act (CEQA) Guidelines (14 C.C.R. 15168[b]).

The analysis contained in this report references and uses information contained in the *Final Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Proposed California High-Speed Train System* and the *California High-Speed Train Project Environmental Analysis Methodologies* (Authority and FRA 2005, 2009) to ensure consistency with previous decisions and guidance provided by the Authority and the FRA.

This analysis also uses and references information in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011), which contains summaries of relevant elements in the general plans; descriptions of the affected environment and communities; an examination of the environmental consequences to the character and cohesion in communities and neighborhoods; and effects on environmental justice (EJ) populations and several sensitive elderly, disabled, linguistically isolated, and female head-of-household populations; agricultural access; and fiscal implications for county and city governments.

1.3 Project Description

The Fresno to Bakersfield Section of the HST project extends from the city of Fresno to the city of Bakersfield and lies within Fresno, Kings, Tulare, and Kern counties, California. To comply with the Authority's guidance to use existing transportation corridors when feasible, the Fresno to Bakersfield Section would be primarily sited adjacent to the existing BNSF Railway corridor. Alternative alignments are being considered where engineering constraints require deviation from the existing railroad corridor and where necessary to avoid environmental impacts.

The project footprint would primarily consist of the train right-of-way, which would typically be 100 feet wide and consist of a northbound and a southbound track. An additional project footprint would be required to accommodate stations, multiple track at stations, power substations, and maintenance facilities. The Fresno to Bakersfield Section would include a station in Fresno, a station in Bakersfield, and a Kings/Tulare Regional Station in the vicinity of Hanford to provide service to Hanford, Tulare, Visalia, and Corcoran. It would also include one heavy maintenance facility (described below). Several locations for power substations are also being considered along the entire length of the alignment.

Chapter 2 provides a detailed description of the project, including alignment alternatives as well as proposed station and heavy maintenance facility (HMF) locations.

1.4 Project Area Characteristics

This document presents background information on the demographic composition, community character, and EJ status of the Region and its counties, cities, unincorporated communities, and rural areas including:

- Population characteristics (demographics, age, income, household characteristics, linguistic isolation, and disabilities).
- Housing.
- EJ populations.
- Local economy.
- Community facilities and non-motorized circulation.

Information about the affected environment is presented in geographical order from north to south along the project alignment. Data sources for counties and urban areas include the U.S. Census, American Community Survey, the California Department of Finance, the California Employment Development Division, the California State Board of Equalization, as well as local data sources. The rural areas that lie between the cities along the alignment were identified by reviewing maps, through discussion with local officials, and through field research or site visits.

Within the four counties, the study area encompasses portions of six cities (Fresno, Hanford, Corcoran, Wasco, Shafter, and Bakersfield) as well as several smaller communities. Between these cities, most of the land is in agricultural use, but in the large cities of Fresno and Bakersfield (the 5th- and 11th-largest cities in the state, respectively), there are dense residential and commercial areas. The smaller cities of Hanford, Corcoran, Wasco, and Shafter are mixes of residential, commercial, and agricultural use. These were examined as whole cities given their smaller geographic area and more homogeneous populations. The small rural communities of Laton, Grangeville, and Armona, which are located between Fresno and Hanford, were also examined. Fresno and Bakersfield were determined to be too large and to contain too many distinct neighborhoods and heterogeneous populations to be examined as a whole. Therefore, study area profiles for these cities also include data by district to create more project-focused areas for analysis.

This summary section presents an overview of regional information. County- and city-specific information is presented in the main body of this technical report.

1.4.1 Population Characteristics

The population in the Region has increased in the last decade and is projected to increase substantially over the next 25 years. The two largest racial or ethnic groups are White and Hispanic. Between 2000 and 2008, the percentages of these two groups shifted substantially, with the total non-Hispanic White population declining slightly to 37.4% and the Hispanic population growing by 289,916 to 49.8%.

In 2008, median annual household income across the four counties was highest in Kings County at \$50,962 and lowest in Fresno County at \$43,737. By comparison, the median annual household income for the state of California was \$61,062 in the same year. The cities of Hanford and Bakersfield had higher incomes than the other cities in the study area over the 2000 to 2008 period.

According to the California Department of Finance, the Region had 606,395 households in 2000, and the average household size was 3.11 people. In 2009, the number of households grew to 715,664, and the average household size increased to 3.18 people.

The predominant housing type across the four counties is single-family homes, accounting for 72% of existing units in the Region in 2009. Multifamily units and mobile homes account for 20% and 8% of the remaining housing stock, respectively. The rate of home ownership for the Region as a whole has decreased from 59.3% of all occupied housing units in 2000 to 56.8% in 2008. Vacancy rates of all home types range between 5% and 12%. Kings County is unique in the Region because approximately 12% of the total population is housed in group quarters, including the three state prison facilities located at Avenal and Corcoran, and the approximately 4,000 military housing units at NAS Lemoore.

The Region as a whole has a high percentage of minority and low-income individuals. According to the 2000 Census, minorities form 56.5% of the total regional population, and 22.2% of the total population is living below the U.S. Census poverty threshold. Within the study area, these percentages are even higher, with minority and low-income individuals totaling 68.7% and

28.3% of the study area population, respectively. Hispanics are the predominate minority in EJ areas, accounting for 80% of the minority population. The cities of Fresno, Corcoran, Wasco, Shafter, and Bakersfield have high concentrations of EJ populations.

1.5 Local Economy

Levels of employment and income in the southern San Joaquin Valley have historically lagged behind those in other parts of the state. The four counties of Fresno, Kings, Tulare, and Kern make up one of the most agriculturally productive areas in the world, and the regional economy has been driven by the farming industry. Although the four counties have led the state in agricultural revenues and agriculture remains the leading employment sector, the regional economy has also been diversifying in recent decades to become more oriented towards services.

Despite having a large number of jobs, the Region continues to be one of the most economically depressed areas in the nation, because many of the jobs are seasonal and low-paying. The real estate market collapse in 2007, and the national and statewide recessions since then have triggered substantial increases in unemployment, home foreclosures, and poverty rates, as well as in sharp declines in housing prices. Consequently, state and local governments have been hit hard by a loss of both property and sales tax revenues.

1.6 Methods

The relocation analysis has several steps, each with its own methods of data collection and analysis. The analysis yielded the following:

- An inventory of the parcels within the HST footprint under the BNSF Alternative or under any of the various alternative alignments.
- An evaluation of the actual or zoned land use (residential, commercial/industrial, agricultural, community facility/public services, or existing right-of-way) of each parcel.
- An analysis of the relocation-related impacts from the potential property displacements.

Property displacements were identified through intensive review of Geographic Information System (GIS) data that presented the spatial relationship between the project alternatives, the existing county parcel boundaries, and aerial photo imagery of the structures located on affected parcels. In cases where the aerial imagery and other geographic databases were not sufficient to identify the land use or the type or number of structures on a parcel, site visits were made to collect additional information.

Parcel impacts were reviewed to determine whether the project would be likely to require a full or partial acquisition of the affected real estate and to estimate the number of individual residences, residents, businesses, employees/jobs, community or public service facilities, and agricultural facilities that would be displaced and require relocation. These were all totaled for each county, city, unincorporated area, and district, where applicable. The analysis also involved estimating the fiscal impacts on local jurisdictions through lost property and sales tax revenue, potential impacts on sensitive populations and school districts, and economic impacts associated with the taking of agricultural land and facilities.

An analysis was performed to evaluate the capacity of the Region and each affected county, city, district, and rural area within it to absorb relocated residents and businesses. Data from a variety of sources, including public and private databases of commercial and residential real estate available for rent or purchase, were collected and used to generate an estimate of the available supply of suitable replacement properties. Property demand associated with project

displacements was then compared with the currently available supply of similarly zoned, sized, and equipped properties in each affected district, city, or county. Where shortfalls (gaps) or surpluses existed, these were noted and discussed, along with any special relocation issues or needs that were identified in the course of the analysis.

1.7 Findings

The Fresno to Bakersfield Section of the HST System is an extensive project affecting a large number of parcels. This Relocation Impact Report describes potential displacements and relocations in terms of whether the affected land uses are primarily residential, commercial and industrial (includes all non-agricultural businesses), agricultural, or community and public service facilities. Findings are summarized below for each category, as well as for indirect impacts associated with these displacements.

1.7.1 Residential

Along the BNSF Alternative, 451 residential units would be displaced, and an estimated 1,430 people would need to be relocated. Almost 70% of these residential displacements are in the city of Bakersfield, particularly in the Northwest and Northeast districts. The analysis of replacement resources showed that at this time large surpluses of every housing type exist in every affected community. This finding means that there is sufficient capacity to relocate every individual in comparable, or better, existing housing in the same community.

The alternative alignments would cause different numbers of residential displacements than would the corresponding segments of the BNSF Alternative, but the differences are relatively small. Most of these differences are around 10, or fewer, housing units per alternative. The exceptions are the Corcoran Elevated and the Corcoran Bypass alternatives, which displace 49 and 21 fewer residences, respectively, than the corresponding segment of the BNSF Alternative that passes at-grade through the more populated section of Corcoran to the west of the existing railroad tracks. The Bakersfield Hybrid Alternative would displace 79 fewer residences than the corresponding segment of the BNSF Alternative that passes through a densely population section of Bakersfield.

Of all of the proposed station alternatives, only the Bakersfield Station–North Alternative would displace any residential units (16 residential units in total). The Fresno HMF site would displace 31 residences, the Kings County—Hanford HMF Site would displace 1 residential unit, the Kern Council of Governments—Wasco HMF Site would displace 1 residential unit, and the Kern Council of Governments—Shafter West HMF Site would displace 5 residential units. There are abundant relocation resources are available in all locations.

As for disruption of EJ communities and other sensitive populations, the *Socioeconomic, Communities, and Environmental Justice Technical Report* (conducted in parallel with this study) found that disproportionately high and adverse impacts on EJ communities would occur during both construction and operation of the HST System. However, none of these impacts are directly associated with displacement impacts. The relocation plan that the Authority will prepare for this project will provide adequate resources and special assistance for all members of EJ or sensitive-population groups to reduce the hardships associated with relocation for this public project.

1.7.2 Commercial and Industrial Businesses

Along the entire BNSF Alternative, an estimated 395 commercial and industrial businesses would be relocated for the project. This corresponds to an estimated 2,458 relocated employees in total. Bakersfield businesses account for 302 of the 395 total business relocations. According to the North American Industry Classification System (NAICS) classification of relocated commercial

and industrial businesses, the primary types of businesses that would be relocated along the BNSF Alternative are automotive repair; wholesale trade; professional, scientific, and technical services; machinery and equipment services; accommodation and food services; construction, transportation, and warehousing; health care and social assistance; administrative and support; and waste management and remediation services.

In those portions of the BNSF Alternative with an alternative alignment, the results were similar, although not identical. The Corcoran Elevated, Corcoran Bypass, and Wasco-Shafter Bypass Alternative would displace 15, 16, and 19 fewer businesses, respectively, than the corresponding segment of the BNSF Alternative. The Hanford West Bypass 1 and Hanford West Bypass 2 alternatives would displace four more businesses than the corresponding segment of the BNSF Alternative. The Bakersfield Hybrid Alternative would displace 22 fewer businesses than the corresponding segment of the BNSF Alternative. The difference is greater between the Bakersfield South Alternative and its corresponding segment of the BNSF Alternative. The BNSF Alternative would relocate 167 businesses more than the Bakersfield South Alternative. This difference is mostly due to the estimated 118 businesses affected at the Mercado Latino Tianguis location in the Northeast District.

The Fresno Station—Mariposa alternatives would relocate 4 businesses and as many as 54 employees. The Fresno Station—Kern Alternative would relocate 1 business with an estimated 8 employees. The Bakersfield Station—North Alternative would relocate 19 businesses; the Bakersfield Station—Hybrid Alternative would relocate 22 businesses, while the Bakersfield Station—South Alternative would displace only 6 businesses.

The proposed Fresno Works—Fresno HMF Site would displace 8 businesses and an estimated 43 employees. The Kern Council of Governments—Wasco and Shafter West HMF sites would displace 1 and 2 businesses, respectively. The proposed Kings County Hanford and Kern Council of Governments—Shafter East HMF sites would not cause the relocation of any businesses.

An assessment of available parcels suitable for relocating businesses was conducted. The NAICS codes for the businesses that would be relocated were used to establish the particular needs of each business, and the description, configuration, and zoning of the parcels listed as available were used to evaluate their suitability. The results of this gap analysis showed that enough alternative sites are available for relocation of the retail, commercial, office, industrial, transportation and warehousing sector businesses that would be displaced by the project. Two exceptions to this finding were identified. The first are relocations in the city of Corcoran, where current vacancies are minimal and as a result, there is a deficit of all types of required business properties in the city. Also, there is a shortfall in facilities suited for automotive repair or service, particularly in Bakersfield. Relocating these businesses could therefore require modification of the equipment or configuration of other available parcels and facilities. These general results hold at the regional, county, and city levels. Despite the ample availability of suitable replacement properties for displaced businesses, it is possible, though undetermined, that these commercial displacements could adversely affect the viability of their respective local business districts.

1.7.3 Agriculture

Impacts on agricultural parcels were considered as part of this relocation study. Since agricultural parcels in California's Central Valley tend to be large, there were relatively few full-parcel acquisitions. More often, the HST alternative alignments would remove an edge or a corner of a parcel; however, in other cases parcels would be split by the alignment. Sometimes agricultural facilities, including processing plants and dairy buildings, were located within the alignment footprint and therefore would require relocation to another portion of the parcel or to a different parcel. In the Central Valley, many farms are made up of multiple parcels of land, and the taking

or splitting of an individual parcel—while still an impact—is of less concern than negatively affecting the facilities that support work on those parcels.

Along the entire BNSF Alternative, an estimated 112 agricultural parcels would be split, and 19 parcels contain agricultural facilities that would be displaced. The majority of split parcels are in Kings County, where 45 agricultural parcels would be split by the BNSF Alternative; the majority of displaced agricultural facilities would be in Fresno and Kings counties (9 and 5 parcels, respectively).

The impacts on agricultural parcels under the alternative alignments are similar in nature, although the magnitude is somewhat different. The Corcoran Elevated, Bakersfield South, and Bakersfield Hybrid alternative alignments are virtually identical to their corresponding segments of the BNSF Alternative. Larger impacts are seen in the Corcoran Bypass, Allensworth Bypass, and to a lesser extent along the Wasco-Shafter Bypass and the Hanford West Bypass 1 and Hanford West Bypass 2 alternative alignments, as these alternatives would bypass urban areas and in doing so, cut across agricultural lands.

The station alternatives in Fresno and Bakersfield are in urban areas and would not affect agricultural operations. The Kings/Tulare Regional Station—East Alternative (potential) and Kings/Tulare Regional Station--West Alternative (potential), while located in a more agricultural area, would not split any parcels nor displace any existing agricultural facilities. The HMF alternatives would have very little effect on agricultural splits or facilities.

Economic impacts associated with these impacts on agricultural businesses are evaluated in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report*, which estimates potential losses in agricultural production, assesses the value of lost yields, and estimates agricultural job losses that would result from the project.

1.7.4 Community Facilities / Public Service Facilities

The HST alternative alignments avoid most community facilities and other properties that provide public services. The visual interpretation and parcel-by-parcel analysis of the BNSF Alternative and other alternative alignments found no displacements of police or fire stations, libraries, post offices, or civic centers. Overall, the BNSF along with all alternatives has the potential to affect 24 community facilities. These facilities are summarized in the next paragraph.

Along the BNSF Alternative, 11 affected parcels house facilities that are important to the community (8 in Bakersfield): the Mercado Latino Tianguis, Bakersfield High School's Industrial Arts Building, and 6 religious facilities. The BNSF would also affect the Fresno Rescue Mission, which provides beds, living space, and other support services for up to 250 homeless people and the Amtrak station in Corcoran. The Wasco-Shafter Bypass Alternative would require relocation of one religious facility in the community of Crome. The Bakersfield South Alternative would require relocation of several businesses and facilities associated with the Mercy Hospital medical complex as well as nine religious facilities. The Bethel Christian School (associated with the First Free Will Baptist Church) would also need to be relocated. Like the Bakersfield South Alternative, the Bakersfield Hybrid Alternative would require relocation of several businesses and facilities associated with the Mercy Hospital medical complex and two religious facilities. In addition, the Kern County Mental Health facility, the Mercado Latino Tianguis, and a Bakersfield homeless shelter would also be displaced.

Mitigation measures were developed to reduce the impacts associated with these displacements. The Authority's relocation plan will include special outreach and assistance programs to facilitate relocation of these facilities, which provide services to the surrounding communities.

1.8 Relocation Resources and Relocation Plan

Relocation resources include the physical space available to accept relocated residents, businesses, and other land uses; these are discussed at length in Chapter 5 of this report. Relocation resources also include the policies, programmatic assistance, funding sources, and other resources to support and assist individuals in relocating. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law [P.L.] 91-646) established guidelines for relocation assistance to be provided to persons relocated as a result of land acquisition for public projects. The Authority's relocation assistance programs are aimed at meeting or exceeding the requirements of P.L. 91-646.¹

Once a preferred project alignment is selected, the Authority will develop a final relocation plan detailing how the various forms of relocation assistance described above will be provided to the specific households and businesses that will require relocation services. This assistance will include relocation assistance advisors, financial assistance, and programs to help relocated households move, with as little inconvenience as possible, into comparable "decent, safe, and sanitary" housing. Relocated people will receive information on the availability of alternative housing options and prices, transportation to inspect housing options, translation services, assistance with paperwork, and various forms of assurance. Dislocation allowances will be provided to cover the costs associated with such expenses as transferring utility services and temporary storage. More direct financial assistance is available in the form of Relocation Housing Payments, which include reimbursement for actual moving expenses as well as allowances to cover the price differential between current rent payments and those for a replacement rental unit.

The Authority is able to provide all necessary funding for relocation from the sale of bonds from the State of California, from the federal government's American Recovery and Reinvestment Act, and from other sources.

As with residential relocations, relocation resources are available for nonresidential relocations, including the relocation of businesses, farms, and nonprofit organizations. The program features are similar to the resources available for residential relocations; however, the assistance programs vary slightly for businesses. Under the Uniform Relocation Act, businesses are not entitled to the same degree of support, assistance, or compensation to which relocated residents are entitled. The body of this report discusses this and other aspects of the relocation plan and relocation resources.

¹ The Authority has adopted the California Department of Transportation (Caltrans) *Right of Way Manual* as the basis for all business and residential relocations on the project. The Caltrans Right of Way Manual Section 10.01.02.01 states that relocation assistance will be administered in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act for all projects regardless of funding sources. In preparing this document, we also looked at the state statutes governing relocation assistance (found in the California Government Code, Section 7260 et seq.), and the California Relocation Assistance and Real Property Acquisition Guidelines (found in the C.C.R., Title 25, chapter 6 [the Guidelines]). Both of these provide that for projects with state-only funding, state agencies shall adopt regulations to administer relocation assistance under state law and, with respect to a federally funded project, a public entity shall make relocation assistance payments and provide relocation advisory assistance as required under federal law.

Chapter 2.0

Project Description

2.0 Project Description

2.1 Project Introduction

The Fresno to Bakersfield Section of the HST project would be approximately 114 miles long, varying in length by only a few miles depending on the route alternatives selected. To comply with the Authority's guidance to use existing transportation corridors when feasible, the Fresno to Bakersfield HST Section would primarily be located adjacent to the existing BNSF Railway right-of-way. Alternative alignments are being considered where engineering constraints require deviation from the existing railroad corridor, and where necessary to avoid environmental impacts.

The Fresno to Bakersfield HST Section would cross both urban and rural lands and include a station in both Fresno and Bakersfield, a potential Kings/Tulare Regional Station in the vicinity of Hanford, a potential heavy maintenance facility (HMF), and power substations along the alignment. The HST alignment would be entirely grade-separated, meaning that crossings with roads, railroads, and other transport facilities would be located at different heights (overpasses or underpasses) so that the HST would not interrupt nor interface with other modes of transport. The HST right-of-way would also be fenced to prohibit public or vehicle access. The project footprint would primarily consist of the train right-of-way, which would include both a northbound and southbound track in an area typically 120 feet wide. Additional right-of-way would be required to accommodate stations, multiple track at stations, maintenance facilities, and power substations.

The Fresno to Bakersfield Section would include at-grade, below-grade, and elevated track segments. The at-grade track would be laid on an earthen rail bed topped with rock ballast approximately 6 feet off the ground; fill and ballast for the rail bed would be obtained from permitted borrow sites and quarries. Below-grade track would be laid in an open or covered trench at a depth that would allow roadway and other grade-level uses above the track. Elevated track segments would span long sections of urban development or aerial roadway structures and consist of steel truss aerial structures with cast-in-place reinforced-concrete columns supporting the box girders and platforms. The height of elevated track sections would depend on the height of existing structures below, and would range from 40 to 80 feet. Columns would be spaced 60 to 120 feet apart.

2.2 Project Alternatives

2.2.1 Alignment Alternatives

This section describes the Fresno to Bakersfield HST Section project alternatives, including the No Project Alternative. The Project EIR/EIS for the Fresno to Bakersfield HST Section examines alternative alignments, stations, and HMF sites within the general BNSF Railway corridor. Discussion of the HST project alternatives begins with a single continuous alignment (the BNSF Alternative) from Fresno to Bakersfield. This alternative most closely aligns with the preferred alignment identified in the Record of Decision (ROD) for the Statewide Program EIR/EIS. Descriptions of the additional eight alternative alignments that deviate from the BNSF Alternative for portions of the route then follow. The alternative alignments that deviate from the BNSF Alternative were selected to avoid environmental, land use, or community issues identified for portions of the BNSF Alternative (Figure 2-1).

2.2.1.1 No Project Alternative

Under the No Project Alternative, the HST System would not be built. The No Project Alternative represents the condition of the Fresno to Bakersfield Section as it existed in 2009 (when the Notice of Preparation was issued), and as it would exist without the HST project at the planning horizon (2035). In assessing future conditions, it was assumed that all currently known programmed and funded improvements to the intercity transportation system (highway, rail, and transit), and reasonably foreseeable local development projects (with funding sources identified), would be developed by 2035. The No Project Alternative is based on a review of regional transportation plans (RTPs) for all modes of travel, the State of California Office of Planning and Research CEQAnet Database, the Federal Aviation Administration Air Carrier Activity Information System and Airport Improvement Plan grant data, the State Transportation Improvement Program, airport master plans and interviews with airport officials, intercity passenger rail plans, and city and county general plans and interviews with planning officials.

2.2.1.2 BNSF Alternative

The BNSF Alternative's cross sections include provisions for a 102-foot separation of the HST track centerline from the BNSF Railway track centerline, as well as separations that include swale or berm protection, or an intrusion protection barrier (wall) where the HST tracks are closer. A 102-foot separation between the centerlines of BNSF Railway and HST tracks is provided wherever feasible and appropriate. In urban areas where a 102-foot separation could result in substantial displacement of businesses, homes, and infrastructure, the separation between the BNSF Railway and HST was reduced. The areas with reduced separation require protection to prevent encroachment on the HST right-of-way in the event of a freight rail derailment. The use of a swale, berm, or wall protection would depend on the separation distance.

The BNSF Alternative would extend approximately 114 miles from Fresno to Bakersfield and would lie adjacent to the BNSF Railway route to the extent feasible (Figure 2-1). Minor deviations from the BNSF Railway corridor would be necessary to accommodate engineering constraints, namely wider curves necessary to accommodate the HST (as compared with the existing lower-speed freight line track alignment). The largest of these deviations occurs between approximately Elk Avenue in Fresno County and Nevada Avenue in Kings County. This segment of the BNSF Alternative would depart from BNSF Railway corridor and instead curve to the east on the northern side of the Kings River and away from Hanford, and would rejoin the BNSF Railway corridor north of Corcoran.

Although the majority of the alignment would be at-grade, the BNSF Alternative would include aerial structures in all of the four counties through which it travels. In Fresno County, an aerial structure would carry the alignment over Golden State Boulevard and SR 99, and a second would cross over the BNSF Railway tracks in the vicinity of East Conejo Avenue. The alignment would be at-grade with bridges where it crosses Cole Slough and the Kings River into Kings County.

In Kings County, the BNSF Alternative would be elevated east of Hanford where the alignment would pass over the San Joaquin Valley Railroad (SJVR) and SR 198. The alignment would also be elevated over Cross Creek, and again in the city of Corcoran to avoid a BNSF Railway spur and agricultural facilities located at the southern end of the city. In Tulare County, the BNSF Alternative would be elevated at the Tule River crossing and over Deer Creek and the Stoil railroad spur that runs west from the BNSF Railway mainline. In Kern County, the BNSF Alternative would be elevated through the cities of Wasco, Shafter, and Bakersfield. The BNSF Alternative would be at-grade through the rural areas between these cities.

The BNSF Alternative would provide wildlife crossing opportunities by means of a variety of engineered structures. Dedicated wildlife crossing structures would be provided from

approximately Cross Creek (Kings County) south to Poso Creek (Kern County) in at-grade portions of the railroad embankment at approximately 0.3-mile intervals. In addition to those structures, wildlife crossing opportunities would be available at elevated portions of the alignment, at bridges over riparian corridors, at road overcrossings and undercrossings, and at drainage facilities (i.e., large-diameter [60 to 120 inches] culverts and paired 30-inch culverts). Where bridges, aerial structures, and road crossings coincide with proposed dedicated wildlife crossing structures, such features would serve the function of, and supersede the need for, dedicated wildlife crossing structures.

The preliminary wildlife crossing structure design consists of a modified culvert in the embankment that would support the HST tracks. The typical culvert would be 73 feet long from end to end (crossing structure distance), would span a width of approximately 10 feet (crossing structure width), and would provide 3 feet of vertical clearance (crossing structure height). Additional wildlife crossing structure designs could include circular or elliptical pipe culverts, and larger (longer) culverts with crossing structure distances of up to 100 feet. The design of the wildlife crossing structures may change depending on site-specific conditions and engineering considerations.

2.2.1.3 Hanford West Bypass 1 Alternative

The Hanford West Bypass 1 Alternative would parallel the BNSF Alternative from East Kamm Avenue to approximately East Elkhorn Avenue in Fresno County. At East Conejo Avenue where the BNSF Alternative crosses to the eastern side of the BNSF Railway tracks to pass the city of Hanford to the east, the Hanford West Bypass 1 Alternative continues south on the western side of the BNSF Railway tracks. The Hanford West Bypass 1 would diverge from the BNSF Railway corridor just south of East Elkhorn Avenue and ascend onto an elevated structure just south of East Harlan Avenue, crossing over the Kings River complex and Murphy Slough and passing the community of Laton to the west. The Hanford West Bypass 1 Alternative would return to grade just north of Dover Avenue. The alignment would continue at-grade, curve gently to the east, and travel between the community of Armona to the west and the city of Hanford to the east. The Hanford West Bypass 1 Alternative would rejoin the BNSF Railway corridor on its western side at about Lansing Avenue. The alignment would then ascend onto another elevated structure, traveling over Cross Creek and special aquatic features that exist north of Corcoran. This alignment would return to grade just north of Nevada Avenue and would connect to the BNSF Alternative, traveling through Corcoran at-grade on the western side of the BNSF Railway corridor. The total length of the Hanford West Bypass 1 Alternative would be approximately 28 miles.

The Hanford West Bypass 1 Alternative includes a design option where the alignment would be below-grade between Grangeville Boulevard and Houston Avenue. The alignment would travel below-grade in an open cut with side slopes as it transitions to a retained-cut profile. As the alignment transitions back to grade just north of Houston Avenue, the open-cut profile would be used once more. The alignment would cross SR 198 and several local roads. South Peach Avenue, East Clarkson Avenue, East Barrett Avenue, Elder Avenue, and South Tenth Avenue would be closed at the HST right-of-way, while the other roads would be realigned and/or grade-separated from the HST with overcrossings/undercrossings. Grade separations at Grangeville Boulevard, Thirteenth Avenue, and West Lacey Boulevard would be determined based on the alignment design option selected (at-grade or below-grade).

The potential Kings/Tulare Regional Station–West Alternative would be located along this alignment, east of Thirteenth Avenue between Lacey Boulevard and the SJVR railroad spur. This potential station includes an at-grade and below-grade design option as well.

2.2.1.4 Hanford West Bypass 2 Alternative

The Hanford West Bypass 2 Alternative would be the same as the Hanford West Bypass 1 Alternative from East Kamm Avenue to just north of Jackson Avenue, where the Hanford West Bypass 2 would curve away from the Hanford West Bypass 1 to the east. The Hanford West Bypass 2 Alternative would then travel over Kent Avenue, the BNSF Railway right-of-way, and Kansas Avenue on an elevated structure. Similar to the Hanford West Bypass 1 Alternative, the Hanford West Bypass 2 Alternative would travel over Cross Creek and the special aquatic features located north of Corcoran and return to grade north of Nevada Avenue; however, the Hanford West Bypass 2 would be located on the eastern side of the BNSF Railway tracks in order to connect to either the Corcoran Elevated Alternative or the Corcoran Bypass Alternative, described below. Like the Hanford West Bypass 1 Alternative, the total length of the Hanford West Bypass 2 Alternative would be approximately 28 miles.

The Hanford West Bypass 2 Alternative includes the same below-grade design option between Grangeville Boulevard and Houston Avenue as the Hanford West Bypass 1 Alternative, as well as either the at-grade or below-grade potential Kings/Tulare Regional Station–West Alternative. Similar to the Hanford West Bypass 1 Alternative, Hanford West Bypass 2 would cross SR 198 and several local roads. Road closures would be the same as those for the Hanford West Bypass 1, and roadway modifications at Grangeville Boulevard, Thirteenth Avenue, and West Lacey Boulevard would depend on the alignment design option selected.

2.2.1.5 Corcoran Elevated Alternative

The Corcoran Elevated Alternative would be the same as the corresponding section of the BNSF Alternative from approximately Nevada Avenue to Avenue 136, except that it would pass through the city of Corcoran on the eastern side of the BNSF Railway right-of-way on an aerial structure. The aerial structure would begin at Niles Avenue and return to grade south of Fourth Avenue. The total length of the Corcoran Elevated Alternative would be approximately 10 miles. Dedicated wildlife crossing structures would be provided from approximately Cross Creek south to Avenue 136 in at-grade portions of the railroad embankment at intervals of approximately 0.3 mile. Dedicated wildlife crossing structures would also be placed between 100 and 500 feet to the north and south of both the Cross Creek and Tule River crossings.

This alternative alignment would pass over several local roads on an aerial structure. Santa Fe Avenue and Avenue 136 would be closed at the HST right-of-way.

2.2.1.6 Corcoran Bypass Alternative

The Corcoran Bypass Alternative would diverge from the BNSF Alternative at Nevada Avenue and swing east of Corcoran, rejoining the BNSF Railway route at Avenue 136. The total length of the Corcoran Bypass would be approximately 10 miles. Similar to the corresponding section of the BNSF Alternative, most of the Corcoran Bypass Alternative would be at-grade. However, one elevated structure would carry the HST over SR 43, the BNSF Railway, and the Tule River. Dedicated wildlife crossing structures would be provided from approximately Cross Creek south to Avenue 136 in at-grade portions of the railroad embankment at intervals of approximately 0.3 mile. Dedicated wildlife crossing structures would also be placed between 100 and 500 feet to the north and south of each of the Cross Creek and Tule River crossings.

This alternative alignment would cross SR 43, Whitley Avenue/SR 137, and several local roads. SR 43, Waukena Avenue, and Whitley Avenue would be grade-separated from the HST with an overcrossing/undercrossing; other roads would be closed at the HST right-of-way.

2.2.1.7 Allensworth Bypass Alternative

The Allensworth Bypass Alternative would pass west of the BNSF Alternative, avoiding Allensworth Ecological Reserve and the Allensworth State Historic Park. This alignment was refined over the course of environmental studies to reduce impacts to wetlands and orchards. The total length of the Allensworth Bypass Alternative would be approximately 21 miles, beginning at Avenue 84 and rejoining the BNSF Alternative at Elmo Highway. The Allensworth Bypass Alternative would be constructed on an elevated structure only where the alignment crosses Deer Creek and the Stoil railroad spur. The majority of the alignment would pass through Tulare County at-grade. Dedicated wildlife crossing structures would be provided from approximately Avenue 84 to Poso Creek at intervals of approximately 0.3 mile. Dedicated wildlife crossing structures would also be placed between 100 and 500 feet to the north and south of both the Deer Creek and Poso Creek crossings.

The Allensworth Bypass would cross several roads including County Road J22, Avenue 24, Garces Highway, Woollomes Avenue, Magnolia Avenue, Pond Road, and Elmo Highway. Avenue 24, Woollomes Avenue, and Elmo Highway would be closed at the HST right-of-way, while the other roads would be realigned and/or grade-separated from the HST with overcrossings.

2.2.1.8 Wasco-Shafter Bypass Alternative

The Wasco-Shafter Bypass Alternative would diverge from the BNSF Alternative between Taussig Avenue and Zachary Avenue, crossing over to the eastern side of the BNSF Railway tracks and bypassing Wasco and Shafter to the east. The Wasco-Shafter Bypass Alternative would be at-grade except where it travels over 7th Standard Road and the BNSF Railway to rejoin the BNSF Alternative. The total length of the Wasco-Shafter Bypass Alternative would be approximately 21 miles.

The Wasco-Shafter Bypass was refined to avoid the Occidental Petroleum tank farm as well as a historic property potentially eligible for listing on the National Register of Historic Places. The Wasco-Shafter Bypass would cross SR 43, SR 46, East Lerdo Highway, and several local roads. Roads, including SR 46, Kimberlina Road, Shafter Avenue, Beech Avenue, Cherry Avenue, and Kratzmeyer Road, would be grade-separated from the HST with overcrossings/undercrossings; other roads would be closed at the HST right-of-way.

2.2.1.9 Bakersfield South Alternative

From the Rosedale Highway (SR 58) in Bakersfield, the Bakersfield South Alternative would parallel the BNSF Alternative at varying distances to the north. At Chester Avenue, the Bakersfield South Alternative would curve south and run parallel to California Avenue. As with the BNSF Alternative, the Bakersfield South Alternative would begin at-grade and become elevated starting at Country Breeze Place through Bakersfield to its terminus at Oswell Street. Dedicated wildlife crossing structures would not be required because this alternative would be elevated to the north and south of the Kern River.

The Bakersfield South Alternative would be approximately 12 miles long and would cross many of the same roads as the BNSF Alternative. This alternative includes the Bakersfield Station–South Alternative.

2.2.1.10 Bakersfield Hybrid Alternative

From Rosedale Highway (SR 58) in Bakersfield, the Bakersfield Hybrid Alternative would follow the Bakersfield South Alternative and parallel the BNSF Alternative at varying distances to the north. At approximately A Street, the Bakersfield Hybrid Alternative would diverge from the Bakersfield South Alternative, cross over Chester Avenue and the BNSF right-of-way in a

southeasterly direction, then curve back to the northeast to parallel the BNSF Railway tracks towards Kern Junction. After crossing Truxtun Avenue, the alignment would curve to the southeast to parallel the UPRR tracks to its terminus at Oswell Street. As with the BNSF and Bakersfield South alternatives, the Bakersfield Hybrid Alternative would begin at-grade and become elevated starting at Country Breeze Place through Bakersfield to Oswell Street. Dedicated wildlife crossing structures would not be required because this alternative would be elevated to the north and south of the Kern River.

The Bakersfield Hybrid Alternative would be approximately 12 miles long and would cross many of the same roads as the BNSF and Bakersfield South alternatives. This alternative includes the Bakersfield Station–Hybrid Alternative.

2.2.2 Station Alternatives

The Fresno to Bakersfield HST Section would include a new station in Fresno and a new station in Bakersfield. A potential third station, the Kings/Tulare Regional Station, is under consideration.

Stations would be designed to address the purpose of the HST, particularly to allow for intercity travel and connection to local transit, airports, and highways. Stations would include the station platforms, a station building, and associated access structure, as well as lengths of bypass tracks to accommodate local and express service at the stations. All stations would contain the following elements:

- Passenger boarding and alighting platforms.
- Station head house with ticketing, waiting areas, passenger amenities, vertical circulation, administration and employee areas, and baggage and freight-handling service.
- Vehicle parking (short-term and long-term) and “kiss-and-ride.”²
- Motorcycle/scooter parking.
- Bicycle parking.
- Waiting areas and queuing space for taxis and shuttle buses.
- Pedestrian walkway connections.

2.2.2.1 Fresno Station Alternatives

Two alternative sites are under consideration for the Fresno Station.

Fresno Station–Mariposa Alternative

The Fresno Station–Mariposa Alternative would be located in Downtown Fresno, less than 0.5 mile east of SR 99 on the BNSF Alternative. The station would be centered on Mariposa Street and bordered by Fresno Street on the north, Tulare Street on the south, H Street on the east, and G Street on the west. The station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet.

The two-level station would be at-grade; with passenger access provided both east and west of the HST guideway and the UPRR tracks, which would run parallel to one another next to the station. The first level would contain the public concourse, passenger service areas, and station and operation offices. The second level would include a mezzanine, a pedestrian overcrossing above the HST guideway and the UPRR tracks, and an additional public concourse area. Entrances would be located at both G and H streets. A conceptual site plan of the Fresno Station–Mariposa Alternative is provided in Figure 2-2.

² “Kiss-and-ride” refers to the station area where riders may be dropped off or picked up before or after riding the HST.

The majority of station facilities would be east of the UPRR tracks. The station and associated facilities would occupy approximately 20.5 acres, including 13 acres dedicated to the station, short-term parking, and kiss-and-ride accommodations. A new intermodal facility, not a part of this proposed undertaking, would be located on the parcel bordered by Fresno Street to the north, Mariposa Street to the south, Broadway Street to the east, and H Street to the west (designated "Intermodal Transit Center" in Figure 2-2). Among other uses, the intermodal facility would accommodate the Greyhound facilities and services that would be relocated from the northwestern corner of Tulare and H streets.

The site proposal includes the potential for up to three parking structures that would occupy a total of approximately 5.5 acres. Two of the three potential parking structures would each sit on 2 acres, and each would have a capacity of approximately 1,500 cars. The third parking structure would be slightly smaller in footprint (1.5 acres), with five levels and a capacity of approximately 1,100 cars. An additional 2-acre surface parking lot would provide approximately 300 parking spaces.

Under this alternative, the historic Southern Pacific Railroad depot and associated Pullman Sheds would remain intact. While these structures could be used for station-related purposes, they are assumed not to be functionally required for the HST project, and are therefore not proposed to be physically altered as part of the project. The Mariposa station building footprint has been configured to preserve views of the historic railroad depot and associated sheds.

Fresno Station–Kern Alternative

The Fresno Station–Kern Alternative would be similarly situated in Downtown Fresno and would be located on the BNSF Alternative, centered on Kern Street between Tulare Street and Inyo Street (Figure 2-3). This station would include the same components as the Fresno Station–Mariposa Alternative, but under this alternative, no station facilities would be located adjacent to the historic Southern Pacific Railroad depot and relocation of existing Greyhound facilities would not be required.

The station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet. The station building would have two levels and house the same facilities as the Fresno Station–Mariposa Alternative (UPRR tracks, HST tracks, mezzanine, and station office). The approximately 18.5-acre site would include 13 acres dedicated to the station, bus transit center, short-term parking, and kiss-and-ride accommodations.

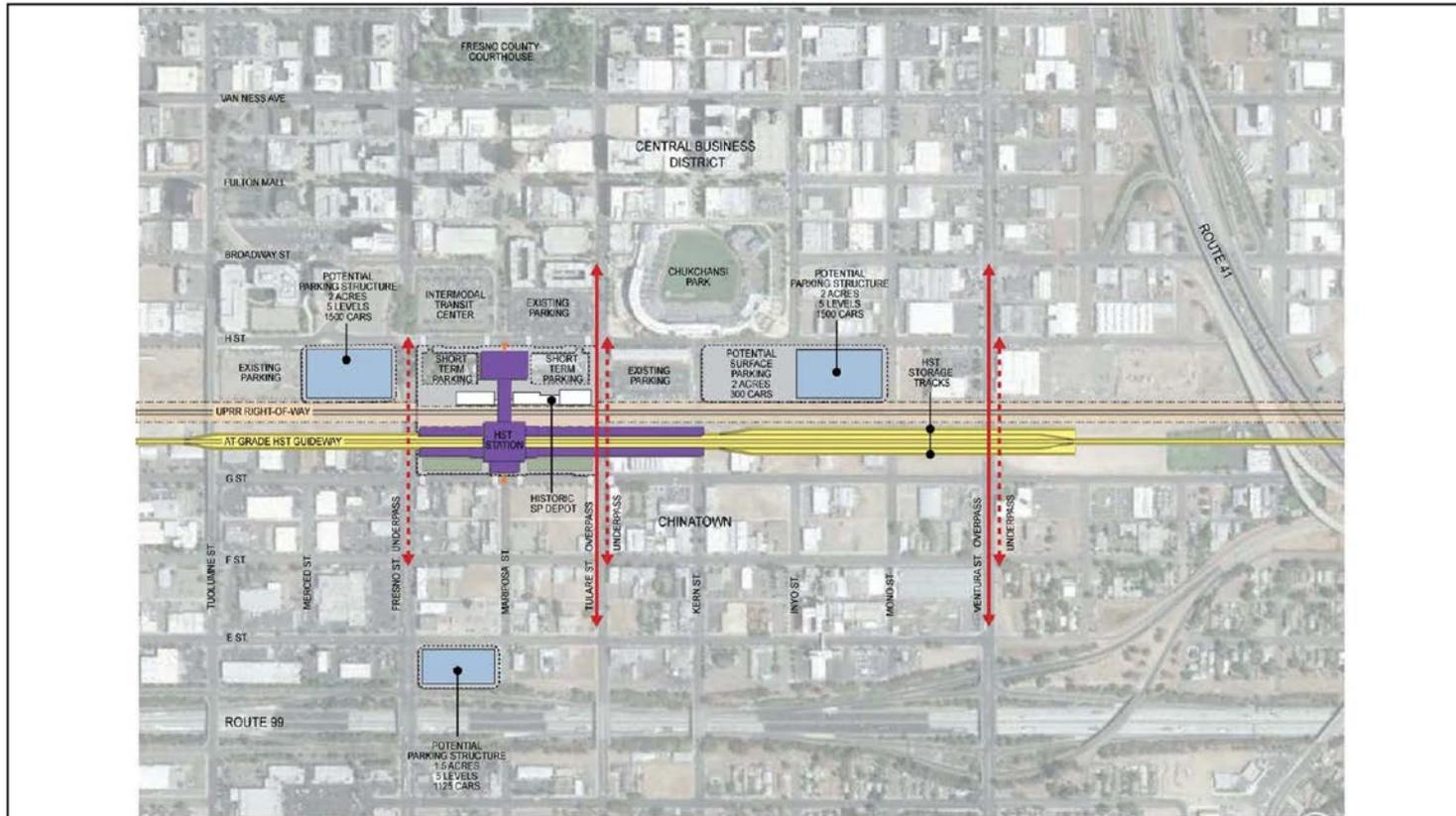
Two of the three potential parking structures would each sit on 2 acres, and each would have a capacity of approximately 1,500 cars. The third structure would be slightly smaller in footprint (1.5 acres) and have a capacity of approximately 1,100 cars. Surface parking lots would provide approximately 600 additional parking spaces. Like the Fresno Station–Mariposa Alternative, the majority of station facilities under the Kern Alternative would be sited east of the HST tracks.

2.2.2.2 Kings/Tulare Regional Station

Two alternative sites are under consideration for the potential Kings/Tulare Regional Station.

Kings/Tulare Regional Station–East Alternative

The potential Kings/Tulare Regional Station would be located east of SR 43 (Avenue 8) and north of the SJVR on the BNSF Alternative (Figure 2-4). The station building would be approximately 40,000 square feet with a maximum height of approximately 75 feet.



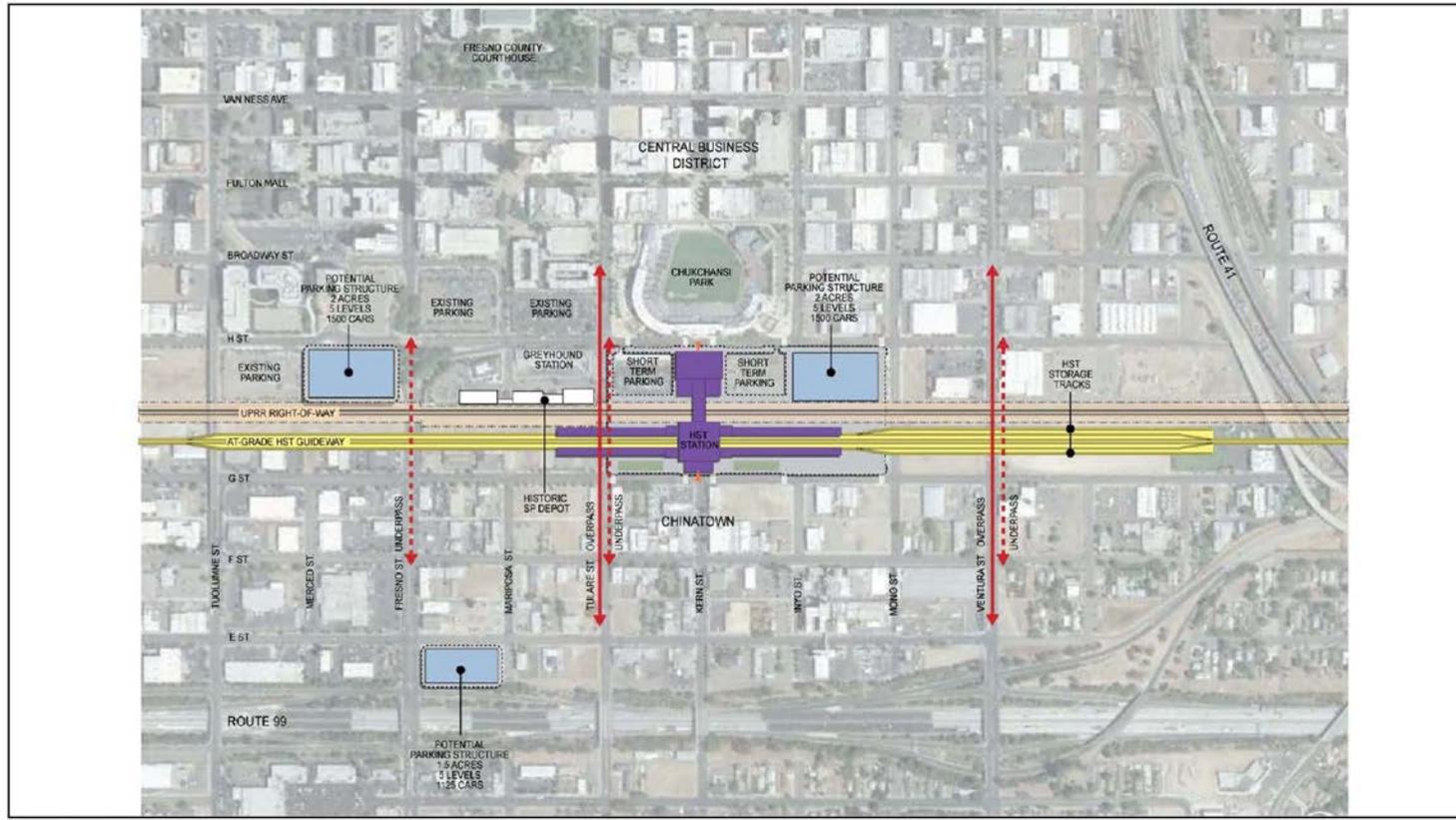
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

March 6, 2012

NOT TO SCALE

-  STATION ENTRANCE
-  KEY PEDESTRIAN LINKAGE
-  OPEN SPACE
-  STATION CAMPUS BOUNDARY
-  RIGHT-OF-WAY BOUNDARY
-  ROADWAY MODIFICATION

Figure 2-2
 Fresno Station–Mariposa Alternative



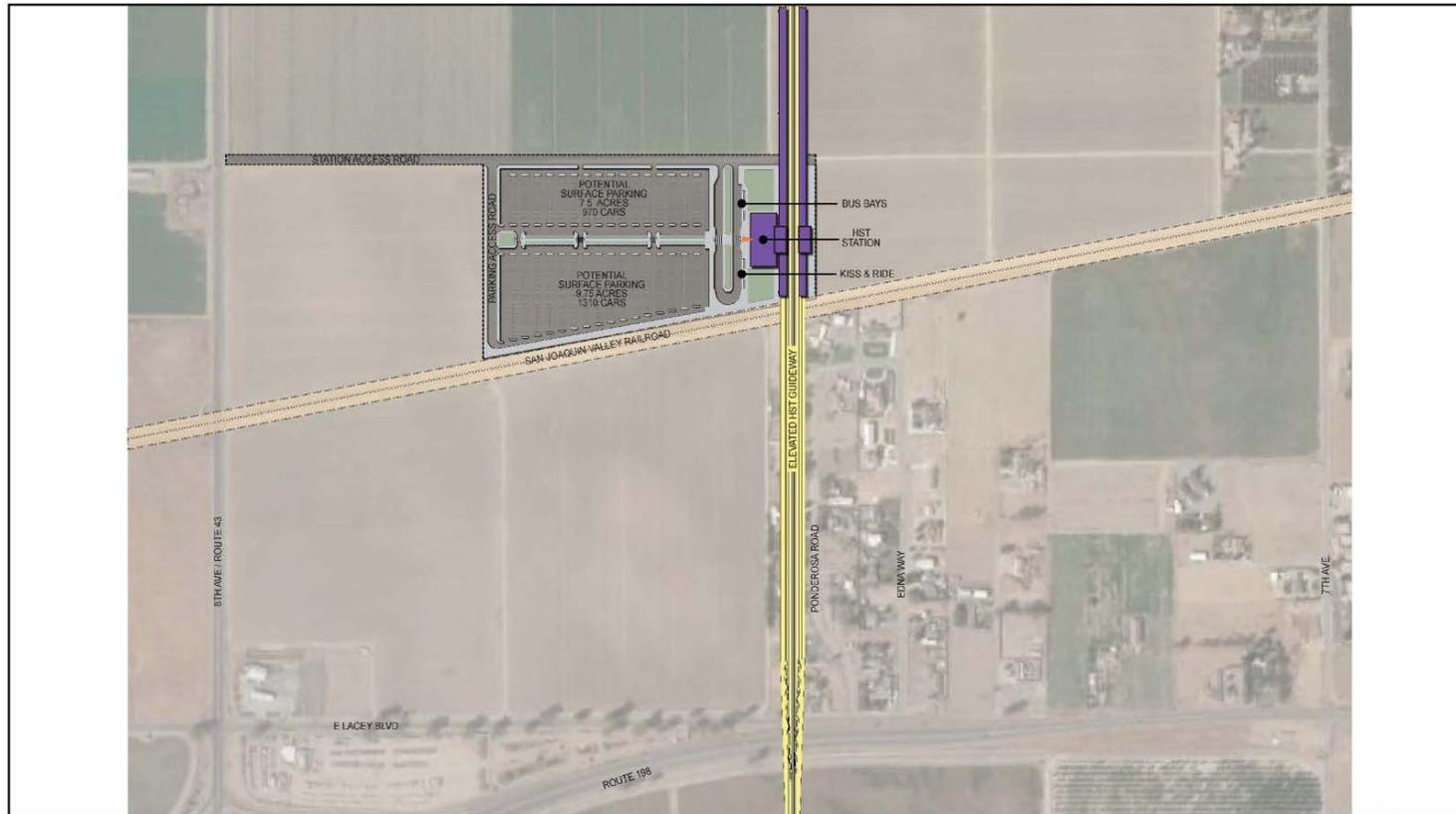
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

March 6, 2012

NOT TO SCALE

- STATION ENTRANCE
- STATION CAMPUS BOUNDARY
- KEY PEDESTRIAN LINKAGE
- RIGHT-OF-WAY BOUNDARY
- OPEN SPACE
- ROADWAY MODIFICATION

Figure 2-3
 Fresno Station–Kern Alternative



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2012

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| | STATION ENTRANCE | | STATION CAMPUS BOUNDARY |
| | KEY PEDESTRIAN LINKAGE | | RIGHT-OF-WAY BOUNDARY |
| | OPEN SPACE | | ROADWAY MODIFICATION |

Figure 2-4
 Kings/Tulare Regional Station–East Alternative

The entire site would be approximately 25 acres, including 8 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride. An additional approximately 17.25 acres would support a surface parking lot with approximately 2,280 spaces.

Kings/Tulare Regional Station–West Alternative

The potential Kings/Tulare Regional Station–West Alternative would be located east of Thirteenth Avenue and north of the SJVR on the Hanford West Bypass 1 and 2 alternatives. The station would be located either at-grade or below-grade depending on which Hanford West Bypass alignment design option is chosen.

The at-grade Kings/Tulare Regional Station–West Alternative would include a station building of approximately 100,000 square feet with a maximum height of approximately 36 feet. The entire site would be approximately 48 acres, including 6 acres designated for the station, bus bays, short-term parking, and kiss-and-ride areas. Approximately 5 acres would support a surface parking lot with approximately 700 spaces. An additional 3.5 acres would support two parking structures with a combined parking capacity of 2,100 spaces (Figure 2-5).

The below-grade Kings/Tulare Regional Station–West Alternative would include a station building of approximately the same size and height. The below-grade station site would include the same components as the at-grade station option on the same number of acres; however, the station platform would be located below-grade instead of at ground level. Approximately 4 acres would support a surface parking lot with approximately 600 spaces and an additional 4 acres would support two parking structures with a combined parking capacity of 2,200 spaces (Figure 2-6).

2.2.2.3 Bakersfield Station Alternatives

Three options are under consideration for the Bakersfield Station.

Bakersfield Station–North Alternative

The Bakersfield Station–North Alternative would be located at the corner of Truxtun and Union Avenue/SR 204 along the BNSF Alternative (Figure 2-7). The three-level station building would be 52,000 square feet, with a maximum height of approximately 95 feet. The first level would house station operation offices and would also accommodate trains running along the BNSF Railway line. The second level would include the mezzanine; the HST platforms and guideway would pass through the third level. Under this alternative, the station building would be located at the western end of the parcel footprint. Two new boulevards would be constructed to access the station and the supporting facilities.

The 19-acre site would designate 11.5 acres for the station, bus transit center, short-term parking, and kiss-and-ride. An additional 7.5 acres would house two parking structures that together would accommodate approximately 4,500 cars. The bus transit center and the smaller of the two parking structures (2.5 acres) would be located north of the HST tracks. The BNSF Railway line would run through the station at-grade, with the HST alignment running on an elevated guideway.

Bakersfield Station–South Alternative

The Bakersfield Station–South Alternative would be similarly located in downtown Bakersfield, but situated on the Bakersfield South Alternative along Union and California avenues, just south of the BNSF Railway right-of-way (Figure 2-8). The two-level station building would be 51,000 square feet, with a maximum height of approximately 95 feet. The first floor would house the concourse, and the platforms and the guideway would be on the second floor. Access to the

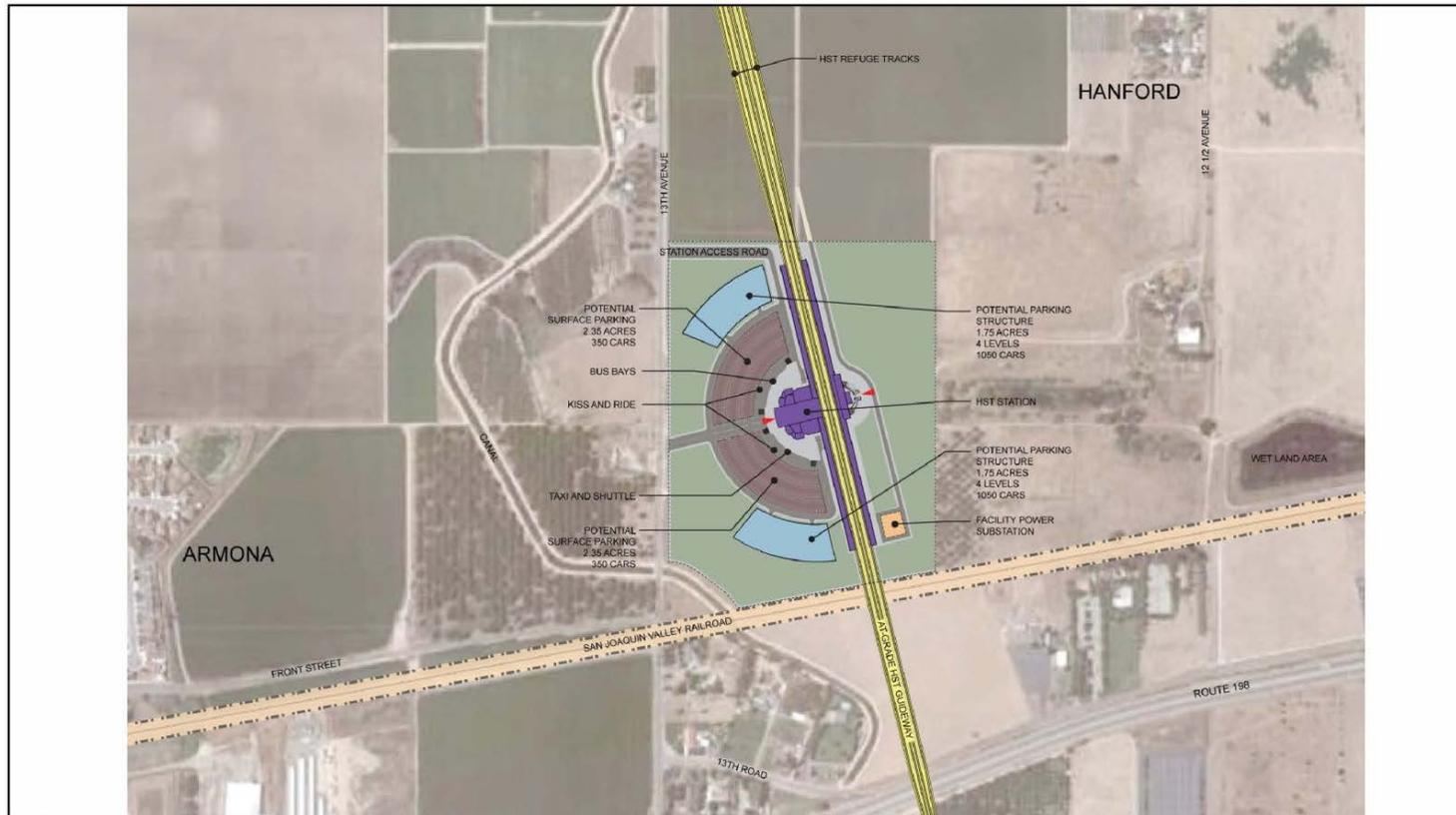
site would be from two new boulevards, one branching off from California Avenue and the other from Union Avenue.

The entire site would be 20 acres, with 15 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride. An additional 5 acres would support one six-level parking structure with a capacity of approximately 4,500 cars. Unlike the Bakersfield Station–North Alternative, this station site would be located entirely south of the BNSF Railway right-of-way.

Bakersfield Station–Hybrid Alternative

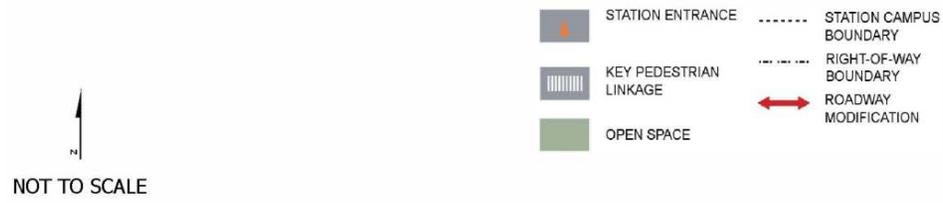
The Bakersfield Station–Hybrid Alternative would be in the same area as the North and South Station alternatives, and located at the corner of Truxtun and Union Avenue/SR 204 on the Bakersfield Hybrid Alternative (Figure 2-9). The station design includes an approximately 57,000 square-foot main station building and an approximately 5,500 square-foot entry concourse located north of the BNSF Railway right-of-way. The station building would have two levels with a maximum height of approximately 95 feet. The first floor would house the concourse, and the platforms and guideway would be on the second floor. Additionally, a pedestrian overcrossing would connect the main station building to the north entry concourse across the BNSF right-of-way.

The entire site would be approximately 24 acres, with 15 acres designated for the station, bus transit center, short-term parking, and kiss-and-ride areas. Approximately 4.5 of the 24 acres would support three parking structures with a total capacity of approximately 4,500 cars. Each parking structure would be seven levels; one with a planned capacity of 1,750 cars, another with a capacity of 1,315 cars, and the third with a planned capacity of 1,435 cars. An additional 460 parking spaces would be provided in surface lots covering a total of approximately 4.5 acres of the station site. Access to the station site would be from Truxtun and Union avenues, as well as from Hayden Court. Under this alternative, the BNSF Railway track runs through the station site, and the main station building and majority of station facilities would be sited south of the BNSF Railway right-of-way.



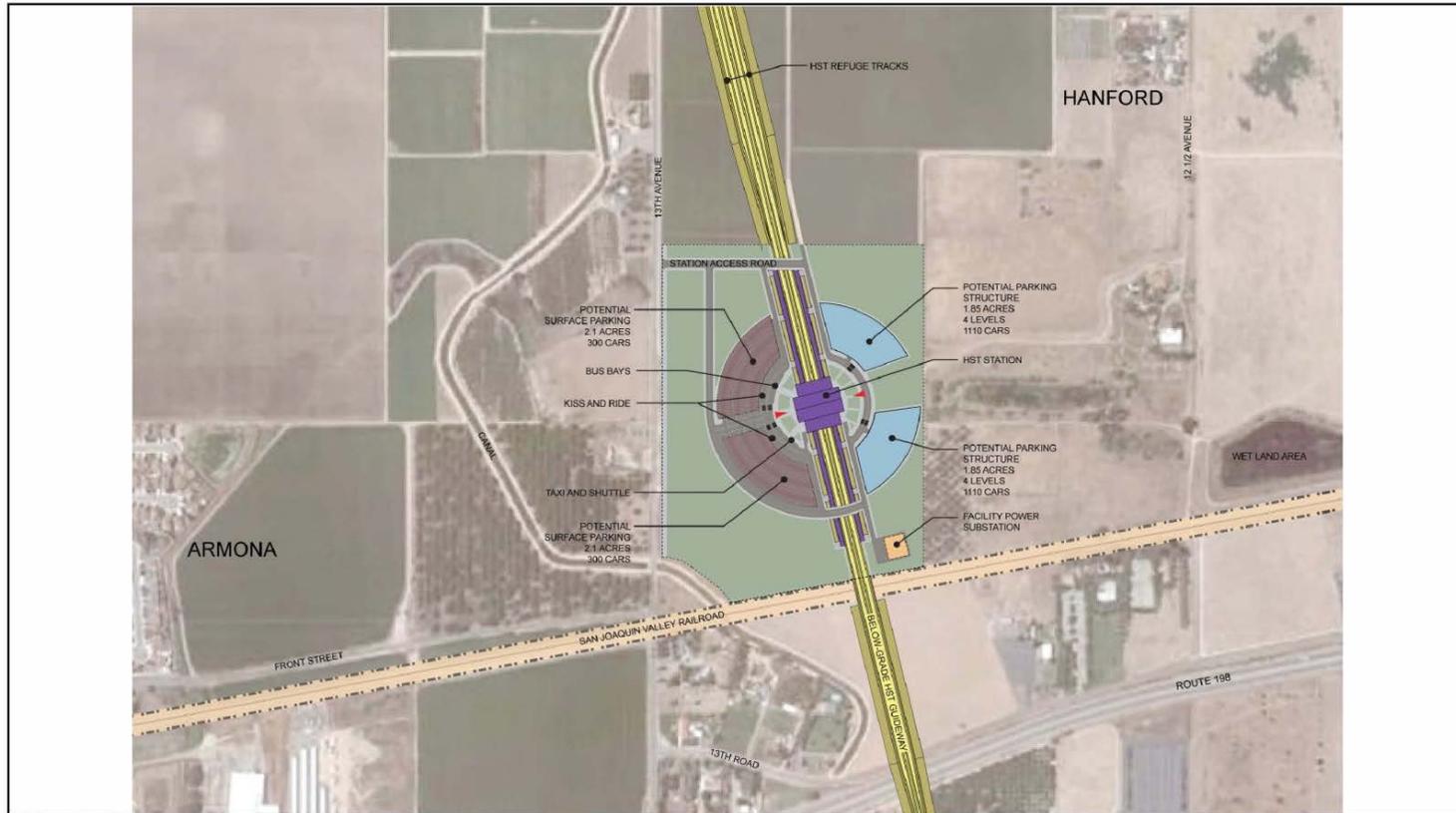
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January 24, 2012



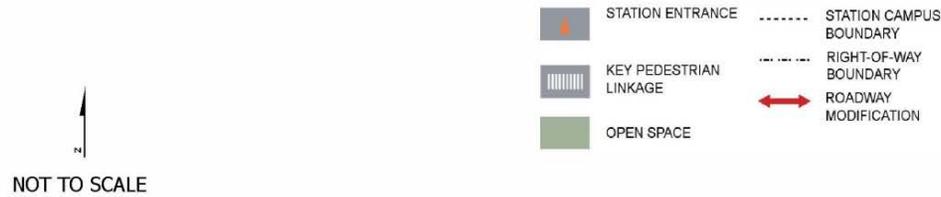
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Figure 2-5
 Kings/Tulare Regional Station–West Alternative (at-grade option)



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

January 24, 2012



NOT TO SCALE

Figure 2-6
 Kings/Tulare Regional Station–West Alternative (below-grade option)

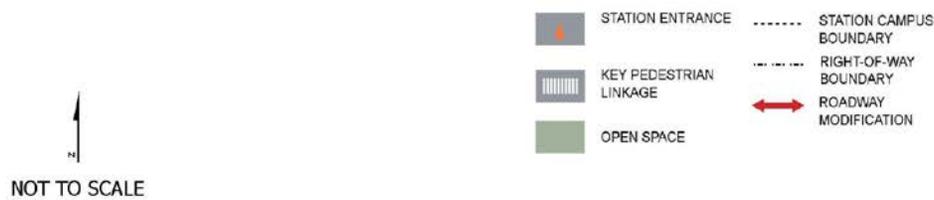
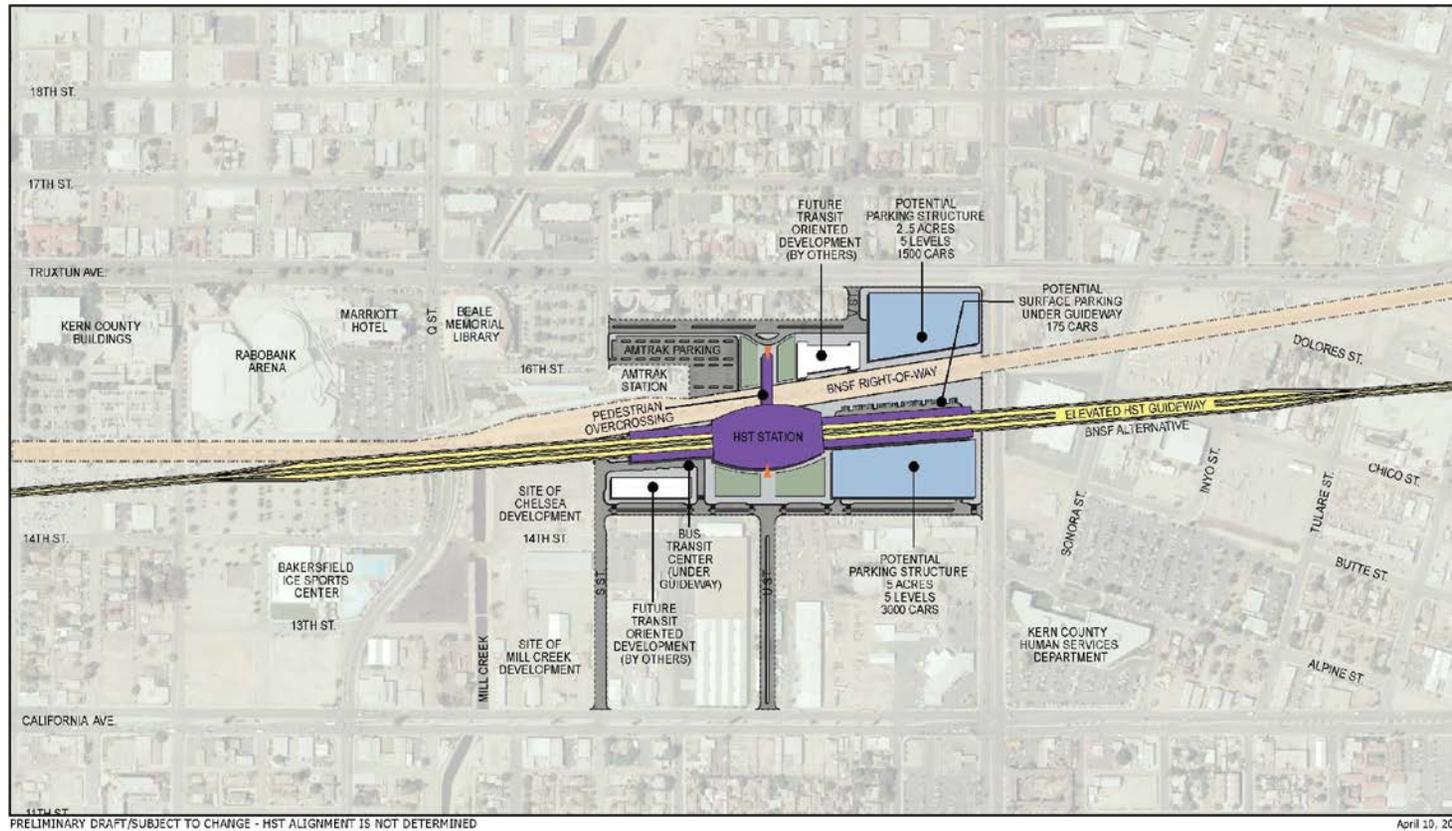
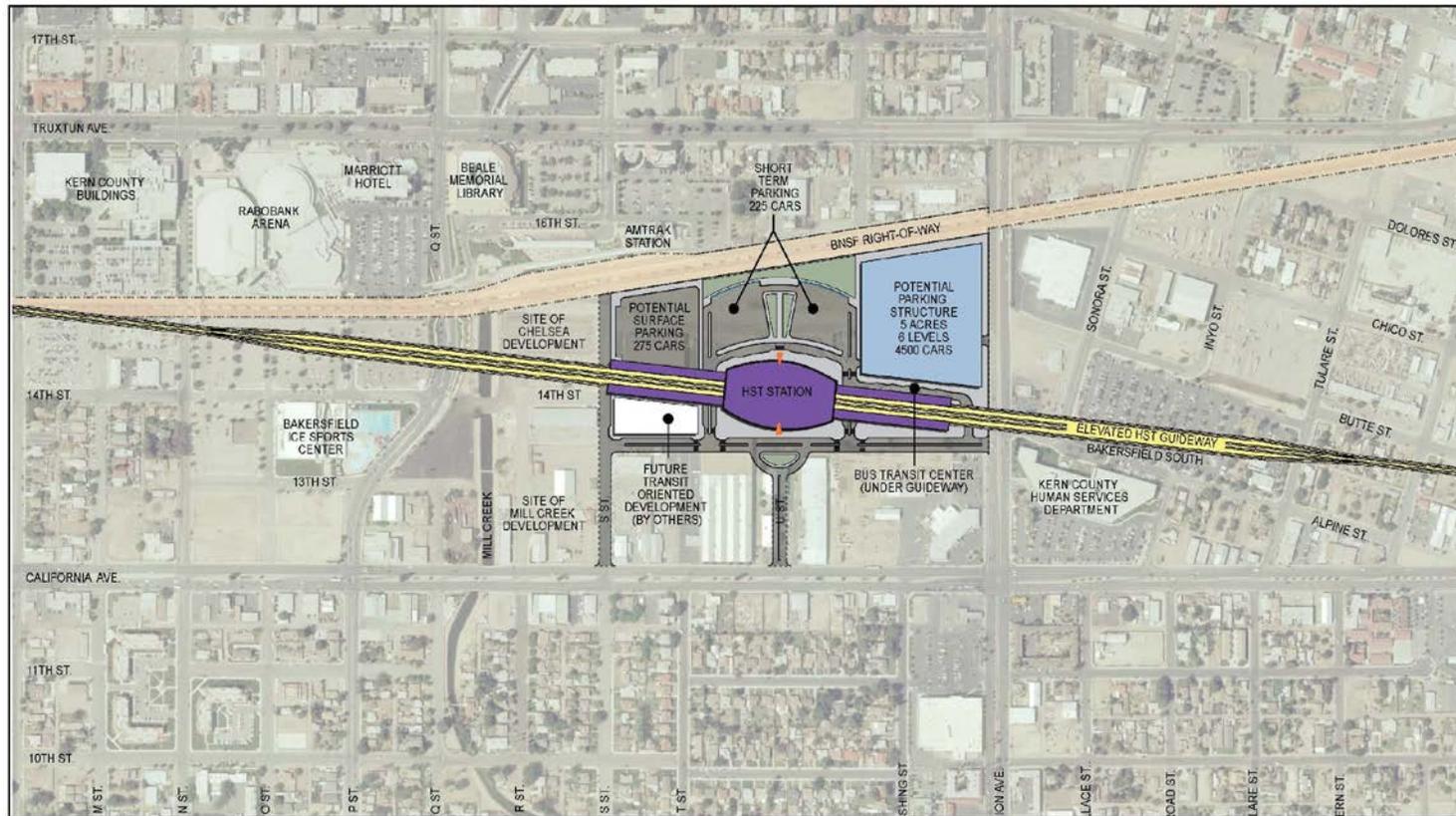


Figure 2-7
 Bakersfield Station–North Alternative



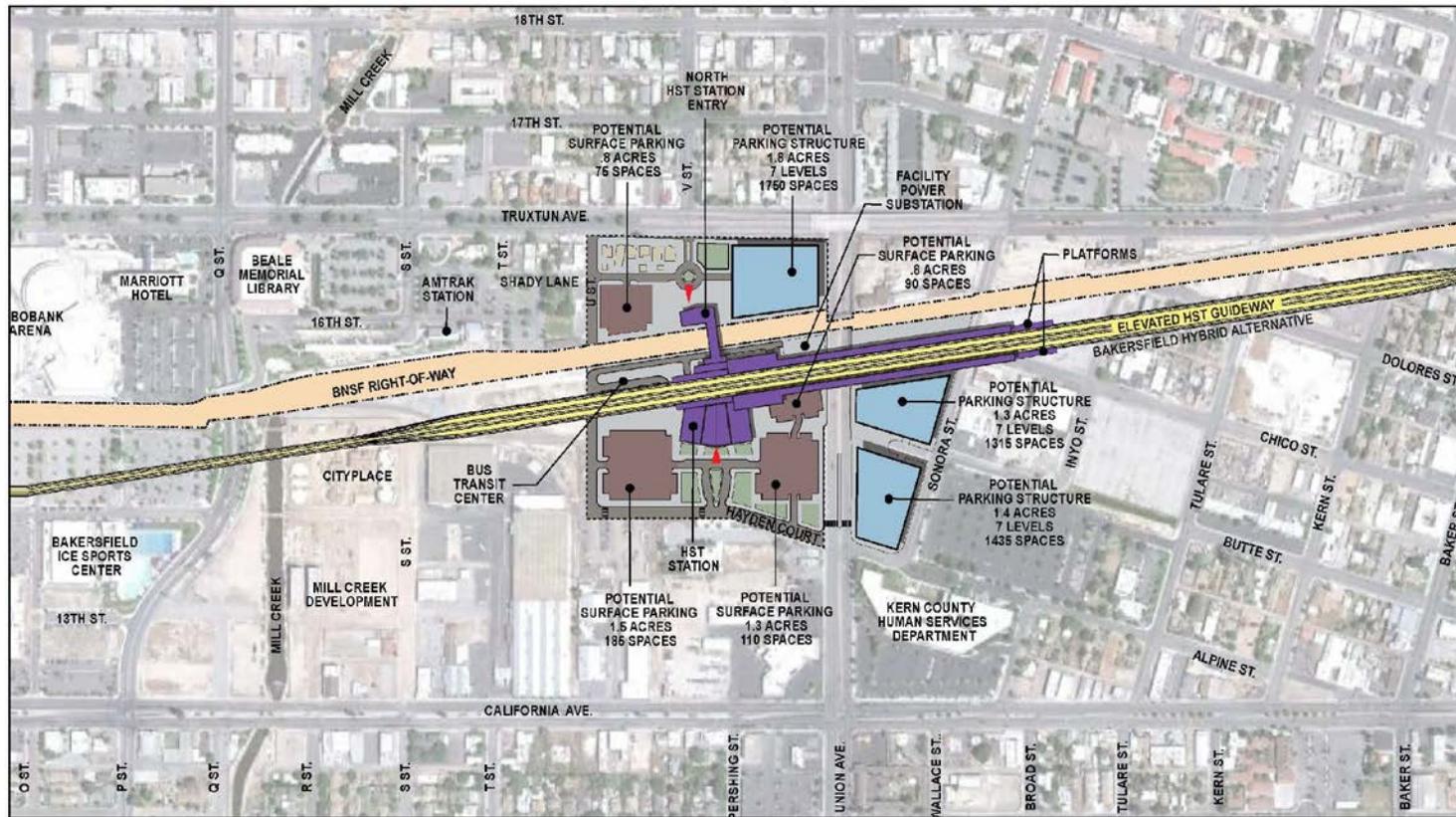
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

April 10, 2012

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-  STATION ENTRANCE
-  KEY PEDESTRIAN LINKAGE
-  OPEN SPACE
-  STATION CAMPUS BOUNDARY
-  RIGHT-OF-WAY BOUNDARY
-  ROADWAY MODIFICATION

Figure 2-8
 Bakersfield Station–South Alternative



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

April 10, 2012

NOT TO SCALE

- STATION ENTRANCE
- KEY PEDESTRIAN LINKAGE
- OPEN SPACE
- STATION CAMPUS BOUNDARY
- RIGHT-OF-WAY BOUNDARY
- ROADWAY MODIFICATION

Figure 2-9
 Bakersfield Station-Hybrid Alternative

2.2.3 Heavy Maintenance Facility (HMF)

One HST heavy vehicle maintenance and layover facility would be sited along either the Merced to Fresno or Fresno to Bakersfield HST section. Before the start-up of initial operations, the HMF would support the assembly, testing, commissioning, and acceptance of high-speed rolling stock. During regular operations, the HMF would provide maintenance and repair functions, activation of new rolling stock, and train storage. The HMF concept plan indicates that the site would encompass approximately 154 acres to accommodate shops, tracks, parking, administration, roadways, power substation, and storage areas. The HMF would include tracks that allow trains to enter and leave under their own electric power or under tow. The HMF would also have management, administrative, and employee support facilities. Up to 1,500 employees could work at the HMF during any 24-hour period.

The Authority has determined that one HMF would be located between Merced and Bakersfield; however, the specific location has not yet been finalized. The property boundaries for each HMF site would be larger than the acreage needed for the actual facility because of the unique site characteristics and constraints of each location. Five HMF sites are under consideration in the Fresno to Bakersfield Section (Figure 2-1):

- The Fresno Works–Fresno HMF site lies within the southern limits of the city of Fresno and county of Fresno next to the BNSF Railway right-of-way between SR 99 and Adams Avenue. Up to 590 acres are available for the facility at this site.
- The Kings County–Hanford HMF site lies southeast of the city of Hanford, adjacent to and east of SR 43, between Houston and Idaho avenues. Up to 510 acres are available at the site.
- The Kern Council of Governments–Wasco HMF site lies directly east of Wasco between SR 46 and Filburn Street. Up to 420 acres are available for the facility at this site.
- The Kern Council of Governments–Shafter East HMF site lies in the city of Shafter between Burbank Street and 7th Standard Road to the east of the BNSF Railway right-of-way. This site has up to 490 acres available for the facility.
- The Kern Council of Governments–Shafter West HMF site lies in the city of Shafter between Burbank Street and 7th Standard Road to the west of the BNSF Railway right-of-way. This site has up to 480 acres available for the facility.

2.3 Power

Power for the HST System would be drawn from California's electricity grid and distributed to the trains via an overhead catenary system. The project would not include the construction of a separate power source, although it would include the extension of power lines to a series of power substations positioned along the HST corridor. The transformation and distribution of electricity would occur in three types of stations:

- Traction power substations (TPSSs) transform high-voltage electricity supplied by public utilities to the train operating voltage. TPSSs would be sited adjacent to existing utility transmission lines and the HST right-of-way, and would be located approximately every 30 miles along the route. Each TPSS would be 200 feet by 160 feet.
- Switching stations connect and balance the electrical load between tracks, and switch power on or off to tracks in the event of a power outage or emergency. Switching stations would be located midway between, and approximately 15 miles from, the nearest TPSS. Each

switching station would be 120 feet by 80 feet and be located adjacent to the HST right-of-way.

- Paralleling stations, or autotransformer stations, provide voltage stabilization and equalize current flow. Paralleling stations would be located every 5 miles between the TPSSs and the switching stations. Each paralleling station would be 100 feet by 80 feet and located adjacent to the HST right-of-way.

2.4 Project Construction

The construction plan developed by the Authority and described below would maintain eligibility for eligibility for federal American Recovery and Reinvestment Act (ARRA) funding. For the Fresno to Bakersfield Section, specific construction elements would include at-grade, below-grade, and elevated track, track work, grade crossings, and installation of a positive train control system. At-grade track sections would be built using conventional railroad construction techniques. A typical sequence includes clearing, grubbing, grading, and compacting the rail bed; applying crushed rock ballast; laying track; and installing electrical and communications systems.

The precast segmental construction method is proposed for elevated track sections. In this construction method, large concrete bridge segments would be mass-produced at an onsite temporary casting yard. Precast segments would then be transported atop the already completed portions of the elevated track and installed using a special gantry crane positioned on the aerial structure. Although the precast segmental method is the favored technique for aerial structure construction, other methods may be used, including cast-in-place, box girder, or precast span-by-span techniques.

Preconstruction activities would be conducted during final design and include geotechnical investigations, identification of staging areas, initiation of site preparation and demolition, relocation of utilities, and implementation of temporary, long-term, and permanent road closures. Additional studies and investigations to develop construction requirements and worksite traffic control plans would be conducted as needed.

Major construction activities for the Fresno to Bakersfield Section would include earthwork and excavation support systems construction, bridge and aerial structure construction, railroad systems construction (including trackwork, traction electrification, signaling, and communications), and station construction. During peak construction periods, work is envisioned to be underway at several locations along the route, with overlapping construction of various project elements. Working hours and workers present at any time will vary depending on the activities being performed.

The Authority intends to build the project using sustainable methods that:

- Minimize the use of nonrenewable resources.
- Minimize the impacts on the natural environment.
- Protect environmental diversity.
- Emphasize the use of renewable resources in a sustainable manner.

The overall schedule for construction is provided in Table 2-1.

Table 2-1
 Construction Schedule

Activity	Tasks	Duration
Right-of-way Acquisition	Per Assembly Bill 3034, proceed with right-of-way acquisitions once State Legislature appropriates funds in annual budget	12–24 months
Survey and Preconstruction	Locate utilities, establish right-of-way and project control points and centerlines, establish or relocate survey monuments	6–8 months
Mobilization	Safety devices and special construction equipment mobilization	March–October 2013
Site Preparation	Utilities relocation; clearing/grubbing right-of-way; establishment of detours and haul routes; preparation of construction equipment yards, stockpile materials, and precast concrete segment casting yard	April–August 2013
Earthmoving	Excavation and earth support structures	August 2013–August 2015
Construction of Road Crossings	Surface street modifications, grade separations	June 2013–December 2017
Construction of Elevated Structures	Elevated structure and bridge foundations, substructure, and superstructure	June 2013–December 2017
Track Laying	Includes backfilling operations and drainage facilities	January 2014–August 2017
Systems	Train control systems, overhead contact system, communication system, signaling equipment	July 2016–November 2018
Demobilization	Includes site cleanup	August 2017–December 2019
HMF Phase 1 ^a	Test track assembly and storage	August–November 2017
Maintenance-of-Way Facility	Potentially co-located with HMF ^a	January–December 2018
HMF Phase 2 ^a	Test track light maintenance facility	June–December 2018
HMF Phase 3 ^a	Heavy Maintenance Facility	January–July 2021
HST Stations	Demolition, site preparation, foundations, structural frame, electrical and mechanical systems, finishes	Fresno: December 2014–October 2019 Kings/Tulare Regional: TBD ^b Bakersfield: January 2015–November 2019
Notes: ^a The HMF would be sited along either the Merced to Fresno or Fresno to Bakersfield section. ^b Right-of-way would be acquired for the Kings/Tulare Regional Station; however, the station itself would not be part of initial construction. Acronym: HMF = heavy maintenance facility TBD = to be determined		

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Chapter 3.0

Development Area Characteristics, Status, and Trends

3.0 Development Area Characteristics, Status, and Trends

The following section provides background information on the Region and on each jurisdiction and rural area in each of the counties. The content was taken from the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011), which was prepared in support of the EIR/EIS and which contains a full description of the sources and methods used to analyze development area characteristics, status, and trends.

This section describes the affected environment of the relocations necessitated by the HST project. Its purpose is to provide a context for the displacements and relocations, which are discussed in Chapter 5 of the report, and to point out any special issues or considerations that could arise from them. It establishes a basis for analyzing the population, communities, and EJ issues in the Region and study area for the Fresno to Bakersfield Section of the HST project.

The Region is defined as the four counties of Fresno, Kings, Tulare, and Kern. The study area is defined as the 0.5-mile radius from the centerline of the HST project alignment as well as the 0.5-mile radius around station locations or access points, maintenance, and other support facilities. The affected environment for relocations is described from north to south along the project alignment. In the four counties, the six cities of Fresno, Hanford, Corcoran, Wasco, Shafter, and Bakersfield, as well as several smaller communities, including Laton, Grangeville and Armona, are located in the study area. The cities of Hanford, Corcoran, Wasco, and Shafter were examined as whole cities given their smaller geographic area and more homogeneous populations. The cities of Fresno and Bakersfield were determined to be too large and composed of too many distinct neighborhoods and heterogeneous populations to be examined as a whole.

Therefore, study area profiles for these cities include data by district to create more project-focused areas for analysis. For Fresno, data are presented for the city as a whole, and separately for the Central, Edison, and Roosevelt districts. For Bakersfield, data are presented for the city as a whole, and separately for the Central, Northeast, and Northwest districts. These are the districts in the two major cities that the project alignment would traverse. District boundaries were determined based on current definitions used by city staff (Fresno), interviews with local planners (Bakersfield), and examination of Census boundaries (tract, block group, and block) to approximate the district boundaries as closely as possible.

Data sources include the U.S. Census, the American Community Survey (ACS), the California Department of Finance, the California Employment Development Division, the California State Board of Equalization as well as local data sources.³ Discussions with local officials, reviews of maps, and site visits were also used to identify existing conditions. The ACS single-year estimates for 2008 are available for Bakersfield and Fresno because both of these cities have a population that is greater than 65,000. By contrast, Hanford, Corcoran, and Wasco each have a population that is less than 65,000 but greater than 20,000, and therefore 2006–2008 average estimates are available. Laton's population was less than 20,000, and currently Laton has no recent estimates available from the ACS; the ACS does not provide estimates for communities of less than 20,000 residents.

³ The specifics and details of how these and other data sources were used and how the analyses were conducted are described in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011).

3.1 Population and Ethnicity

3.1.1.1 Region

The population in the Region has continued to increase in the last decade and is projected to increase substantially over the next 25 years, with some county populations expected to nearly double by 2035 (see Table 3-1).

Table 3-1
 Existing and Projected County Populations

Location	2010	2035	% Change
Fresno County	953,761	1,547,582	62.3
Kings County	156,289	274,576	75.7
Tulare County	447,814	809,789	80.8
Kern County	839,587	1,523,934	81.5
Regional Total	2,397,451	4,155,881	73.3

Sources: California DOF 2007, 2010.
 % = percent

The two largest racial or ethnic groups are White and Hispanic, each of which accounted for approximately 43% of the total population in 2000. Between 2000 and 2008, the percentages of these two groups shifted substantially, with the total White population declining to 37.4% and the Hispanic population growing by 289,916 to 49.8% (see Table 3-3). The regional population is expected to nearly double by 2035, to over 4.1 million people. In line with current trends, it is expected that the Hispanic population will continue to grow at a faster rate than other groups in the Region and will represent nearly 60% of the population in 2035.

Table 3-2
 Minority Group Representation in the Region (2000)

Location	% of Population					
	Hispanic of All Races	Non-Hispanic Native American	Non-Hispanic Asian	Non-Hispanic African-American	Non-Hispanic Other	Total
Fresno County	44.0	0.9	7.9	5.0	2.5	60.3
City of Fresno	39.9	0.9	11.0	8.0	2.9	62.7
Community of Laton	68.9	0.6	0.6	0.4	1.5	72.0
Kings County	43.6	1.2	3.0	8.0	2.6	58.4
City of Hanford	38.7	0.8	2.8	4.8	3.0	50.1
Community of Grangeville	18.7	0.3	2.8	0.2	4.9	26.9

Table 3-2
 Minority Group Representation in the Region (2000)

Location	% of Population					
	Hispanic of All Races	Non-Hispanic Native American	Non-Hispanic Asian	Non-Hispanic African-American	Non-Hispanic Other	Total
Community of Armona	48.6	1.2	1.3	4.0	3.2	58.3
City of Corcoran	59.6	0.5	0.7	14.0	1.1	75.9
Tulare County	50.8	0.9	3.1	1.4	2.0	58.2
Kern County	38.4	1.0	3.2	5.7	2.2	50.5
City of Wasco	66.7	0.6	0.6	9.8	0.7	78.4
City of Shafter	68.1	0.6	0.3	1.4	0.6	71.0
City of Bakersfield	32.5	0.9	4.1	8.9	2.5	48.9
Regional Total	43.3	0.9	5.1	4.8	2.4	56.5

Source: U.S. Census Bureau 2000. Table: P4.

Table 3-3
 Minority Group Representation in the Region (2008)

Location	% of Population					
	Hispanic	Non-Hispanic Native American	Non-Hispanic Asian	Non-Hispanic African-American	Non-Hispanic Other	Total
Fresno County	48.7	0.6	8.4	4.9	2.3	65.0
City of Fresno	46.6	0.3	9.9	7.5	2.4	66.7
Community of Laton	N/A	N/A	N/A	N/A	N/A	N/A
Kings County	49.3	1.2	3.1	7.5	1.7	62.8
City of Hanford*	45.5	0.8	4.2	7.3	0.9	58.8
Community of Grangeville	N/A	N/A	N/A	N/A	N/A	N/A
Community of Armona	N/A	N/A	N/A	N/A	N/A	N/A
City of Corcoran*	62.6	1.5	2.0	12.8	0.9	80.8
Tulare County	57.5	0.6	2.8	1.3	2.2	64.4
Kern County	47.1	0.5	3.6	5.4	2.5	59.0

Table 3-3
 Minority Group Representation in the Region (2008)

Location	% of Population					Total
	Hispanic	Non-Hispanic Native American	Non-Hispanic Asian	Non-Hispanic African-American	Non-Hispanic Other	
City of Wasco*	74.4	0.4	1.7	7.5	1.2	85.2
City of Shafter**	68.1	0.5	0.3	1.4	0.7	71.0
City of Bakersfield	43.3	0.5	4.8	8.6	3.0	60.2
Regional Total	49.8	0.6	5.3	4.6	2.3	62.6

Source: ACS 2008b.

*Cities of Hanford, Corcoran, and Wasco data provided by American Community Survey 2006-2008.

**City of Shafter data provided by U.S. Census Bureau 2000 as more recent data are not available.

Note: The California Department of Finance does not provide annual Racial and Ethnicity Characteristics estimates, so the most current American Community Survey data are used. This explains the difference between the 2009 total population estimates and the 2008 or 2006-2008 totals in this table. The very high percentage of minority residents shown for the cities of Corcoran and Wasco includes the prison populations in these cities, and it is likely that the profile of non-prison populations in these two communities would be much more comparable to that of the counties and Region as a whole.

N/A = Not available, as the American Community Survey 2006–2008 does not provide data for communities with less than 20,000 persons.

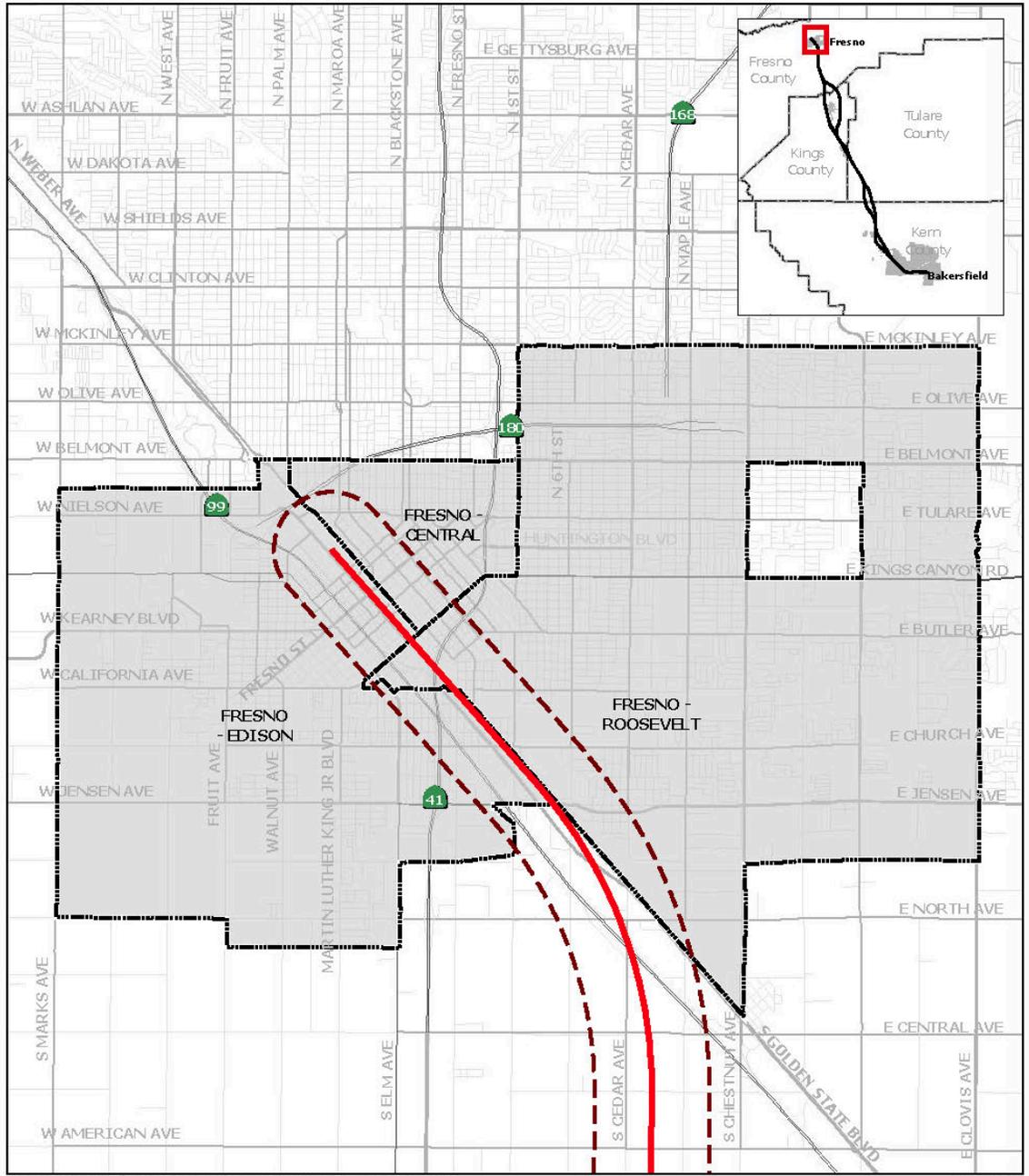
3.1.1.2 City of Fresno

Fresno’s population of 427,652 residents in 2000 had grown to 502,303 by 2010, resulting in an annual average growth rate of 1.7%. This is lower than the growth rates of Fresno County (1.9%) and the region (2.2%) during the same period (California Department of Finance 2010).

Fresno’s minority population, which represented 63% of all residents in 2000, increased to almost 67% of all residents in 2008 (see Table 3-2 and Table 3-3). This total percentage of minority population is similar to that of Fresno County (65%) and the Region (63%).⁴ See the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* for a detailed breakdown of minority group representation in Fresno (Authority and FRA 2011).

The data available to examine the three bisected city districts within the study area are Census 2000 data, aggregated at the Census tract level to match district boundaries as closely as possible (see Figure 3-1 for the city of Fresno district map). The Census 2000 populations of the neighborhoods vary widely, ranging from 16,754 people in the Central District to 102,489 people in the Roosevelt District. All of the districts have very high concentrations of minority populations; each district has a minority population of at least 84%, which is significantly higher than the city as a whole (63%). Table 3-4 shows this breakdown by district.

⁴ U.S. Census ACS single-year estimates for 2008 are available for Bakersfield and Fresno because both of these cities have a population of greater than 65,000. By contrast, the cities of Hanford, Corcoran, and Wasco have a population of less than 65,000 but greater than 20,000, and therefore 2006–2008 average estimates are available. Currently, no recent estimates are available from the ACS for the city of Shafter, which has a population of less than 20,000.



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
 Source: URS, 2012

May 11, 2012



Figure 3-1
 Districts within the city of Fresno

Table 3-4
 City of Fresno District Populations and Racial and Ethnicity Characteristics

Race	Central District		Edison District		Roosevelt District	
	2000	Percent	2000	Percent	2000	Percent
Non-Hispanic White	2,092	12.5	713	3.0	15,955	15.6
Minority	14,662	87.5	22,980	97.0	86,534	84.4
Total	16,754	100.0	23,693	100.0	102,489	100.0
Hispanic of All Races	10,767	64.3	11,206	47.3	60,166	58.7
Non-Hispanic Black or African-American	1,516	9.0	8,630	36.4	6,881	6.7
Non-Hispanic American Indian and Alaska Native	138	0.8	99	0.4	791	0.8
Non-Hispanic Asian	1,656	9.9	2,626	11.1	15,853	15.5
Non-Hispanic Native Hawaiian and Other Pacific Islander	0	0.0	0	0.0	51	0.0
Non-Hispanic, Some Other Race	97	0.6	0	0.0	124	0.1
Non-Hispanic, Two or More Races	488	2.9	419	1.8	2,668	2.6
Total	16,754	100	23,693	100	102,489	100

Source: Analysis of U.S. Census Bureau 2000 P4.
 Note: Percentages may total slightly less or more than 100% due to rounding.

3.1.1.3 City of Fresno to the City of Hanford

Seven small communities are interspersed along the section of the BNSF Alternative from Fresno to Hanford. The five communities of Malaga, Oleander, Bowles, Monmouth, and Conejo are in Fresno County, and the communities of Hamblin and Ponderosa are in Kings County. All of these communities are unincorporated, and only Bowles was classified as a census-designated place (CDP) by the Census Bureau in 2000. Community population estimates range from less than 100 people in the smallest communities of Oleander and Conejo to approximately 1,500 residents in the largest community of Malaga.

3.1.1.4 Community of Laton

Laton's population was 1,236 residents in 2000. Laton's minority population represented approximately 72% of all residents in 2000 (see Table 3-2 for 2000). This total percentage of minority population is higher than both that of Fresno County (65%) and the Region (63%) (U.S. Census Bureau American Community Survey 2008a).

3.1.1.5 City of Hanford

Hanford's population of 41,686 residents in 2000 had grown to 53,266 in 2010, resulting in an average annual growth rate of 2.8%. This growth rate was higher than the growth rates seen in both Kings County (2.1%) and the region (2.2%) during the same period (California Department of Finance 2010).

Hanford's minority population, which represented approximately half the residents in 2000, increased to approximately 60% of all residents by 2006–2008 (see Table 3-2 and Table 3-3). This total percentage of minority population is similar to that of Kings County (59%) and the Region (63%).⁵

3.1.1.6 Community of Grangeville

Grangeville's population was 638 residents in 2000. Grangeville's minority population represented approximately a quarter of the residents in 2000 (see Table 3-2 for 2000). This total percentage of minority population is substantially lower than that of Kings County (59%) and the Region (63%) (ACS 2008a).

3.1.1.7 Community of Armona

Armona's population was 3,239 residents in 2000. Armona's minority population represented approximately half the residents in 2000 (see Table 3-2 for 2000). This total percentage of minority population is similar to that of Kings County (59%) and the region (63%) (ACS 2008a).

3.1.1.8 City of Hanford to City of Corcoran

The study area between the cities of Hanford and Corcoran is in Kings County. El Rancho is the one community identified in this segment of the project. El Rancho lies south of Lacey Boulevard, 1 mile west of Hanford, with an estimated population of 400 residents.

3.1.1.9 City of Corcoran

In 2000, Corcoran had a population of 20,843 residents; by 2010 the population had grown to 25,692 people, for an average annual growth rate of 2.3%. This growth rate is higher than the growth rates seen in Kings County (2.1%) and the region (2.2%) during the same period (California Department of Finance 2010).

Corcoran's minority population, which represented approximately 75% of all residents in 2000, increased to 80% of all residents by 2006–2008 (see Table 3-2 and Table 3-3). This total percentage of minority population is much higher than that of Kings County (59%) and the Region (63%).⁶ Not only does Corcoran have a higher-than-average number of individuals of Hispanic background, but it also has a higher percentage of individuals of African-American descent, as compared to the county and Region.

3.1.1.10 City of Corcoran to the City of Wasco

None of the eight unincorporated communities identified in the study area between the cities of Corcoran and Wasco is a CDP. The communities of Blanco, Angiola, Stoil, and Allensworth are

⁶ U.S. Census ACS single-year estimates for 2008 are available for Bakersfield and Fresno because each of these cities has a population greater than 65,000. By contrast, Hanford, Corcoran, and Wasco each have a population of less than 65,000 but greater than 20,000, and therefore 2006–2008 average estimates are available. No recent estimates are currently available from the ACS for the city of Shafter, which has a population of less than 20,000.

located in Tulare County, while Kernell, Pond, Elmo, and Neufeld are located in Kern County. The largest of these is Allensworth, with an estimated resident population of 400. None of these communities has experienced significant growth in the past several years, and no growth is anticipated in the foreseeable future (Kinney 2010, personal communication; Smith 2010, personal communication; Waters 2010, personal communication).

3.1.1.11 City of Wasco

Wasco had a population of 21,263 residents in 2000; by 2010, the population had grown to 25,541, resulting in an average annual growth rate of 2.0% (California Department of Finance 2010). This growth rate is lower than the growth rate seen in the county (2.7%) but similar to the growth rate seen in the region (2.2%) during the same period.

Wasco's minority population, which represented approximately 80% of all residents in 2000, increased to over 85% of all residents by 2006–2008 (see Table 3-2 and Table 3-3). The total percentage of minority population in Wasco is substantially higher than that of the county (59%) and the Region (63%).⁷

3.1.1.12 City of Wasco to the City of Shafter

The three communities identified in the study area between the cities of Wasco and Shafter are Palmo, the North Shafter Labor Camp, and Myricks Corner. These communities are unincorporated in Kern County, and none is classified as a CDP. Palmo is the smallest of the communities in this area, with an estimated population of less than 25 people. There are approximately 300 residents at the North Shafter Labor Camp, and approximately 250 residents in Myricks Corner.

3.1.1.13 City of Shafter

Shafter's population of 12,736 residents in 2000 had grown to 16,208 by 2010, which amounts to an average annual growth rate of 2.7% (California Department of Finance 2010). This was higher than seen in the region (2.2%), but similar to the county's growth rate (2.7%) during the same period.

Shafter's minority population, which represented approximately 70% of all residents in 2000, is a higher percentage of the population than the percentage in either the county (50.5%) or the Region (56.5%). No Census data are available for Shafter after 2000 due to the smaller size of the city (see Table 3-2 and Table 3-3).⁸

3.1.1.14 City of Shafter to City of Bakersfield

The one identified community in the study area between the cities of Shafter and Bakersfield is Crome, which is unincorporated and is not a CDP. Crome has an estimated population of about 75 people.

⁷ U.S. Census ACS single-year estimates for 2008 are available for Bakersfield and Fresno because each of these cities has a population greater than 65,000. By contrast, Hanford, Corcoran, and Wasco each have a population of less than 65,000 but greater than 20,000, and therefore 2006–2008 average estimates are available. No recent estimates are currently available from the ACS for the city of Shafter, which has a population of less than 20,000.

⁸ U.S. Census ACS single-year estimates for 2008 are available for Bakersfield and Fresno because both of these cities have a population of greater than 65,000. By contrast, the cities of Hanford, Corcoran, and Wasco have a population of less than 65,000 but greater than 20,000, and therefore 2006–2008 average estimates are available. Currently, no recent estimates are available from the ACS for Shafter, which has a population of less than 20,000.

3.1.1.15 City of Bakersfield

In 2000, Bakersfield had a population of 247,057 residents, growing to 338,952 in 2010, for an average annual growth rate of 3.7% (California Department of Finance 2010). This growth rate is higher than the growth rates of the county (2.7%) and the region (2.2%) during the same period.

Bakersfield's minority population, which represented approximately half of all residents in 2000, increased to 60% of all residents in 2008 (see Table 3-2 and Table 3-3). This total percentage of minority population is similar to that of Kern County (59%) and the Region as a whole (63%).⁹ See the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* for a detailed breakdown of racial and ethnicity characteristics for the city of Bakersfield (Authority and FRA 2011).

The population data available for examining the three bisected districts in Bakersfield are Census 2000 data, aggregated at the Census tract level to match district boundaries as closely as possible (see Figure 3-2 for the city of Bakersfield district map).

⁹ U.S. Census ACS single-year estimates for 2008 are available for Bakersfield and Fresno because both of these cities have a population of greater than 65,000. By contrast, the cities of Hanford, Corcoran, and Wasco have a population of less than 65,000 but greater than 20,000, and therefore 2006–2008 average estimates are available. Currently, no recent estimates are available from the ACS for Shafter, which has a population of less than 20,000.

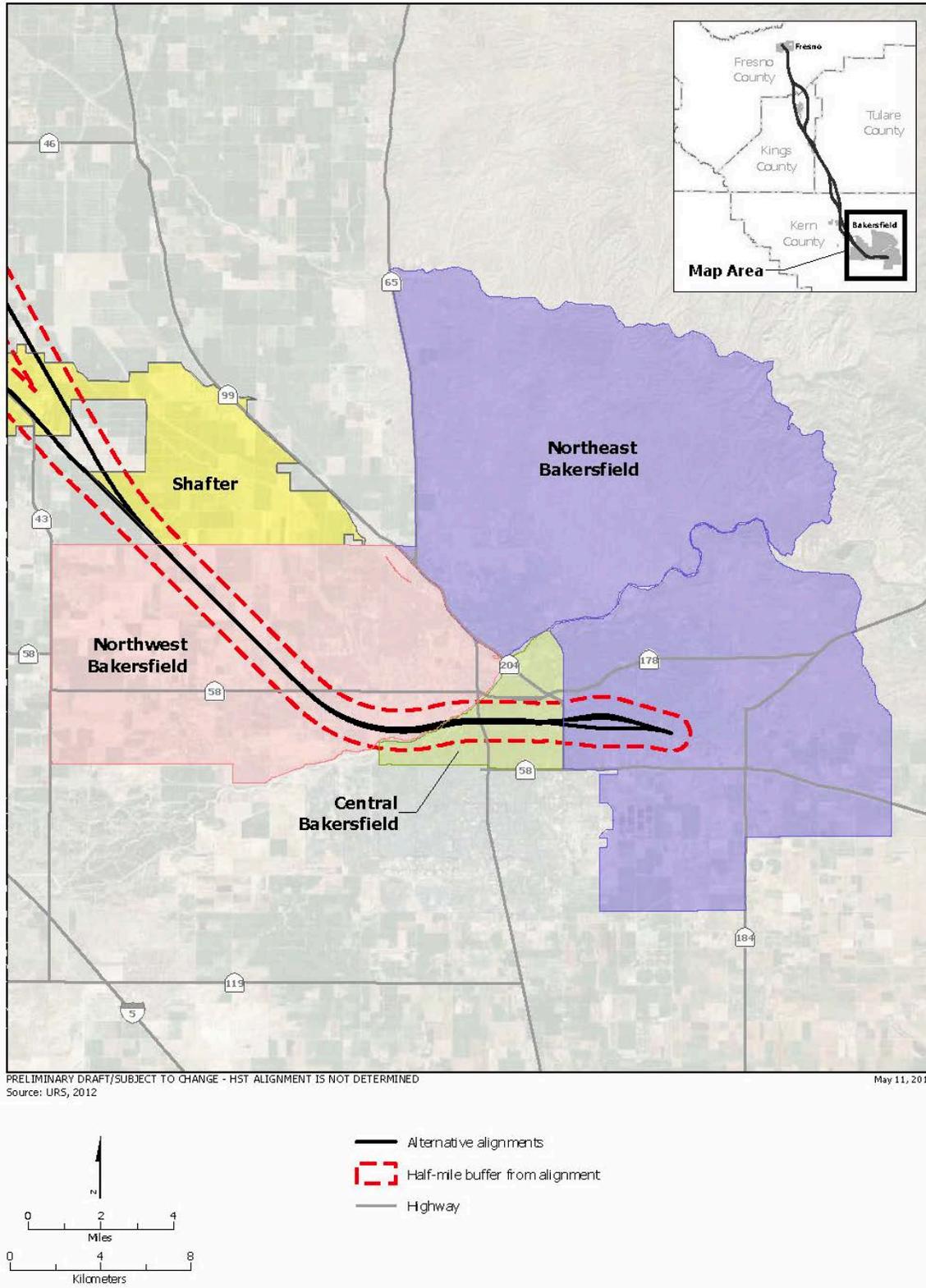


Figure 3-2
 Districts within the city of Bakersfield

The Census 2000 populations of the three districts vary widely, ranging from 38,610 people in the Central District to 140,082 people in the Northeast District. Both the Central and Northeast districts had similar percentages of minorities (51.5% and 55.7%, respectively) when compared to Bakersfield as a whole (48.9% in 2000), while the Northwest District had a much lower percentage of minorities (18.8%). Table 3-5 provides a breakdown by district.

Table 3-5
 City of Bakersfield District Populations and Racial and Ethnicity Characteristics

Race	Central		Northeast		Northwest	
	2000	Percent	2000	Percent	2000	Percent
Non-Hispanic White	18,715	48.5	62,014	44.3	42,735	81.2
Minority	19,895	51.5	78,068	55.7	9,888	18.8
Total	38,610	100	140,082	100	52,623	100
Hispanic of All Races	12,634	32.7	65,497	46.8	6,301	12.0
Non-Hispanic Black or African-American	4,698	12.2	6,276	4.5	794	1.5
Non-Hispanic American Indian and Alaska Native	394	1.0	1,423	1.0	481	0.9
Non-Hispanic Asian	952	2.5	1,954	1.4	1,019	1.9
Non-Hispanic Native Hawaiian and Other Pacific Islander	7	0.0	119	0.1	22	0.0
Non-Hispanic Some Other Race	85	0.2	90	0.1	177	0.3
Non-Hispanic Two or More Races	1,125	2.9	2,709	1.9	1,094	2.1
Total	38,610	100	140,082	100	52,623	100

Source: U.S. Census Bureau 2000 P4.
 Note: Percentages may total slightly less or more than 100% due to rounding.

3.2 Income

Median annual household income is summarized below in Table 3-6. In 2008, median annual household income across the four counties was highest in Kings County at \$50,962 and lowest in Fresno County at \$43,737. By comparison, the median annual household income in the state of California was \$61,062 in the same year.¹⁰ The cities of Hanford and Bakersfield and the community of Grangeville had the highest incomes in the study area over the years 2000–2008.

In 2000, all three of Fresno’s districts were significantly below the city as a whole. Central (\$12,085) was the lowest, with Edison (\$16,437) and Roosevelt (\$24,023) higher but still well

¹⁰ U.S. Census Bureau; American Community Survey 2008; American Community Survey 2006-2008a.

below the citywide median household income. Bakersfield districts had lower median incomes when compared to Bakersfield as a whole in 2000, with the exception of the Northwest District, which had a median income well above that of the city, county, and Region as a whole at \$61,910 (U.S. Census Bureau 2000).

Table 3-6
 Median Annual Household Income (2000 and 2008)

Location	2000	2008	% Increase
State of California	\$47,493	\$61,021	28.5
Fresno County	\$34,725	\$43,737	26.0
City of Fresno	\$32,236	\$40,134	24.5
Central District	\$12,085	N/A	—
Edison District	\$16,437	N/A	—
Roosevelt District	\$24,023	N/A	—
Community of Laton	\$35,408	N/A	N/A
Kings County	\$35,749	\$50,962	42.6
City of Hanford	\$37,582	\$51,520	37.1
Community of Grangeville	\$50,917	N/A	N/A
Community of Armona	\$32,790	N/A	N/A
City of Corcoran	\$30,783	\$35,340	14.8
Tulare County	\$33,983	\$45,117	32.8
Kern County	\$35,446	\$44,733	26.2
City of Wasco	\$28,997	\$34,976	20.6
City of Shafter	\$29,515	N/A	N/A
City of Bakersfield	\$39,982	\$50,409	26.1
Central District	\$27,291	N/A	N/A
Northeast District	\$30,885	N/A	N/A
Northwest District	\$61,910	N/A	N/A

Sources: U.S. Census Bureau; American Community Survey 2008; American Community Survey 2006-2008a.

Note: 2008 data are not available at the district level for Fresno and Bakersfield or for Shafter.

N/A = Not available, as the American Community Survey 2006–2008 does not provide data for communities with less than 20,000 persons.

Acronyms and Abbreviations:

N/A = Not available, as the American Community Survey 2006–2008 does not provide data for communities with less than 20,000 persons.

% = percent

3.3 Households

3.3.1.1 Region

According to the California Department of Finance, 606,395 households were present in the Region in 2000, with an average household size of 3.11 persons. In 2009, the number of households grew to 715,664, and the average household size increased to 3.18 persons (California DOF 2009). Approximately 75% of all households in the Region are family households; however, the percentage of married-couple households has decreased across all four counties since 2000, while the percentage of households headed by a single female or a single male has increased (see Table 3-7 and Table 3-8).

Table 3-7
 Type of Household in the Region (2000)

Location	% of Total Households					
	% Family Household	% Married Couple Family	% Female householder (no husband present)	% Male householder (no wife present)	% Non-Family Household	% Householder Living Alone
Fresno County	74.3	53.4	15.1	5.8	25.7	20.6
City of Fresno	70.4	47.3	17.4	5.7	29.6	23.3
Central District	64.8	33.2	22.6	9.1	35.2	18.6
Edison District	75.9	37.1	31.6	7.2	24.1	8.0
Roosevelt District	78.9	49.9	20.5	8.5	21.1	7.1
Community of Laton	91.7	78.2	8.3	0.5	8.3	6.6
Kings County	78.6	58.6	14.2	5.8	21.4	17.0
City of Hanford	74.5	54.8	15.0	4.7	25.5	20.6
Community of Grangeville	87.7	69.6	8.8	0.6	12.3	12.3
Community of Armona	81.7	58.3	13.9	0.5	18.3	13.9
City of Corcoran	80.1	53.2	16.7	10.2	19.9	16.2
Tulare County	79.3	59.1	14.1	6.2	20.7	17.1

Table 3-7
 Type of Household in the Region (2000)

Location	% of Total Households					
	% Family Household	% Married Couple Family	% Female householder (no husband present)	% Male householder (no wife present)	% Non-Family Household	% Householder Living Alone
Kern County	75.4	55.7	14.1	5.7	24.6	20.3
City of Wasco	86.2	62.4	17.3	6.5	13.8	11.9
City of Shafter	84.3	62.9	15.1	6.3	15.7	13.2
City of Bakersfield	73.7	53.6	14.6	5.5	26.3	21.5
Central District	62.5	37.5	18.9	6.0	37.5	12.9
Northeast District	73.8	49.1	17.8	7.0	26.2	8.8
Northwest District	84.1	73.0	7.9	3.2	15.9	6.0
Regional Total	75.8	55.5	14.5	5.8	24.2	19.7

Source: U.S. Census Bureau 2000 H7.

Note: Rows do not necessarily add to 100%, as the percentage presented is of total households, and a household can be accounted for in more than one column.

Acronyms and Abbreviations:

N/A = Not available, as the American Community Survey 2006–2008 does not provide data for communities with less than 20,000 persons.

% = percent

Table 3-8
 Type of Household in the Region (2008)

Location	% of Total Households					
	% Family Household	% Married Couple Family	% Female householder (no husband present)	% Male householder (no wife present)	% Non-Family Household	% Householder Living Alone
Fresno County	71.7	48.5	16.4	6.8	28.3	22.0
City of Fresno	68.4	43.7	17.8	7.0	31.6	23.2
Community of Laton	N/A	N/A	N/A	N/A	N/A	N/A
Kings County	75.5	54.4	12.9	8.2	24.5	18.2
City of Hanford	74.0	53.3	14.7	6.0	26.0	21.1
Community of Grangeville	N/A	N/A	N/A	N/A	N/A	N/A
Community of Armona	N/A	N/A	N/A	N/A	N/A	N/A
City of Corcoran	81.7	45.7	24.0	12.0	18.3	17.7
Tulare County	80.9	56.9	16.3	7.7	19.1	16.4
Kern County	73.3	51.1	15.0	7.2	26.7	21.1
City of Wasco	80.3	52.2	17.1	11.0	19.7	16.7
City of Shafter	N/A	N/A	N/A	N/A	N/A	N/A
City of Bakersfield	71.6	50.4	14.2	7.0	28.4	21.7
Regional Total	74.1	51.3	15.7	7.2	25.9	20.4

Source: U.S. Census Bureau 2008b.

Note: California Department of Finance does not provide the number of households by type for 2009, so American Community Survey 2008 data were used. This explains the difference between the 2009 total household estimates and the 2008 totals in this table.

Acronyms and Abbreviations:

N/A = Not available, as the American Community Survey 2006–2008 does not provide data for communities with less than 20,000 persons.

% = percent

3.3.1.2 City of Fresno

In 2000, Fresno had 140,079 households, and the average household size was 2.99 people. By 2009, both the number of households and the average household size had increased to 159,523 and 3.05 people, respectively (California DOF 2009). The average household size for Fresno is less than that of the county (3.15) and the Region (3.18).

The makeup of households in Fresno has changed somewhat since 2000. Approximately 70% of the households were family households in 2000, but that percentage decreased to 68.4% in

2008. The percentage of married-family couples also decreased by 3.6% during the same period, and the number of male householder and non-family households increased (see Table 3-7 and Table 3-8).

In 2000, the average household size was similar in the districts of Edison (3.74) and Roosevelt (3.75), but the average household size in the Central District (3.33) was smaller (U.S. Census Bureau 2000). This difference could be due to the urban nature of the area and the lower percentage of family households in and around the downtown.

The three Fresno districts had a different household makeup in 2000. The Central District had a lower percentage of family households (64.8%) than the city average (70.4%), and the Edison and Roosevelt districts had a higher percentage (75.9% and 78.9%, respectively). Similar trends were observed for married-couple families; thus, single-parent and non-family percentages were highest in the Central District (66.8%) and lower in the Edison (60.2%) and Roosevelt (50.1%) districts.

3.3.1.3 Community of Laton

There were 363 households in Laton in 2000, with an average household size of 3.72 persons per household. Laton's 2000 average household size is higher than that of both Kings County (3.30) and the Region (3.18).

3.3.1.4 City of Hanford

In 2000, Hanford had 13,913 households, with an average household size of 2.93 persons. By 2009, both the number of households and the average household size had increased to 17,015 and 3.05, respectively (California DOF 2009). The average household size for Hanford in 2009 is lower than that of either Kings County (3.30) or the Region (3.18).

The makeup of households in Hanford has changed little since 2000. Approximately 74.5% of the households were family households in 2000, which is similar to the 2006–2008 estimates of 74.0%. Also, reflecting similar trends in both the county and Region, Hanford had decreases in the percentage of married-couple families and increases in single-parent households (see Table 3-7 and Table 3-8).

3.3.1.5 Community of Grangeville

There were 227 households in Grangeville in 2000, with an average household size of 2.8 persons per household. Grangeville's 2000 average household size is significantly lower than both that of Kings County (3.30) and the Region (3.18).

3.3.1.6 Community of Armona

There were 961 households in Armona in 2000, with an average household size of 3.37 persons per household. Armona's 2000 average household size is higher than both that of Kings County (3.30) and the Region (3.18).

3.3.1.7 City of Corcoran

Corcoran had 2,722 households in 2000, and the average household size was 3.44 people. Both the number of households and the average household size increased by 2009 to 3,653 and 3.58, respectively (California DOF 2009). The average household size for Corcoran remains higher than that of either Kings County (3.30) or the Region (3.18).

Corcoran's makeup of households has remained steady since 2000. Approximately 80% of the households were family households in 2000, which is similar to the 2006-2008 estimate. Like

both the county and Region, Corcoran had decreases in the percentage of married-couple families and increases in single-parent households. Of note is the significant increase (almost 50%) in the number of female-headed households, which is not reflected at the county or regional level (see Table 3–7 and Table 3–8).

3.3.1.8 City of Wasco

In 2000, Wasco had 3,983 households, and the average household size was 3.79 people. By 2009, both the number of households and the average household size had increased to 4,882 and 3.92, respectively (California DOF 2009). The average household size for Wasco is higher than that of either the county (3.13) or the Region (3.18).

Approximately 86% of Wasco households were family households in 2000, but that percentage decreased to 80% by 2006–2008. Reflecting similar trends in both the county and Region, Wasco experienced a decrease in the percentage of married-couple families and an increase in single-parent households over this period (see Table 3-7 and Table 3-8).

3.3.1.9 City of Shafter

The 3,293 households present in Shafter in 2000 had an average household size of 3.67 people. By 2009, both the number of households and the average household size had increased, to 4,000 and 3.80, respectively (California DOF 2009). Shafter's average household size is higher than that of either the county (3.13) or the Region (3.18). The makeup of households is similar to the county and Region, with family households comprising 84.3% of all households in 2000 (see Table 3-7 and Table 3-8).

3.3.1.10 City of Bakersfield

Bakersfield had 83,428 households in 2000, and the average household size was 2.92 people. By 2009, both the number of households and the average household size increased to 109,449 and 3.02, respectively (California DOF 2009). Bakersfield's average household size is smaller than that of either the county (3.13) or the Region (3.18).

The makeup of households in Bakersfield has changed since 2000, with family households decreasing from approximately 74% of the total to 71.6% by 2008. Furthermore, the percentage of married-couple families decreased by approximately 3% between 2000 and 2008, and both the number of non-family households and male-householder family households increased (see Table 3-7 and Table 3-8).

The average household size was similar in the Northeast (3.07) and Northwest (3.03) districts, while the Central District's average household size (2.57) was smaller (U.S. Census Bureau 2000). This could be due to the urban nature of the area as well as to the lower percentage of family households in and around the downtown area.

The differences in the makeup of households across the Bakersfield districts in 2000 showed that the Central District had a percentage of family households (62.5%) below the city average (73.7%). The Northeast District's percentage was similar to the city average (73.9%), while the Northwest District had a higher-than-average family household percentage (84.2%). The same trend in percentages was true for married-couple families. Single-parent and non-family percentages were highest in the Central (62.5%) District, similar to the city average in the Northeast (50.9%) District, and lowest in the Northwest (27%) District.

3.4 Housing

3.4.1.1 Region

Single-family homes form the predominant housing type across the four counties, accounting for 73% of existing units in the Region in 2010. Multifamily units and mobile homes account for 20% and 7% of the remaining housing stock, respectively. Table 3-9 and Table 3-10 provide a summary of housing characteristics for 2000 and 2009, respectively, including vacancy rates for the Region. Kings County is unique because approximately 14% of the population is housed in group quarters, including the three state prison facilities located at Avenal and Corcoran and numerous military housing units at NAS Lemoore. Household characteristics exclude these group quarters. The rate of home ownership for the Region as a whole has decreased from 59.3% of all occupied housing units in 2000 to 56.8% in 2008. Table 3-10 provides a summary of home ownership in the Region for 2000 and 2008.

Table 3-9
 Housing Characteristics (2000)

Location	Single-family Housing Units		Multifamily Housing Units		Mobile Homes	Occupied	% Vacant
	Detached	Attached	2 to 4	5 Plus			
Fresno County	175,370	10,063	24,162	47,830	13,342	252,940	6.58
City of Fresno	86,592	6,028	16,308	36,174	3,923	140,079	6.00
Central District	1,277	248	986	2,244	8	4,165	12.56
Edison District	4,593	354	1,138	603	49	6,231	7.51
Roosevelt District	16,768	1,058	3,561	6,944	572	26,807	7.25
Community of Laton	350	7	4	0	12	363	2.7
Kings County	25,393	2,144	2,722	4,226	2,078	34,418	5.87
City of Hanford	10,401	552	1,387	2,041	341	13,932	5.37
Community of Grangeville	172	13	18	12	27	242	4.2
Community of Armona	878	41	59	36	28	1,042	4.9
City of Corcoran	2,144	180	270	303	123	2,772	8.21
Tulare County	87,838	4,740	8,514	7,819	10,728	110,385	7.73
Kern County	156,361	8,383	20,462	23,308	23,053	208,652	9.89
City of Wasco	3,069	326	413	318	130	3,971	6.70
City of Shafter	2,718	177	280	237	211	3,292	9.14
City of Bakersfield	57,582	3,221	9,993	14,855	2,538	83,428	5.46
Central District	7,848	775	2,944	3,651	451	14,447	7.80
Northeast District	32,917	2,027	5,436	5,262	3,183	44,989	7.86

Table 3-9
 Housing Characteristics (2000)

Location	Single-family Housing Units		Multifamily Housing Units		Mobile Homes	Occupied	% Vacant
	Detached	Attached	2 to 4	5 Plus			
Northwest District	15,502	131	478	1,068	800	17,298	3.79
Regional Total	439,645	23,719	54,035	79,761	57,341	606,395	7.35

Source: California DOF 2009.
 % = percent

Table 3-10
 Housing Characteristics (2010)

Location	Single-Family Housing Units		Multifamily Housing Units		Mobile Homes	Occupied	% Vacant
	Detached	Attached	2 to 4	5 Plus			
Fresno County	210,874	10,083	25,755	53,912	14,134	294,547	6.42
City of Fresno	103,640	6,028	17,142	40,301	3,923	160,763	6.01
Central District ^a	1,277	248	986	2,244	8	4,165	12.6
Edison District ^a	4,593	354	1,138	603	49	6,231	7.5
Roosevelt District ^a	16,768	1,058	3,561	6,944	572	26,807	7.3
Community of Laton ^a	350	7	4	0	12	363	2.7
Kings County	30,227	2,637	3,011	4,624	2,278	40,347	5.68
City of Hanford	13,212	864	1,538	2,082	343	17,070	5.37
Community of Grangeville ^a	172	13	18	12	27	242	4.2
Community of Armona ^a	878	41	59	36	28	1,042	4.9
City of Corcoran	2,970	180	373	334	164	3,690	8.23
Tulare County	106,474	4,917	10,320	9,001	11,812	131,915	7.44
Kern County	196,958	8,536	23,912	25,929	26,400	253,957	9.86
City of Wasco	3,861	361	445	441	134	4,892	6.68
City of Shafter	3,512	177	278	283	209	4,052	9.13

Table 3-10
 Housing Characteristics (2010)

Location	Single-Family Housing Units		Multifamily Housing Units		Mobile Homes	Occupied	% Vacant
	Detached	Attached	2 to 4	5 Plus			
City of Bakersfield	83,006	3,224	11,658	16,055	2,749	110,316	5.46
Central District ^a	7,848	775	2,944	3,651	451	14,447	7.8
Northeast District ^a	32,352	1,999	5,426	5,262	3,099	44,351	7.9
Northwest District ^a	16,067	159	488	1,068	884	17,936	3.0
Regional Total	544,533	26,173	62,998	93,466	54,624	720,766	7.81

Source: California Department of Finance 2010.
^aHousing data not available at the district level in Fresno and Bakersfield or in smaller communities for 2010, so 2000 Census data are presented.

Table 3-10
 Home Ownership (2000 and 2008)

Location	% of Total Units Owned by Occupants	
	2000	2008
Fresno County	56.5	53.7
City of Fresno	50.7	47.8
Central District	13.8	N/A
Edison District	40.5	N/A
Roosevelt District	43.6	N/A
Community of Laton	51.6	N/A
Kings County	55.9	55.3
City of Hanford	59.3	58.7
Community of Grangeville	73.6	N/A
Community of Armona	61.3	N/A
City of Corcoran	57.2	60.2
Tulare County	61.5	58.9
Kern County	62.1	59.6
City of Wasco	57.6	50.8
City of Shafter	60.2	N/A

Table 3-10
 Home Ownership (2000 and 2008)

Location	% of Total Units Owned by Occupants	
	2000	2008
City of Bakersfield	60.4	57.2
Central District	42.5	N/A
Northeast District	56.7	N/A
Northwest District	85.4	N/A

Sources: U.S. Census Bureau 2000. Summary Table. Selected Housing Characteristics; U.S. Census Bureau, Data Profile. Selected Housing Characteristics (2008).
 N/A = Not available, as the American Community Survey 2006–2008 does not provide data for communities with less than 20,000 persons.
 % = percent

3.4.1.2 City of Fresno

As is the case in Fresno County and the region overall, the largest increase in the Fresno housing stock occurred in single-family detached homes between 2000 and 2010, accounting for 77.5% of the housing stock growth. Given the recent economic recession, the majority of this growth occurred before 2008, with little occurring since. Housing inventory is different in the city than in either the county or the region, with a larger percentage of housing units being multifamily residences. These characteristics reflect the more urban nature of the city of Fresno compared with the unincorporated areas in the region.

The composition of the housing stock in 2000 varied substantially among the three affected districts. The Central District had a much higher percentage of multifamily units when compared to either the Edison or Roosevelt districts. When compared to the city as a whole, the Roosevelt District reflected the citywide housing stock very closely, whereas the Central District had a much higher percentage of multifamily units, and the Edison District had a high percentage of single-family homes (see Table 3-9 and Table 3-10).

The rate of home ownership in Fresno has decreased since 2000, and home ownership across the three districts varied widely. In 2000, the Central District had the highest percentage of individuals who rent (86.2%), making its residents about twice as likely to rent as the city residents as a whole (43.5%). Edison (59.5%) and Roosevelt (56.4%) districts had lower percentages of renters, but these percentages were still above that of the city as a whole (see Table 3-11). In 2008, housing unit turnover in Fresno was higher and the percentage of more established residents was lower (69.4% and 13.6%, respectively) than in the county (64.7% and 15.9%) and the Region (66% and 15.2%) (U.S. Census Bureau 2000; ACS 2008c).

In 2000, the Edison District had a higher percentage of housing units with the same residents for 20 years or more than either the Central or Roosevelt districts. Slightly more than a quarter of the housing units in the Edison District had been occupied by the same residents for at least 20 years, while in the Central and Roosevelt districts, 81.6% and 73.1% of units, respectively, had turned over in the past 10 years (U.S. Census Bureau 2000).

3.4.1.3 City of Fresno to Community of Laton

The community of Malaga, which is between Fresno and Laton, has an estimated 450 homes. Census data show that Bowles had an estimated 35 housing units in 2000, 23 of which were owner-occupied (U.S. Census Bureau 2000; California DOF 2009). The remaining communities in this area had between 20 and 50 identified residences.

3.4.1.4 Community of Laton

The community of Laton has an estimated 350 homes, and the main residential area is completely surrounded by agricultural fields. Census data show that 51.6% of the homes in Laton were owner-occupied homes (see Table 3-11).

3.4.1.5 Community of Laton to City of Hanford

Hamblin and Ponderosa, two communities in Kings County that are located between Laton and Hanford, have between 20 and 50 residences. Both communities have experienced growth over the past several years, and this growth is expected to continue.

3.4.1.6 City of Hanford

The largest increase in Hanford housing stock occurred in single-family detached homes between 2000 and 2010, which accounted for 84.8% of the housing stock growth. The composition of the housing stock in Hanford is similar to that of the county and the region, except for a smaller percentage of mobile homes (see Table 3-9 and Table 3-10).

Housing availability and price in Hanford may be affected by the unmet demand for housing for personnel from the nearby Lemoore NAS. The waiting list for military housing (for individuals and families) at the base is 2 years. The base has approximately 1,600 family housing units and almost 2,400 individual units. The base's population, however, is approximately 13,000 people, including enlisted personnel, officers, families, and civilian employees. The overflow population probably resides in Hanford and surrounding communities, though some may also commute to and from Fresno, approximately 50 miles away. As the Results section notes, Hanford has a surplus of available housing, despite the presence of the nearby base.

Home ownership in Hanford decreased slightly from 59.3% in 2000 to 58.7% in 2008, a decrease that is similar to decreases experienced by the county and Region (see Table 3-11). As of 2008, residents of 62.5% of the occupied housing units in Hanford had moved into their homes since 2000, while 14.5% of households were more established, having lived in the same residences since at least 1990. These percentages are similar to those of the county (67% and 14.5%) and of the Region (66% and 15.2%) as a whole (U.S. Census Bureau 2000; ACS 2008).

3.4.1.7 Community of Grangeville

The community of Grangeville has an estimated 172 homes, and the main residential area is completely surrounded by agricultural fields. Census data show that an estimated 73.6% of the homes in Grangeville were owner-occupied homes (see Table 3-11).

3.4.1.8 Community of Armona

The community of Armona has an estimated 878 homes, and the main residential area is completely surrounded by agricultural fields. Census data show that an estimated 61.3% of the homes in Armona were owner-occupied homes (see Table 3-11).

3.4.1.9 City of Hanford to the City of Corcoran

The study area between the cities of Hanford and Corcoran is entirely in Kings County. El Rancho is the only community identified in this segment of the project. El Rancho lies south of Lacey Boulevard, 1 mile west of Hanford, and has approximately 125 homes.

3.4.1.10 City of Corcoran

The composition of the housing stock in Corcoran is very similar to that in the county and region except for the smaller percentage of mobile homes. Single-family detached homes accounted for 82.5% of the housing stock growth between 2000 and 2010. Housing vacancy rates in the city were higher than the rates of both the county (5.7%) and the region (7.4%) (see Table 3-9 and Table 3-10) (California Department of Finance 2010).

The rate of home ownership in Corcoran increased from 57.2% in 2000 to 60.2% between 2006 and 2008. This increase runs counter to trends observed in the county and Region, which both experienced decreases over this period (see Table 3-11). In 2008, residents of more than half of the occupied housing units in Corcoran (55.4%) had moved into their homes since 2000, while 22.8% of these households were more established, having lived in the same unit since at least 1990. The percentage of housing units that turned over in the past 8 years is substantially less than that in the county (67%) and Region (66%). Similarly, the percentage of units with the same residents since at least 1990 is substantially higher, suggesting that the population of Corcoran is more stable than that of the surrounding areas (U.S. Census Bureau 2000; ACS 2008).

3.4.1.11 City of Corcoran to the City of Wasco

All eight communities identified in the study area between the cities of Corcoran and Wasco are unincorporated, and none is a CDP. The communities of Blanco, Angiola, Stoil, and Allensworth are located in Tulare County, and Kernell, Pond, Elmo, and Neufeld are located in Kern County. None has experienced significant growth in the past several years, and no growth is anticipated in the foreseeable future (Kinney 2010, personal communication; Smith 2010, personal communication; Waters 2010, personal communication).

The community of Allensworth is home to approximately 120 households, and most of the housing stock consists of mobile homes. The remaining seven communities are quite small, and have between zero and approximately 20 residences.

3.4.1.12 City of Wasco

As with the county and region, the largest increase in the Wasco housing stock was also in single-family detached homes between 2000 and 2010, accounting for 80.3% of the housing stock growth. The composition of the housing inventory is similar to that in the county and region, although Wasco has a smaller percentage of mobile homes (see Table 3-9 and Table 3-10).

The rate of home ownership in Wasco has decreased from 57.6% in 2000 to 50.8% between 2006 and 2008, which is consistent with changes seen in the county and Region over this same period (see Table 3-11). Residents of 61.3% of the occupied housing units in Wasco in 2008 moved into their homes since 2000, while 19.8% of households in the city were more established, having lived in the same home since 1990, or earlier. The percentage of recent turnover is lower and the percentage of more established residents is higher in Wasco than in the county (68.6% and 13.6%, respectively), and regionally (66% and 15.2%, respectively), suggesting a somewhat more stable community than is typical of the surrounding Region (U.S. Census Bureau 2008; ACS 2008).

3.4.1.13 City of Wasco to the City of Shafter

The three communities identified in the study area between the cities of Wasco and Shafter are Palmo, North Shafter Labor Camp, and Myricks Corner. These communities are unincorporated, none is classified as a CDP, and all are in Kern County. Palmo, with approximately five homes, has the fewest residences of the three communities. The North Shafter Labor Camp has approximately 45 duplexes, and Myricks Corner has approximately 75 residences.

3.4.1.14 City of Shafter

The largest increase in the Shafter housing stock between 2000 and 2010 is consistent with that in the region, with single-family detached homes accounting for 95% of the housing stock growth. The composition of the local housing stock is similar to that in the county and region. Housing vacancy rates in the city were 9.1% in 2000 and remained approximately the same in 2010 (California Department of Finance 2010). These rates are higher than those observed in the region (7.8%) but lower than in the county (9.8%) (see Table 3-9 and Table 3-10).

The rate of home ownership in 2000 in Shafter was 60%, which was similar to that of both the county and the Region (see Table 3-11). Residents of 66.2% of the occupied housing units in Shafter had moved into their homes between 1990 and 2000, while 18.6% of households were more established, having lived in the same residence since at least 1980.¹¹ These values are similar for the county (71.2% and 13.9%) and the Region (70.4% and 16%) for the same period (U.S. Census Bureau 2008; ACS 2008).

3.4.1.15 City of Shafter to the City of Bakersfield

The one identified community in the study area between the cities of Shafter and Bakersfield is Crome. This community is unincorporated and is not a CDP. There are approximately 20 homes in the community, with no growth anticipated in the foreseeable future (Smith 2010, personal communication).

3.4.1.16 City of Bakersfield

Although the observed growth in the housing units in Bakersfield of 32.2% between 2000 and 2010 was very much greater than that of the county (21.7%) and the region (18.7%), similarities between the city and its surrounding areas can be observed. As with the county and region, the largest increase in the Bakersfield housing stock occurred in single-family detached homes, which accounted for 89.3% of the housing stock growth. The composition of the city's housing stock is also similar except for the smaller percentage of mobile homes. Housing vacancy rates in the city were 5.5% in 2000 and remained stable into 2010 (California Department of Finance 2010). These 2010 vacancy rates are lower than the rates of both the county (9.8%) and the region (7.8%).

A comparison of the 2000 housing stock by district shows some significant differences in terms of the numbers and types of housing units. The Central District had the lowest percentage of single-family homes and a very high percentage of multifamily housing, while the Northeast District showed a higher percentage of single-family homes. The Northwest District had the highest percentage of single-family homes, which were 86.2% of the total housing stock (see Table 3-9 and Table 3-10).

The rate of home ownership in Bakersfield has decreased from 60.4% in 2000, to 57.2% in 2008. This decrease is consistent with changes seen in the county and Region over this period. The rate

¹¹ Because Shafter data are not available for the years after 2000, the analysis was adjusted to compare 1990–2000 and pre-1980 data to identify community stability and length of residency trends.

of home ownership across districts varied widely in 2000. The Central District, which is the most urban of the districts, had the highest percentage of individuals who rent (57.5%), which is substantially higher than the city as a whole (39.6%). In contrast, the Northwest District had the lowest percentage of renters (14.6%), which was significantly below the city average. The Northeast District had rates more similar to the city averages, with 56.7% of individuals owning homes and 43.3% of individuals renting (see Table 3-11) (U.S. Census Bureau 2000; ACS 2007).

Residents of 75.4% of the occupied housing units in Bakersfield in 2008 had moved into their homes after 2000, while only 9.4% of the households had lived in the same residences since at least 1990. The rate of recent turnover is higher, and the percentage of more established residents is lower in Bakersfield than in the county (68.6% and 13.6%) and Region (66% and 15.2%) (U.S. Census Bureau 2000). This may suggest a newer population and a potentially less stable community base.

In 2000, both the Central and Northeast districts had a higher percentage of housing units with the same residents for at least 10 years than did the Northwest District. Residents who had moved in prior to 1990 occupied about 30% of the housing units in these two districts while in the Northwest District, almost 80% of the district's units had new residents in the past 10 years, a much higher rate of population turnover than observed in the other two districts (U.S. Census Bureau 2000).

The Northeast District of Bakersfield is home to several established homes and businesses. The neighborhood that lies south of East Truxtun Avenue, between Union Avenue and Oswell Street lies partially in the project study area but is examined as a whole community in this document since the Bakersfield to Palmdale Section of the HST project will bisect this neighborhood as well. This neighborhood has a relatively high density of small churches, a community dental clinic, schools, markets, and a veterinary hospital. A relatively high level of pedestrian and bicycle travel within the neighborhood was observed, and there have been community organization activities held in response to the proposed HST project. Neighborhood characteristics indicate there is a shared sense of community as well as interest in this project.

The Northwest District of Bakersfield is residential in character, with many single-family, ranch-style homes constructed prior to the 1990s. The rate of home ownership in this area (81%) is substantially higher than the citywide average (57.2%), and census information indicates that there is considerable racial and socioeconomic homogeneity. The relatively large yards surrounding the modest single-family homes appear to be meticulously landscaped and residents were observed actively engaged in yard maintenance—one potential indicator of a shared sense of community pride and commitment to place. There have also been recent community organizing activities conducted specifically to raise awareness about the proposed HST project and its potential impacts on the neighborhood, an indication of the level of shared community interest associated with this proposed project. These factors indicate a relatively high degree of community cohesion in this area.

3.5 Environmental Justice

The EJ populations in the Region are identified and presented below. These communities have a substantial population of minority and/or low-income residents and were identified through the use of the 2000 Census data and consultation with local experts on demographic trends over the last decade. EJ areas are defined as Census block and block group populations that meet either or both of the following criteria:

- The Census block contains 50%, or more, minority individuals and/or the block group contains 25%, or more, low-income families.

- The percentage of minority and/or low-income individuals in any Census block or block group is more than 10 percentage points greater than the average of the surrounding area.

The EJ study area included all Census blocks and block groups within a 0.5-mile radius of the BNSF Alternative and station locations. Minority persons were defined as all individuals not identified as White-only in the 2000 Census, including those identified as Hispanic or Latino. Low-income individuals were defined as those with household incomes below the Census poverty threshold. See Appendix A of the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* for an examination of the appropriate poverty threshold for this analysis (Authority and FRA 2011).

Although Census 2000 data are now a decade old, the decennial Census is considered the most reliable source of data on race and ethnicity because it is based on a 100% population survey rather than on sampling or estimating techniques. 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 (Caltrans 1997). To confirm these assumptions, EJ populations in the study area were further examined using additional quantitative and qualitative methods to identify any potential demographic changes that may have occurred since the 2000 Census.

Quantitative analysis included proxy data sources that would indicate the current locations of EJ populations, such as American Community Survey data for 2006 through 2008 and participation data by zip code for social services, food stamps, Section 8 housing, and school-free or reduced-fee lunch programs in the study area.

Qualitative examination included outreach to local agencies and organizations to inquire about changes in conditions that would lead to changes in EJ population identification, and local expert review of identified 2000 Census EJ areas to ensure results are representative of current minority and low-income conditions. These additional verification processes validated the 2000 Census data.

The Region as a whole has a high percentage of minority and low-income individuals, as shown in Table 3-12. According to the 2000 Census, 56.5% of the total regional population is minority and 22.2% is living below the U.S. Census poverty threshold. Within the study area, these percentages are even higher, with minority and low-income individuals totaling 68.7% and 28.2% of the study area population, respectively. Hispanics are the predominate minority in EJ areas, accounting for 80% of the minority population (U.S. Census Bureau 2000).

Figure 3-3 provides an overview of the locations of EJ populations throughout the entire Region. Orange is used to indicate U.S. Census blocks containing EJ population, and darker orange is representative of EJ blocks with higher population densities. The red-dashed lines represent the study area, and the purple line is the project alignment. EJ populations located outside of the study area corridor are displayed to add regional context to the study area results and to show that the concentrations of EJ populations in the study area are similar to those found in surrounding areas.

Table 3-11
 Minority and Low-Income Percentages in the Region

Location	Total Area			Environmental Justice Study Area			
	Population 2000	% Minority	% Low Income	Population 2000	% Minority	% Low Income	Key Minority Demographic
Fresno County	799,407	60.3	22.9	18,610	81.4	40.5	Hispanic
City of Fresno	427,652	62.7	24.7	12,680	86.2	48.4	Hispanic
Community of Laton	1,236	71.9	17.4	685	81.9	18.7	Hispanic
Kings County	129,461	58.4	19.5	14,302	64.8	18.3	Hispanic
City of Hanford	41,686	50.1	17.3	1,135	64.7	13.9	Hispanic
Community of Grangeville	638	26.8	14.0	330	23.3	14.1	Hispanic
Community of Armona	3,239	58.3	26.6	185	42.7	30.1	Hispanic
City of Corcoran ^a	14,458	75.9	29.4	10,240	73.4	24.2	Hispanic
Tulare County	368,021	58.2	23.9	619	83.0	35.3	Hispanic
Kern County	661,645	50.5	20.7	81,699	66.4	26.7	Hispanic
City of Wasco	21,263	78.4	27.6	7,868	91.3	31.9	Hispanic
City of Shafter	12,736	71.0	28.9	8,849	63.8	29.9	Hispanic
City of Bakersfield	247,057	48.9	19.2	31,719	61.8	25.7	Hispanic
Regional Total	1,958,534	56.5	22.2	115,230	68.7	28.2	Hispanic

Sources: Analysis of U.S. Census Bureau 2000; U.S. Census Bureau 2000.

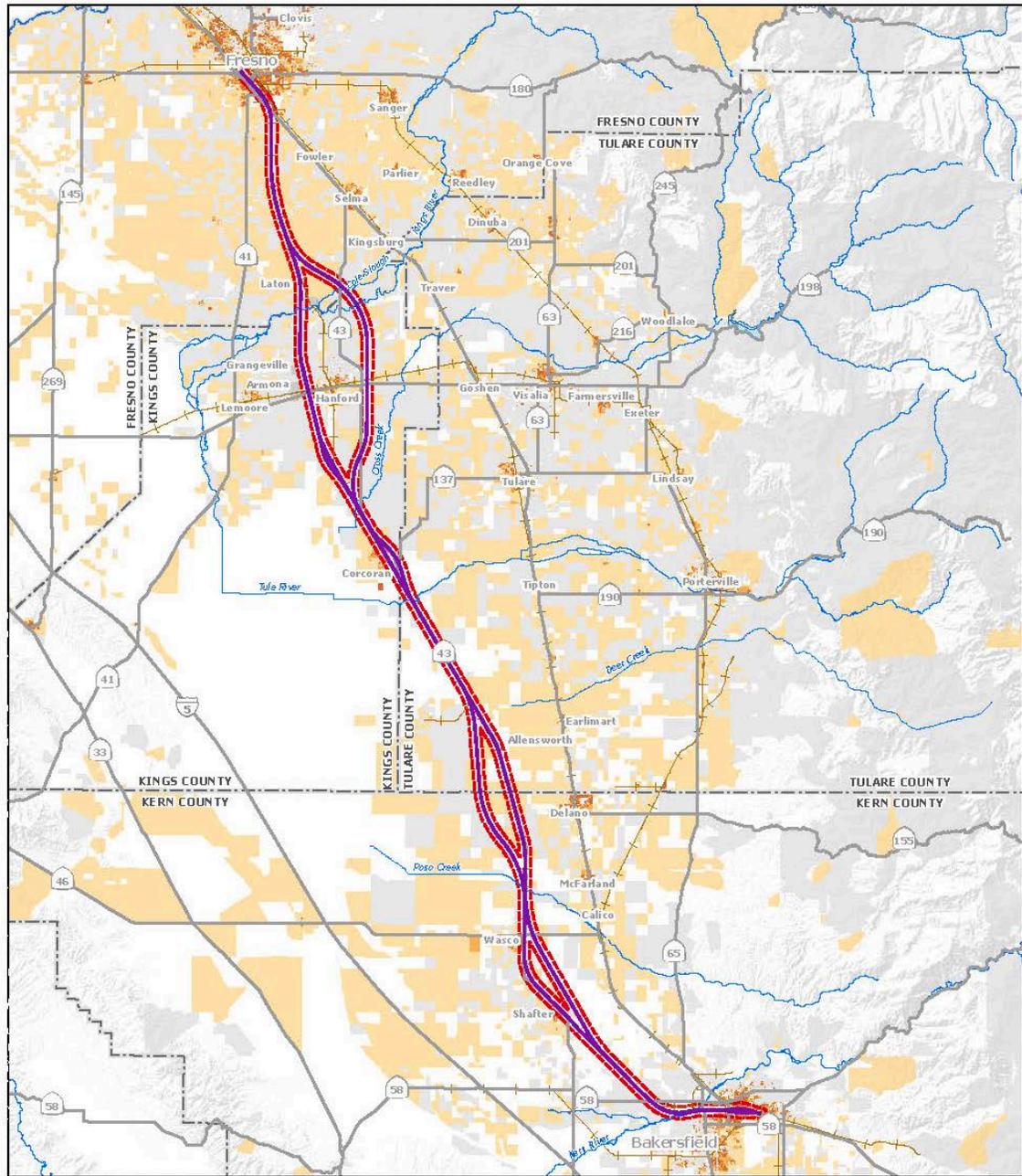
^a An error in the Census 2000 data for Corcoran was later corrected by the Census Bureau, but only for total population and not the racial profile breakdown. Minority percentages for Corcoran are therefore based on the original 14,458 total population estimate provided by the Census.

Note: Census 2000 Racial Profile data do not include institutionalized population, of which Corcoran has a significant number given the presence of the Corcoran State Prison facilities. Bakersfield districts cross city limit boundaries and therefore contain population that is outside what the Census defines as the city of Bakersfield.

% = percent

Figure 3-4, Figure 3-5, Figure 3-6, and Figure 3-7 show the locations of EJ population across each the four counties of Fresno, Kings, Tulare, and Kern, respectively. The Census blocks within the study area total 350.4 square miles, and 112.3 square miles (or 32.1%) of these are identified as EJ blocks.¹² The vast majority of these EJ blocks are rural and have low-density populations (102.8 of the 112.3 square miles), and only 9.5 square miles (or 8%) of the EJ areas contain more urban, medium- to high-density populations (U.S. Census Bureau 2000).

¹² The area calculated for the EJ analysis will be different than the areas presented in other sections because the study area for EJ includes all U.S. Census blocks that are completely or partially contained within the 0.5-mile radius of the alignment. Therefore, the areas of partially contained U.S. Census blocks that are outside the 0.5 mile are included. This difference will be larger in rural areas, where the U.S. Census blocks are larger.



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
 Data source: URS, 2012

May 14, 2012

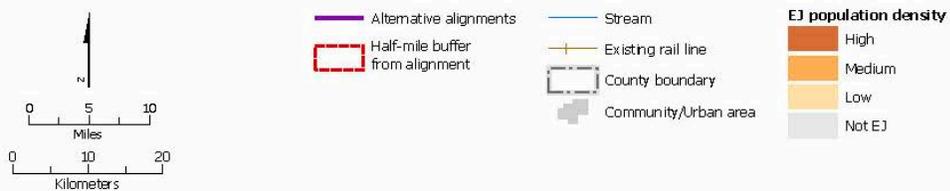
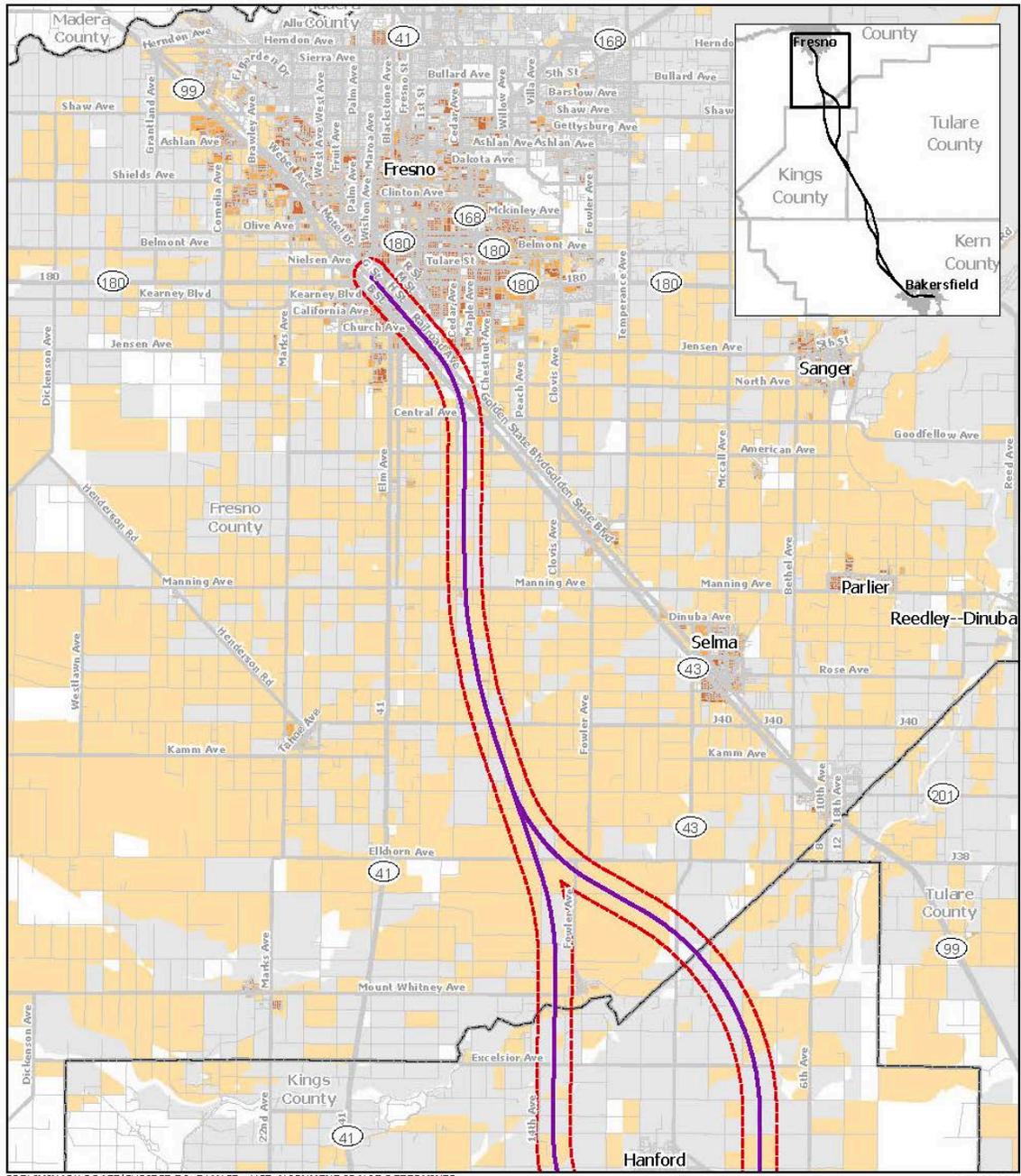
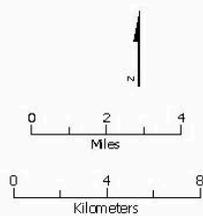


Figure 3-3
 Region EJ populations



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
 Source: Environmental justice analysis - URS, 2012

May 14, 2012



- Alternative alignments
 - Road
 - County boundary
 - Half-mile buffer from alignment
- EJ population density High
 - EJ population density Medium
 - EJ population density Low
 - Not EJ

Figure 3-4
 Fresno County EJ populations

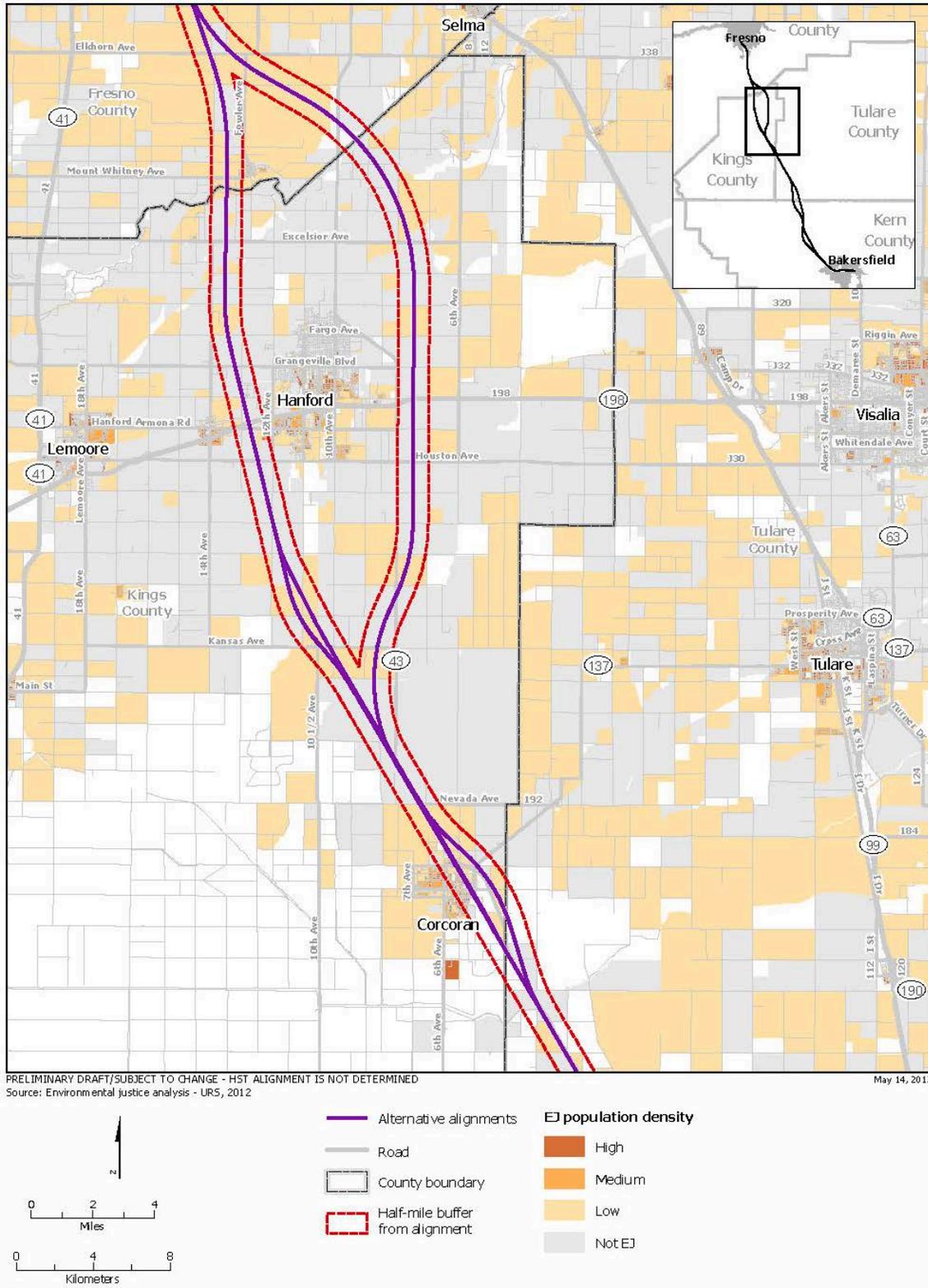


Figure 3-5
 Kings County EJ populations

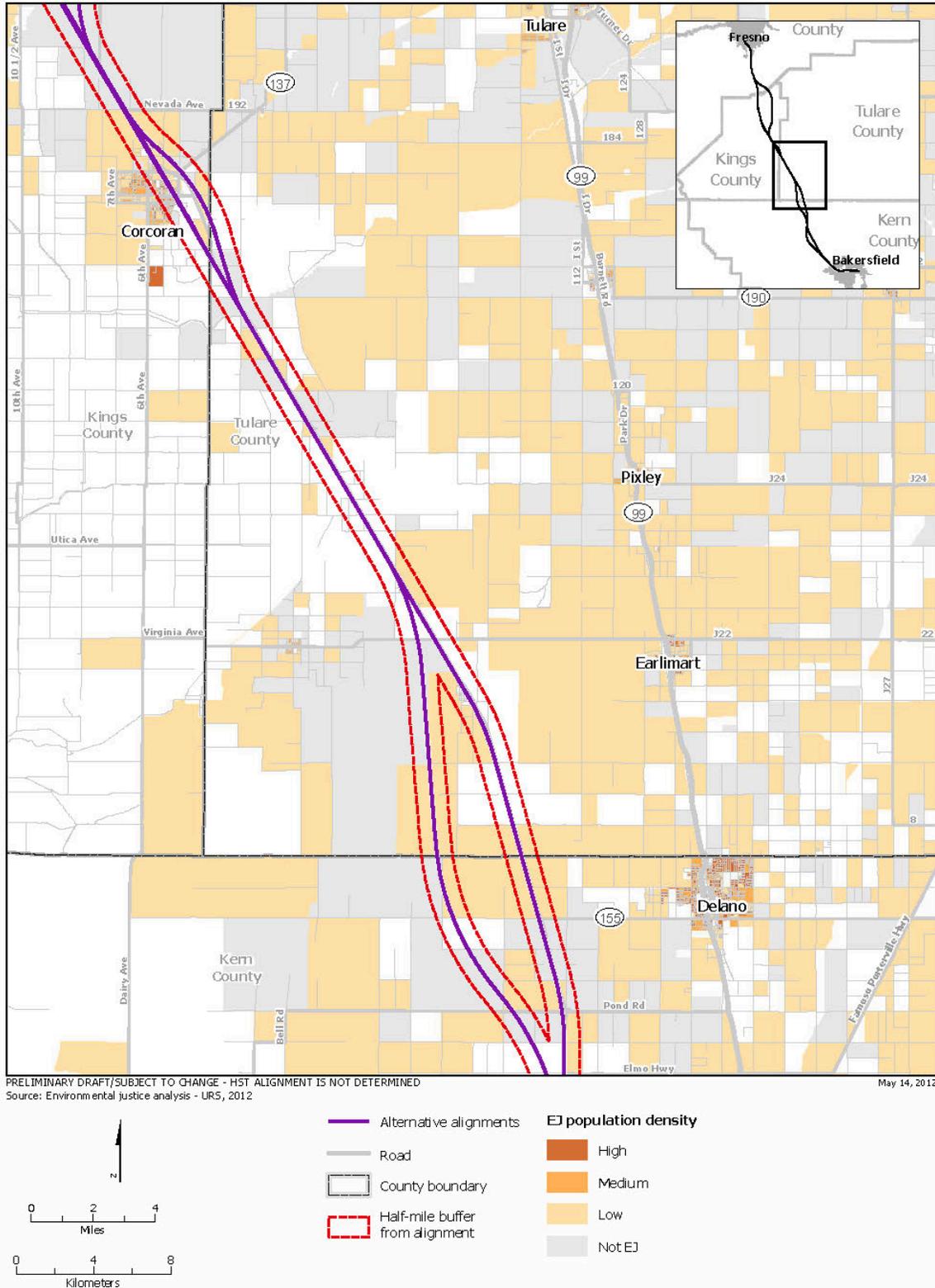
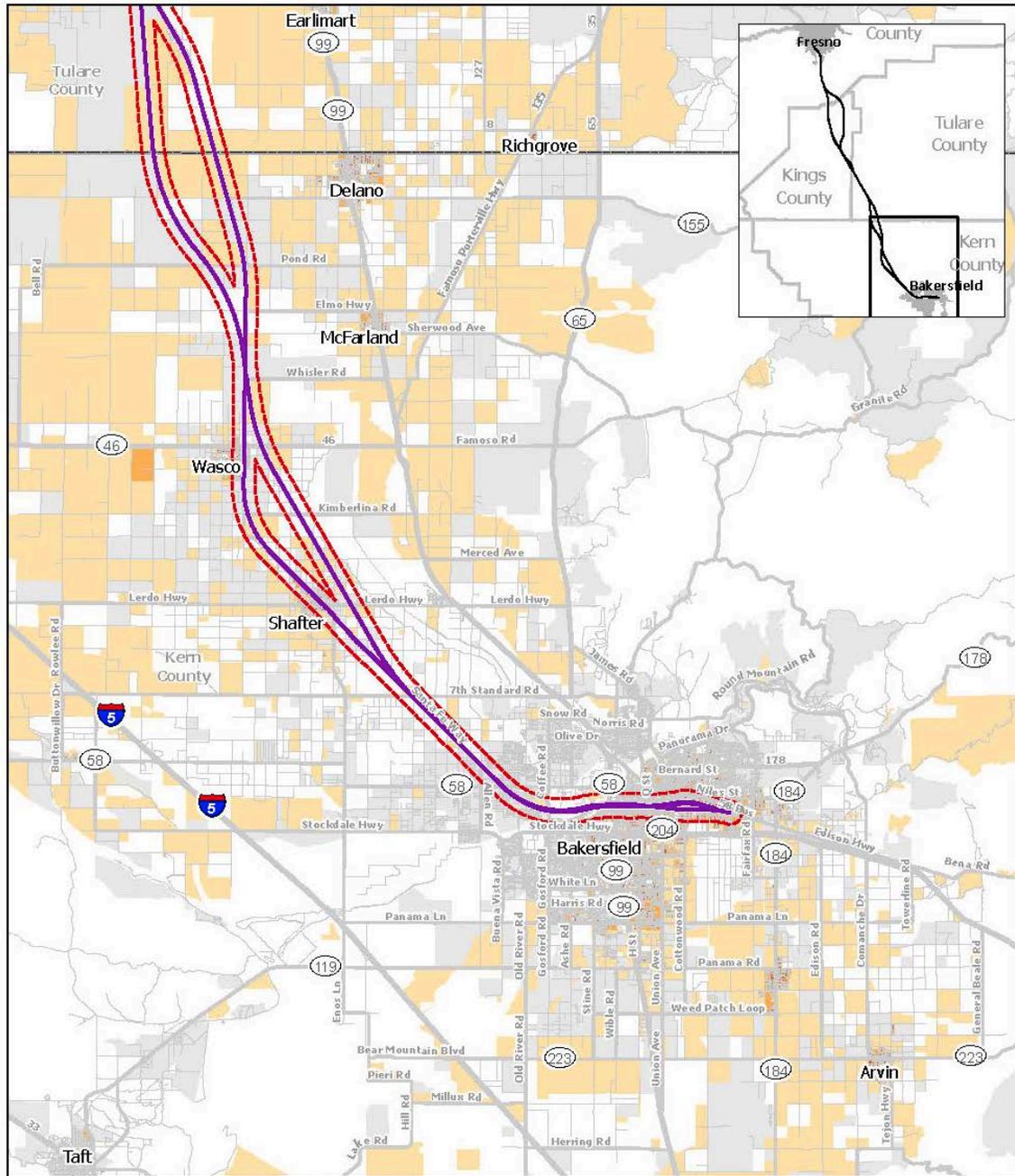


Figure 3-6
 Tulare County EJ populations



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED
 Source: Environmental justice analysis - URS, 2012

May 14, 2012

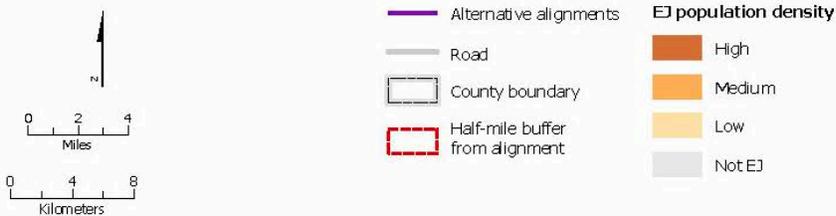


Figure 3-7
 Kern County EJ populations

The Region's cities of Fresno, Hanford, Corcoran, Wasco, Shafter, and Bakersfield have high concentrations of EJ populations. Fresno's Central District contains scattered EJ areas, some with high-density populations, and the Edison District contains a consistent stretch of densely populated EJ areas along the study area's southern extent. The Roosevelt District around Calwa, where the study area curves southward to leave the city, also contains a concentration of EJ areas with higher-density populations (U.S. Census Bureau 2000). The poverty rate for each of the three districts was well above that of the city of Fresno in 2000 (24.7%). The Central District had the highest poverty rate, with a staggering 57.7% of the population in poverty. The Edison (44.7%) and Roosevelt (38.0%) districts had lower poverty rates, but these were still significantly higher than the city and Region as a whole. The neighborhood of West Fresno, a predominately African-American community in the city of Fresno, is an EJ area that falls just outside of the study area of this section of the HST project.

The city of Fresno also houses the largest homeless encampment in the San Joaquin Valley. Hundreds of homeless individuals live in makeshift shelters under the SR 41 freeway structures between the Central and Edison districts. Located in this area are the Fresno Rescue Mission, the Poverello House (a women's shelter), and other facilities that serve this population. Census 2000 data collection methods attempted to include the homeless in the overall population counts but limitations in this data collection effort could lead to an underestimate of homeless populations in various locations (U.S. Census Bureau 2001).

The EJ study area for the Hanford West Bypass 1 and the Hanford West Bypass 2 alternatives includes Laton, Hanford, Grangeville, and Armona. This study area contains populations that differ from the other parts of the EJ study area, where a high minority population usually corresponds with a high low-income population. Within the Hanford West Bypass 1 and Hanford West Bypass 2 study area, as in Laton, Hanford, and Kings County as a whole, the low-income population does not qualify as an EJ area, but the high minority population will designate it an EJ area. The Grangeville study area has neither a minority EJ community nor a low-income EJ community. The population in the Armona study area contains an EJ low-income community but not an EJ minority community.

The study area for the BNSF Alternative through Corcoran contains a concentration of high- and medium-density EJ areas that are fairly continuous throughout the study area within the Corcoran city limits, particularly to the west of SR 43 and Pickerell Avenue. The study area for the Corcoran Bypass Alternative (to the east of the town) contains a much lower total population, a lower percentage of minorities (73.4%), and a lower percentage of low-income individuals (24.2%) than the city of Corcoran (U.S. Census Bureau 2000).

Wasco contains a concentration of mostly high-population-density EJ areas along the entire extent of the study area for the BNSF Alternative. These EJ areas are, for the most part, west of SR 43, extending between SR 43 and Griffith Avenue, with the exception of a major farm labor housing development east of SR 43. The study area for the Wasco-Shafter Bypass Alternative, which lies to the east of Wasco and Shafter, contains scattered, very lightly populated EJ areas (U.S. Census Bureau 2000).

Within the BNSF Alternative study area in Shafter, the percentage of minorities is lower and the percentage of low-income residents is slightly higher than in the city as a whole. The BNSF main line is a major dividing line for EJ communities through the city. The high school and newer upscale housing lie to the northeast of the BNSF, and the lower-income neighborhoods and traditional downtown area are to the southwest. As stated in the Wasco EJ discussion, the study area for the Wasco-Shafter Bypass Alternative contains scattered, very lightly populated EJ areas (U.S. Census Bureau 2000).

The EJ area in the city of Bakersfield is roughly split between low-density (38.6%), medium-density (33.4%), and high-density (28%) blocks. No significant EJ areas were identified in the Northwest District of Bakersfield, which had a very low percentage of persons living in poverty (5.5%). Poverty rates for the Central and Northeast districts were well above the citywide poverty rate of 25.7% in 2000 (29.5% and 37.0%, respectively). Central Bakersfield contains concentrations of high-density EJ areas, particularly south of Truxtun Avenue. The study area in the Northeast District of Bakersfield contains concentrations of high-density EJ areas both north and south of Edison Highway, moving west to east from Central Bakersfield through Oswell Street (U.S. Census Bureau 2000).

3.6 Local Economy

3.6.1 Employment

3.6.1.1 Region

Levels of employment and income in the southern San Joaquin Valley have historically lagged behind those in other parts of the state. The four counties of Fresno, Kings, Tulare, and Kern make up one of the most agriculturally productive areas in the world, and the regional economy has been driven by the farming industry. Although the four counties have led the state in agricultural revenues, the regional economy has also been diversifying in recent decades to become more oriented towards services. Additional shifts in employment sectors came as a result of the real estate boom several years ago, which generated many jobs in construction, fueled retail sales, and generated increased property sales and tax revenues (Cowan 2005).

Although the agricultural industry provides the area with a great deal of employment, the Region continues to be one of the most economically depressed areas in the nation because many of these jobs are seasonal and low-paying (Cowan 2005). The increased activity and investment in the real estate industry only made the effects of the market's subsequent crash that much worse, exacerbating the economic situation and leaving the Region one of the hardest-hit areas in the nation. The regional implications of the industry's 2007 collapse and the associated nationwide recession include substantial increases in unemployment, foreclosure rates, and poverty, as well as sharp declines in housing prices (Bertaut and Pounder 2009). Unemployment rates increased sharply across all four counties, with Tulare County's 15.3% unemployment rate the highest in the Region in 2009 and well beyond the state average of 11.4% for the same year (California EDD 2010).

While Fresno County has continued to increase production in agricultural goods over the past decades, the number of people employed in the industry has declined by approximately 12% since 2000, and it is expected that the number of people employed in agricultural and related occupations will continue to decrease through 2016 as agricultural land is urbanized and work in the fields is further mechanized. Despite Fresno County's agricultural productivity, this sector does not employ the largest percentage of the workforce. Instead, the largest sector consists of education, health, and social services, employing approximately 21.2% of the total labor force compared to 14% employed by agriculture at in 2008. Seven of Fresno County's largest employers are located in the project study area.

Kings County has been more buffered from the recession due to the large number of individuals employed by the government and working at the state prisons and Lemoore Naval Air Station in the county. Public administration continues to be by far the largest employment base in the county, with 31.6% of the total labor force. Since 2000, no occupation group has experienced a dramatic shift in its percentage of the labor force makeup. Of the 25 largest employers in the county, 3 employers are located in the study area (California EDD 2010).

Tulare County has been hard hit by the economic recession and has the highest unemployment rate in the Region. Although occupations in agriculture and related industries provide the largest employment base, 24.7% of the total labor force, the agricultural sector has continued to shrink and is projected to be approximately the same size as the public administration sector by 2016. None of Tulare County's 25 largest employers is located in the BNSF Alternative study area.

Kern County with its diversified employment base continues to have the lowest unemployment rate in the Region. Production in agricultural goods has continued to increase, and although the percentage of the labor force employed in agriculture and resource extraction has declined somewhat since 2000, this sector still employs the largest percentage of the labor force. Of the 25 largest employers in Kern County, 9 employers are potentially located in the study area (California EDD 2010).

Table 3-13 summarizes unemployment rates across the Region in 2000 and 2009.

Table 3-12
 Unemployment Rates (2000 and 2009)

Location	% of Labor Force	
	2000	2009
Fresno County	10.4	15.1
City of Fresno	9.7	14.2
Central District	30.0	N/A
Edison District	23.0	N/A
Roosevelt District	16.8	N/A
Community of Laton ^a	21.2	29.8
Kings County	10.0	14.6
City of Hanford	8.7	12.8
Community of Grangeville ^a	7.4	N/A
Community of Armona ^a	13.6	19.1
City of Corcoran	10.8	15.2
Tulare County	10.4	15.3
Kern County	8.2	14.4
City of Wasco	15.6	26.1
City of Shafter	14.9	25.1
City of Bakersfield	5.7	10.1
Central District	10.2	N/A
Northeast District	13.1	N/A
Northwest District	4.3	N/A

Sources: California Employment Development Department 2010a; U.S. Census Bureau 2000.
 N/A = Not available as the American Community Survey 2006–2008 does not provide data for communities with less than 20,000 persons.
 % = percent

3.6.1.2 City of Fresno

Despite the strength of the agricultural sector, unemployment in Fresno remains high and wages relatively low. Public administration is the largest occupational sector, followed by the education, health, and social services sector (City of Fresno Planning and Development Department 2002). Between 2000 and 2008, the number of workers in Fresno's labor force grew by 24,800, and the unemployment rate increased slightly from 9.7% to 9.9%. In 2009, the city, county, and Region all experienced increased unemployment, with rates climbing to 14.2%, 15.1%, and 14.9%, respectively. Employment data from the districts in the city of Fresno show that individuals living in the Central District (30%) were much more likely to be unemployed in 2000 than those living in either the Edison (23%) or Roosevelt districts (16.8%). (See Table 3-13.) Information on employment by occupation type is not available at the district level after 2000.

3.6.1.3 Community of Laton

Between 2000 and 2009 the unemployment rate in Laton increased from 21.2% to 29.8%. The 2009 percentage, which is high for the area, is higher than both the county (15.1%) and the Region (14.9%).

3.6.1.4 City of Hanford

Between 2000 and 2008, Hanford's labor force grew by 2,900 workers, while unemployment increased from 8.7% to 9.4%. During 2009, unemployment in Hanford reached 12.8%, which is slightly lower than the county rate of 14.6%. Public administration is the largest occupation group within the city limits of Hanford. The occupational profile of the city is very different from that of either the county or Region in that a much smaller percentage of the workforce participates in agriculturally related jobs. This is most likely due to Hanford's proximity to several major regional employers, such as NAS Lemoore and the Corcoran state prisons (see Table 3-13).

3.6.1.5 Community of Grangeville

In 2000, the community of Grangeville had a population of 638 individuals and a 7.4% unemployment rate, about half the rate of the county and the Region.

3.6.1.6 Community of Armona

Armona is a rural, agricultural community that had an unemployment rate of 13.6% in 2000, which increased to 19.1% in 2009. This unemployment rate is slightly lower than both the county (14.6%) and the Region (14.9%).

3.6.1.7 City of Corcoran

Public administration is the largest occupation within the city limits of Corcoran. The city's occupational profile differs from that of the county and Region in that a much smaller percentage of the workforce participates in agriculturally related activities. Compared to other communities, Corcoran has a very high percentage of individuals working in the public administration field as a result of the two major state prison facilities. Between 2000 and 2008, the number of workers in Corcoran's labor force grew by 700, while unemployment increased from 10.8% to 11.4%. During 2009, the city's unemployment rate reached 15.2% (see Table 3-13).

3.6.1.8 City of Wasco

A large number of jobs in Wasco service the agriculture industry. Between 2000 and 2008, the number of workers in Wasco's labor force grew by 1,600, while unemployment increased from

15.6% to 18.8%. During 2009, Wasco's annual average unemployment rate of 26.1% was a great deal higher than rates seen in both the county (14.4%) and the Region (14.9%). Public administration and agriculture are the two largest occupations within the city limits and account for approximately 70% of Wasco's occupational profile (see Table 3-13).

3.6.1.9 City of Shafter

Between 2000 and 2008, the number of workers in Shafter's labor force grew by 1,200, and unemployment increased from 14.9% to 16.9%. Shafter's 2009 annual average unemployment rate of 25.1% was one of the highest in the Region. Agriculture and related occupations comprise the largest occupational sector in Shafter. Between 2000 and 2008, the agricultural industry experienced substantial growth, more than doubling in size in large part due to the opening of the Bidart Brothers apple-packing facility and the expansion of Grimmway's citrus- and carrot-packaging facilities in Shafter (Sweeny 2010, personal communication). The occupational profile of Shafter is even more dominated by the agricultural sector than that of either the county or the Region (see Table 3-13).

3.6.1.10 City of Bakersfield

Bakersfield's economy has traditionally been more diversified than others in the Region, with both the oil and gas industry and agriculture playing major roles. Between 2000 and 2008, the number of workers in Bakersfield's labor force grew by 29,100, while unemployment increased from 5.7% to 6.8%. Bakersfield's 2009 annual average unemployment rate of 10.1% is lower than the rate in either the county (14.4%) or Region (14.9%). In 2000, unemployment rates for both the Central and Northeast districts were significantly higher at 18.5% and 20.5%, respectively, than the 12.4% unemployment rate in the Northwest District (U.S. Census Bureau 2000). Public administration is the largest occupational sector in Bakersfield. Bakersfield's occupational profile includes a much smaller percentage of the workforce in agriculture and related activities, while other occupations that represented a small percentage of the county and regional profile are larger here (see Table 3-13).

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Chapter 4.0
Methods of Displacement and Relocation
Analysis

4.0 Methods of Displacement and Relocation Analysis

This section presents the methods that were used to identify the residential, commercial, industrial, and agricultural property displacements and relocations expected under each of the project alternatives. In addition, the methodologies for evaluating the availability of suitable replacement properties are presented. The term 'displacement' is used to represent property takings that result in the acquisition of a parcel or structure, while the term 'relocation' is used to represent the need to find new homes for the residents and institutions, such as businesses, that are located in affected structures.

4.1 Property Displacement Analysis—Overview

Property displacements were identified through an intensive review of GIS data presenting the spatial relationship between the project alternatives, the existing county parcel boundaries, and the structures located on affected parcels. Specifically, GIS data overlays included the area of the proposed project footprint, aerial imagery of current structure locations, U.S. Census demographic information, photos and field notes of properties obtained during site visits, and county parcel data providing parcel size, land use designations, and structure characteristics such as address, value, and square footage. This information was used to (1) identify each parcel that falls within the project footprint, (2) determine the need for full or partial acquisition of the affected parcel, and (3) count the number and characterize the types of structures displaced.

This evaluation of parcel acquisitions and the structures affected by the project was recorded in a Microsoft Excel database. Additional information was added to this database to record the following:

- Number of residential units associated with each acquired parcel.
- The number of businesses associated with each acquired parcel, including business names, addresses, type of business, and the estimated number of employees and annual sales.
- The number of agricultural parcels acquired that were split as a result of the project.
- The number of agricultural parcels acquired that contained facilities that would be displaced.
- The number and types of community facilities that would be displaced by the project alternatives.
- Average number of residents per household in the area.
- Current vacancies for suitable replacement residences and businesses in the vicinity of projected displacements.

This detailed information enabled the analysis to identify the following:

- The number of units and residents affected, demographic characteristics of these residents, and types of residential structures displaced.
- The number and type of commercial and industrial businesses that would be relocated and the specific economic sectors affected.
- The number of agricultural parcels that have affected facilities or that are split, potentially resulting in increased costs and/or temporary disruption of agricultural production.
- The number and types of community facilities affected.

- The availability of suitable replacement residences and business locations in the vicinity of displacements was evaluated using data from the U.S. Department of Housing and Urban Development (HUD) and real estate databases listing current residential and business vacancies.

4.2 Parcel Analysis

Potential full parcel acquisition was determined if the project facilities would displace existing structures or acquire a substantial portion of the property that would affect its continued use. In the case of full acquisition, all residences and businesses on the parcel are assumed to be displaced. Many parcels will be partially acquired for this project and displacement of the residences and businesses located on the parcel may not be necessary. However, this does not mean there are no potential impacts on these structures. The Authority intends to relocate some residents and businesses, temporarily, from parcels that would be affected or disturbed by construction activities and nuisances, but that would not be permanently physically affected by the presence of the HST nearby.

For example, residences may not be displaced, but the residents may be temporarily moved if they are located close to such construction area nuisances as noise, dust, and traffic during the construction period. In these cases, residential structures would not be permanently acquired but their occupants would be temporarily relocated if the construction would cause access difficulties or if living in the residence during construction would be unsafe or extremely unpleasant. Also, businesses located near construction areas may close temporarily to allow for construction lay-down areas in cases where access in and out of the facility would be restricted or where buildings would need to be modified to remain adjacent to the project. At this stage of the project design, identifying the individual circumstances surrounding each of these potential occurrences on partial acquisitions is not possible.

In order to be conservative in this analysis and to avoid underestimating displacements, most of the residences and businesses on partially acquired parcels, including those that may ultimately be only temporarily affected, are counted as displacements. This assumption allows for a preliminary understanding of the magnitude of potential property impacts. The final full and partial parcel acquisition decisions will ultimately be determined on a case-by-case basis during the land acquisition and real estate appraisal phase of the project.

The analysis of potential suitable replacement real estate (residential and commercial-industrial) available for sale or rent in the study region was conducted in 2010, with findings reported below. Real estate market conditions are constantly changing along with overall economic conditions in the region. Research indicates that regional economic conditions have been improving slowly since the recession of 2008-2009 (Central Valley Business Times 2011; University of the Pacific 2012). As a result, market conditions in 2012 are still considered generally comparable to those evaluated in 2010.

Specific and more-detailed methods are presented below for the analysis conducted on the displacement of residential, commercial and industrial, agricultural, and community facilities.

4.2.1 Residential Properties

Residential properties or portions thereof that would need to be acquired were identified using aerial photographs, conceptual engineering plans and profiles, and right-of-way data. Land and structures within the project footprint were assumed to be displaced. These property acquisitions were compiled in the Microsoft Excel database containing details for each affected parcel including the estimated number of residential units, land use, assessed value, size of parcel, and street address. The number of residential units on a parcel was approximated using the available

county land use assessment and field observations. Field visits were conducted to obtain necessary additional information on properties. To identify displaced multifamily properties, the county zoning and land use codes for displaced residential properties were used.

Potential full and partial acquisitions were tabulated for each parcel located in the footprint of the project alternatives. Full acquisition was assumed if the project would displace existing residential structures or acquire a substantial portion of the front yard or other important residential amenities (e.g., the driveway or garage). While these definitions were used to make initial estimates of the project's impact, such full and partial acquisition decisions will ultimately be determined on a case-by-case basis during the land acquisition and real estate appraisal portion of the project, and therefore may change in the future.

The number of residents to be relocated was estimated for each community using average household size data from the 2000 Census. Data on minority, low-income, elderly, disabled, female head-of-household and linguistically isolated households in the area was used to identify sensitive populations. This Census data, although a decade old, remains the most reliable source of demographic data to identify sensitive populations in the districts of Fresno and Bakersfield with the highest concentrations of residential displacements.

Analysis was also conducted to determine the number of suitable replacement housing units available in the communities of the relocated residents. Land acquisition is scheduled to begin in 2012, so current vacancy rates were considered to be a good indicator of the availability of suitable replacement properties. This involved a community search for vacant housing units using the HUD Aggregated U.S. Postal Service (USPS) Administrative Data on Address Vacancies, as well as a search of vacant housing properties in real estate listings (HUD 2010; Zillow 2010; Primedia 2010). Locations of vacant residential properties were identified by Census tract and zip code along the project alignment and compared with the projected numbers of displaced residences in these areas to identify the likely availability of suitable replacement housing.

4.2.2 Commercial and Industrial Properties

Non-residential properties containing commercial and industrial businesses, or the portions thereof, that would need to be acquired were identified using aerial photographs, conceptual engineering plans and profiles, and right-of-way data showing potential parcel acquisitions. As noted, the Authority will temporarily relocate some businesses from parcels that would be affected or disturbed by construction activities and nuisances but that would not be permanently physically affected by the presence of the HST nearby. However, even though some businesses have been identified as being suitable for temporary relocation, it may be the case that marginal businesses would not survive a temporary relocation and would instead close. The resulting sales of these businesses would likely be compensated for by other businesses in the area, reducing overall negative economic impacts to the community, but the temporary impacts would be magnified by these potential business closures.

County data on parcel characteristics were obtained to identify specific information such as land use, assessed value, size of parcel, and street address. The direct construction impacts were compiled in the Microsoft Excel database containing details for each affected parcel, including a count of the number of businesses and relevant business characteristics (i.e., type of business, number of employees, and annual sales). The number and type of businesses, as classified in the NAICS, on each parcel were identified using the Reference USA database, a service of InfoGroup. Field visits were conducted to obtain necessary additional information.

Potential full and partial acquisitions were tabulated for each parcel along each of the project alternatives. Potential full nonresidential property acquisition was determined if the project would physically intrude on existing buildings or remove enough of a portion of the available use of the

site (such as parking) so that the business would be unable to operate. The analysis for commercial and industrial business parcels included estimating the number, type, and size (by number of employees and amount of annual sales) of businesses relocated. While these definitions were used to estimate the effect of the project, such full and partial acquisition decisions will ultimately be determined on a case-by-case basis during the land acquisition and real estate appraisal portion of the project, and therefore may change in the future. These full and partial designations are used here to provide an initial understanding of potential impacts.

Analysis was also conducted to determine the number of suitable replacement properties in the communities where there would be relocated businesses. Land acquisition is scheduled to begin in 2012, so current vacancy rates are considered a good indicator of the likely availability of suitable replacement properties. Locations of vacant commercial and industrial properties were identified by Census tract and zip code along the project alignment and compared with the projected numbers of relocated businesses in these areas to identify the likely availability of suitable replacement properties. This involved a community search for vacant commercial and industrial properties in these Census tracts and zip codes using HUD Aggregated USPS Administrative Data on Address Vacancies and a search of vacant commercial and industrial properties in real estate listings (HUD 2010; Loopnet 2010).

Additional real estate data were provided by a private commercial realtor in the area who was able to run professional-level queries of the Loopnet database (www.loopnet.com) of commercial properties available for sale or lease. This information was used to determine current availability/vacancy of commercial real estate for Fresno, Kings, Tulare, and Kern counties. For purposes of this analysis, all available data were extracted for the four counties, including sales and lease availability for the following types/classes of commercial property: office, warehouse, medical, retail, shopping center, industrial, agricultural, hotel/motel, church, restaurant, gas station, agricultural land, raw land, and automotive. The analysis was conducted in July 2010 and therefore real estate numbers represent vacancies at that period in time. Given that economic conditions have remained constant in the region and that recovery from the recession has been slow since this time, these findings are a good proxy for representing current conditions (Central Valley Business Times 2011; University of the Pacific 2012).

The current vacancies were then tallied for the various types of properties for sale or lease in each respective county. The data were further narrowed down by focusing only on properties in the zip codes of areas through which the proposed project will pass. The zip codes used were the following:

- Fresno: 93609, 93662, 93701, 93702, 93704, 93705, 93706, 93721, 93722, 93725, 93728, 93242.
- Kings: 93212, 93230.
- Tulare: none needed as there are no projected commercial or industrial relocations in the county.
- Kern: 93250, 93263, 93280, 93301, 93304, 93305, 93306, 93307, 93308, 93309, 93312, 93314.

This vacancy information was transferred to the Microsoft Excel database, and the numbers were combined to arrive at a total count. The resulting information was subsequently used in a gap analysis to compare the availability of commercial property to the need for similar types of properties that would result from relocations.

To refine the property data further, the property types/classes were categorized by their respective NAICS codes, which were then grouped into five broader categories:

- Industrial
- Commercial/Wholesale/Retail/Offices
- Transportation and Warehousing
- Automotive
- Miscellaneous

The available properties for each of the above five categories were then aggregated and compared directly to the estimated number of displacements of similar properties, as determined in the gap analysis. The resulting data were used to determine potential shortfalls and/or surpluses of commercial real estate currently available in Fresno, Kings, and Kern counties.

4.2.3 Agricultural Properties

Examination of agricultural businesses involved identifying direct construction impacts associated with the number of split parcels as well as the number of parcels where agricultural facilities (such as processing facilities, warehouses, barns, or silos) would be displaced. Split agricultural parcels—those parcels divided into two or more separate pieces by the project—represent potential impacts where farm units that are not rearranged to incorporate resulting splits logically could result in added operational expenses (staff time, extra gasoline) associated with access to fields for irrigation, pesticide application, harvesting, and other farm equipment operations.

The count of parcels with displaced agricultural facilities provides an indication of impacts on agriculture in the Region. As with commercial and industrial properties, some relocations may only be temporary (during construction of the HST) and the present occupants would return during operation of the system. On an agricultural parcel where a significant agricultural facility is to be relocated, that firm's business may close during its relocation. These impacts are associated with temporarily losing the associated facility functions and with the resulting direct impacts on farmers as well as the indirect impacts on the businesses involved in processing and transporting the agricultural products dependent on those facilities. The number of split parcels and displacements of agricultural facilities was identified using aerial photographs, conceptual engineering plans and profiles, and site visits to obtain the necessary information. Suitable replacement agricultural lands and operations were examined using data from a commercial real estate database (Loopnet 2010). Chapter 3.12 (Socioeconomics, Communities and Environmental Justice) and Chapter 3.14 (Agricultural Lands) of the EIR/EIS provide detailed information on the acreages and types of agricultural lands to be acquired by the project.

4.2.4 Community Facilities

Preliminary impacts were identified through intensive review of aerial photographs and GIS layers showing the spatial relationship between the proposed action and HST alternatives and existing community facilities. Assessor's parcel data and site inspections were used to identify those parcels containing community facilities, and other databases (e.g., Reference USA) were used to identify the number and type of community facilities that may be displaced or disrupted. The various alternative alignments were considered in relationship to the locations of key community facilities and services to determine potential impacts due to relocating community or public service facilities and services.

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Chapter 5.0

Project Displacement and Relocation Impacts

5.0 Project Displacement and Relocation Impacts

This section presents the numbers of each type of anticipated displacement and relocation within each city, county, and rural area, and within the Region as a whole that would occur as a result of the project. The term 'displacement' is used to represent property takings that result in the acquisition of a parcel or structure, while the term 'relocation' is used to represent the need to find new homes for the residents and institutions, such as businesses, that are located in affected structures. The results are presented first for the BNSF Alternative and then for the other alternatives and bypasses. The adequacy of replacement resources in each jurisdiction to absorb the displaced homes and businesses is also evaluated. It is important to note that the parcel takings examined here are based on current design of the project and may change as the project develops. Such changes will be monitored throughout project design to ensure the relocation plan is up-to-date.

5.1 Residential

This section presents the residential unit displacements and evaluates the need for permanent and temporary relocation of residents. It also evaluates the potential relocation capacity (i.e., comparable residential space currently available) in each affected city and county. The Cumulative Impacts section of the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* examines the potential of other projects in the Region for relocating residents and competing for available housing resources (Authority and FRA 2011). That analysis did not find any such conflict between the HST project and other projects.

5.1.1 BNSF Alternative

In total along the entire BNSF Alternative, an estimated 451 residential units would be displaced (see Table 5-1). This correlates to an estimated 1,430 relocated residents. The majority of these unit displacements are in the Bakersfield area where 265 households divided among Bakersfield's three districts would be displaced: the Central District, with 1 unit and 3 residents; the Northeast District with 119 units and 364 residents; and the Northwest District with 145 units and 444 residents.

The remaining displacements along the BNSF Alternative are primarily single-family residences in unincorporated portions of the four counties and the city of Corcoran, specifically 56 units and 176 residents in unincorporated Fresno County, 48 units and 172 residents in Corcoran, 40 units and 132 residents in unincorporated Kings County, 8 units and 27 residents in unincorporated Tulare County, and 25 units and 78 residents in unincorporated Kern County. The other urban areas have a small number of residential displacements and relocations: 5 units and 18 residents in the city of Fresno, and 2 units with 8 residents in both Wasco and Shafter. The city of Hanford would have no residential displacements.

Examination of suitable replacement housing alternatives finds that a sufficient number of comparable replacement residences are currently available in all areas with displacements and relocations (except for large-lot rural residential developments as noted below). Table 5-2 shows the gap analysis of single-family residential properties that are available for relocation.

Table 5-1
 Residential Displacement under the BNSF Alternative

Location	Residential Units Displaced	Estimated Residents to be Relocated
Urban Areas		
Fresno Central	0	0
Fresno Edison	3	11
Fresno Roosevelt	2	7
Hanford	0	0
Corcoran	48	172
Wasco	2	8
Shafter	2	8
Bakersfield Northwest	145	444
Bakersfield Central	1	3
Bakersfield Northeast	119	364
Rural Areas		
Unincorporated Fresno County	58	176
Unincorporated Kings County	40	132
Unincorporated Tulare County	8	27
Unincorporated Kern County	25	78
Regional Total	451	1,430
Source: Authority and FRA 2012a.		

Table 5-2
 Gap Analysis of Single-Family Residential Displacements in the BNSF Alternative

Location	Residential Units Displaced	Residential Units Available	Size of Surplus
Urban Areas			
Fresno Central	0	66	66
Fresno Edison	3	118	115
Fresno Roosevelt	2	657	655
Hanford	0	417	417
Corcoran	48	75	27
Wasco	2	108	106

Table 5-2
 Gap Analysis of Single-Family Residential Displacements in the BNSF Alternative

Location	Residential Units Displaced	Residential Units Available	Size of Surplus
Shafter	2	66	64
Bakersfield Northwest	145	500	355
Bakersfield Central	1	520	519
Bakersfield Northeast	119	945	826
Rural Areas			
Unincorporated Fresno County	56	342	286
Unincorporated Kings County	40	589	549
Unincorporated Tulare County	8	3,302	3,294
Unincorporated Kern County	25	2,044	2,019
Regional Total	451	11,589	11,138

Replacement Housing

About 95% of the total residential unit displacements under the BNSF Alternative would occur in unincorporated Fresno and Kings counties, the city of Corcoran, and communities in the Northwest and Northeast districts of Bakersfield. All of these areas have current vacancies in excess of the estimated displacements. Vacant residential properties in overlapping zip codes along the project alignment in unincorporated Fresno, Kings and Kern counties numbered 342, 589 and 2,044 respectively. These vacant properties would be more than sufficient for the 56, 40 and 25 potential displacements, respectively, in these locations, and these vacant residential properties do not include consideration of existing adjacent vacant land where current units could be moved. In Corcoran, 75 vacant residential properties are available for the 48 that would be displaced. At present in the Northeast District of Bakersfield, 945 single-family homes are available for sale where 119 units would be displaced (an 8-to-1 vacancy-to-displacement ratio). Thus, the existing supply of vacant residences would be far greater than necessary to house the relocated residents. Similarly, the Northwest District of Bakersfield currently has 500 vacancies, which exceeds the 145 units that would be displaced by more than a 4-to-1 ratio.

An examination of a second data source—the HUD Aggregated USPS Administrative Data on Address Vacancies—in the heavily affected areas of Corcoran and Bakersfield confirms the above findings that current residential vacancies would be sufficient to accommodate relocated residents. In Corcoran, 1 out of every 20 residences is vacant. In Bakersfield, approximately 1 out of every 18 residences is currently vacant in the Northeast District and 1 out of 70 residences is vacant in the Northwest District. These ratios equate to 252 vacant residences in Corcoran, 4,672 vacant units in the Northeast District of Bakersfield, and 481 vacant units in the Northwest District of Bakersfield. In all cases, the number of available units far exceeds the number of residential displacements expected from the project. Although the postal data do not indicate how many of these vacant units are actually available for sale or rent, they do indicate that the vacancy rate for residential properties is currently high in the study area.

The values of these potential replacement housing units are comparable to the values of the displaced properties. This comparison of cost is a good measure of the suitability of replacement housing because it is a function of important attributes, such as size, quality, and neighborhood amenities. This is particularly important in Bakersfield given the 265 displaced residences across all value categories. The displaced residential units in the Northeast District of Bakersfield have an average value of around \$70,000. More specifically, 3 units have values greater than \$200,000, 15 units have values between \$100,000 and \$200,000, and 101 units have values less than \$100,000. The displaced properties in the Northwest District of Bakersfield have an average value of \$160,000; 29 units have values greater than \$200,000; 88 units have values between \$100,000 and \$200,000; and 28 units have values below \$100,000. Data from the 2009 U.S. Census American Community Survey show that vacant housing values in Bakersfield are evenly distributed between all three of these price classes, and each class has about 1,100 units (U.S. Census Bureau, American Community Survey 2009). Also, a review of current vacant home prices in the Northeast and Northwest districts reveals a price distribution that is similar to that of the displaced properties in each district (Zillow 2010).

The multi-family displacements in the heavily affected Bakersfield districts would be 52 units displaced in the Northeast District and 21 units displaced in the Northwest District. Under the assumption that a large percentage of those living in multi-family housing would not purchase a home (i.e., would continue to rent), comparable rental units in these communities were quantified. Available houses and apartments for rent in the Northwest District (34 units) are sufficient to house the relocated potential renters in these communities. However, fewer units are available in the Northeast District (27 units) than the potential number of renters relocated. Also, renters housed in single-family residences could add to this need for rental units in all three districts in Bakersfield. Even so, given the large numbers of single-family residential vacancies, it is not likely that new housing would need to be constructed to house these individuals (given the large numbers of vacancies in homes detailed above). The relocation plan for residents in the Northeast District will note the possibility that rental units available in the immediate area may not be adequate. As a result, it will be important to plan sufficient lead time to allow for identification of suitable rental properties or provision of housing of last resort, including rehabilitation of existing housing or relocation of the disrupted residential areas to newly constructed housing elsewhere in the vicinity, where necessary, for low-income renters within the Northeast District.

In sum, although the BNSF Alternative would displace considerable numbers of existing housing units and relocate many people, adequate replacement housing appears to be available in the area. Residential displacements are concentrated in the Bakersfield Northwest and Northeast districts (a total of 264 residences and 808 residents) and in the city of Corcoran (48 residences and 172 residents). Although sufficient replacement housing is available within these communities, the number of displacements is considerable and represents over two-thirds of all residential displacements along the entire alignment. Although residential displacements in unincorporated Fresno and in Kings and Kern counties are fewer in number and less concentrated in a single community, they are still considerable and represent about 12%, 9%, and 6%, respectively of all residential displacements along the alignment. Because the majority of displacements in unincorporated counties are likely to be single-family residential households on working agricultural lands, it may be difficult to find comparable replacements, and the relocation of existing housing to nearby land may take time. Relocations may be especially difficult for rural residential subdivisions such as Ponderosa Road northeast of Hanford, the Newark Avenue area northeast of Corcoran, where residents enjoy a unique blend of amenities (spacious lots, city services, a country setting yet close to town), and the rural residential community located at the intersection of 7th Standard Road and the Central Valley Highway in Kern County. Few vacant, comparable, developed rural residential homesteads may be available for use as relocation resources. If so, it may be necessary to consider constructing housing of last resort, or even

duplicating the disrupted residential areas elsewhere in the vicinity. The relocation plan that the Authority will develop will consider these relevant impacts and prepare for them.

One manufactured housing, or mobile home park, community is affected by the BNSF Alternative in the city of Corcoran (20 units displaced). The special characteristics of mobile home parks can make it difficult to relocate residents within the same vicinity. Therefore, special consideration will be included in the project relocation plan to ensure that these residents obtain comparable housing and are able to remain in the vicinity, including the provision of housing of last resort, if necessary.

Residential displacements in the other communities along the BNSF Alternative are small in number and any effect on the region or any individual county or city would be minor. However, the composition of the relocated population must be considered because the Uniform Relocation Act and other policies and regulations require efforts to avoid disproportionate impacts on any given population group, particularly those considered to be part of "Environmental Justice" communities. The demographics, income, ownership rates, and other relevant data on the communities in the project study area were presented in detail in Chapter 4 (Affected Environment).

The sections on Environmental Justice and Relocation of Sensitive Populations in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* take a closer, more-detailed look at impacts on minority and low-income (EJ) populations and sensitive populations (the elderly, disabled, female heads of households, and linguistically isolated) in the communities through which the alternative alignments pass, particularly in the heavily affected Bakersfield districts because that is where the overwhelming majority of residential displacements would take place (Authority and FRA 2011).

In general, the residents of parcels that would be displaced do not differ from the general populations of the Central Valley. For example, minority and low-income populations tend to be clustered in the urban areas, while displaced residents of rural areas tended to be non-minority with somewhat higher incomes. The exception to this general rule is Bakersfield's Northwest District, which is an area of large, newer, high-priced, single-family homes that are owned and occupied by generally higher-income people.

The BNSF Alternative would cause a displacement within the Fresno Roosevelt District of an estimated 250 beds in the Fresno Rescue Mission's headquarters building. As described in the section on Disruption or Division of Existing Communities in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report*, this facility provides meals and services, including an overnight shelter, to the city's homeless. The social impact of displacing these transient residents would be large and may require relocation or re-establishment of the facility elsewhere.

When viewed from the perspective of property displacement, suitable existing replacement structures appear to be available within the community inasmuch as many vacant buildings exist in the area of the facility.¹³ In addition, if it is determined that a new building should be constructed, it would be a single structure and would not be likely to place pressure on the availability of existing housing units, affect existing community housing objectives or plans, or require new, previously unplanned housing to be built. The project would not displace substantial

¹³ As noted in the section on Disruption or Division of Existing Communities in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report*, the executive director of the Fresno Rescue Mission has indicated that it may be possible to rebuild the headquarters building on adjacent land owned by the Rescue Mission.

numbers of existing housing or people along this alternative alignment and thus not require the construction of replacement housing elsewhere.

Table 5-3 contains a summary of the relative changes in residential displacements that compares each of the alternative alignments to the BNSF Alternative. Table 5-4 contains a more-detailed comparison of the residential displacements in those portions of the BNSF Alternative that would be replaced by a corresponding alternative alignment.

Table 5-3
 Relative Change in Residential Displacement

Residential Displacements	BNSF Alternative	Relative Change to the BNSF Alternative									
		Hanford West Bypass 1		Hanford West Bypass 2		Corcoran Elevated	Corcoran Bypass	Allensworth Bypass	Wasco-Shafter Bypass	Bakersfield South	Bakersfield Hybrid
		AG	BG	AG	BG						
Total Units	451	-9	-10	-11	-12	-49	-21	-9	-5	7	-79
Total Residents	1,430	-30	-30	-37	-37	-175	-83	-29	-17	22	-242

Acronyms and Abbreviations:
 AG = at-grade option
 BG = below-grade option

Table 5-4
 Total Changes in Residential Displacement along Corresponding Segments of the BNSF Alternative

Alternative Name	Residential Units Displaced in Alternative	Residential Units Displaced in Corresponding Segments of BNSF Alternative	Difference
Hanford West Bypass 1 AG	53	62	-9
Hanford West Bypass 1 BG	52	62	-10
Hanford West Bypass 2 AG	51	62	-11
Hanford West Bypass 2 BG	50	62	-12
Corcoran Elevated	3	52	-49
Corcoran Bypass	31	52	-21
Allensworth Bypass	0	9	-9
Wasco-Shafter Bypass	18	23	-5
Bakersfield South	272	265	7
Bakersfield Hybrid	186	265	-79

Acronyms and Abbreviations:
 AG = at-grade option
 BG = below-grade option

5.1.2 Hanford West Bypass 1 Alternative

The Hanford West Bypass 1 Alternative consists of an at-grade option and a below-grade option. Very little difference exists in the number of residential displacements between these two options. The at-grade option would displace 53 residences: 1 in Laton, 2 in Hanford, 7 in unincorporated Fresno County, 40 in unincorporated Kings County, and 3 in Armona. The below-grade option would displace 52 residences: 1 in Laton, 1 in Hanford, 7 in unincorporated Fresno County, 40 in unincorporated Kings County, and 3 in Armona. Because 62 residential displacements would occur along the corresponding segment of the BNSF Alternative, the displacements for the at-grade option and the below-grade options would be a decrease of 9 and 10 displacements, respectively, if this alternative was selected instead of the BNSF Alternative. The estimated total number of residents relocated by this alternative would be about 171, or about 30 fewer than under the BNSF Alternative.

An examination of suitable housing alternatives for the displaced residents in this area revealed that a sufficient number of alternative homes are currently available. Real estate listing for homes for sale show that Laton, unincorporated Fresno and Kings counties (within zip codes 93242 and 93230), and the city of Armona (zip code 93202) had vacancies of 22, 506, and 37, respectively, all in excess of the residential displacement that would result in these locations from either of the two options for this alternative. Also, examination of HUD-aggregated USPS administrative data on address vacancies in the heavily affected area of Armona further verified that residential vacancies would be sufficient to accommodate relocated residents; 107 units were identified as vacant. The Hanford West Bypass 1 Alternative would therefore not necessitate the construction of replacement housing elsewhere.

5.1.3 Hanford West Bypass 2 Alternative

The Hanford West Bypass 2 Alternative consists of an at-grade option and a below-grade option. Very little difference exists in the number of residential displacements between these two options. The at-grade option would displace 51 residences: 1 in Laton, 2 in Hanford, 7 in unincorporated Fresno County, 38 in unincorporated Kings County, and 3 in Armona. The below-grade option would displace 50 residences: 1 in Laton, 1 in Hanford, 7 in unincorporated Fresno County, 38 in unincorporated Kings County, and 3 in Armona. Because 62 residential displacements would occur along the corresponding segment of the BNSF Alternative, the displacements for the at-grade option and the below-grade option would be a decrease of 11 and 12 units, respectively, if this alternative was selected instead of the BNSF Alternative. The estimated total number of residents relocated by this alternative would be about 164, or about 37 fewer than under the BNSF Alternative.

An examination of suitable housing alternatives for the displaced residents in this area is the same as that outlined for the Hanford West Bypass 1 Alternative. Therefore, the Hanford West Bypass 2 Alternative would not necessitate the construction of replacement housing elsewhere.

5.1.4 Corcoran Elevated Alternative

The Corcoran Elevated Alternative would displace three residences: one in Corcoran and two in unincorporated Tulare County. Because 52 residential displacements would occur along the corresponding segment of the BNSF Alternative, these displacements would be a decrease of 49 units if this alternative was selected instead of the BNSF Alternative. Because the Corcoran Elevated Alternative would displace a small number of existing housing units, the alternative would not require the construction of replacement housing elsewhere.

5.1.5 Corcoran Bypass Alternative

The Corcoran Bypass Alternative would displace a total of 31 residences: 30 in unincorporated Kings County and 1 in unincorporated Tulare County. The corresponding segment of the BNSF Alternative has 52 residential displacements. Therefore, if the Corcoran Bypass Alternative is selected instead of the BNSF Alternative, 21 fewer residences would be displaced compared to the BNSF Alternative. The estimated total number of residents needing to be relocated would be 102, or about 83 fewer than under the BNSF Alternative.

A sufficient number of suitable housing alternatives for the displaced residents in this area are currently available. Real estate listings of homes for sale show that unincorporated Kings County (within zip code 93212) and in the city of Corcoran had 664 vacancies¹⁴ in excess of the 32 total residential displacements that would result from this alternative. Because this alternative would not displace substantial numbers of existing housing units or people, the alternative would not require the construction of replacement housing elsewhere.

5.1.6 Allensworth Bypass Alternative

The Allensworth Bypass Alternative would not displace any residences. The corresponding segment of the BNSF Alternative would displace 9 residences and require the relocation of 29 residents.

5.1.7 Wasco-Shafter Bypass Alternative

The Wasco-Shafter Bypass Alternative would displace 18 residences: 16 in unincorporated Kern County and 2 in Shafter. The corresponding segment of the BNSF Alternative would displace 23 residences. There would be 58 residents displaced by the Wasco-Shafter Bypass, 17 fewer than the corresponding segment of the BNSF Alternative.

Unincorporated Kern County and the city of Shafter have 2,044 and 66 vacant homes available, respectively, to meet the housing needs of these displaced residents. Because this alternative would not displace substantial numbers of existing housing units or people, this alternative would not require the construction of replacement housing elsewhere.

5.1.8 Bakersfield South Alternative

The Bakersfield South Alternative would displace 272 residences in the city of Bakersfield. The corresponding segment of the BNSF Alternative would displace 265 residences. Displacements resulting from the Bakersfield South Alternative would relocate 832 residents, whereas displacements along the corresponding segment of the BNSF Alternative would relocate 810 residents.

The Bakersfield South Alternative would displace 146 units and 447 residents in the Northeast District, and 126 units and 386 residents in the Northwest District. These totals are similar to those of the corresponding segment of the BNSF Alternative, which would displace 7 fewer residential units and 22 fewer residents.

Sufficient numbers of alternative residences are available in the area. The Northeast District has 945 units available for sale, and the Northwest District has 500 units. As noted in the discussion of displacements in the BNSF Alternative, replacement rental units may be scarce, but no new

¹⁴ Note that since the Bypass is located outside of Corcoran these vacancies include housing in unincorporated Kings County within the vicinity of Corcoran. The vacancy count for the BNSF Alternative includes only residences in Corcoran.

residential units are likely to be constructed because both districts have sufficient replacement housing for the estimated number of displacements. Because this alternative would not displace substantial numbers of existing housing units or people, this alternative would not require the construction of replacement housing elsewhere.

Like the BNSF Alternative, the residential displacements along Bakersfield South Alternative in the Northwest and Northeast districts of Bakersfield would be considerable.

5.1.9 Bakersfield Hybrid Alternative

The Bakersfield Hybrid Alternative would displace 186 residences in the city of Bakersfield. The corresponding segment of the BNSF Alternative would displace 265 residences. Displacements resulting from the Bakersfield Hybrid Alternative would affect 569 residents, whereas displacements along the corresponding segment of the BNSF Alternative would relocate 810 residents.

The Bakersfield Hybrid Alternative would displace 57 units and 174 residents in the Northeast District, 128 units and 392 residents in the Northwest District, and 1 unit with an estimated 3 residents in the Central District. These totals are less than those of the corresponding segment of the BNSF Alternative, which would displace 79 additional residential units and 242 additional residents.

Like the BNSF Alternative, this alternative would result in considerable residential displacements in the Northwest and Northeast districts

Sufficient numbers of replacement residences are available in the area. The Northeast District has 945 units available for sale, and the Northwest District has 500 units. As noted in the discussion of displacements under the BNSF Alternative, although replacement rental units may be scarce, no new residential units are likely to be constructed because all of these districts have sufficient replacement housing to accommodate the estimated number of displacements.

5.1.10 Station Alternatives

Fresno Station–Mariposa Alternative

The Fresno Station–Mariposa Alternative displaces no residential units and therefore would not require the construction of replacement housing elsewhere. There would be no impact.

Fresno Station–Kern Alternative

The Fresno Station–Kern Alternative displaces no residential units and therefore would not require the construction of replacement housing elsewhere. There would be no impact.

Kings/Tulare Regional Station—East Alternative

The Kings/Tulare Regional Station—East Alternative would not displace any residential units and therefore would not require the construction of replacement housing elsewhere. Thus, this station alternative would have no impact.

Kings/Tulare Regional Station—West Alternative

The Kings/Tulare Regional Station—West Alternative would not displace any residential units and therefore would not require the construction of replacement housing elsewhere. Thus, this station alternative would have no impact.

Bakersfield Station–North Alternative

The Bakersfield Station–North Alternative displaces 16 residential units in Bakersfield’s Central District, which in 2010 has 520 vacant residential units to accommodate these 16 displaced households. As the Bakersfield Station–North Alternative would not displace substantial numbers of existing housing or people and would not, therefore, require the construction of a substantial amount of replacement housing elsewhere, any impact would be minor.

Bakersfield Station–South Alternative

The Bakersfield Station–South Alternative displaces no residential units and therefore would not require the construction of replacement housing elsewhere. There would be no impact.

Bakersfield Station–Hybrid Alternative

The Bakersfield Station–Hybrid Alternative would displace 12 residential units in Bakersfield’s Central district, which in 2010 had 520 vacant residential units to accommodate these 12 displaced households. Because the Bakersfield Station–Hybrid Alternative would not displace substantial numbers of existing housing units or people, this alternative would not require the construction of a substantial amount of replacement housing elsewhere. Thus, the impact of this station would be minor.

5.1.11 Heavy Maintenance Facility Alternatives

Fresno Works–Fresno HMF Site

Although the Fresno Works–Fresno HMF site displaces 31 residential units within unincorporated Fresno County, south of Fresno city limits, there are 342 vacant residential units along the alignment in unincorporated Fresno County to accommodate these displacements. As the project would not displace substantial numbers of existing housing or people and would therefore not require the construction of substantial numbers of replacement housing elsewhere, the impact of residential displacements would be minor.

Kings County–Hanford HMF Site

This HMF site displaces one residential unit and therefore would not require the construction of a substantial amount of replacement housing elsewhere. There would be a minor impact.

Kern Council of Governments–Wasco HMF Site

Although the Kern Council of Governments–Wasco HMF site displaces 1 residential unit in Wasco, more than 100 vacant residential units are available in the city to accommodate this displacement. As the project would not displace substantial numbers of existing housing or people and would therefore not require the construction of a substantial amount of replacement housing elsewhere, the impact of residential displacements would be small.

HMF Kern Council of Governments–Shafter East HMF Site

The Kern Council of Governments–Shafter East HMF site displaces no residential units and would not necessitate the construction of replacement housing elsewhere. There would be no impact.

HMF Kern Council of Governments–Shafter West HMF Site

The Kern Council of Governments–Shafter West HMF site would displace five residential units, but would not require the construction of a substantial amount of replacement housing elsewhere. Thus, this HMF alternative site would have a minor impact.

5.1.12 Relocation of Residents—Sensitive Populations

High concentrations of residential unit displacements associated with construction of the project could result in the relocation of high percentages of sensitive populations, including the elderly (over 65), the disabled, female heads of household, and linguistically isolated residents. It follows that adequate relocation plans must be put in place to meet any special needs. Potential impacts from the relocation of sensitive populations are a direct result of project construction and the need to acquire land for the project and its associated structures. Impacts from the relocation of minority and low-income populations are examined specifically in the section on Environmental Justice in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011).

The anticipated residential unit displacements resulting from the construction of the HST System are not expected to disproportionately displace sensitive populations; however, it is expected that sensitive populations will be among those relocated by the project. Relocation plans and resources would take this into account and address special needs of such households accordingly.

BNSF Alternative

The highest numbers of residential displacements would occur in the Northeast and Northwest districts of Bakersfield under the BNSF Alternative. Within the U.S. Census tracts for these three districts, analysis of Census 2000 data shows that the percentage of the total population that is elderly in these districts is 10.5% and 7.8%, respectively. These percentages are similar to those for Bakersfield as a whole (8.8%) and for Kern County (9.4%). The disabled population in these districts accounts for 24.6% and 14.3%, respectively, of the total population. The value for the Northeast District is somewhat higher than those of Bakersfield as a whole (19.9%) and of Kern County (22.5%), and the percentage for the Northwest District is considerably lower. The female head-of-household population in these districts is 17.8% and 7.9%, respectively. The percentages for the Northeast District are somewhat higher than those for Bakersfield as a whole (14.2%) and for Kern County (15.0%), and the percentage for the Northwest District is considerably lower. The percentage of households linguistically isolated in the districts is 9.6% and 1.2%, respectively. The percentage for the Northeast District is higher than in Bakersfield as a whole (5.8%) and in Kern County (8.2%). These comparisons suggest that the residential displacements in the Northeast District may affect slightly higher numbers of disabled, female head-of-household populations, and linguistically isolated populations. Relocation plans and resources would take these possibilities into account.

After the Bakersfield area, the city of Corcoran and unincorporated Fresno and Kings counties contained the most residential displacements. For the unincorporated areas, these relocations are not concentrated in a single community, but rather are dispersed throughout rural areas. Given that no elderly, disabled care, or women's centers were identified among these displacements, there is no reason to believe that relocation of elderly, disabled, or female head-of-household populations would occur at a rate greater than that for the county average for these populations. The same is true for individuals who are linguistically isolated, because the percentage of these individuals relocated would be expected to correlate with those of the counties as a whole.

Hanford West Bypass 1 Alternative

High concentrations of residential displacements would not occur under the Hanford West Bypass 1 Alternative. Therefore, the impacts on sensitive populations would be small.

Hanford West Bypass 2 Alternative

High concentrations of residential displacements would not occur under the Hanford West Bypass 2 Alternative. Therefore, the impacts on sensitive populations would be small.

Corcoran Elevated Alternative

High concentrations of residential displacements would not occur under the Corcoran Bypass Alternative. Therefore, the impacts on sensitive populations would be small.

Corcoran Bypass Alternative

High concentrations of residential displacements would not occur under the Corcoran Bypass Alternative. Therefore, the impacts on sensitive populations would be small.

Allensworth Bypass Alternative

High concentrations of residential displacements would not occur under the Allensworth Bypass Alternative. Therefore, the impacts on sensitive populations would be small.

Wasco-Shafter Bypass Alternative

High concentrations of residential displacements would not occur under the Wasco-Shafter Bypass Alternative. Therefore, the impacts on sensitive populations would be small.

Bakersfield South Alternative

High concentrations of residential displacements would occur in and near the city of Bakersfield's Northeast and Northwest districts under the Bakersfield South Alternative. The presence of sensitive populations in these areas was examined for the BNSF Alternative. The analysis suggests that relocation in these districts may affect high numbers of disabled, female head-of-household, and linguistically isolated populations in the Northeast District. Therefore, the relocation plans and resources provided will take these populations into account.

Bakersfield Hybrid Alternative

High concentrations of residential displacements would occur in and near the city of Bakersfield's Northeast and Northwest districts under the Bakersfield Hybrid Alternative. The presence of sensitive populations in these areas was examined for the BNSF Alternative. The analysis suggests that relocation in these districts may affect high numbers of disabled, female head-of-household, and linguistically isolated populations in the Northeast District. Therefore, the relocation plans and resources provided will take these populations into account.

5.1.12.1 Station Alternatives

No residential displacements would be associated with the Fresno and Hanford station alternatives. Residential displacements associated with the Bakersfield Station–North Alternative and Bakersfield Hybrid Alternative occur in and near the Central and Northeast districts of Bakersfield. The presence of sensitive populations in these districts was examined for the BNSF Alternative. The analysis suggests that relocations in these districts may affect high numbers of female head-of-household, and linguistically isolated populations. Therefore, the relocation plans and resources provided will take these populations into account.

5.1.12.2 Heavy Maintenance Facility Alternatives

Residential displacements that would result from the Fresno Works–Fresno HMF site and the Kern Council of Governments–Wasco HMF site would not disproportionately displace sensitive populations. No residential displacements are associated with the Kings County–Hanford HMF site or the Kern Council of Governments–Shafter HMF site.

5.2 Commercial and Industrial

5.2.1 BNSF Alternative

In total along the entire BNSF Alternative, an estimated 395 commercial and industrial businesses would be relocated during the construction of the project. These relocated businesses would correspond to an estimated 2,458 relocated employees. Bakersfield businesses, which account for 302 of the 395 total business relocations, would be divided among the city’s Central District (109 businesses and an estimated 635 employees), Northeast District (174 businesses and 477 employees), and Northwest District (19 businesses and 410 employees).

The remaining commercial and industrial relocations along the BNSF Alternative would occur primarily in the city of Fresno (36 businesses and 579 employees), unincorporated Fresno County (15 businesses and 151 employees), and Corcoran (16 businesses and 51 employees). The cities of Wasco (13 businesses and 31 employees) and Shafter (6 businesses and 21 employees), unincorporated Kern County (4 businesses and 53 employees), and unincorporated Kings County (3 business and 51 employees) would also have relocations. No business relocations would occur in the city of Hanford or unincorporated Tulare County.

Table 5-5 contains a breakdown of the total commercial and industrial business relocations along the BNSF Alternative.

Table 5-5
 Commercial and Industrial Relocations under the BNSF Alternative

Location	Businesses Relocated	Estimated Employees Relocated
Urban Areas		
Fresno Central	1	5
Fresno Edison	34	534
Fresno Roosevelt	1	40
Hanford	0	0
Corcoran	16	51
Wasco	13	31
Shafter	6	21
Bakersfield Northwest	19	409
Bakersfield Central	109	635
Bakersfield Northeast	174	477

Table 5-5
 Commercial and Industrial Relocations under the BNSF Alternative

Location	Businesses Relocated	Estimated Employees Relocated
Rural Areas		
Unincorporated Fresno County	15	151
Unincorporated Kings County	3	51
Unincorporated Tulare County	0	0
Unincorporated Kern County	4	53
Regional Total	395	2,458
Source: Authority and FRA 2010.		

Examination of the NAICS classification of relocated commercial and industrial businesses reveals that the types of businesses being relocated along the BNSF Alternative include automotive repair; wholesale trade; professional, scientific and technical services; machinery and equipment services; accommodation and food services; construction, transportation and warehousing; health care and social assistance; administrative and support; and waste management and remediation services. The highest number of business and employee relocations would occur in the Edison District in the city of Fresno, unincorporated Fresno County, Corcoran, and the Central and Northeast districts in Bakersfield.

Replacement Business Locations

An assessment was conducted to determine the suitability of available properties as relocation sites for these businesses. The suitability of a property was based on the NAICS codes of the businesses being relocated and on the description, configuration, and zoning of the properties listed as available. The NAICS codes of the businesses being relocated were shortened to two digits and then grouped into similar functional requirements. The exception to this was automotive services, where 3-digit NAICS codes were used to distinguish these specific and extremely common business types in the study area from others that began with "81-." Table 5-6 shows the available commercial facilities located within the study area that were evaluated and determined to be suitable relocation sites for these businesses.

Table 5-6
 Number of Available Vacant Business Properties by County and Most Common NAICS Code

Description and NAICS Codes	Fresno	Kings	Kern
Industrial (construction and manufacturing): 23, 31, 32, 33	64	10	46
Commercial/Wholesale/Retail/Offices: 42, 44, 53, 54	174	40	363
Transportation and Warehousing: 45, 48	114	6	111
Automotive Repair and Services: 811	5	0	9
Accommodation, food service, other non-automotive services: other 81 codes	15	1	67
Sources: Analysis of information collected through Reference USA (2010), Loopnet (2010), county parcel data, aerial images, and site visits. Acronym: NAICS = North American Industry Classification System			

Examination of suitable replacement locations for these businesses finds that a sufficient number of alternative sites are available for the retail, commercial, office, industrial, transportation, and warehousing sectors. However, there are a larger number of businesses (58) associated with automotive repair, service, or sales than there are properties available (14). Relocating these automotive businesses could therefore require modification of the equipment or configuration of other properties to meet needed specifications. Table 5-7 shows the results of the gap analysis—a comparison of needed versus available—of the total number of industrial and commercial properties within the study area.

Table 5-7
 Gap Analysis of Business Relocations in the BNSF Alternative

Counties	Businesses Relocated	Business Units Available	Size of Surplus
Fresno County	51	372	321
Kings County	19	57	38
Tulare County	0	0	0
Kern County	325 ^a	596	269
Regional Total	395	1,025	630
Source: Analysis of information collected through Reference USA (2010), Loopnet (2010), county parcel data, aerial images, and site visits. ^a Note that this total for Kern County includes businesses associated with the Mercado Latino Tianguis, a single structure that houses an estimated 118 small businesses.			

This analysis examined the availability of these types of business locations within the zip codes that fall within the study area in the communities. The 321 displaced businesses¹⁵ in Kern County in the Bakersfield area and in the cities of Wasco and Shafter are primarily retail, commercial, office, and miscellaneous businesses (225 units). Examination of current commercial real estate

¹⁵ Note that this total includes the 118 small retail businesses associated with the Mercado Latino Tianguis, a single structure.

for sale and for lease in these locations identified 430 units of this type available. Vacancies in industrial as well as transportation and warehousing properties total 46 and 111 units, respectively. This is in comparison to the 25 and 23 units, respectively, of each type that would be displaced by the BNSF Alternative.

In the city of Fresno and unincorporated Fresno County, the commercial, retail, and office space vacancies total 174 units; this level of vacancy would be more than sufficient to meet the needs of the 27 businesses displaced by the BNSF Alternative. Vacant industrial as well as transportation and warehousing vacancies total 64 and 114 units, respectively; again, this total of vacancies more than covers the 11 and 4 businesses of each class that the BNSF Alternative would relocate.

Within the city of Corcoran, 16 business relocations would occur across the industrial, commercial, wholesale, retail, and automotive and transportation sectors. Current vacancies in Corcoran are minimal, and there is a deficit of all types of required business properties in the city. Therefore, business relocation in Corcoran will be an important consideration in the relocation plan.

The HUD-aggregated USPS administrative data on address vacancies supports these findings, showing overall current business vacancies in the Bakersfield Central and Northeast districts to be 17% and 16%, respectively. Based on these percentages, 1 out of every 6 business locations in these two districts is vacant, which equates to 2,112 and 834 vacant business properties, respectively, in the two districts). The overall vacancy rate in Fresno's Edison District is approximately 17%, and one out of every six business sites is vacant (totaling 200 vacant business properties).

Automotive is an important class of businesses that would be relocated in both Kern and Fresno counties as well as in the city of Corcoran. Automotive businesses usually require specialized facilities, given the services they perform. Based on an examination of alternative automotive-specific locations, current vacancies specifically tailored for this sector are fewer than the projected relocations. In Kern County, 46 automotive businesses would be relocated and only 9 current vacancies are identified. In Fresno County, eight automotive businesses would be relocated and only five units are vacant. In Corcoran, four automotive businesses would be relocated, and there are no suitable vacancies. Given the relative scarcity of these specialized replacement properties, special consideration would be given to automotive businesses during the acquisition and relocation process.

Commercial and industrial business relocations in the Bakersfield Central and Northeast districts total 283 units, and these businesses employ an estimated 1,111 individuals. Although there is sufficient replacement space located within these communities, this is a considerable number of relocations and represents about 70% of all commercial and industrial relocations along the entire alignment. Given the high number of relocations and the fact that the BNSF Alternative would divide these communities and important community facilities, the impact of these relocations on business operations would be substantial.

The number of business relocations in Corcoran is 16, which is large given the small size of the city's overall economy. In addition, the lack of suitable vacant replacement properties has the potential to further disrupt economic conditions. Therefore, the effect of these relocations on business operations in Corcoran would be substantial.

Commercial and industrial relocations in unincorporated Fresno County and in Fresno's Edison District are smaller in number, but they remain considerable and represent 8%, and 5%, respectively, of all commercial and industrial relocations along the alignment. The effect on business operations within these communities would be moderate.

One active oil well is located in the Bakersfield metropolitan area along the BNSF Alternative within the project footprint and a 50 foot buffer around the footprint. Active wells would need to be capped and abandoned or relocated, potentially to nearby locations using direction drilling techniques, if feasible. Appurtenant facilities such pipelines would also potentially need to be relocated if they fall within the footprint. Production lost during well relocation is expected to be small on a regional basis, due to the small number of affected wells.

Table 5-8 contains a summary of the relative changes in commercial and industrial business relocations and compares each of the alternative alignments to the BNSF Alternative. Table 5-9 contains a more-detailed comparison of the relocations in those portions of the BNSF Alternative that could be replaced by a corresponding alternative alignment.

Table 5-8
 Relative Changes in Commercial and Industrial Relocations

Commercial and Industrial Business Relocations	BNSF Alternative	Relative Change to the BNSF Alternative									
		Hanford West Bypass 1		Hanford West Bypass 2		Corcoran Elevated	Corcoran Bypass	Allensworth Bypass	Wasco-Shafter Bypass	Bakersfield South	Bakersfield Hybrid
		AG	BG	AG	BG						
Total Units	395	+4	+4	+4	+4	-15	-16	0	-19	-167 ^a	-22
Total Employees	2,458	-7	-7	-7	-7	-48	-51	0	-92	-481	-123

Acronyms and Abbreviations:
 AG = at-grade option
 BG = below-grade option

^a Note that this difference includes businesses associated with the Mercado Latino Tianguis, which houses an estimated 118 small businesses. The Mercado Latino Tianguis is not affected by the Bakersfield South Alternative.

Table 5-9
 Changes in Commercial and Industrial Relocations along Parallel Alignment Portions

Alternative Name	Business Relocations in Alternative	Business Relocations in Corresponding Segment of BNSF Alternative	Difference
Hanford West Bypass 1 AG	7	3	+4
Hanford West Bypass 1 BG	7	3	+4
Hanford West Bypass 2 AG	7	3	+4
Hanford West Bypass 2 BG	7	3	+4
Corcoran Elevated	1	16	-15
Corcoran Bypass	0	16	-16
Allensworth Bypass	0	0	0
Wasco-Shafter Bypass	4	23	-19
Bakersfield South	135	302	-167
Bakersfield Hybrid	280	302	-22

Acronyms and Abbreviations:
 AG = at-grade option
 BG = below-grade option

5.2.2 Hanford West Bypass 1 Alternative

Seven businesses with 44 employees would be relocated along the Hanford West Bypass 1 Alternative under both the at-grade and the below-grade options. These relocations compare with the 3 businesses and 51 employees that would be relocated in the corresponding segment of the BNSF Alternative. The Hanford West Bypass 1 Alternative would have a negligible effect on commercial and industrial business operations.

5.2.3 Hanford West Bypass 2 Alternative

Seven businesses with 44 employees would be relocated along the Hanford West Bypass 2 Alternative under both the at-grade and the below-grade options. These relocations compare to the 3 businesses and 51 employees that would be relocated in the corresponding segment of the BNSF Alternative. The Hanford West Bypass 2 Alternative would have a negligible effect on commercial and industrial business operations.

5.2.4 Corcoran Elevated Alternative

One commercial or industrial business would be relocated along the Corcoran Elevated Alternative, unlike the corresponding segment of the BNSF Alternative, where 16 businesses and 51 employees would be relocated. This alternative would have no effect on business operations.

5.2.5 Corcoran Bypass Alternative

No commercial or industrial businesses would be relocated along the Corcoran Bypass Alternative, unlike the corresponding segment of the BNSF Alternative where 16 businesses and 51 employees would be relocated. This alternative would have no effect on business operations.

5.2.6 Allensworth Bypass Alternative

No commercial or industrial businesses would be relocated along the Allensworth Bypass Alternative. Selection of this alternative over the corresponding segment of the BNSF Alternative would therefore not change the number of businesses or employees relocated and would have no impact on business operations.

5.2.7 Wasco-Shafter Bypass Alternative

Four commercial and industrial businesses with an estimated 13 employees would be relocated along the Wasco-Shafter Bypass Alternative. The corresponding segment of the BNSF Alternative would relocate 23 businesses and 105 employees. This alternative would have less of an impact on commercial and industrial business operations than would the BNSF Alternative.

5.2.8 Bakersfield South Alternative

The Bakersfield South Alternative would relocate an estimated 135 commercial and industrial businesses and an estimated 1,041 employees, and the corresponding segment of the BNSF Alternative would relocate 302 businesses and 1,521 employees. The Bakersfield South commercial and industrial business relocations would be divided as follows among the city's districts:

- The Central District would have 57 business and 357 employee relocations,
- The Northeast District would have 57 business and 244 employee relocations.
- The Northwest District would have 21 business and 440 employee relocations.

Although the Bakersfield South Alternative would cause a considerable number of commercial and industrial businesses relocations, an examination of suitable alternatives for these businesses found that a sufficient number of alternative sites are available in 2010 for those in the retail, commercial, office, industrial, transportation, and warehousing sectors, which is similar to the analysis for the corresponding segment of the BNSF Alternative. As with the BNSF Alternative, however, relocations in the automotive sector may have difficulty finding existing suitable locations.

One active oil well is located in the Bakersfield metropolitan area along the Bakersfield South Alternative within the project footprint and a 50 foot buffer around the footprint. Active wells would need to be capped and abandoned or relocated, potentially to nearby locations using direction drilling techniques, if feasible. Appurtenant facilities such pipelines would also potentially need to be relocated if they fall within the footprint. Production lost during well relocation is expected to be small on a regional basis, due to the small number of affected wells.

Although the total number of commercial and industrial business relocations in the Bakersfield Central and Northeast districts would be much less under the Bakersfield South Alternative compared to the BNSF Alternative, the totals are still considerable.

5.2.9 Bakersfield Hybrid Alternative

The Bakersfield Hybrid Alternative would relocate an estimated 280 commercial and industrial businesses and an estimated 1,399 employees, and the corresponding segment of the BNSF Alternative would relocate 302 businesses and 1,521 employees. The Bakersfield Hybrid commercial and industrial business relocations would be divided as follows among the city's districts:

- The Central District would have 78 business and 365 employee relocations,
- The Northeast District would have 182 business and 567 employee relocations.
- The Northwest District would have 20 business and 467 employee relocations.

Although the Bakersfield Hybrid Alternative would cause a considerable number of commercial and industrial businesses relocations, an analysis in 2010 of suitable alternatives for these businesses found that a sufficient number of alternative sites are available for those in the retail, commercial, office, industrial, transportation, and warehousing sectors, which is similar to the analysis for the corresponding segment of the BNSF Alternative. As with the BNSF Alternative, however, relocations in the automotive sector may have difficulty finding existing suitable locations.

Although the total number of commercial and industrial business relocations in the Bakersfield Central and Northeast districts would be much less under the Bakersfield Hybrid Alternative compared to the BNSF Alternative, these totals are still considerable.

5.2.10 Station Alternatives

Fresno Station–Mariposa Alternative

The Fresno Station–Mariposa Alternative would relocate 4 commercial and industrial businesses with an estimated 54 employees in the city of Fresno. As with the BNSF Alternative, sufficient numbers of suitable alternative business sites are available in the city of Fresno and unincorporated Fresno County for the businesses in every sector except for the automotive sector. Given the number of units and employees displaced in this small area, the impact on business operations would be moderate.

Fresno Station–Kern Alternative

The Fresno Station–Kern Alternative would relocate one commercial and industrial business with an estimated eight employees in the city of Fresno. As with the BNSF Alternative, sufficient numbers of suitable alternative business sites are available in the city of Fresno and unincorporated Fresno County for the businesses in every sector except for the automotive sector. Given the number of units and employees displaced in this small area, the impact on business operations would be moderate.

Kings/Tulare Regional Station—East Alternative

The Kings/Tulare Regional Station—East Alternative would not relocate any commercial or industrial businesses and therefore would have no impact on business operations.

Kings/Tulare Regional Station—West Alternative

The Kings/Tulare Regional Station—West Alternative would not relocate any commercial or industrial businesses, and therefore would have no impact on business operations.

Bakersfield Station—North Alternative

The Bakersfield Station—North Alternative would relocate an estimated 19 commercial and industrial businesses with an estimated 229 employees in the Bakersfield's Central district. Five of these businesses are associated with railroad spurs providing access to the BNSF railroad. Therefore, these businesses would require special relocation consideration to ensure continued access to the BNSF in their new locations. Examination of suitable alternatives for these businesses had the same result as the examination of the surrounding Bakersfield area for relocations along the BNSF Alternative. Although the Bakersfield Station—North Alternative would affect a substantial number of businesses, a sufficient number of alternative sites were available in 2010 for businesses in every sector except for the automotive sector. Given the number of units and employees relocated in this small area, the impact on business operations would be moderate.

Bakersfield Station—South Alternative

The Bakersfield Station—South Alternative would relocate an estimated 6 commercial and industrial businesses with an estimated 174 employees in Bakersfield's Central District. Five of these businesses are associated with railroad spurs providing access to the BNSF railroad. Therefore, these businesses would require special relocation consideration to ensure continued access to the BNSF in their new locations. Examination of suitable alternatives for these businesses had the same result as the examination of the surrounding Bakersfield area for relocations along the BNSF Alternative. A sufficient number of alternative sites are available in 2010 for the businesses in all but the automotive sector. Given the number of units and employees displaced in this small area, the impact on business operations would be moderate.

Bakersfield Station—Hybrid Alternative

The Bakersfield Station—Hybrid Alternative would relocate an estimated 22 commercial and industrial businesses with an estimated 194 employees in Bakersfield's Central District. Four of these businesses are associated with railroad spurs providing access to the BNSF railroad. Therefore, these businesses would require special relocation consideration to ensure continued access to the BNSF in their new locations. Examination of suitable alternatives for these businesses had the same result as the examination of the surrounding Bakersfield area for relocations along the BNSF Alternative. In 2010 a sufficient number of alternative sites were

available for the businesses in all but the automotive sector. Given the number of units and employees displaced in this small area, the impact on business operations would be moderate.

5.2.11 Heavy Maintenance Facility Alternatives

5.2.11.1 Fresno Works–Fresno HMF Site

This proposed HMF site would relocate 8 commercial and industrial businesses with an estimated 43 employees in unincorporated Fresno County. Examination of suitable alternatives for these commercial and industrial businesses resulted in the same findings as the examination previously discussed for the surrounding Edison District and unincorporated Fresno County locations under the BNSF Alternative. Again, although according to the 2010 analysis a sufficient number of alternative sites are available for the affected businesses, those businesses in the automotive sector may have difficulty finding existing suitable locations. Given the number of units and employees relocated in this small area, the impact on business operations would be substantial.

Kings County–Hanford HMF Site

This proposed HMF site would not relocate any commercial or industrial businesses; there would be no impact on business operations.

Kern Council of Governments–Wasco HMF Site

This proposed HMF site would relocate one commercial and industrial business with an estimated eight employees in the city of Wasco. Examination of suitable alternatives in 2010 for these displaced commercial and industrial businesses in the surrounding area found that a sufficient number of alternative sites were available at that time for all displaced businesses. Given the number of units and employees displaced in this small area, the impact on business operations would be moderate.

Kern Council of Governments–Shafter East HMF Site

This proposed HMF site would not relocate any commercial or industrial businesses. There would be no impact on business operations.

Kern Council of Governments–Shafter West HMF Site

This proposed HMF site would relocate two commercial or industrial businesses with an estimated two employees. There would be a minor impact on business operations.

5.3 Agricultural

Agricultural parcels account for the largest percentage of acreage to be acquired for the project. Specific details on important farmland and remnant parcels are provided in the Agricultural Lands section of the EIR/EIS. The number of agricultural parcels split and agricultural facilities displaced are presented below. Details on the resulting economic (dollar value) impact of agricultural displacements are presented in Chapter 5.0, Impacts, of the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011). Prime farmland displaced by the project will likely not be able to be relocated given the scarcity of this resource; therefore, the associated production will be lost to the Region. The high productivity of this land and the importance of agriculture to the Region as a whole need to be considered during the relocation phase of the project.

5.3.1 BNSF Alternative

In total along the entire BNSF Alternative, an estimated 112 agricultural parcels would be split, and 19 parcels containing agricultural facilities would be displaced. In Kings County, the BNSF Alternative would split 45 agricultural parcels. Split parcels also occur in unincorporated Kern County (29 parcels), Fresno County (20 split parcels), and Tulare County (18 split parcels). If farm units are not rearranged to incorporate these split parcels, additional operational expenses (e.g., labor hours, extra gasoline) associated with access to and movement within fields for irrigation, pesticide application, harvesting, and other farm equipment operations could result.

Displaced agricultural facilities occur in Fresno County (nine parcels), Kern County (two parcels), Kings County (five parcels), and Tulare County (three parcels). The temporary business interruption from the relocation of these facilities could result in temporary increases in business costs and lost revenues. Table 5-10 contains a breakdown of these agricultural impacts.

Suitable agricultural land is available in the region for any agricultural operations that are required to relocate. It is the case that most agricultural disruption will not be in relocation but rather in the logical reallocation of agricultural property bought and sold by neighboring operations. Note that the loss of any prime farmland will have greater implications as relocation is unlikely given the scarcity of this resource. This issue is covered below in the dollar value estimates lost agricultural production. In the instance where an operation may be required to relocate, a current examination of vacant and for sale agricultural lands and operations reveals a generous supply available (Loopnet 2010). In July 2010, there were 380 agricultural properties for sale in the region with 195 in Fresno County, 23 in Kings County, 97 in Tulare County and 65 in Kern County. These operations include vacant agricultural land as well as land and facilities for pasture/ranch; field crops, vineyards, dairy; and nut and fruit tree operations.

Table 5-10
 Agricultural Business Impacts under the BNSF Alternative

Location	Split Agricultural Parcels	Displaced Facilities (Parcels)
Fresno County	20	9
Kings County	45	5
Tulare County	18	3
Kern County	29	2
Regional Total	112	19

Overall, Kings and Kern counties have the greatest number of split agricultural parcels, and Kings County would have the greatest number of displaced agricultural facilities. In all four counties there is the potential for temporary disruptions to agricultural operations when split parcels are reallocated among owners, if desired, and facilities are relocated.

In terms of agricultural facilities, special consideration is required in the relocation plan for dairy operations, a unique rendering facility in Kings County, and a California Department of Food and Agriculture sampling station in Corcoran. The affected rendering facility (Baker Commodities) is the only one of its kind in the area, and is critical to the economic well-being of local dairy and livestock operations. In addition, the sampling station in Corcoran inspects wheat, safflower,

corn, and barley for moisture and from May until September has as many as 75 to 100 trucks per day passing through the facility. It would therefore be important that relocation of the rendering facility and the sampling station occur before the existing facilities are closed or that steps be taken to ensure that sufficient capacity is available at other facilities to avoid interruption in the provided services.

Table 5-11 contains a summary of the relative changes in agricultural facility displacements, and compares each of the alternative alignments to the BNSF Alternative. Table 5-12 contains a more-detailed comparison of the agricultural business impacts in those portions of the BNSF Alternative that would be replaced by a corresponding alternative alignment.

Table 5-11
 Relative Changes in Agricultural Business Impacts

Agricultural Impacts	BNSF Alternative	Relative Change to the BNSF Alternative									
		Hanford West Bypass1		Hanford West Bypass2		Corcoran Elevated	Corcoran Bypass	Allensworth Bypass	Wasco-Shafter Bypass	Bakersfield South	Bakersfield Hybrid
		AG	BG	AG	BG						
Split Parcels	112	-4	-8	-2	-7	0	+15	+29	+5	0	0
Facilities Displaced	19	-2	-2	-3	-3	-2	-3	0	0	-1	-1

Acronyms and Abbreviations:
 AG = at-grade option
 BG = below-grade option

Table 5-12
 Changes in Agricultural Business Impacts along Parallel Alignment Portions

Alternative Name	Number in Alternative	Number in Corresponding Segment of BNSF Alternative	Difference
Split Parcels			
Hanford West Bypass 1 At-grade	60	64	-4
Hanford West Bypass 1 Below-grade	56	64	-8
Hanford West Bypass 2 At-grade	62	64	-2
Hanford West Bypass 2 Below-grade	57	64	-7
Corcoran Elevated	2	2	0
Corcoran Bypass	17	2	+15

Table 5-12
 Changes in Agricultural Business Impacts along Parallel Alignment Portions

Alternative Name	Number in Alternative	Number in Corresponding Segment of BNSF Alternative	Difference
Allensworth Bypass	44	15	+29
Wasco-Shafter Bypass	28	23	+5
Bakersfield South	0	0	0
Bakersfield Hybrid	0	0	0
Facilities Displaced (Parcels)			
Hanford West Bypass 1 AG	4	6	-2
Hanford West Bypass 1 BG	4	6	-2
Hanford West Bypass 2 AG	3	6	-3
Hanford West Bypass 2 BG	3	6	-3
Corcoran Elevated	2	4	-2
Corcoran Bypass	1	4	-3
Allensworth Bypass	0	0	0
Wasco-Shafter Bypass	1	1	0
Bakersfield South	0	1	-1
Bakersfield Hybrid	0	1	-1
Acronyms and Abbreviations: AG = at-grade option BG = below-grade option			

5.3.2 Hanford West Bypass 1 Alternative

The Hanford West Bypass 1 Alternative consists of an at-grade option and a below-grade option. The two options result in a different number of split parcels. The at-grade option splits 60 parcels and displaces 4 agricultural facilities, and the below-grade option splits 56 parcels and displaces 4 facilities. The difference between the numbers of split parcels in the two options is due to the differences in the right-of-way land acquisition required for each option. The corresponding segment of the BNSF Alternative splits 64 parcels and displaces 6 facilities. Similar to the effect under the BNSF Alternative, the effect of parcel splits and facility disruptions on agricultural business operations associated with the Hanford West Bypass 1 Alternative would be moderate in the short term and negligible in the long term.

5.3.3 Hanford West Bypass 2 Alternative

The Hanford West Bypass 2 Alternative consists of an at-grade option and a below-grade option. The two options result in a different number of split parcels. The at-grade option splits 62 parcels and displaces 3 agricultural facilities, and the below-grade option splits 57 parcels and displaces 3 facilities. The difference between the numbers of split parcels in the two options is due to the differences in the right-of-way land acquisition required for each option. The corresponding segment of the BNSF Alternative splits 64 parcels and displaces 6 facilities. Similar to the effect under the BNSF Alternative, the effect of parcel splits and facility disruptions on agricultural business operations associated with the Hanford West Bypass 2 Alternative would be moderate in the short term and negligible in the long term.

5.3.4 Corcoran Elevated Alternative

The Corcoran Elevated Alternative splits two parcels and displaces two facilities. The corresponding segment of the BNSF Alternative splits two parcels and displaces four facilities. Similar to the effect under the BNSF Alternative, the effect of parcel splits and facility disruptions on agricultural business operations associated with the Corcoran Elevated Alternative would be moderate in the short term and negligible in the long term.

5.3.5 Corcoran Bypass Alternative

Along the Corcoran Bypass Alternative, an estimated 17 agricultural parcels would be split and 1 agricultural facility would be displaced. A total of 14 of the 17 split parcels along the alternative are in Kings County, and 3 of the parcels are in Tulare County. Similar to the effect under the BNSF Alternative, the effect of parcel splits and facility disruptions on agricultural business operations associated with the Corcoran Bypass Alternative would be moderate in the short term and negligible in the long term.

5.3.6 Allensworth Bypass Alternative

An estimated 44 agricultural parcels would be split along the Allensworth Bypass Alternative. This number is much greater than the 15 parcels that would be split along the corresponding segment of the BNSF Alternative. The Allensworth Bypass Alternative does not displace any facilities, and neither does the corresponding segment of the BNSF Alternative. The 44 split parcels along the Allensworth Bypass would be in Kern County (24 parcels) and Tulare County (20 parcels). Similar to the effect under the BNSF Alternative, the effect of split parcels and facility disruptions on agricultural business operations would be moderate in the short term and negligible in the long term.

5.3.7 Wasco-Shafter Bypass Alternative

Along the Wasco-Shafter Bypass Alternative, an estimated 28 agricultural parcels would be split, and 1 agricultural facility would be displaced. The corresponding segment of the BNSF Alternative would split 23 agricultural parcels and displace 1 agricultural facility. Similar to the effect under the BNSF Alternative, the effect of split parcels and facility disruptions on agricultural business operations would be moderate in the short term and negligible in the long term.

5.3.8 Bakersfield South Alternative

Agricultural business displacements and disruptions along the Bakersfield South Alternative would be minimal as there are no agricultural splits or facility disruptions along the Bakersfield South Alternative. This is not surprising given that this alternative is primarily within the city limits of

Bakersfield. Only one agricultural parcel would be split and no agricultural facilities would be displaced by the corresponding section of the BNSF Alternative.

5.3.9 Bakersfield Hybrid Alternative

Agricultural business displacements and disruptions along the Bakersfield Hybrid Alternative would be minimal as there are no agricultural splits or facility disruptions along the Bakersfield Hybrid Alternative. This is not surprising given that this alternative is primarily within the city limits of Bakersfield. Only one agricultural parcel would be split and no agricultural facilities would be displaced by the corresponding section of the BNSF Alternative.

5.3.10 Station Alternatives

Fresno Station–Mariposa Alternative

The Fresno Station–Mariposa Alternative is located in the city of Fresno in the urbanized downtown area and would not affect agricultural operations.

Fresno Station–Kern Alternative

The Fresno Station–Kern Alternative is located in the city of Fresno in the urbanized downtown area and would not affect agricultural operations.

Kings/Tulare Regional Station–East Alternative

The Kings/Tulare Regional Station–East Alternative would not split any agricultural parcels or displace any agricultural facilities.

Kings/Tulare Regional Station–West Alternative

The Kings/Tulare Regional Station–West Alternative would not split any agricultural parcels or displace any agricultural facilities.

Bakersfield Station–North Alternative

The Bakersfield Station–North Alternative is located within the city of Bakersfield in the urbanized downtown area and would not affect agricultural operations.

Bakersfield Station–South Alternative

The Bakersfield Station–South Alternative is located within the city of Bakersfield in the urbanized downtown area and would not affect agricultural operations.

Bakersfield Station–Hybrid Alternative

The Bakersfield Station–Hybrid Alternative is located within the city of Bakersfield in the urbanized downtown area and would not affect agricultural operations.

5.3.11 Heavy Maintenance Facility Alternatives

The HMFs do not split parcels as they are not a linear feature. Instead, a count of total agricultural parcels acquired is presented.

Fresno Works–Fresno HMF Site

This proposed HMF site does not split any parcels but displaces agricultural facilities on 10 parcels. Displacement and relocation of agricultural facilities could result in increased business costs.

Kings County–Hanford HMF Site

This proposed HMF site does not split any parcels or displace any agricultural facilities.

Kern Council of Governments–Wasco HMF Site

This proposed HMF site does not split any parcels, but displaces one agricultural facility. Displacement and relocation of agricultural facilities could result in increased business costs.

Kern Council of Governments–Shafter East HMF Site

This proposed HMF site does not split any parcels or displace any agricultural facilities.

Kern Council of Governments–Shafter West HMF Site

This proposed HMF site splits one parcel and does not displace any agricultural facilities.

5.4 Community Facilities

The HST project alignments would avoid most community facilities and other properties that provide public services. The visual interpretation and parcel-by-parcel analysis of the BNSF Alternative and other alternative alignments found no takings of police or fire stations, libraries, post offices, or civic centers. Each of these community facilities affected is listed below by alternative. Some of these facilities are hybrids of public and private services discussed above in Section 5.1.1 (Disruption or Division of Existing Communities). These facilities are covered again here for clarity and specific discussion regarding their role in providing community services.

5.4.1.1 BNSF Alternative

Overall, the BNSF Alternative would affect 11 community facilities. The majority are in Bakersfield¹⁶ where the BNSF Alternative would affect 8 parcels containing community facilities: the Mercado Latino Tianguis, Bakersfield High School's Industrial Arts Building, and 6 parcels housing religious facilities.

The Mercado Latino Tianquis is not only a retail center but also an important community facility that would be temporarily displaced during construction of the BNSF Alternative. The Mercado is a shopping complex that re-creates the feel of a Mexican village market in the city's Northeast District. This facility is not a single business entity; rather, it rents stall space to approximately 118 small and micro-businesses that cater to Kern County's Hispanic population. The Mercado is often filled with shoppers who come to meet, sample traditional foods, and browse the narrow aisles lined with homemade and manufactured goods. Mexican music is played over loudspeakers that permeate the Mercado, competing with soccer scores and other announcements in Spanish.

The Mercado consists of a large main building that has been developed into numerous booths or stalls, where individual business owners sell wares, ranging from apparel to electronics to homemade foods. There are also services, such as immigration advice and legal assistance, cell

¹⁶ The other community facilities are the Fresno Rescue Mission and the Amtrak station and a church in Corcoran.

phone service sales, and insurance protection services, provided by merchants who speak Spanish fluently. At the south end of the complex is an outdoor market area, Plaza del Pueblo, which has additional retail stalls as well as a range of restaurants featuring Latino foods and outdoor seating areas, providing opportunities for members of the Hispanic community to interact with one another.

Cultural events such as Mexican dance and music performances are sometimes held at the Mercado, as are health fairs where members of the community can obtain vaccinations and other health services. Therefore, the loss of the Mercado Latino Tianguis would be a substantial one to the community. In addition to the cultural importance of the facility to the Hispanic community of Kern County, its closure or relocation would create economic hardships for the 118 small business owners who provide goods and services through this unique marketplace.

Bakersfield High School occupies a relatively small campus in a built-out urban area. Because of this, opportunities for relocating the displaced Industrial Arts Building and meeting modern codes and regulations are limited. Bakersfield High School's historic importance, combined with the critical nature of the educational services it provides, makes it an important community resource. The displacement of this facility in an already built-out urban area is considered a division of an important community resource.

Five religious facilities would be affected by the BNSF Alternative in the Bakersfield area. The project would displace 3 religious facilities and two parcels containing religious facilities would be partially acquired. Two additional religious facilities would not be directly affected by property acquisition but would be located very near to the project during construction and operation. Parking would be displaced on the partially acquired parcels, and all remaining facilities would be exposed to increased noise, traffic, and other indirect impacts during project construction and operation. Given the overall number of religious facilities affected in Bakersfield, these facilities are listed in Table 5-13. The Bakersfield South and Bakersfield Hybrid alternatives would also affect religious facilities, and they are included in this table.

Table 5-13
 Bakersfield Religious Facilities Affected

Name	Address	District	Alternative	Impact
Christ First Ministries	625 Robinson St	Northeast	BNSF Alternative	Displaced
Iglesia de Dios	1227 E. 19th St	Northeast	BNSF Alternative	Parcel Affected
Bethany United Methodist Church/Centro Cristiano Agape	409 Baker St	Northeast	BNSF Alternative	Close to project
St George Greek Orthodox Church	401 Truxtun Ave	Central	BNSF Alternative (Bakersfield Station-North Alternative) and Bakersfield Station-Hybrid Alternative	Parcel Affected
Korean Presbyterian Church	1601 Art St	Northwest	BNSF Alternative and Bakersfield South Alternative	Displaced under both alignments

Table 5-13
 Bakersfield Religious Facilities Affected

Name	Address	District	Alternative	Impact
Chinmaya Mission of Bakersfield	1723 County Breeze Place	Northwest	BNSF Alternative, Bakersfield South Alternative, and Bakersfield Hybrid Alternative	Displaced under BNSF Alternative and parcel affected under Bakersfield South and Bakersfield Hybrid alternatives
Grace Baptist Church	2550 Jewetta Avenue	Northwest	BNSF Alternative	Close to project
Baker Street Church of Christ	200 Baker St	Northeast	Bakersfield South Alternative	Displaced
Full Gospel Lighthouse	800 Butte St	Northeast	Bakersfield South Alternative	Displaced
Grace Christian Center	231 Beale Ave	Northeast	Bakersfield South Alternative	Close to project
Chapel of Praise Church of God	1223 Dolores St	Northeast	Bakersfield South Alternative	Close to project
First Free Will Baptist Church	2400 E California Ave	Northeast	Bakersfield South Alternative	Displaced
Saints Memorial Church of God in Christ	1302 East 19th St	Central	Bakersfield South Alternative	Displaced
Bakersfield Word of Life Ministries	1300 S St	Central	Bakersfield South (Bakersfield Station–South Alternative)	Close to project
Abbreviations: Ave = Avenue St = Street				

The BNSF Alternative would also displace the Fresno Rescue Mission, which provides beds, living space, and other support services for up to 250 homeless people. See the discussion in the section on Disruption or Division of Existing Communities in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011).

The BNSF Alternative would also acquire the Amtrak station and a church in the city of Corcoran as well as a church in the community of Crome. The Wasco Amtrak passenger platform may also need to be relocated.

5.4.1.2 Hanford West Bypass 1 Alternative

The Hanford West Bypass 1 Alternative at-grade and below-grade options would not acquire any parcels containing community facilities.

5.4.1.3 Hanford West Bypass 2 Alternative

The Hanford West Bypass 2 Alternative at-grade and below-grade options would not acquire any parcels containing community facilities.

5.4.1.4 Corcoran Elevated Alternative

The Corcoran Elevated Alternative would not acquire any parcels containing community facilities.

5.4.1.5 Corcoran Bypass Alternative

The Corcoran Bypass Alternative would not acquire any parcels containing community facilities.

5.4.1.6 Allensworth Bypass Alternative

The Allensworth Bypass Alternative would not acquire any parcels containing community facilities.

5.4.1.7 Wasco-Shafter Bypass Alternative

The Wasco-Shafter Bypass Alternative would displace one religious facility in the community of Crome.

5.4.1.8 Bakersfield South Bypass Alternative

The Bakersfield South Alternative would displace and require relocation of several businesses and ancillary facilities associated with the Mercy Hospital medical complex. See the discussion in the section on Disruption or Division of Existing Communities in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011).

The Bakersfield South Alternative would also affect nine religious facilities in the Bakersfield area: five of these facilities would be relocated, one would remain on a parcel that is partially acquired and three would not be directly affected but would be very close to the project (see Table 5-13, above). The Bethel Christian School (associated with the First Free Will Baptist Church) would also need to be relocated. Parking would be displaced on these partially acquired parcels, and the facilities would be exposed to increased noise, traffic, and other indirect impacts during project construction and operation.

In addition, although not a community facility, land within the Bakersfield Fleet Services Department of Public Works yard would be acquired for the project.

5.4.1.9 Bakersfield Hybrid Alternative

The Bakersfield Hybrid Alternative would displace and require relocation of several businesses and ancillary facilities associated with the Mercy Hospital medical complex. The Kern County Mental Health facility, the Mercado Latino Tianguis, and a Bakersfield homeless shelter would also be displaced. See the discussion in the section on Disruption or Division of Existing Communities in the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011).

The Bakersfield Hybrid Alternative would also affect two religious facilities in the Bakersfield area, and both would remain on a parcel that is partially acquired (see Table 5-13, above). Parking would be displaced on the partially acquired parcels, and the facilities would be exposed to increased traffic, noise, and other indirect impacts during project construction and operation.

Also, land within the Bakersfield Fleet Services Department of Public Works yard would be acquired for the project.

5.4.1.10 Station Alternatives

For the location of the Bakersfield Station–North Alternative, a portion of a parcel containing a religious facility (see Table 5-13, above) would be acquired. Although the church itself would not be acquired, this acquisition would affect an associated school, a meeting place, and a playground area. Also, a religious facility would not be affected but would be close to the Bakersfield Station–South Alternative location.

5.4.1.11 Heavy Maintenance facility Alternatives

No parcels containing community facilities are acquired for the heavy maintenance facility alternative locations.

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Chapter 6.0

Relocation Resources and Relocation Plan

6.0 Relocation Resources and Relocation Plan

This section provides a description of the relocation resources that would be provided as part of the development of the California HST. The resources include the available capacity in existing buildings and parcels (ideally within the same community, city, or county) into which people and businesses could relocate. Resources also include the policies, programmatic assistance, funding sources, and other resources to support and assist individuals in relocating. These resources are in addition to the physical resources previously discussed.

Chapter 5 of this report conveyed the results of the gap analyses that were conducted to evaluate the available capacity in the most critical relocation resource: available real estate parcels and structures. Those results are summarized in Section 6.2 (Residential Relocations) and Section 6.3 (Business Relocations), which also discuss the programs and other assistance to be provided to displaced individuals. Finally, Section 6.4 presents an overview of the relocation plan that the Authority would develop during the preparation of the Final Relocation Impact Report and the larger EIR/EIS. This overview contains the elements of what the relocation plan would include and important recommendations for specific considerations to address potential problems or issues identified in the relocation analysis process.

6.1 Project Assurances

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 established requirements for relocation assistance to be provided to persons displaced as a result of land acquisition for public projects. The Authority's relocation assistance programs, to be described in full in a separate relocation plan, will meet or exceed the requirements of federal and state laws on relocation.

The policy of the Authority is as follows:

- Non-tenured occupants will not be required to relocate until comparable replacement housing has been made available to them.
- The Relocation Program will be realistic and adequate to provide orderly, timely, and efficient relocation of displaced persons.
- The Authority will also develop a relocation plan (discussed in Section 6.4, below) that details how the various forms of relocation assistance will be provided.

6.2 Residential Relocations

This section discusses the residential relocations in terms of property availability, assistance programs, and other resources.

6.2.1 Residential Property Resources

The most important relocation resource is available space or capacity to absorb residential relocations. Relocation problems are expected to be limited because of the ample supply of available housing in most affected locations. Section 5.1 discussed residential relocations and provided the details of a gap analysis of the needed versus the available residential properties. This analysis was conducted for available properties in each county, city, and district, as well as for the Region as a whole. Table 6-1 summarizes the results, which are presented for the BNSF Alternative only; however, the results do not differ dramatically in magnitude or in type from those of the various alternative alignments under consideration.

Table 6-1
 Residential Relocation Summary Table

Location	Residential Units Displaced	Size of Surplus
Fresno Central District	0	+66
Fresno Edison District	3	+115
Fresno Roosevelt District	2	+655
Hanford	0	+417
Corcoran	48	+27
Wasco	2	+106
Shafter	2	+64
Bakersfield Northwest District (all)	145	+355
Bakersfield Central District (all)	1	+519
Bakersfield Northeast District (all)	119	+826
Bakersfield Northwest District (multifamily or rental only) ^a		+13
Bakersfield Central District (multifamily or rental only) ^a		+48
Bakersfield Northeast District (multifamily or rental only) ^a		-25
Unincorporated Fresno County	56	+286
Unincorporated Kings County	40	+549
Unincorporated Tulare County	8	+3,294
Unincorporated Kern County	25	+2,019
Regional Total	451	+11,138
^a The numbers of multifamily housing or rental are subsets of the total housing units displaced or available in that district; they are not additive.		

As Table 6-1 shows, in almost all locations, the housing supply was several times greater than demand, often by an order of magnitude, or more. The only place where there was a potential shortfall was in multifamily housing units in the Northeast Bakersfield District. The large surplus of single-family homes available for purchase in the district, however, provides a margin of safety for any shortfall that may exist in either low-income, single-family properties, or in multifamily properties at any price level.

The “housing-of-last-resort” component of state-funded assistance allows the state—or in this case, the Authority—to provide additional funding or support to fill any gap between the cost of an available housing unit that is equal to or better than the one being displaced and the cost of that displaced unit. Since there are ample single-family homes for sale in each city, relocating a household from a low-income or multifamily rental property to a single-family residential

structure intended for sale would be possible, though potentially a greater cost. This type of relocation could be funded under housing-of-last-resort policies.

6.2.2 Other Residential Relocation Resources

In addition to actual residential properties that are available to receive people who relocate, other types of residential relocation resources are available:

- Relocation assistance and counseling for those who would need to relocate.
- Direct financial assistance for those who would need to relocate.
- Sufficient government funding to carry out all relocation processes and forms of assistance.

6.2.2.1 Relocation Assistance and Counseling

Residents displaced by the project would be entitled to relocation assistance and counseling, which would be provided in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the CFR Part 23 to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All benefits and services would be provided equitably without regard to race, color, religion, age, national origins, and disability as specified under Title VI of the Civil Rights Act of 1964. All rights and services provided under P.L. 91-646, Uniform Relocation Assistance and Real Property Acquisition Act of 1970, would be strictly adhered to by the Authority to meet the needs of the handicapped, elderly, and other special groups (e.g., non-English-speaking people) to ensure that their relocation needs are met.

Programs implemented to meet these needs include bilingual brochures on relocation services, interpreters, determination of people's needs and preferences through individual interviews, transportation services for those who do not own personal transportation or who cannot drive, information on other state and federal assistance programs, and counseling to minimize hardships.

As noted, a number of federal and state laws and policies require the provision of certain forms of assistance to individuals and families in residential structures that would be displaced by projects. The eligibility for these assistance programs and policies is determined through a series of steps, including an Initiation of Negotiation and Notice of Intent to Inquire. These early notification steps lead to further screening and eventual certification and classification as to the degrees and types of relocation assistance for which each affected person qualifies. Different forms of assistance are available to homeowners versus renters. The duration of occupancy prior to notification is considered in determining the level of support provided. In addition, landlords receive assistance, depending on the type of structure and property they own.

A Relocation Assistance Program is developed to help displaced individuals move with as little inconvenience as possible. Specifically, displaced people can receive information on the availability of housing and prices, transportation to inspect possible housing, translation services, and help with paperwork (e.g., completing rental applications or understanding title documents), and various other aspects of relocation. Dislocation allowances are also available to cover various costs, such as transferring utility services and temporary storage.

6.2.2.2 Direct Financial Assistance

More direct financial assistance is available in the form of Relocation Housing Payments, which include reimbursement for demonstrated direct moving expenses as well as a variety of replacement housing costs. These include covering the price differential between existing rent payments and those for a new rental unit. Similarly, homeowners receive mortgage differential payments to cover the difference between current payments and those for a replacement

property that they may purchase. Down payment assistance is also available for current renters who purchase replacement properties as a part of their relocation. Finally, owners of fully acquired parcels of land and residences will be paid fair market value for their land or residences.

In many cases, the displaced persons have an option between fixed “standard” assistance payments or reimbursement for actual incurred costs. For example, a displaced renter may choose between reimbursement for actual moving expenses or a fixed and direct lump-sum payment based on the size of the residence being moved and certain assumptions about standardized contents. All of these programs and forms of assistance have established maximums that limit the assistance provided. However, since these limits are not indexed to inflation or adjusted for differences in the costs of living in various locations, there is a provision for “last-resort housing” that allows the caps to be exceeded if the need to do so can be demonstrated. Last-resort housing assistance can be used to address any differences between the supply of and the demand for a particular type of housing in any given location.

6.2.2.3 Sufficient Government Funding for Relocation

Finally, the third type of relocation resource consists of sufficient funding for buying parcels of land or other real property, making replacement house payments, reimbursing moving costs, and providing all other forms of assistance requiring financial resources. The Authority provides these resources through the sale of bonds from the State of California, from the federal government’s American Recovery and Reinvestment Act, and from other sources.

6.3 Businesses on Commercial and Industrial Properties

This section discusses the business relocations in terms of property availability, assistance programs, and other resources.

6.3.1 Commercial and Industrial Property Resources

Section 5.2 discussed commercial and industrial parcel displacements and the relocation of businesses that occupy them. It also compared project-related needs to the inventory of currently available commercial and industrial properties. This analysis was conducted for available properties in each county, city, and district, as well as for the Region as a whole. Table 6-2 summarizes these results, which are presented for the BNSF Alternative only; however, they do not differ dramatically in magnitude or type from the various alternative alignments under consideration.

Table 6-2
 Commercial and Industrial Relocation Summary Table

Location	Businesses Relocated	Business Units Available	Size of Surplus
Fresno County	51	372	+321
Kings County	19	57	+38
Tulare County	0	NA	NA
Kern County	325 ^a	596	+269
Regional Total	395	1,025	+630

^a Note that this total for Kern County includes businesses associated with the Mercado Latino Tianguis, a single structure that houses an estimated 118 small businesses.
 NA = Not applicable as no businesses are relocated in Tulare County.

As Table 6-2 shows, in every location, the supply of commercial and industrial properties was several times greater than demand, often by more than an order of magnitude. However, not every available parcel or facility would be suitable for every relocated business. The results from Section 5.2.1 showed that almost all types of relocated businesses (based on their NAICS codes) could be accommodated in the same community or general location within which they currently exist. The two exceptions to this general finding were business relocations in Corcoran and automotive service, repair, and sales businesses, especially in the Bakersfield area, where there would be a potential shortfall of units. Relocating automotive-related businesses in these areas will require special consideration and assistance in the relocation plan, as discussed in Section 6.4, below.

6.3.2 Other Business Relocation Resources

Businesses that would be relocated by the project would be entitled to relocation assistance and counseling similar to that provided to residents in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended, to ensure adequate relocation of businesses. All benefits and services would be provided equitably without regard to race, color, religion, age, national origins, and disability as specified under Title VI of the Civil Rights Act of 1964. The Relocation Assistance Program was developed to help displaced business owners relocate with as little inconvenience as possible. All rights and services provided under P.L. 91-646, Uniform Relocation Assistance and Real Property Acquisition Act of 1970, would be strictly adhered to by the Authority to meet the needs of the handicapped, elderly, and other special groups (e.g., non-English-speaking people) to ensure that their relocation needs are met.

As with residential relocations, relocation resources are available for nonresidential relocations, including businesses, farms, and nonprofit organizations. The three categories of resources that apply to residential relocations apply to these nonresidential relocations:

- Available space in suitable replacement properties.
- Financial support for the costs of those programs.
- Programs and policies for assistance.

6.3.2.1 Sufficient Available Properties and Facilities for Relocation

With regard to the first category, as with residential relocations, the gap analysis conducted for this EIR/EIS showed that there are adequate spaces and properties for the required nonresidential relocations in the Region, in each county and in each affected city and district. In most cases, the specific types of facilities required for a particular type of business (e.g., restaurant, office, retail) were available in each community. In some cases (e.g., auto repair), while there is more-than-sufficient space and parcels available for business relocations, some modification or improvements to properties will need to be made to make them suitable "turn-key" business locations.

6.3.2.2 Sufficient Government Funding for Relocation

Sufficient funding for the program costs to allow the Authority to provide the needed assistance is available through the same bond and federal support resources previously described. This category includes the funds to purchase or acquire the necessary properties from their current owners.

6.3.2.3 Programs and Policies for Nonresidential Relocations

For nonresidential relocations, the second category of resources differs from that for residential relocations. Similar informational assistance and advisory programs are available, which include bilingual brochures on relocation services, interpreters, determination of people's needs and

preferences through individual interviews, transportation services for those who do not own personal transportation or who cannot drive, information on other state and federal assistance programs, and counseling to minimize hardships. However, the Uniform Relocation Act does not require that relocated businesses be made whole, and relocated businesses thus receive fewer relocation benefits than do displaced residents. Payments are limited to moving and relocation expenses, although nonresidential displacees may qualify for a re-establishment payment to mitigate some of the expenses associated with establishing their businesses at a new location.

Moving expenses qualifying for financial assistance include transportation of personal property, disconnecting and dismantling machinery and equipment, utility connection or transfer, temporary storage, moving and storage insurance, transfer fees for licenses or permits, costs to sell property or belongings that cannot be moved, salvage value for those items that cannot be sold or moved, and the costs of searches for suitable replacement properties. Business owners have the option to self-move or to hire movers. Small businesses, in particular, may choose either in-lieu fixed payment or reimbursement for actual costs.

Re-establishment payments for qualifying expenses may be made available to displaced business owners. These benefits are capped at \$10,000, and they must be actual, reasonable, and necessary. They include, but are not limited to, repairs or modifications to the new property to make it suitable, construction and installation costs of signage, lot and structure repaving or redecorating, expenses to advertise the new location, increased operating costs from rent or insurance premium changes (for up to 2 years), and increased personal or real-property taxes. Finally, compensation for loss of goodwill is provided. Goodwill is defined as the benefit that accrues from the skill, reliability, or location of a business. If these factors can be shown to be reduced as a consequence of the relocation, the business owner will be compensated for the loss. Generally, this is part of the acquisition expense, but some of it may occur as a relocation expense.

Farm operations and nonprofit organizations are treated somewhat differently from the other types of private sector, for-profit businesses. Not all of the forms of assistance apply, and the payments are calculated and based on these differences. For example, fixed payments for farm relocation are limited to the operations at the displacement property, and farms are not required to demonstrate a loss of substantial patronage, as other businesses are required to do. However, the general forms and types of relocation resources still apply. That is, those aspects of an agricultural business that correspond to or have an analog in a non-agricultural business would be treated similarly. Farms, crops, and cropland cannot be relocated in the same way that a store or restaurant could be, but neither are they as subject to complete displacement as those businesses are. Generally speaking, portions of an agricultural parcel would be acquired as needed, and the Authority would compensate the owner, as required, for that land. In the remaining cases, the relocation of an agricultural facility or the temporary interruption of those operations would be assisted as described for other non-agricultural businesses.

6.4 Relocation Plan Elements and Recommendations

The Authority will develop a relocation plan, the specific elements of which will be developed as part of the *Final Relocation Impact Report* and the final EIR/EIS development. The components of the relocation plan will include the following:

- Assumptions
- Relocation Plan Elements
- Special Relocation Considerations and Steps to Address Them
 - Lead Time
 - Interpreter Services

- Field Office
- Last-Resort Housing

6.4.1 Assumptions

The relocation plan will be based on certain assumptions that must approximate those used in the DRIR and the other technical reports prepared in support of the EIR/EIS. These assumptions include the premise that the design alternatives will not differ substantially from those presented in the current project description and that any major variations from those would trigger a new analysis. Moreover, the relocation plan must include all significant recommendations and considerations discussed herein, and ensure that all forms of support, guidance, funding, and other forms of assistance will be provided promptly and as required by the relevant federal, state, and local laws and policies.

6.4.2 Relocation Plan Elements

The relocation plan should contain the following elements:

- Full discussions and explanations of existing and expected relocation assistance programs, including all those discussed in Sections 6.2.2 and 6.3.2.
- Itemization of these programs by the type of relocation (e.g., residential, commercial, or industrial).
- Listings of which programs are appropriate for each type of relocation.
- Discussions of the special relocation considerations noted throughout this DRIR and which are summarized in the section that follows.
- Evaluation of options for addressing those special considerations.

6.4.3 Special Relocation Considerations and Steps to Address Them

Several special cases and situations were identified during the research for the DRIR and the *Fresno to Bakersfield Section: Community Impact Assessment Technical Report* (Authority and FRA 2011). These situations, which could become problems if not carefully planned for and addressed by the Authority, require special consideration in the relocation plan. Once a preferred project alternative has been selected, the Authority will conduct interviews with residential and business displacees to further define the need for special consideration or services during the relocation process.

6.4.3.1 Special Relocation Considerations

Each of these cases may require some form of assistance beyond the basic levels that must be provided to all displacees.

Sensitive Populations/EJ Populations

Several distinct types of sensitive populations or EJ populations were identified in this DRIR. These include low-income families and individuals, disabled people, elderly people, and families with a female head-of-household, as well as linguistically isolated populations. Additional outreach and technical assistance may be needed to fully address their needs.

Community Service Facilities

Section 5.4 of this DRIR listed five important community service facilities that may need to be displaced as part of the HST project. The BNSF Alternative would displace the Mercado Latino Tianquis, the Bakersfield High School Industrial Arts building, and school buildings and meeting facilities at Saint George Greek Orthodox Church, all of which are in Bakersfield. The BNSF Alternative would also displace the Fresno Rescue Mission in the city of Fresno. The Bakersfield South Alternative would displace several facilities associated with the Mercy Hospital medical complex and school facilities of the Bethel Christian School, which is associated with the First Free Will Baptist Church. Note that the Bethel Christian School and the First Free Will Baptist Church would require special consideration, as a unique structure would be required to maintain current connectivity and house both facilities in the same location.

As discussed in Section 5.4, these facilities provide important services to EJ and sensitive populations and to some portion of the general population. Continued provision of these services, through either temporary or permanent relocation, is important to the community. Ensuring the continued provision of these services will require additional planning and outreach, as well as technical and financial assistance.

Rental Housing in Northeast Bakersfield

The only community in which there was an identified gap between the number and type of displaced residential parcels and currently available resources for residential relocations was in Northeast Bakersfield, where rental homes in multifamily structures or in low-income or affordable properties were in short supply. Special effort should be made to provide additional time, funds, and technical support for the residents of this district who need to be relocated.

Rural Homes on Agricultural Land

Similar residential relocation challenges are present in certain rural areas where the relocation of displaced residential structures may require extra planning. Families living on rural agricultural properties may want or need to remain on the same parcel or on a nearby one, and may require additional time or assistance to relocate or rebuild their homes on the farm in a new location.

Automotive Businesses

There are a greater number of businesses associated with automobile repair, service, and sales than there are available commercial parcels currently equipped to support them, particularly in the Bakersfield area. Therefore, if those businesses are to be relocated, some vacant commercial parcels will need to be retrofitted or adapted to be suitable. Additional time or funding may be required to meet the needs of these types of businesses.

Key Agricultural Land and Facilities

Prime farmland displaced by the project will likely not be able to be relocated given the scarcity of this resource, and therefore the associated lost production is a loss to the Region. The high productivity of this land and the importance of agriculture to the Region as a whole needs to be considered during the relocation phase of the project.

The project also affects parcels that contain animal operations. Given the importance of animal operations to the Region's economy, special consideration will be required when these facilities are relocated. This special consideration will need to recognize the difficulties associated with permitting new animal operations and the possibility that relocation could result in the permanent closure of facilities. This is particularly true for dairy operations in Kings County.

The project would also relocate an important rendering facility in the Hanford area (Baker Commodities) and a California Department of Food and Agriculture sampling station in Corcoran. The rendering facility is unique to the Region and all the local dairy and livestock facilities depend on the services it provides. The Corcoran sampling station is also important to agriculture in the area, servicing 75 to 100 trucks a day from May through September. Additional time will be required to relocate these unique facilities and to ensure that replacement facilities are established before the existing facilities are displaced. Other important agricultural facilities that are identified would need similar consideration during relocation.

Rural Community Residential Displacements

Because the majority of displacements in unincorporated counties are typically single-family residential homesteads on working agricultural lands, it may be difficult to find comparable replacements and relocating existing housing to nearby land may take time. This may be especially difficult for rural residential subdivisions, such as Ponderosa Road northeast of Hanford (affected by the BNSF Alternative) and the Newark Avenue area northeast of Corcoran (affected by the Corcoran Bypass Alternative), where residents enjoy a unique blend of amenities (spacious lots, city services, a country setting yet close to town). There may be very few vacant, comparable, developed rural residential homesteads to be used as relocation resources. If so, it may be necessary to consider constructing housing of last resort, or even duplicating the disrupted residential areas elsewhere in the vicinity.

Business Relocations in Corcoran

Within the city of Corcoran, there are 16 business relocations occurring across the industrial, commercial, wholesale, retail, and automotive and transportation sectors. Current vacancies in Corcoran are minimal, and there is a deficit of all types of required business properties in the city. Therefore, business relocation in Corcoran will be an important special consideration in the final relocation plan.

Religious Facilities

There are many religious facilities affected, particularly in the Bakersfield area, under both the BNSF and Bakersfield South alternatives. Religious facilities have special needs and are often associated with an adjacent community. Therefore, special consideration is required when relocating or affecting parcels of these facilities. In addition, some of the smaller facilities affected are community-based, thus drawing their members from the immediate area, while other larger facilities likely bring in attendees from a larger geographic area. Any relocation to another, potentially distant, location would have different implications for these two types of religious facilities and such special consideration needs to be addressed on a case-by-case basis.

Manufactured Housing (Mobile Home) Communities

One manufactured housing community located in the city of Corcoran is affected by the BNSF Alternative (16 units displaced). The special characteristics of mobile-home parks can make it difficult to relocate residents within the same vicinity. Therefore, special consideration will be included in the project relocation plan to address the unique needs of these residents.

City of Bakersfield Public Works Yard

The project under the Bakersfield South and Bakersfield Hybrid alternatives would acquire land in the city's public works yard. Special consideration is required when finding suitable replacement for this facility and the services it provides.

Corcoran Amtrak Station and Wasco Amtrak Passenger Platform

The Amtrak station located in Downtown Corcoran would need to be relocated. This facility also houses the city's visitor center. The Wasco Amtrak passenger platform may also need to be relocated. Special consideration is required when relocating these facilities to ensure any interruption to service is minimized.

Relocation of Businesses in Central Bakersfield Dependent on Railroad Spur Access

Five businesses potentially relocated in Central Bakersfield under the proposed station alternative locations are associated with railroad spurs providing access to the BNSF railroad. Therefore, these businesses would require special relocation consideration to ensure continued access to the BNSF railroad tracks in their new locations.

Relocation of Active Oil Wells

Two active oil wells, one water injection well, and two abandoned wells occur within the project footprint and a 50 foot buffer around the footprint. The wells are all located in the Bakersfield metropolitan area, with one active well located on the BNSF Alternative and the others on the Bakersfield South Alternative. Active wells would need to be capped and abandoned or relocated, potentially to nearby locations using direction drilling techniques, if feasible. Appurtenant facilities such as pipelines would also potentially need to be relocated if they fall within the footprint.

6.4.3.2 Remediation For Special Considerations

Each of the situations noted above could be addressed by implementing one, or more, of the following recommendations.

Lead Time

Many individuals in the special cases mentioned above would benefit from additional lead time beyond the 90 days that is the customary minimum. For example, finding suitable low-income housing or relocating a rural residence may take longer because of various supply constraints and access limitations. Similarly, all of the sensitive populations listed above would benefit from additional time to gather information and make use of the supplementary forms of assistance available to them. Modifying available commercial parcels so that they are suitable for automotive relocations would also take more time.

In addition, lead time will be needed for relocation of a unique rendering facility to ensure that economic impacts to the dairy and livestock operations do not result in the Region that depends on the services that facility provides.

Interpretive Services

Several distinct types of linguistically isolated populations were noted in the studies conducted for the EIR/EIS; most prominent among them are the numerous communities where Spanish is the only language fluently spoken or read by the adults who reside there. Other prominent languages in linguistically isolated communities in California's Central Valley include Hmong, Chinese, Vietnamese, and Tagalog. Efforts should be made to provide interpretive services to these communities, and these services should be delivered near the affected communities to maximize their effectiveness. These services should include written instructions in Spanish and all other prominent languages on forms and other materials to be provided onsite and via the internet. Stationary or mobile information and assistance booths should be staffed with translators or multilingual staff. Telephone information and assistance lines should provide recorded and live assistance in as many languages as needed.

Bakersfield and Corcoran Field Offices

Because the majority of displacements as well as many of the special needs identified are located in Bakersfield, the HST should establish a field office for special relocation assistance there. The numbers of displacements are lower in Corcoran but given the smaller size of the community, this area will need a field office for special location assistance as well. These offices would be open throughout the project planning and construction period or until the relocation processes are complete. They would provide technical assistance, transportation assistance, residential-search assistance, and other forms of help to the high proportion of relocated residents. In addition, specialized forms of all of these types of assistance should be targeted toward the many people in these communities who speak and read only Spanish.

Housing of Last Resort

Where available rental housing in certain categories or price-points is unavailable to meet demand, the Authority should attempt to provide financial assistance beyond the prescribed statutory limits for relocation assistance, as provided for under the housing-of-last-resort portions of the Uniform Relocation Act. This should be implemented, as needed, to ensure that all residents of displaced residential properties who desire to remain in or near their current homes can do so. This option will not be necessary if people choose to relocate to another neighborhood or city rather than remain in the community where they currently reside.

Assisting Religious Facilities

Given the cultural and community importance of religious facilities, the Authority will need to initiate outreach and coordination with the affected facilities to identify project design modifications that would minimize impacts on facilities and services and that would avoid splitting functions among different sites. If the project design cannot be altered to avoid such impacts, the entire facility will be relocated to a suitable alternative location.

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Chapter 7.0

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7.0 References

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Chapter 8.0

Preparer Qualifications

8.0 Preparer Qualifications

The following individuals have made significant contributions to the development of this technical report:

David Halsing, Primary Author

David Halsing has 12 years of experience in analyzing and modeling natural resources, environmental economics, hazards, and other environmental issues, and has delivered a number of environmental studies, benefit-cost analyses, greenhouse gas inventories, and decision-support tools to clients in federal, state, and regional governments. He has prepared or contributed to several environmental documents and conducted environmental permitting on a number of major projects. Projects and tasks completed under his management and leadership have been used in land-use planning, water quality management, the evaluation of investments in spatial data infrastructure, conservation planning, watershed and protected area design, and policy/program development.

Mark Metcalfe, Ph.D., Contributing Author

Dr. Metcalfe has 18 years of experience in conducting socioeconomic analysis for projects encompassing a wide spectrum of local and regional economic issues. Throughout his current work, he is responsible for developing and implementing methodologies to create necessary affected environment and environmental consequence documentation for NEPA and CEQA projects. This includes authoring both technical reports and writing EIR/EIS sections for the environmental document. Issues examined in his work include regional growth; land use; substantial and significant changes to community character and cohesion; disproportionate and adverse effects on environmental justice populations; impacts on residents, employees and broader local economies resulting from displacement of residences, businesses and public facilities; project-related short- and long-term employment creation; community access and circulation; project-related fiscal impacts on local jurisdictions, impacts on agricultural operations, and overall cumulative project impacts. He has 10 years of experience as a leader of multidisciplinary teams, and has authored 20 professional publications on all aspects of his work.

Sean Rudden, Contributing Author

Sean Rudden holds a degree in economics from Sacramento State University and is continuing his education toward a degree in urban land development. He has a varied background in economics, planning, and sustainability; projects he has worked on range from land use studies, CEQA/NEPA permitting projects, energy reduction campaigns, economic profiles and disaster preparedness plans.

Mara Feeney, Independent Technical Reviewer

Mara Feeney obtained an undergraduate degree in Anthropology and a Master's degree in Community and Regional Planning. She has more than 30 years of professional experience conducting socioeconomic impact analysis, land use impact analysis, environmental justice evaluations, and community outreach. She has worked on a wide variety of projects throughout the United States and Canada—many of them large scale and controversial resource development or public works projects. Her assignments on multidisciplinary teams have included evaluation of potential impacts on land use, regional employment and income, population and demographic characteristics, public finance, adopted local plans and policies, farmland, housing, community infrastructure and services, recreation, environmental justice, and quality of life. She is thoroughly familiar with the requirements of NEPA and CEQA and was an instructor in environmental impact reporting at Sonoma State University.

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