



## Memorandum

*To: Kern COG & Stakeholders*

*From: CDM Smith*

*Date: March 18, 2015*

*Subject: Task 3: Proposed Transit Center Sites*

The purpose of this memorandum is to provide an initial selection of proposed transit center sites for the Metropolitan Bakersfield area. This memo documents the logic behind the selection of each site and offers a starting point for examining each location and its potential for Transit Oriented Development (TOD). The information gathered from the mapping exercises for the socioeconomic data was also utilized in determining the transit center locations. There were ten transit center locations identified:

1. Bakersfield College
2. Downtown Transit Center
3. Southwest Transit Center
4. California State University Bakersfield
5. Downtown Train Station
  - a. Amtrak Station (without HSR)
  - b. High Speed Rail Station (with HSR)
6. Niles and Mt. Vernon Avenue
7. Panama Lane and Highway 99
8. Mt. Vernon Avenue and Highway 178
9. F Street and Golden State Avenue (Locally Generated Alternative)

Of the ten locations, several would be suitable for near-term (Year 2020) transit center locations while others would be more suitable for the long-term (Year 2040) locations.

### **Demographic and Transit Maps**

Demographic maps for the Metro Bakersfield are shown in the figures below including existing Low-Income Populations, Households with No Vehicles, Minority Populations, Senior Populations, Youth Populations, and Population and Employment projections for 2020, 2035, and 2040. In

addition, existing Land Use and Transit Maps are included. These were mapped to provide perspective on the geographic locations of the demographics of Metro Bakersfield; specifically, the relationship between existing transit lines and the demographics of the adjacent areas. Employment and population projections were mapped to understand where growth is anticipated to occur for planning of future transit centers.

In general, population and employment in the long-term is expected to grow outward from the center of Metro Bakersfield with high concentrations of employment in the center. Dense youth and minority populations are observed to be in the same vicinities and households with no vehicles are more common in the center of Metro Bakersfield. The Demographic and Transit Maps are shown below in the following pages in Figures 1-13.

Figure 1: Low-Income Population by TAZ

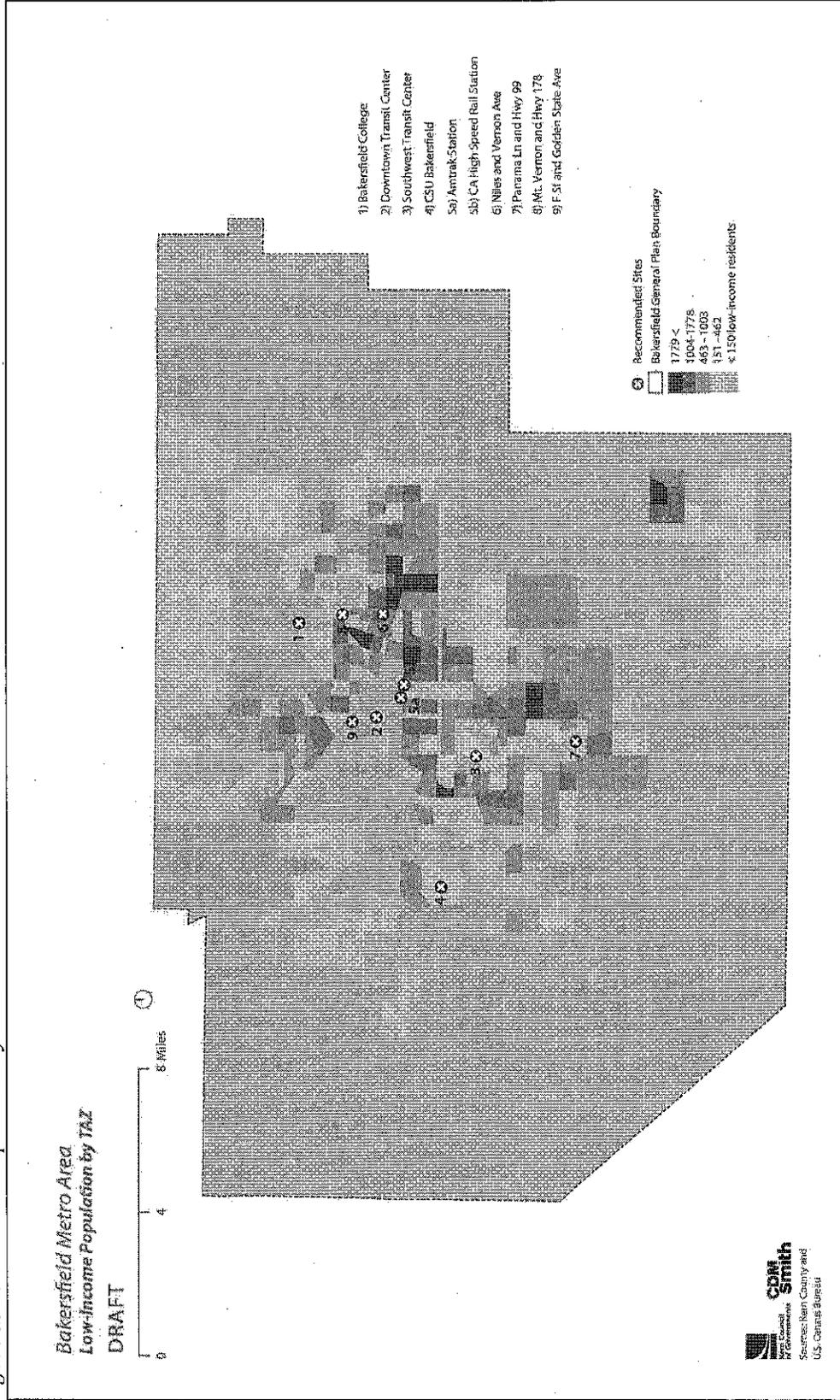


Figure 2: Households with No Vehicles by TAZ

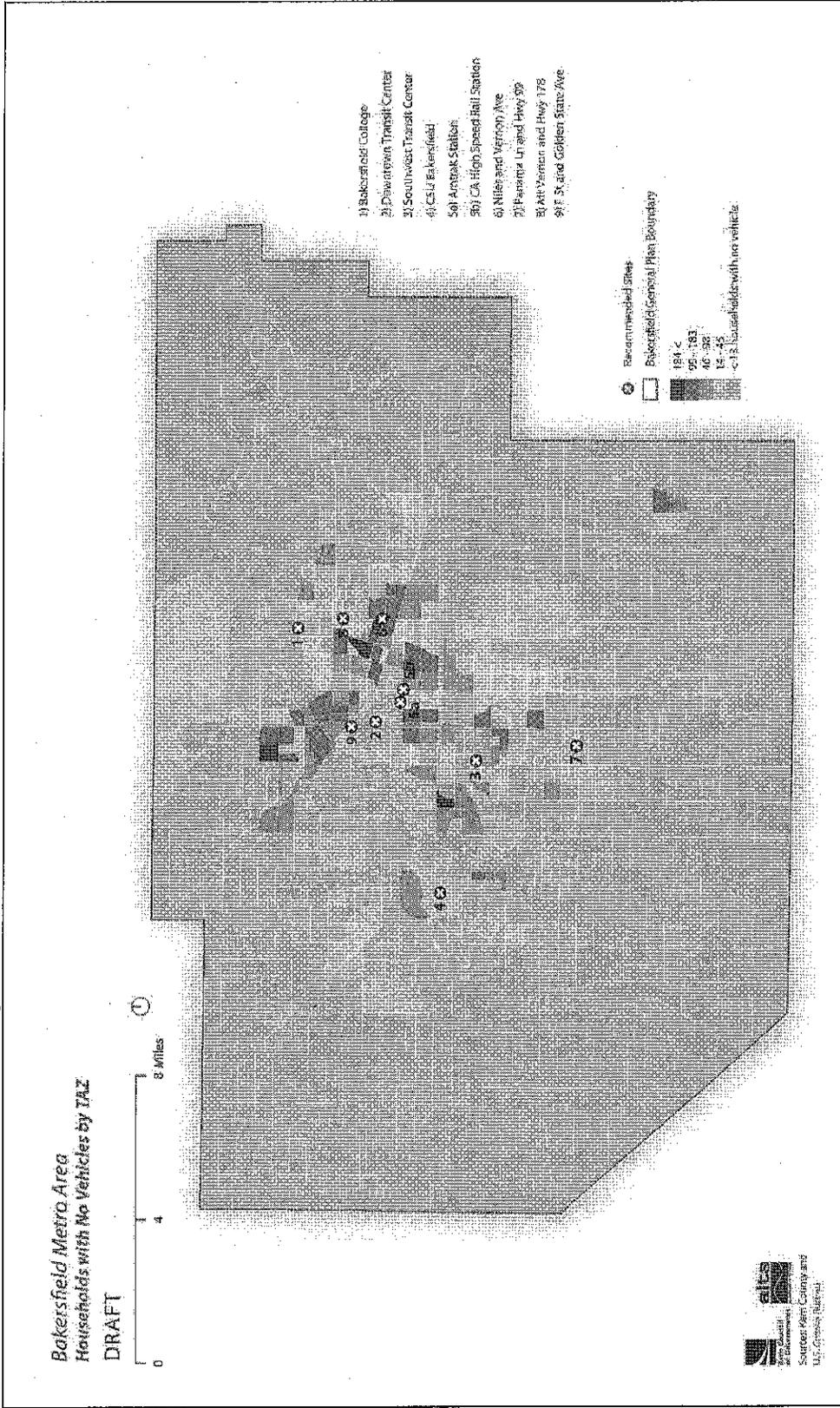


Figure 3. Minority Population by TAZ

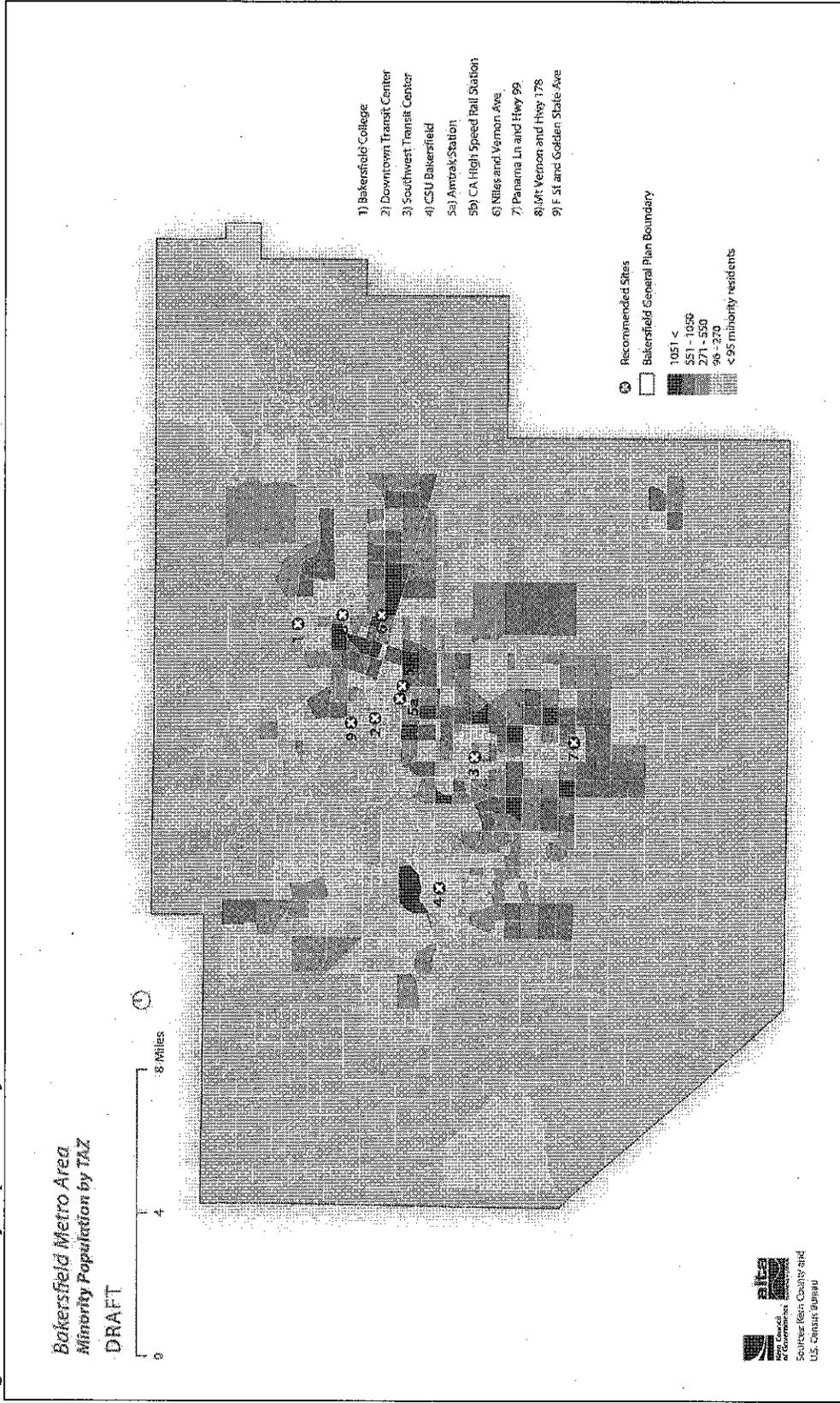


Figure 4: Senior Population by TAZ

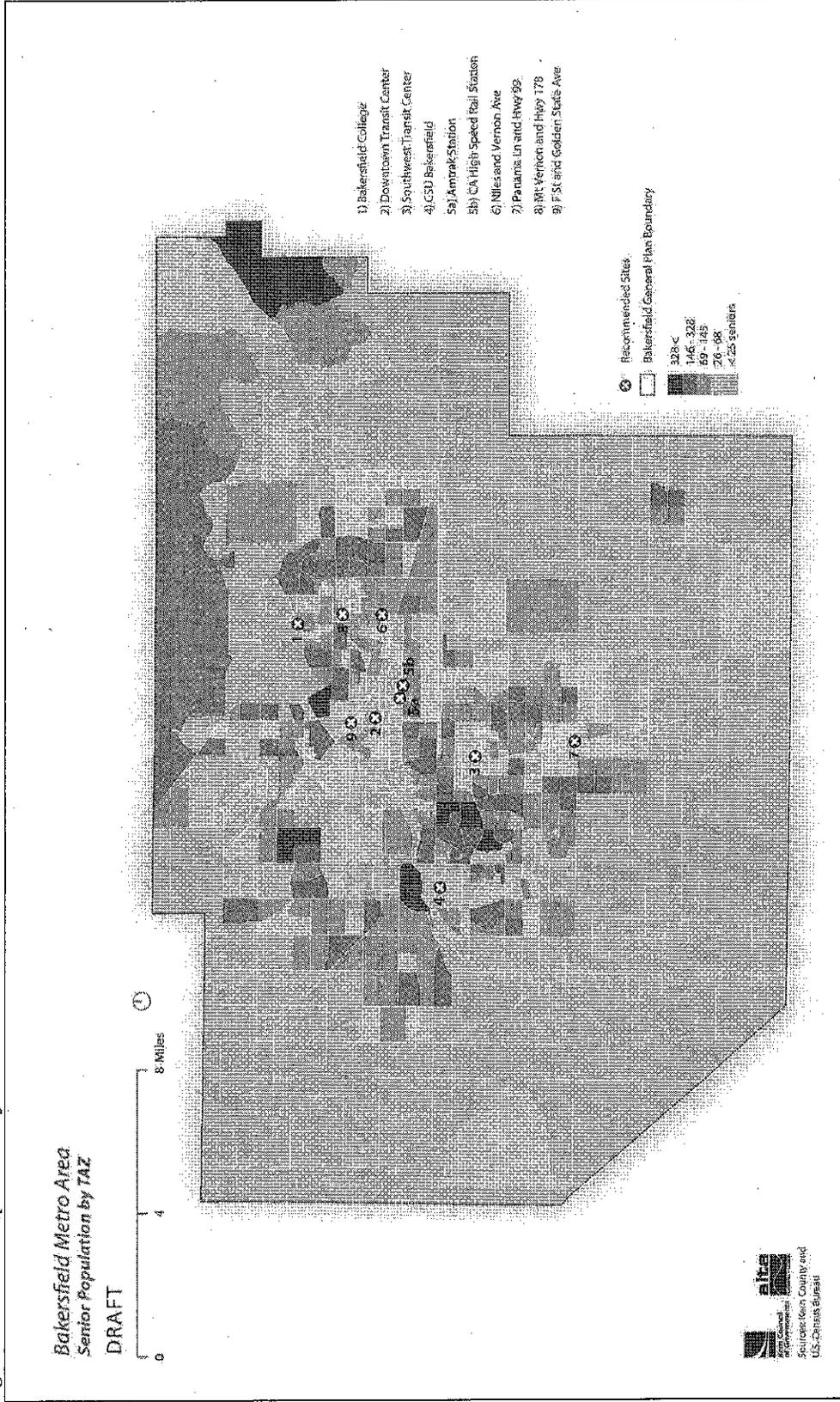


Figure 5: Youth Population by TAZ

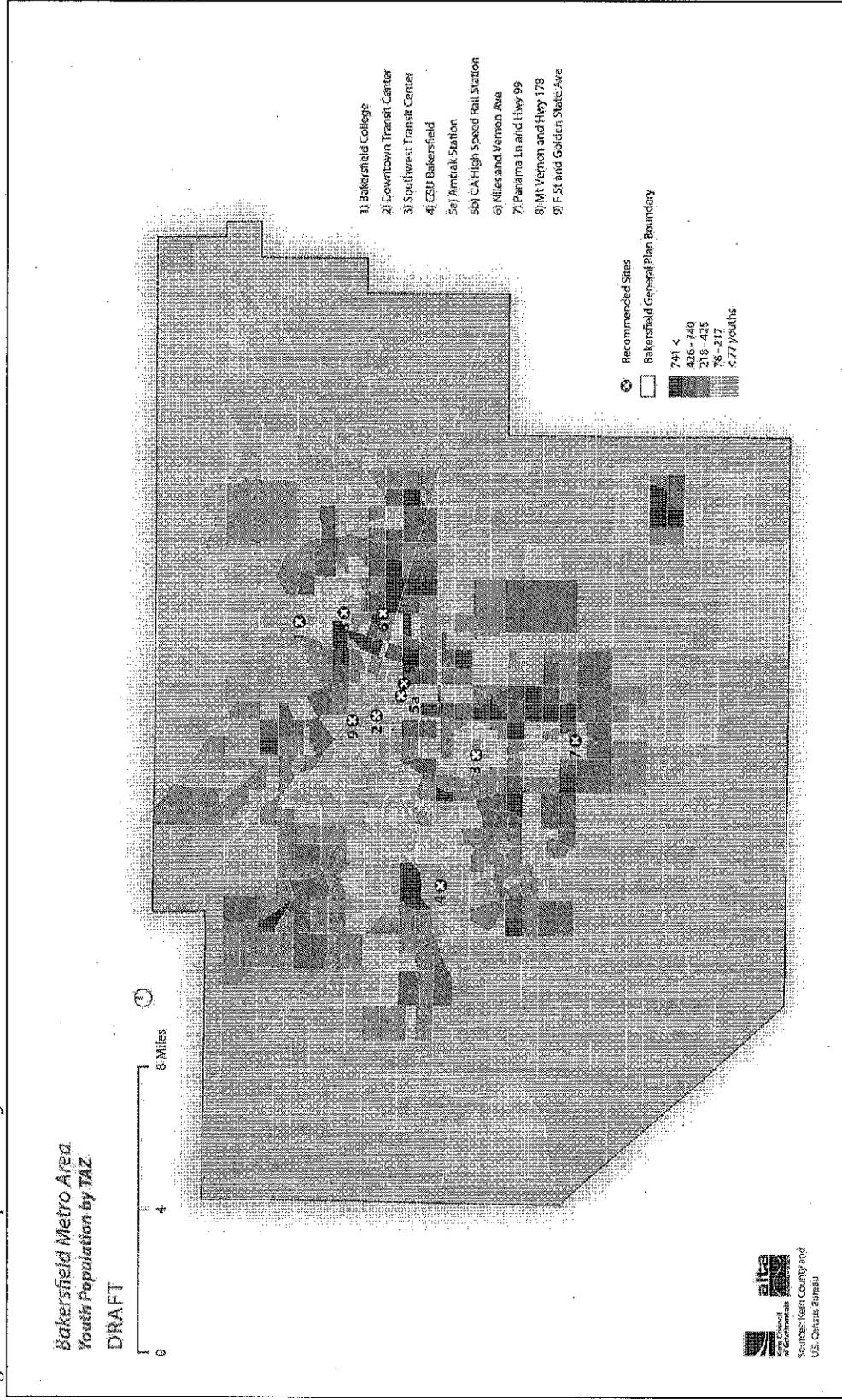


Figure 6: Projected 2020 Population by TAZ

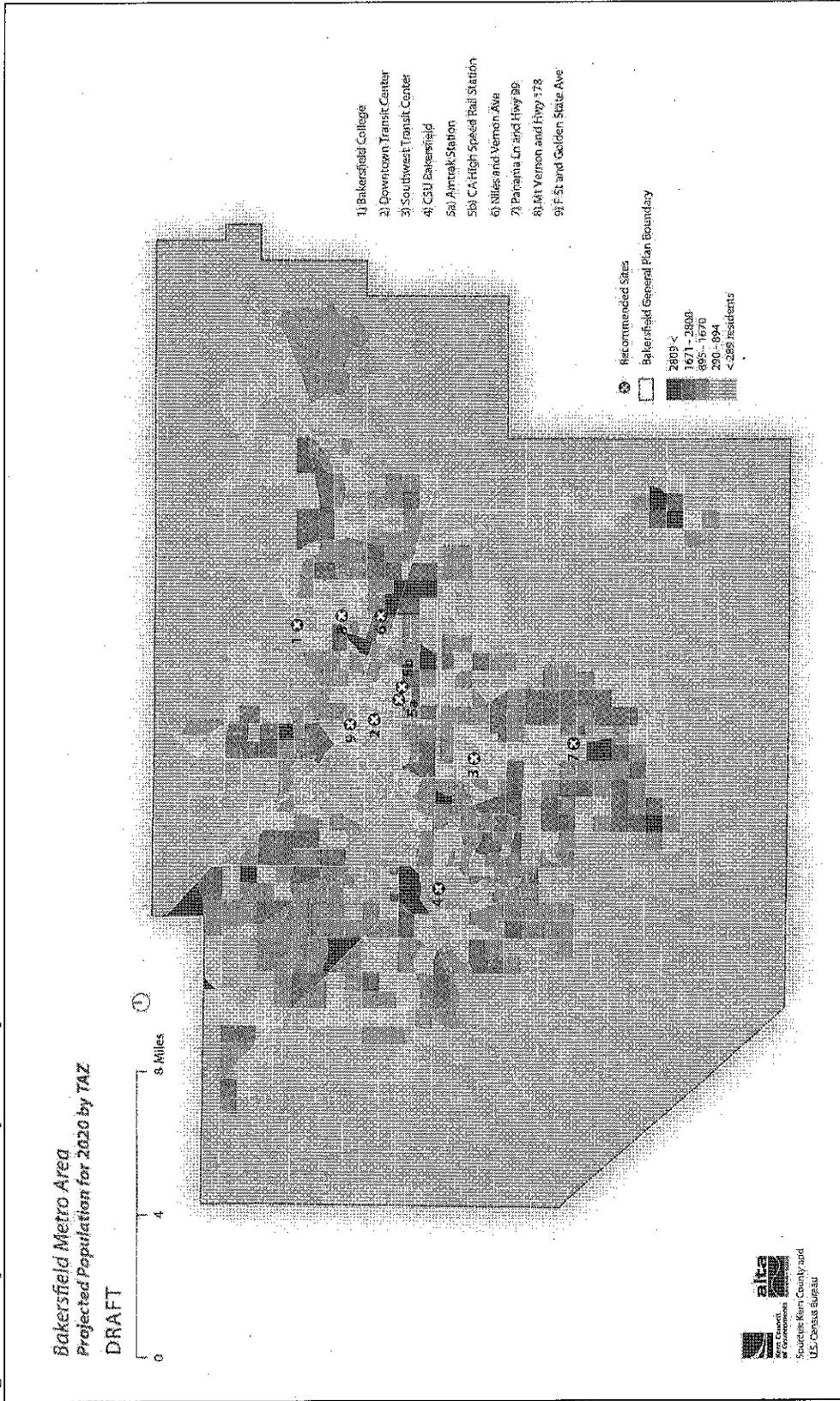


Figure 7: Projected 2035 Population by TAZ

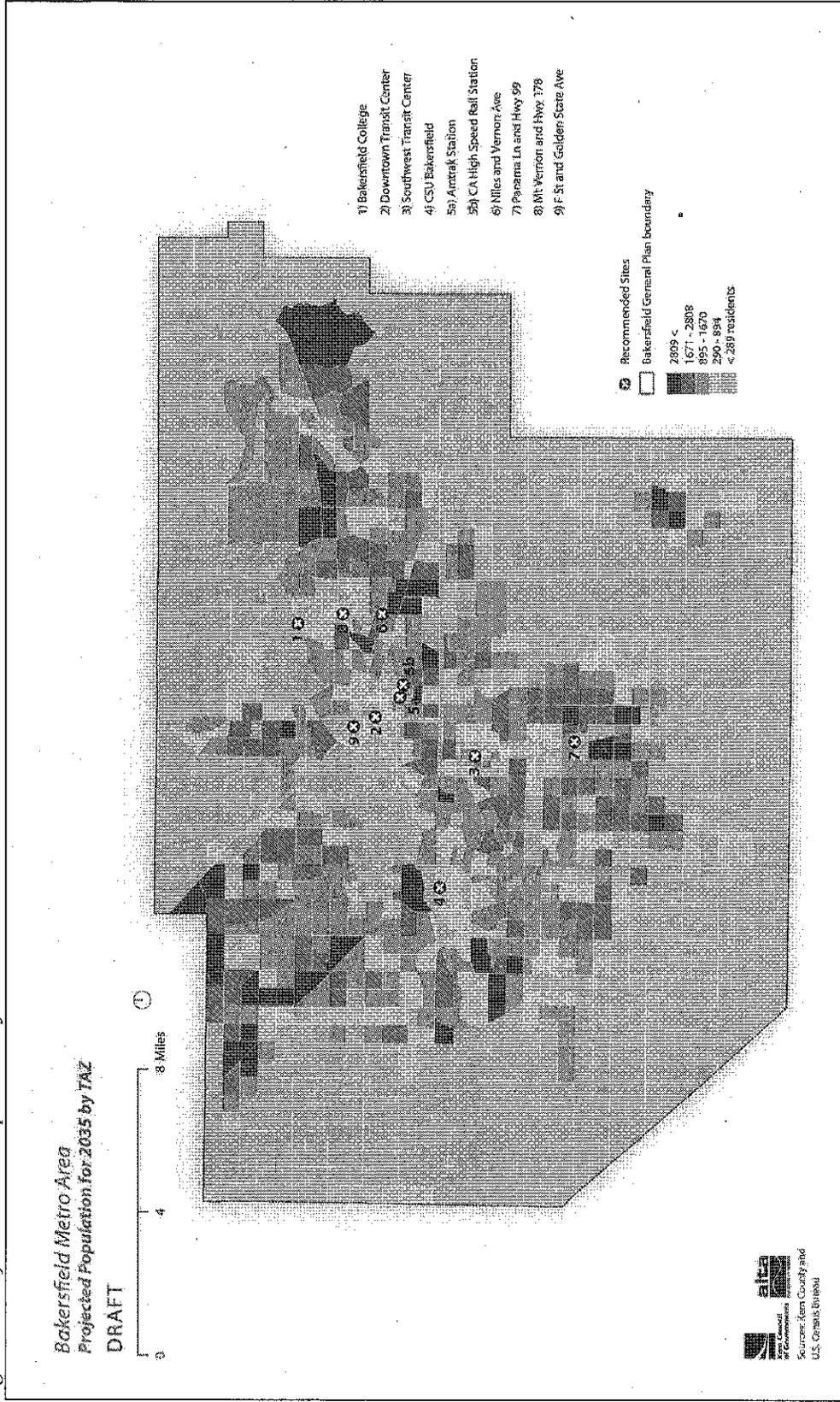


Figure 8: Projected 2040 Population by TAZ

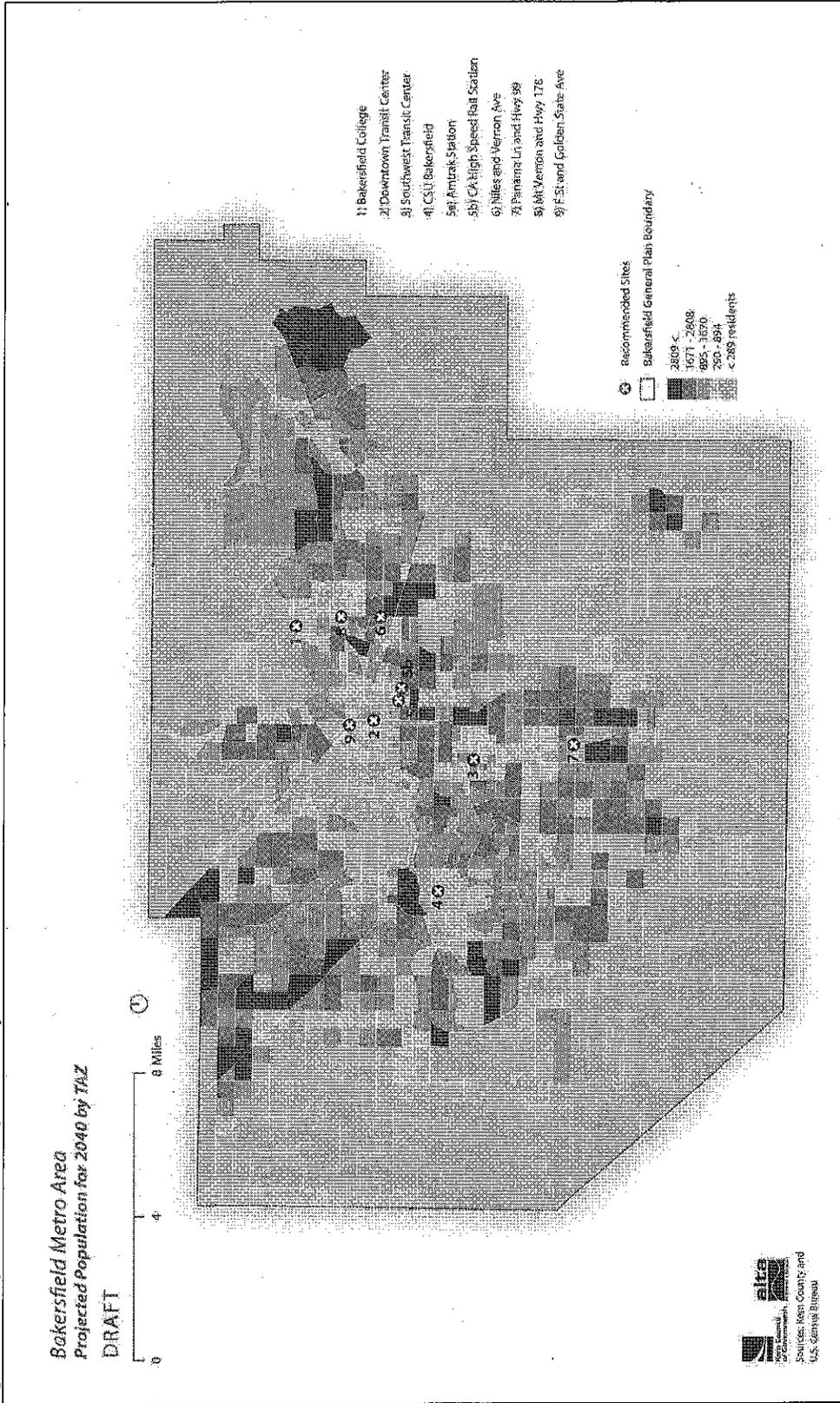


Figure 9: Projected Employment 2020 by TAZ

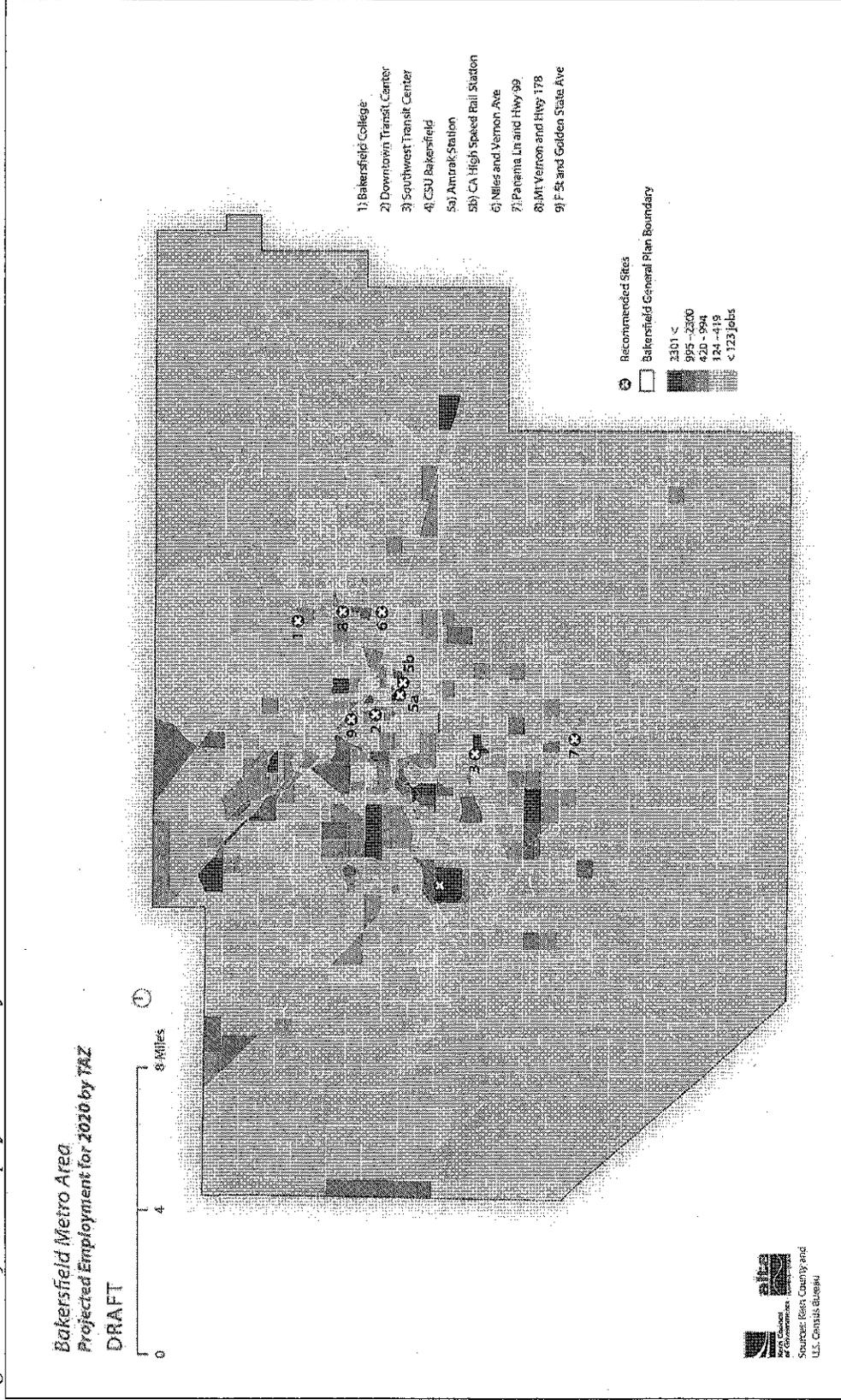


Figure 10: Projected Employment 2035 by TAZ

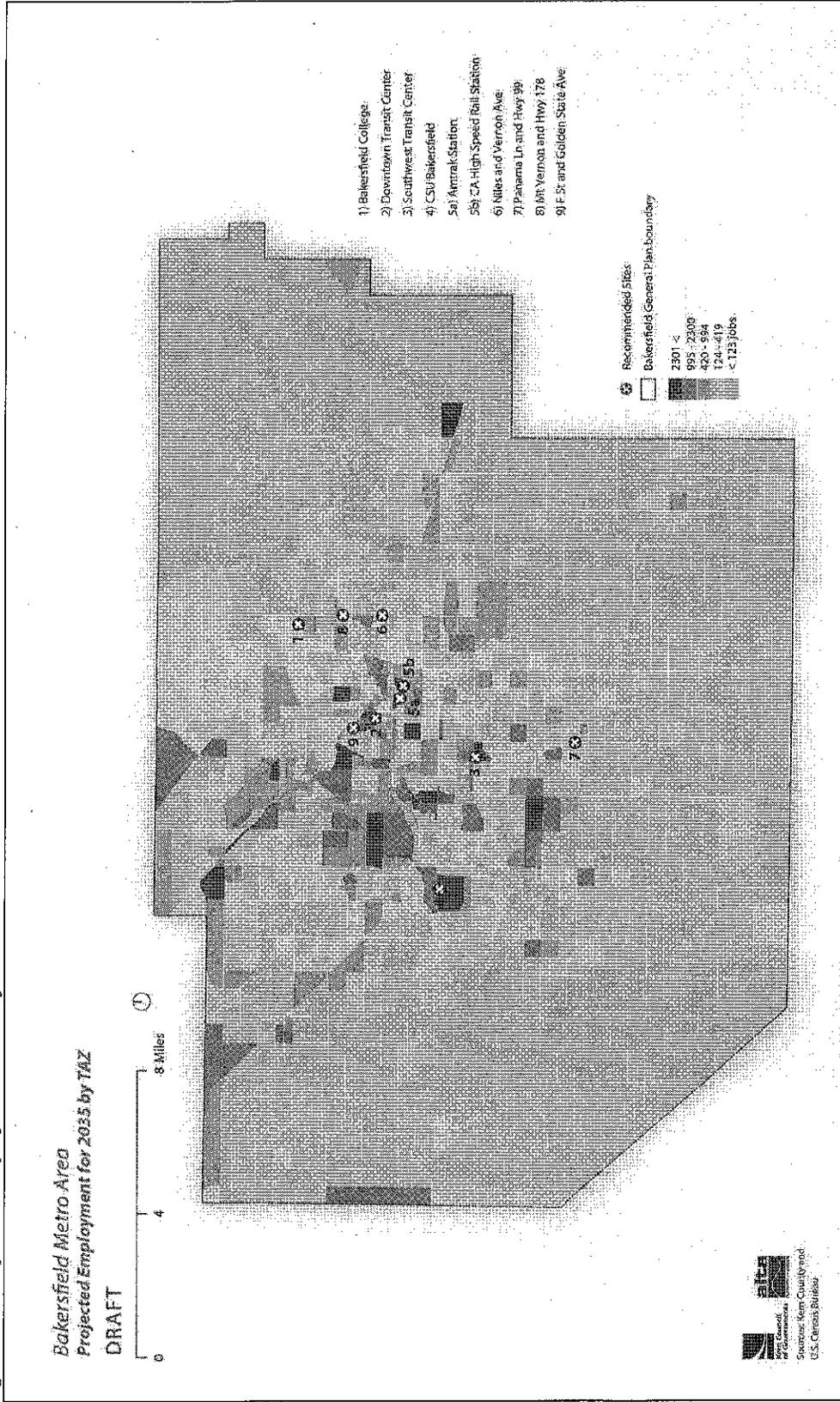


Figure 11: Projected Employment 2040 by TAZ

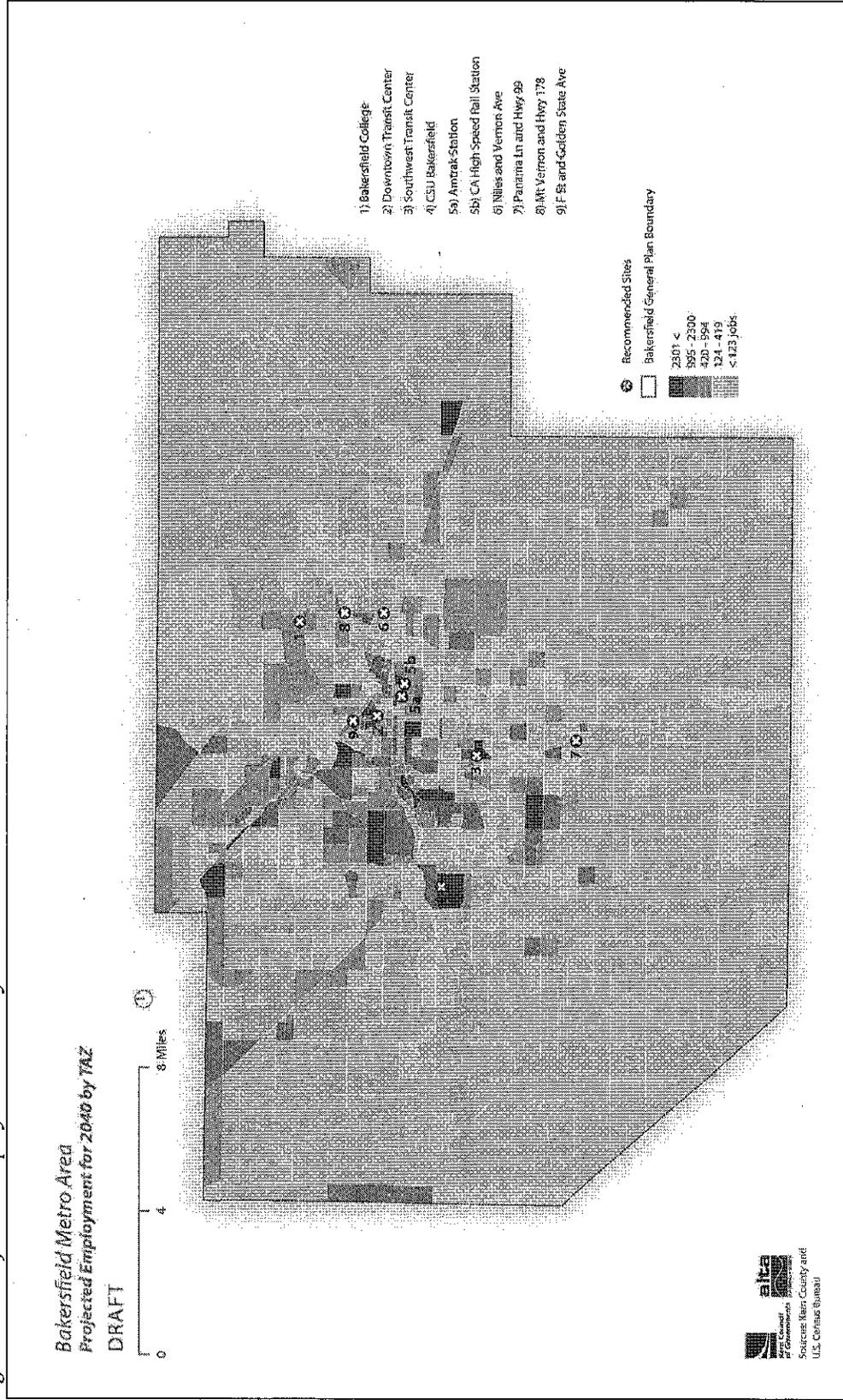


Figure 12: Existing Land Use

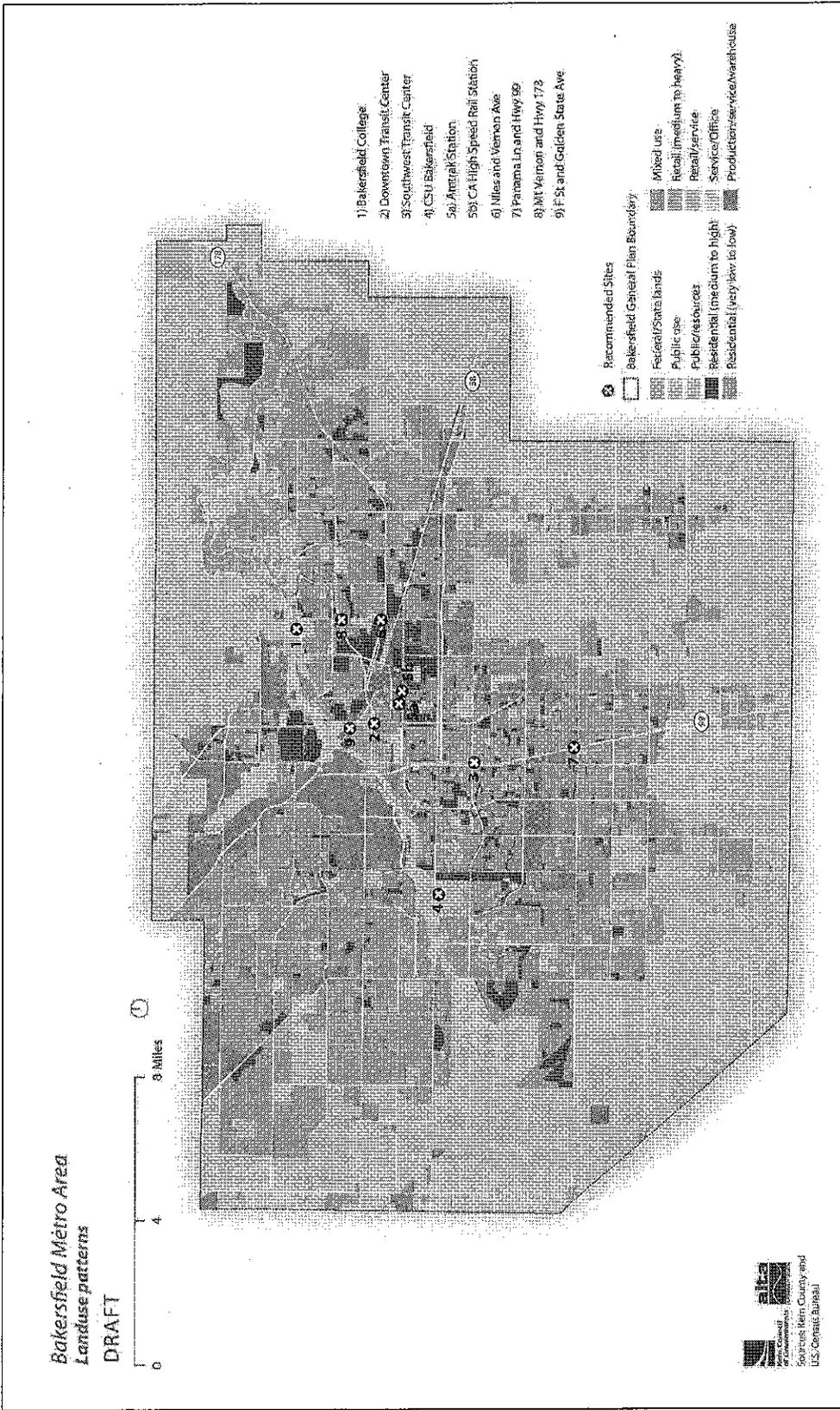
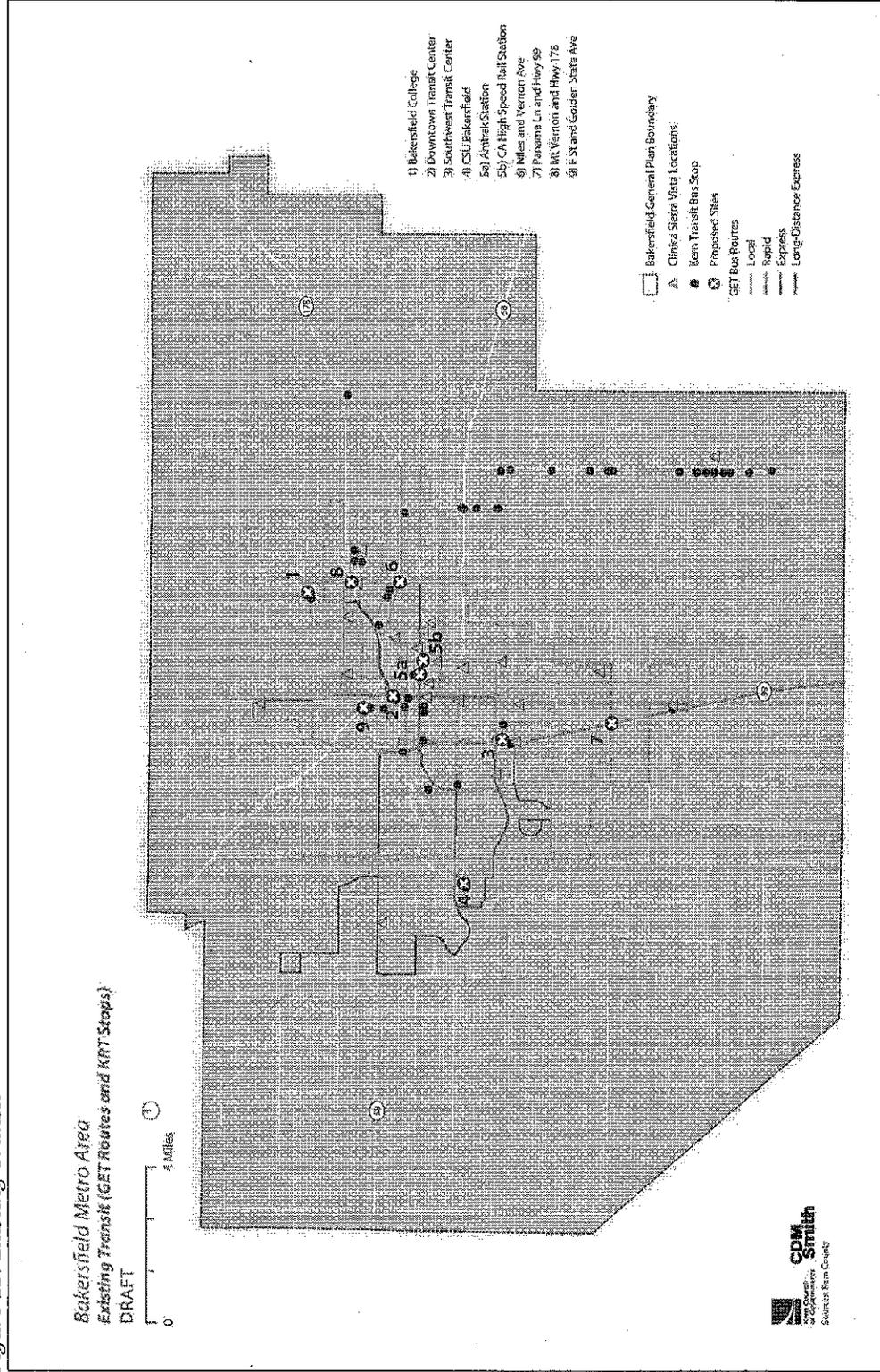


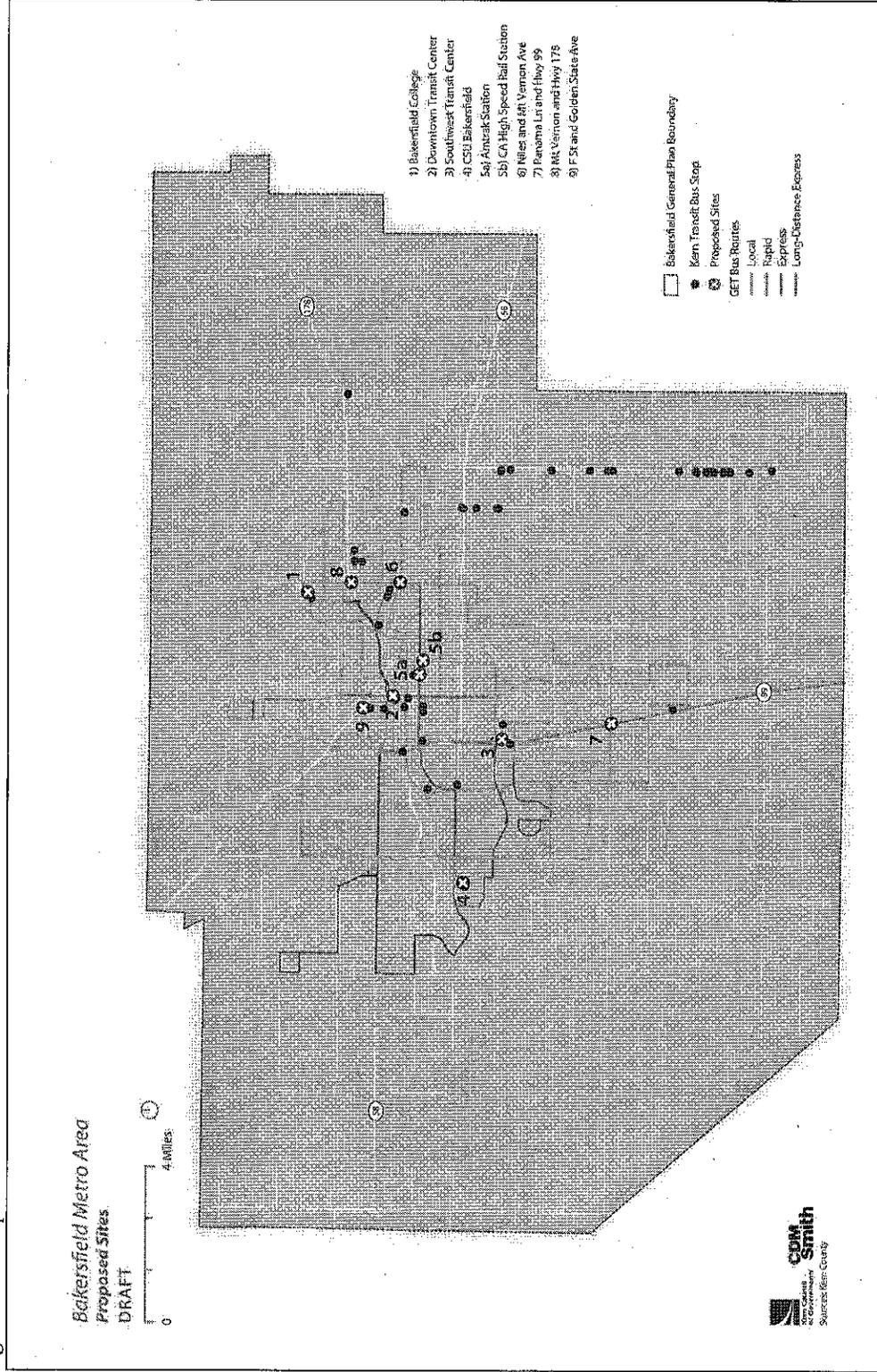
Figure 13: Existing Transit



## **Recommended Site Locations**

A total of ten sites were identified including existing and proposed locations (shown below in Figure 14). Each site is described in further detail in the following section; sites are not listed in order of priority. Existing transit center locations are included for a baseline comparison against potential future locations and for evaluating the potential for Transit Oriented Development (TOD). Proposed transit center locations are based on several factors including, the plans and goals outlined in the Bakersfield Transit System Long-Range Plan (LRTP), City of Bakersfield Bicycle Transportation Plan, California High Speed Rail Station Area Plans, existing and planned transit routes, land uses and demographics of surrounding potential sites, first and last mile connections, potential for TOD, and population and employment growth trends.

Figure 14: Proposed Sites



**Existing Sites**

**#1 Bakersfield College**

The Bakersfield College is included as a potential transit center site due to the high trip attraction of the college. The Bakersfield College was identified in the Bakersfield LRTP as a location planned for fast and frequent service. The site provides access to six GET bus routes (21, 41, 43, 44, 61, and the 81) and three of the Kern Transit bus routes (100, 140, and 150). First and last mile connections are provided with existing Class 1 and Class 2 bike routes and two future Class 2 and five Class 3 routes are planned in the City of Bakersfield Bicycle Transportation Plan. While there is not a significant amount of transit dependent populations such as youth, senior, or households with no vehicles, there is a moderate low-income and minority population.<sup>1</sup> In addition, employment is expected to be moderately high in the short-term and long-term (see employment and senior population figures to the right) with dense employment within a ¼ mile. Similar to the California State University Bakersfield site, this site is also comprised of primarily public land use making it an ideal site for a transit center to improve access to public facilities such as the college.

**Existing**

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	87 (42%)	102 (50%)	38 (18%)	40 (19%)	2 (2%)
1/2 Mile	548 (37%)	505 (34%)	345 (23%)	238 (16%)	28 (5%)

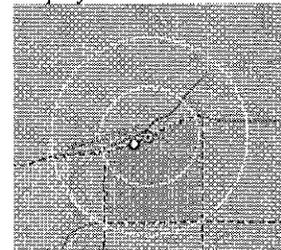
Note: Percentages indicate proportion of total population or households.

**Future**

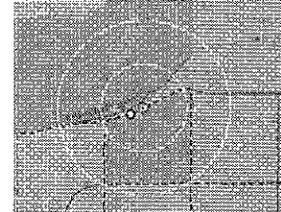
Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	357	2,141	357	2,227	1,604	2,312
1/2 Mile	1,557	1,506	1,613	1,558	3,120	1,645

Note: Units presented are density (people/jobs per square mile).

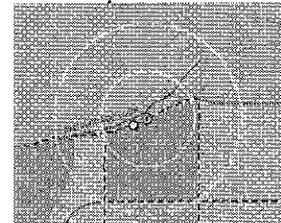
Employment 2020



Employment 2040



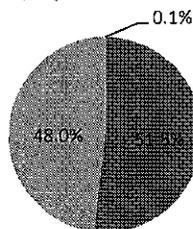
Senior Population



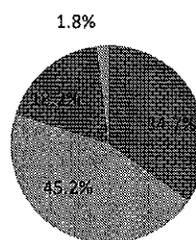
**Land Use**

- Federal/State Land
- Public Use
- Public/Resources
- Residential
- Mixed Use
- Retail/Service
- Service/Office
- Production/Service/Warehouse

Quarter Mile



Half Mile

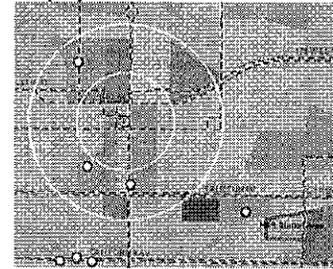


<sup>1</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentrations are shown in orange to red for employment higher than 995 and senior populations higher than 146.

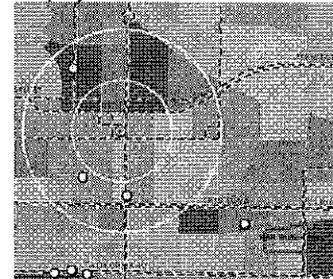
## #2 Downtown Transit Center

The Downtown Transit Center was identified in the Bakersfield LRTP as an existing transit center that would be phased out in the midterm (2021-2025) and long-term (2026-2035) service plans. However, the site itself can be utilized for the potential for Transit Oriented Development (TOD) due to its access to transit and the high amount of mixed-use land use surrounding the site to allow for compact and dense development. In addition, the site is located near the California High Speed Rail Station Plan Area to further enhance access. The site is nearby nine of the GET bus routes (22, 42, 43, 45, 81, 82, 83, 84, and 92) and seven Kern Transit bus routes (100, 110, 115, 120, 130, 140, and 150). Two existing bike routes are present with three additional routes planned in the City's Bicycle Transportation Plan. Among the transit dependent populations, a moderately high concentration of low-income and minority populations are present while other populations are relatively low. Population is expected to become significantly denser in the short-term and continue to grow in the long-term; employment is also expected to grow between the short and long-term (see figures to the right).<sup>2</sup>

Employment 2020



Employment 2040



### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	113 (63%)	94 (53%)	24 (13%)	15 (8%)	18 (29%)
1/2 Mile	699 (60%)	519 (45%)	168 (15%)	111 (10%)	106 (21%)

Note: Percentages indicate proportion of total population or households.

### Future

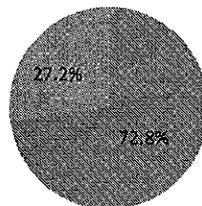
Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	1,391	17,888	11,549	18,077	12,666	26,894
1/2 Mile	1,448	14,806	8,694	14,912	9,882	26,725

Note: Units presented are density (people/jobs per square mile).

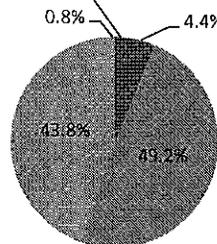
### Land Use

- Federal/State Land
- Public Use
- Public/Resources
- Residential
- Mixed Use
- Retail/Service
- Service/Office
- Production/Service/Warehouse

Quarter Mile



Half Mile



<sup>2</sup> Maps display a 1/4 mile and 1/2 mile buffer and are shown by TAZ. High concentrations are shown in orange to red for employment higher than 995.

### #3 Southwest Transit Center

The Southwest Transit Center is also identified in the Bakersfield LRTP as a transit center that will be phased out in the midterm (2021-2025) and long-range (2026-2035) service plans, similar to the Downtown Transit Center. Also similar to the Downtown Transit Center site, the Southwest Transit Center site can be utilized for TOD potential. The site provides access to eight GET bus routes (22, 41, 42, 44, 62, 81, 83, and 92) and two Kern Transit bus routes (130 and 145) within a ¼ mile walking distance. Within a ½ mile there is an additional Kern Transit bus route (110) and a Community Health Center (Clinica Sierra Site). An existing Class 2 bike route is adjacent to the site with an additional Class 2 bike route planned in the City's Bicycle Transportation Plan, providing first and last mile connections. The Valley Plaza shopping mall is also immediately adjacent which further enhances TOD potential. However, since the Valley Plaza shopping mall currently has several large retailers on the site, a relocation of the existing transit center site to the south at the shopping center at the southwest corner of Wilson Road and Wible Road could optimize TOD potential by providing a higher variety in dense land uses. The existing transit center is used primarily for transfers and is not a destination station. This existing nature of the transit center indicates that a relocation of the site would not inhibit existing GET routes and service. In addition, the length of the existing bus bays cannot accommodate newer articulated buses. The site is also suitable as high concentrations of employment are expected in the short-term (2020) and those projections will more than double by the long-term (2040), which can help support transit center activity.<sup>3</sup> A moderate amount of transit dependent populations are also present with low-income, minority, and youth populations.

#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	515 (52%)	516 (52%)	417 (42%)	84 (8%)	20 (7%)
1/2 Mile	2,590 (55%)	2,126 (45%)	1,750 (37%)	405 (9%)	133 (9%)

Note: Percentages indicate proportion of total population or households.

#### Future

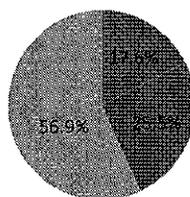
Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	3,159	8,929	3,587	9,000	10,236	22,300
1/2 Mile	5,706	4,621	5,575	4,452	10,096	12,274

Note: Units presented are density (people/jobs per square mile).

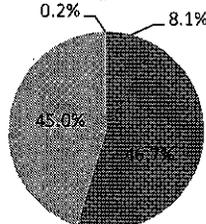
#### Land Use

- Federal/State Land
- Public Use
- Public/Resources
- Residential
- Mixed Use
- Retail/Service
- Service/Office
- Production/Service/Warehouse

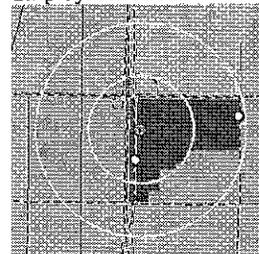
Quarter Mile



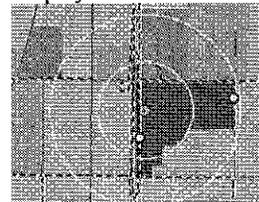
Half Mile



Employment 2020



Employment 2040

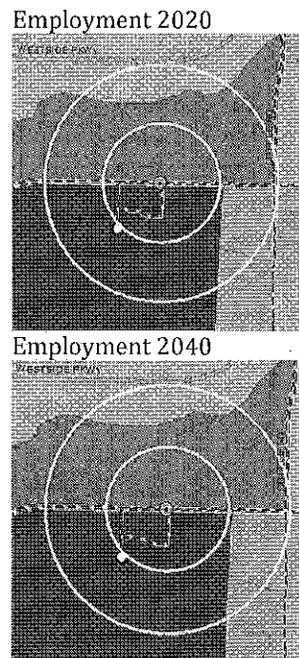


<sup>3</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentrations are shown in orange to red for employment higher than 995.

**Proposed Sites**

**#4 California State University Bakersfield**

California State University Bakersfield is a suitable location for a transit center as it has already been identified in the Bakersfield LRTP as a transit center. The site includes access within a ¼ mile to four GET Bus Routes (21, 22, 61, and 82) and the California State University Bakersfield Kern Transit bus stop (120). First and last mile connections are supported with an existing Class 2 bike route and two Class 1 routes; a future Class 1 route is planned in the City of Bakersfield Bicycle Transportation Plan. In addition, the Bicycle Transportation Plan also recommends this site as a potential bike share location. While there is not a high concentration of existing transit dependent populations (minority, youth, senior, and households with no vehicles), existing employment is high (see employment figures to the right) and is anticipated to remain high in the short-term and long-term. <sup>4</sup> The surrounding land use is primarily public use (mostly due to the University) in which a transit center can improve access to the University.



**Existing**

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	64 (32%)	52 (26%)	19 (10%)	14 (7%)	9 (10%)
1/2 Mile	284 (28%)	309 (30%)	174 (17%)	101 (10%)	40 (10%)

Note: Percentages indicate proportion of total population or households.

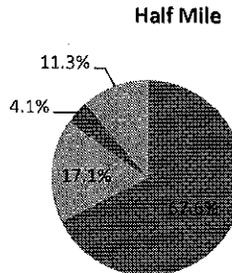
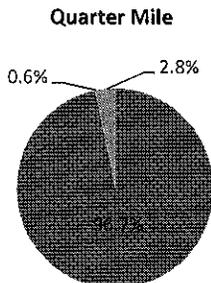
**Future**

Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	163	3,433	163	3,458	621	3,458
1/2 Mile	647	3,103	708	3,138	1,366	3,138

Note: Units presented are density (people/jobs per square mile).

**Land Use**

- Federal/State Land
- Public Use
- Public/Resources
- Residential
- Mixed Use
- Retail/Service
- Service/Office
- Production/Service/Warehouse



<sup>4</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentration of employment is shown in orange to red (995 and higher), medium concentrations are in orange (between 420 and 994), and yellow to green symbolizes low concentrations (less than 419).

## **#5 Downtown Train Station**

The Downtown Train Station pertains to the planning area for the California High Speed Rail (HSR). The goal of this site location is to leverage the opportunities, such as TOD, of the planned HSR station. In order to maximize functionality and mutual benefit, California HSR stations and surrounding development need to be designed with an eye to each other. If not carefully planned, conventional transit design can separate transit stations from the adjacent community it is intended to serve.<sup>5</sup> For these reasons, it is important to evaluate all aspects of the California HSR and the potential opportunities that are included with relation to TOD.

There are many opportunities presented by the California HSR and its potential for TOD which can include location, land use, and transportation. Location can attract employers to the area, such as Los Angeles-based employers taking advantage of the fast travel time between the two regions (approximately 54 minutes) and looking for less expensive office space while still being able to maintain a presence in Los Angeles. The area surrounding the California HSR station planning area offers potential for TOD with vacant and publicly-owned parcels. Lastly, the planned Bakersfield Hybrid HSR station is unique in that it will be the only station where both HSR and Amtrak will meet at the same station enhancing connectivity and acting as a major regional and statewide hub.<sup>6</sup>

In order to leverage the opportunities associated with the Bakersfield Hybrid HSR station, two options are presented for a Downtown Train Station including the existing Amtrak station and the proposed HSR station. In the interim, until the HSR station is implemented the Amtrak station would be a suitable site for a transit center in the short-term; alternatively, a suitable site can also be located at the HSR station upon implementation in the long-term. These two scenarios are described in the following section.

The City of Bakersfield has proposed locating the Bakersfield HSR station at the F Street and Golden State Avenue potential transit center site (Site #9). This proposal has been designated the Locally Generated Alternative to the CAHSR Authority's Bakersfield Hybrid HSR station site.

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<sup>5</sup> Urban Design Guidelines California High-Speed Train Project. March 2011. California High-Speed Rail Authority

<sup>6</sup> Planning Transit-Oriented Development around High-Speed Rail Stations in Fresno and Bakersfield. December 2010. Daniel Krause

### #5a Amtrak Station (Short-Term)

The Amtrak Station is included as a potential site due to its regional access. Users of the Amtrak Station are able to access the 45 GET bus route and four Kern Transit bus routes (100, 120, 130, and 150) within a ¼ mile walking distance; within a ½ mile users can also access the 44 GET bus route and a Women, Infants, and Children (WIC) program (Clinica Sierra Site). First and last mile connections are included with an existing Class 2 bike route with Class 1 and Class 3 bike routes planned in the City's Bicycle Transportation Plan. Station improvements are also included in the Bicycle Transportation Plan and the Kern COG 2014 Regional Transportation Plan. In addition, the California High Speed Rail (HSR) Bakersfield Station Planning Area is located immediately south of the Amtrak Station. While it is likely the California HSR Station will replace the Amtrak Station as a major transit center, the site of the Amtrak Station could be utilized as TOD with a growing high concentration of employment and a mixture of land uses in the surrounding area.<sup>7</sup> The area surrounding the site is also comprised of a high amount of transit dependent populations such as low-income, minority populations, and households with no access to a vehicle.

#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	195 (75%)	168 (65%)	53 (21%)	34 (13%)	36 (36%)
1/2 Mile	1,660 (68%)	1,119 (46%)	475 (19%)	268 (11%)	175 (25%)

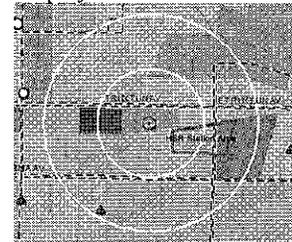
Note: Percentages indicate proportion of total population or households.

#### Future

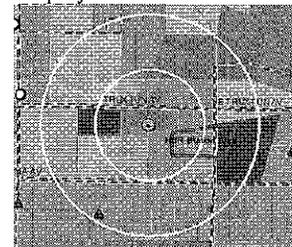
Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	825	20,368	4,014	28,370	6,255	37,156
1/2 Mile	1,909	12,411	7,511	15,800	9,566	22,113

Note: Units presented are density (people/jobs per square mile).

Employment 2020



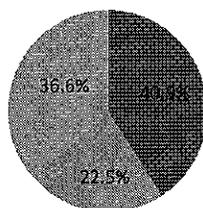
Employment 2040



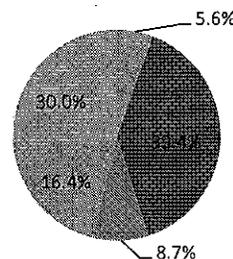
#### Land Use

- Federal/State Land
- Public Use
- Public/Resources
- Residential
- Mixed Use
- Retail/Service
- Service/Office
- Production/Service/Warehouse

Quarter Mile



Half Mile

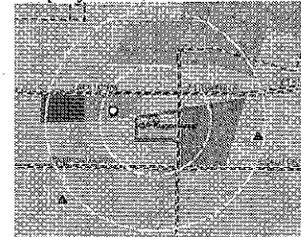


<sup>7</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentrations are shown in orange to red for employment higher than 995.

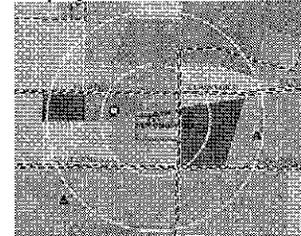
### #5b California High Speed Rail Hybrid Station (Long-Term)

The California High Speed Rail (HSR) Hybrid Station is located immediately south of the Amtrak Station across from the rail road tracks. This location makes a suitable site due to its connectivity to the planned California HSR system providing regional and statewide access. Similar to the Amtrak station, users are provided GET and Kern Transit bus routes within walking distance including the 45 GET bus route and four Kern Transit bus routes (100, 120, 130, and 150) within a ¼ mile walking distance; within a ½ mile users can also access the 44 GET bus route and a Women, Infants, and Children (WIC) program (Clinica Sierra Site). First and last mile transit connections consist of the existing Class 2 bike route along with planned Class 1 and Class 3 bike routes in the City's Bicycle Transportation Plan to increasing connectivity. High concentrations of transit dependent populations (low-income, minority, and households with no vehicle) are present in the surrounding area, further supporting this site as a suitable location for a transit center and/or a TOD site.<sup>8</sup> Employment density is also anticipated to drastically intensify by the long-term year 2040. Additionally, a high portion of the surrounding land uses are identified as mixed-use, allowing for dense and compact development.

Employment 2020



Employment 2040



#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	251 (65%)	201 (52%)	80 (21%)	39 (10%)	34 (29%)
1/2 Mile	1,910 (66%)	1,174 (40%)	623 (21%)	240 (8%)	137 (19%)

Note: Percentages indicate proportion of total population or households.

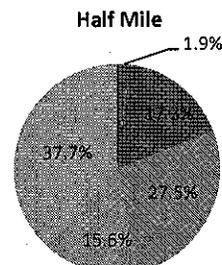
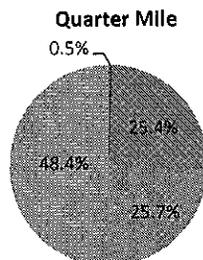
#### Future

Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	210	1,117	392	2,265	666	4,036
1/2 Mile	1,630	8,448	4,038	11,103	5,823	16,441

Note: Units presented are density (people/jobs per square mile).

#### Land Use

- Federal/State Land
- Public Use
- Public/Resources
- Residential
- Mixed Use
- Retail/Service
- Service/Office
- Production/Service/Warehouse



<sup>8</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentrations are shown in orange to red for employment higher than 995.

### #6 Niles and Mt Vernon Avenue

The parcels immediately adjacent to the intersection of Niles Street and Mt Vernon Avenue makes a suitable transit center location with access to transit and a high concentration of transit dependent populations. A transit center could be located on any of the four quadrants of the intersection. The site includes access to three GET bus routes (21, 41, and 45) and three Kern Transit bus routes (100, 140, and 150); first and last mile connections will be enhanced with a future Class 3 and three future Class 2 bike routes that have been identified in the City's Bicycle Transportation Plan. In addition, the East Bakersfield High School and Kern Medical Center are both within a ½ mile. Although the land use surrounding the site is primarily residential and does not allow for mixed-use development, the area is densely populated with low-income, minority, youth, and households with no vehicles (transit dependent users) making this site an ideal location for a transit center.<sup>9</sup> Population is anticipated to remain relatively consistent in the short and long-term with small growth in employment by the long-term year 2040. While a significant amount of growth is not anticipated, this site is still an ideal location for a transit center as it improves accessibility for transit dependent populations in a densely populated area.

#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	1,368 (66%)	1,012 (49%)	743 (36%)	72 (3%)	162 (28%)
1/2 Mile	4,490 (66%)	3,455 (51%)	2,609 (38%)	476 (4%)	527 (30%)

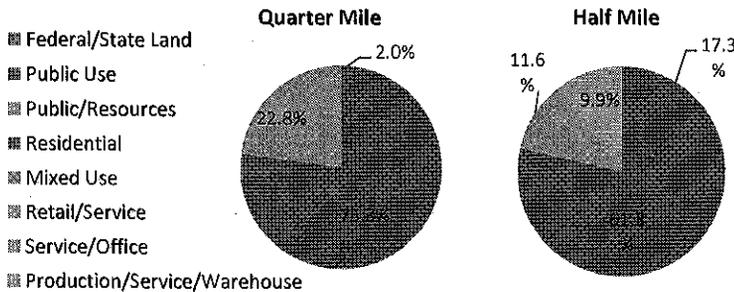
Note: Percentages indicate proportion of total population or households.

#### Future

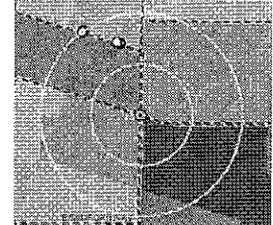
Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	10,041	276	10,041	292	11,448	482
1/2 Mile	8,620	780	8,640	798	10,209	983

Note: Units presented are density (people/jobs per square mile).

#### Land Use



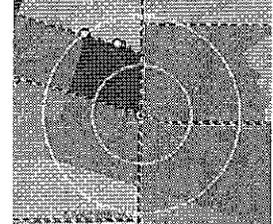
Population 2020



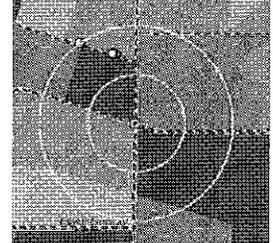
Population 2040



Households with No Vehicles



Youth Population



<sup>9</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentrations are shown in orange to red for minority populations higher than 548, youth populations higher than 425, and households with no vehicle higher than 98.

### #7 Panama Lane and Hwy 99

While not located in the center of Metro Bakersfield, the intersection of Panama Lane and Highway 99 is a site location for a potential transit center. The site is anticipated to double in population density between the short and long-term years and provides access to multiple transit lines. Regional and local access is available with six GET bus routes (41, 42, 47, 61, 62, and 92) and two Kern Transit bus routes (130 and 145). First and last mile connections to the transit center are offered with proposed future Class 2 and Class 1 routes in the City's Bicycle Transportation Plan. The demographics for the surrounding area include a moderately high amount of low-income, minority, and youth populations (transit dependent populations).<sup>10</sup> Although the land uses for the site are primarily retail and residential, the demographics for the area indicate the population is transit dependent with a moderately high amount of low-income, minority, and youth populations. A transit center at this location can improve upon the existing accessibility for these users and assist with the population growth between short and long-term years.

#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	610 (57%)	530 (49%)	360 (33%)	51 (5%)	18 (7%)
1/2 Mile	2,329 (55%)	2,065 (48%)	1,414 (33%)	225 (5%)	58 (5%)

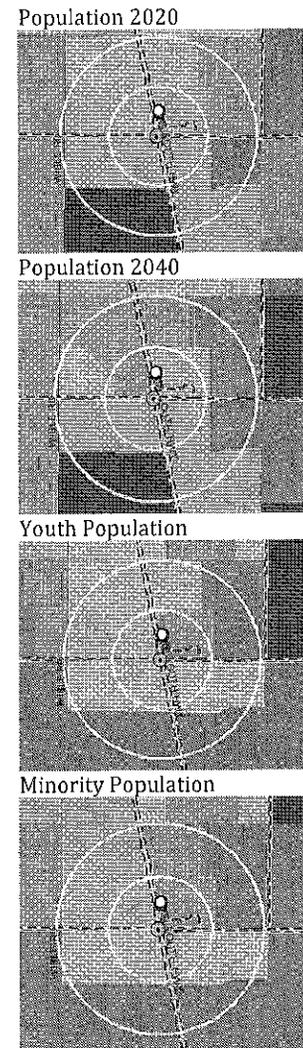
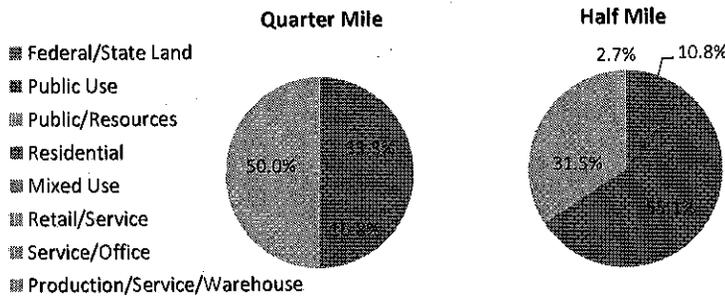
Note: Percentages indicate proportion of total population or households.

#### Future

Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	616	1,861	820	197	1,745	197
1/2 Mile	4,233	835	5,655	1,077	9,353	1,491

Note: Units presented are density (people/jobs per square mile).

#### Land Use

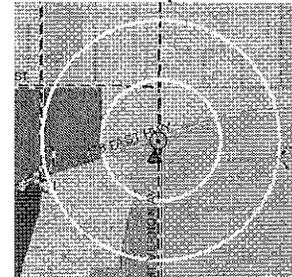


<sup>10</sup> Maps display a 1/4 mile and 1/2 mile buffer and are shown by TAZ. High concentrations are shown in orange to red for populations higher than 1,670, minority populations higher than 548, and youth populations higher than 425.

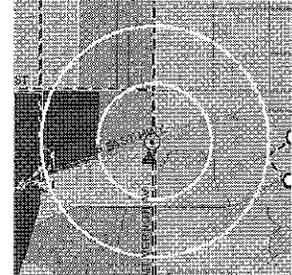
### #8 Mt Vernon Ave and Hwy 178

South along Mount Vernon Avenue at the intersection of Highway 178 is a site location for a potential transit center. This location is an ideal site for a potential transit center as it is within close proximity of the East Hills Shopping Mall. Regional and local access is available with three GET bus routes (21, 43, and 44) within a ¼ mile radius and a Women, Infants, and Children (WIC) program (Clinica Sierra Site) is within close proximity. First and last mile connections to the transit center are enhanced with an existing Class 2 bike routes and an additional future Class 2 route proposed in the City's Bicycle Transportation Plan. Although population density between the short and long-term years remain relatively constant, a moderately high amount of low-income, minority, and youth populations (transit dependent populations (transit dependent populations) are within the surround areas.<sup>11</sup> The land uses for the site are primarily retail and residential with a mixture of public use. The site's adjacent location to the East Hills Shopping Mall and its concentration of transit dependent populations enhances its potential to become eligible for TOD. A transit center at this location can improve access for neighboring populations and assist in providing access to the East Hills Shopping Mall.

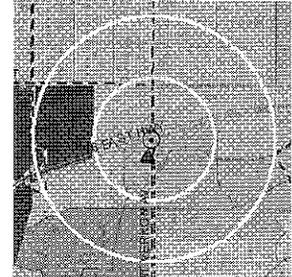
Low-Income Population



Minority Population



Youth Population



#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	657 (53%)	554 (45%)	403 (32%)	146 (12%)	60 (15%)
1/2 Mile	2,530 (48%)	2,174 (41%)	1,588 (30%)	594 (11%)	201 (12%)

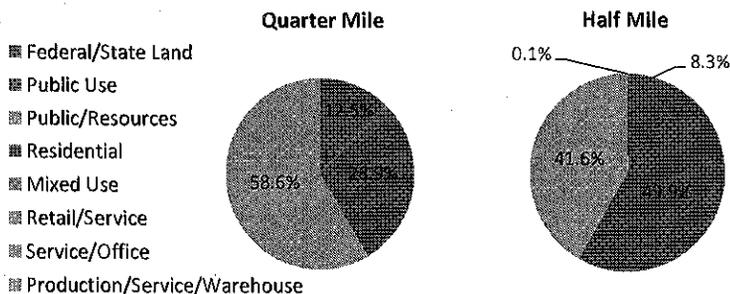
Note: Percentages indicate proportion of total population or households.

#### Future

Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	842	785	850	695	1,001	695
1/2 Mile	4,128	2,124	4,053	2,069	5,868	2,069

Note: Units presented are density (people/jobs per square mile).

#### Land Use

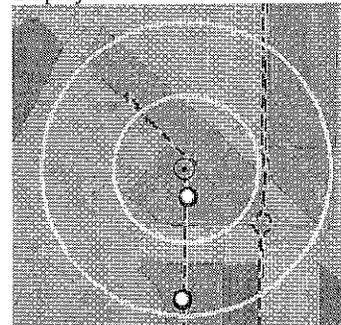


<sup>11</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentrations are shown in orange to red for populations higher than 1,670, minority populations higher than 548, and youth populations higher than 425.

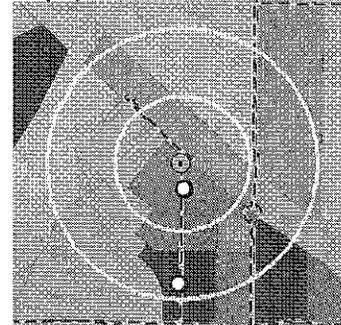
### #9 F Street and Golden State Avenue (Locally Generated Alternative HSR Station)

North of the existing Amtrak Station at the intersection of F Street and Golden State Avenue (Highway 204) is also a site location for a potential transit center. The site location has a high amount of retail/service land use within a ¼ mile radius supporting the site as a transit center; within a ½ mile radius there is also public use/resource areas. Regional and local access is available with two GET bus routes (22, and 42), and two Kern Transit bus routes (110 and 150) within a ½ mile radius. First and last mile connections to the transit center include existing Local, Class 1, and Class 2 bike routes and future Local and Class 2 routes proposed in the City's Bicycle Transportation Plan. While there is not a high concentration of existing transit dependent populations (low-income, minority, youth, senior, and households with no vehicles), employment growth is anticipated to triple by long term year 2040 (see employment figures to the right).<sup>12</sup> A transit center at this location can assist with the anticipated employment growth and provide multi-model access to the nearby future employment centers. However, the site is located immediately north of Golden State Ave (Highway 204) and presents a challenge for access across the highway; additionally, line of sight from the road is not optimal due to the geography of the site.

Employment 2020



Employment 2040



#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	118 (38%)	94 (30%)	64 (21%)	33 (11%)	23 (19%)
1/2 Mile	1,108 (51%)	695 (32%)	468 (22%)	209 (10%)	158 (19%)

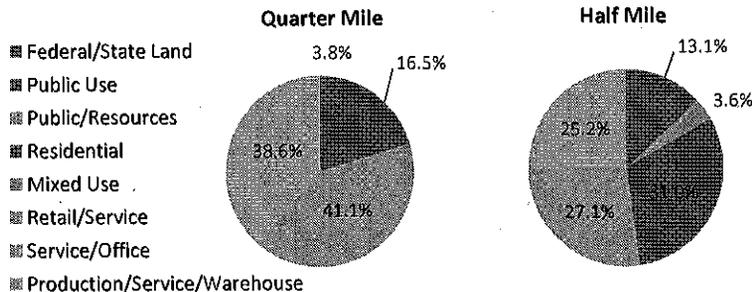
Note: Percentages indicate proportion of total population or households.

#### Future

Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	424	978	361	1,044	424	2,693
1/2 Mile	1,952	3,494	2,123	3,598	2,913	9,079

Note: Units presented are density (people/jobs per square mile).

#### Land Use



<sup>12</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentration of employment is shown in orange to red (995 and higher), medium concentrations are in orange (between 420 and 994), and yellow to green symbolizes low concentrations (less than 419).

## Demographic Summary

The demographics for each site are summarized in the tables below for existing and projected. Sites were partially selected based on their existing and projected demographics. For existing demographics high concentration of transit dependent users such as low-income, minority, youth, senior, and households with no vehicles were criteria for a site recommendation. The projected demographics were used to determine the degree of growth that is anticipated between the base year, short term and long term years. The selected sites all displayed a high concentration of transit dependent populations and anticipated growth and were selected for these reasons.

Quarter Mile (Existing)								
Site	Description	Total Population	Total Households	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1	Bakersfield College	206	85	87 (42%)	102 (50%)	38 (18%)	40 (19%)	2 (2%)
2	Downtown Transit Center	180	63	113 (63%)	94 (53%)	24 (13%)	15 (8%)	18 (29%)
3	Southwest Transit Center	1,000	313	515 (52%)	516 (52%)	417 (42%)	84 (8%)	20 (7%)
4	Cal State Bakersfield	201	87	64 (32%)	52 (26%)	19 (10%)	14 (7%)	9 (10%)
5a	Amtrak Station	258	102	195 (75%)	168 (65%)	53 (21%)	34 (13%)	36 (36%)
5b	CA HSR	388	117	251 (65%)	201 (52%)	80 (21%)	39 (10%)	34 (29%)
6	Niles and Vernon Ave	2,069	588	1368 (66%)	1012 (49%)	743 (36%)	72 (3%)	162 (28%)
7	Panama Ln and Hwy 99	1,077	259	610 (57%)	530 (49%)	360 (33%)	51 (5%)	18 (7%)
8	Vernon Ave and Hwy 178	1,245	391	657 (53%)	554 (45%)	403 (32%)	146 (12%)	60 (15%)
9	F St and Golden State Ave	310	121	118 (38%)	94 (30%)	64 (21%)	33 (11%)	23 (19%)
Half Mile (Existing)								
Site	Description	Total Population	Total Households	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1	Bakersfield College	1,493	552	548 (37%)	505 (34%)	345 (23%)	238 (16%)	28 (5%)
2	Downtown Transit Center	1,156	496	699 (60%)	519 (45%)	168 (15%)	111 (10%)	106 (21%)
3	Southwest Transit Center	4,681	1,448	2590 (55%)	2126 (45%)	1750 (37%)	405 (9%)	133 (9%)
4	Cal State Bakersfield	1,021	415	284 (28%)	309 (30%)	174 (17%)	101 (10%)	40 (10%)
5a	Amtrak Station	2,440	700	1660 (68%)	1119 (46%)	475 (19%)	268 (11%)	175 (25%)
5b	CA HSR	2,904	740	1910 (66%)	1174 (40%)	623 (21%)	240 (8%)	137 (19%)
6	Niles and Vernon Ave	6,790	1,780	4490 (66%)	3435 (51%)	2609 (38%)	276 (4%)	527 (30%)
7	Panama Ln and Hwy 99	4,262	1,062	2329 (55%)	2065 (48%)	1414 (33%)	225 (5%)	58 (5%)
8	Vernon Ave and Hwy 178	5,263	1,682	2,530 (48%)	2,174 (41%)	1,588 (30%)	594 (11%)	201 (12%)
9	F St and Golden State Ave	2,173	849	1,108 (51%)	695 (32%)	468 (22%)	209 (10%)	158 (19%)

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Quarter Mile (Projected)									
Site	Description	Population				Employment			
		Base	2020	2035	2040	Base	2020	2035	2040
1	Bakersfield College	71	70	237	315	420	437	452	454
2	Downtown Transit Center	274	2,267	2,469	2,486	3,511	3,548	5,249	5,279
3	Southwest Transit Center	620	704	2,007	2,009	1,753	1,767	4,377	4,377
4	Cal State Bakersfield	32	32	86	122	674	679	711	679
5a	Amtrak Station	163	788	1,227	1,228	3,998	5,569	7,290	7,293
5b	CA HSR	211	393	666	666	1,117	2,265	4,030	4,036
6	Niles and Mt. Vernon Ave	1,972	1,972	2,059	2,247	54	57	57	95
7	Panama Ln and Hwy 99	122	161	343	343	365	39	39	39
8	Mt. Vernon Ave and Hwy 178	842	850	880	1,001	785	695	695	695
9	F St and Golden State Ave	424	362	380	424	978	1,044	2,393	2,693
Half Mile (Projected)									
Site	Description	Population				Employment			
		Base	2020	2035	2040	Base	2020	2035	2040
1	Bakersfield College	1,223	1,266	2,179	2,450	1,183	1,224	1,249	1,292
2	Downtown Transit Center	1,137	6,827	7,649	7,760	11,627	11,710	20,837	20,986
3	Southwest Transit Center	4,481	4,378	7,862	7,928	3,628	3,496	9,553	9,638
4	Cal State Bakersfield	508	556	894	1,073	2,437	2,464	2,464	2,464
5a	Amtrak Station	1,499	5,898	7,404	7,512	9,746	12,407	17,351	17,365
5b	CA HSR	1,630	4,038	5,777	5,823	8,448	11,103	16,401	16,441
6	Niles and Mt. Vernon Ave	6,769	6,785	7,110	8,017	612	627	631	772
7	Panama Ln and Hwy 99	3,324	4,441	7,345	7,345	656	846	1,113	1,171
8	Mt. Vernon Ave and Hwy 178	4,128	4,053	4,494	5,868	2,124	2,069	2,069	2,069
9	F St and Golden State Ave	1,952	2,123	2,232	2,913	3,494	3,598	8,330	9,079

### Land Use Summary

In addition to the demographics of the surrounding areas, sites were also selected based on their surrounding land uses. The surrounding land uses are vital to support a transit center, as the immediate adjacent area's ability to attract and/or produce activity offer ridership for a transit center. Sites containing a high portion of residential land uses were selected for their potential to generate trips only if the demographics of the residents include a high concentration of transit dependent populations. Sites containing heavy amounts of public uses and retail indicated a high potential to attract trips. In addition, sites with a significant amount of mixed use land uses were included for their potential to promote compact development and play an important role in TOD development; the denser development is able to capture and serve a larger population, increasing the efficiency of transit center.

Quarter Mile								
Site	Description	Public Use	Public Resources	Residential	Mixed Use	Retail/Service	Production/Service/Warehouse	Total
1	Bakersfield College	51.8%	48.0%	0.1%	--	--	--	100.0%
2	Downtown Transit Center	--	--	--	72.8%	27.2%	--	100.0%
3	Southwest Transit Center	17.6%	--	25.5%	--	56.9%	--	100.0%
4	Cal State Bakersfield	96.7%	0.6%	--	--	2.8%	--	100.0%
5a	Amtrak Station	--	--	--	71.9%	3.4%	24.7%	100.0%
5b	CA HSR	--	--	0.5%	25.4%	25.7%	48.4%	100.0%
6	Niles and Vernon Ave	2.0%	--	75.3%	--	22.8%	--	100.0%
7	Panama Ln and Hwy 99	33.3%	--	16.8%	--	50.0%	--	100.0%
8	Mt. Vernon Ave and Hwy 178	12.5%	--	28.9%	--	58.6%	--	100.0%
9	F St and Golden State Ave	3.8%	--	16.5%	--	41.1%	38.6%	100.0%
Half Mile								
Site	Description	Public Use	Public Resources	Residential	Mixed Use	Retail/Service	Production/Service/Warehouse	Total
1	Bakersfield College	34.7%	45.2%	18.2%	--	1.8%	--	100.0%
2	Downtown Transit Center	1.7%	--	4.4%	49.2%	43.8%	0.8%	100.0%
3	Southwest Transit Center	8.1%	--	46.7%	--	45.0%	0.2%	100.0%
4	Cal State Bakersfield	67.6%	17.1%	4.1%	--	11.3%	--	100.0%
5a	Amtrak Station	0.0%	5.6%	39.4%	8.7%	16.4%	30.0%	100.0%
5b	CA HSR	1.9%	--	17.3%	27.5%	15.6%	37.7%	100.0%
6	Niles and Vernon Ave	17.3%	--	61.3%	--	11.6%	9.9%	100.0%
7	Panama Ln and Hwy 99	10.8%	--	55.1%	--	31.5%	2.7%	100.0%
8	Mt. Vernon Ave and Hwy 178	8.3%	--	49.9%	--	41.6%	0.1%	100.0%
9	F St and Golden State Ave	13.1%	3.6%	31.0%	--	27.1%	25.2%	100.0%

## Secondary Potential Sites

Throughout the outreach process, which included general public outreach and meetings with stakeholders and steering committee members, other additional sites were identified. The sites were identified based on the feedback of stakeholders and the public community to identify areas outside of the recommended site locations. These locations were not included as recommended sites due to limited land use patterns, population, employment, or other transit dependent factors, reducing the sites ability to be a location for a Transit Center or TOD site. However, should any of these factors unexpectedly increase; these sites have the potential to become ideal locations for a Transit Center or a TOD site. The site locations are shown in Figure 15 and include:

- Santa Fe Way and 7<sup>th</sup> Standard Road
- China Grade Loop at Airport Drive
- China Grade Loop at North Chester Avenue
- Morning Drive and Highway 178
- California Avenue and Highway 99

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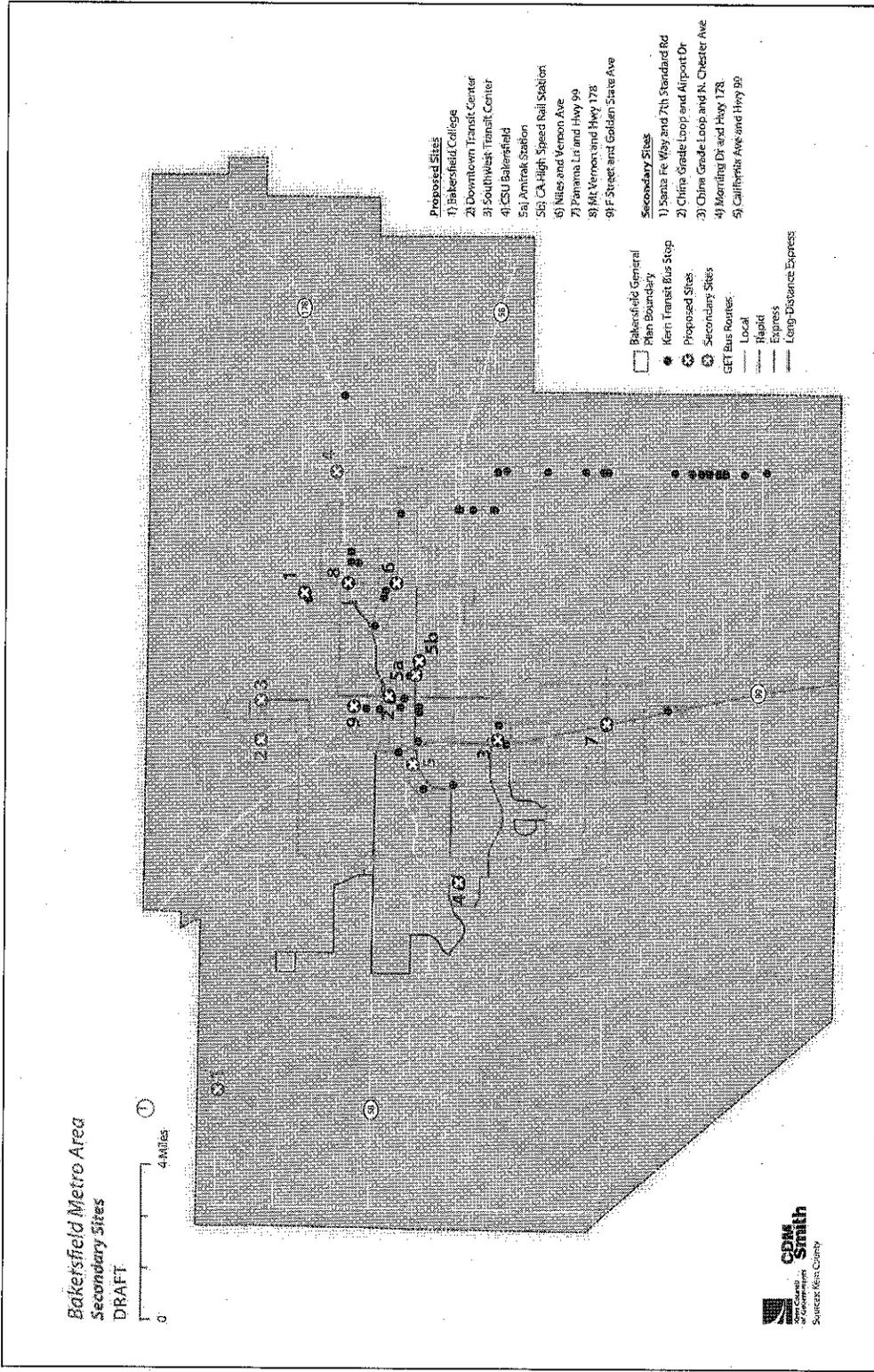
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In addition, resulting from the outreach process, two sites (listed below) initially identified as primary potential sites by the consultant team were determined more suitable as secondary potential sites. Due to previously being considered primary potential sites, analyses for these sites had previously been conducted. The analyses are shown below for reference purposes; detailed analysis of the remaining secondary potential sites will not be completed.

- Morning Drive and Hwy 178
- California Avenue and Hwy 99

Figure 14: Secondary Sites



### Morning Drive and Hwy 178

A transit center located at Morning Drive and Highway 178 is recommended based on future projections. While there is currently no GET and/or Kern Transit bus service, the growth pattern of expanding to the east will likely impact the demand for service; population densities are expected to at least double in the long-term. Currently, the surrounding area (beyond a ½ mile distance) is primarily undeveloped and/or zoned for low-density residential indicating that this site may be suitable for park and ride facilities to complement its surrounding land uses and increase multi modalism.<sup>13</sup> In addition, the location of this site captures the highest variety of land uses to enhance TOD functionality. First and last mile connections are anticipated to be enhanced with 2 proposed Class 2 routes within proximity of the proposed site; additionally, GET and Kern Transit bus routes would need to be expanded and incorporated for this site to become a viable site location. Based on the current projections and the surrounding and immediate land uses, this site is most suitable to assist in addressing the eastern growth pattern.

#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	290 (43%)	234 (35%)	145 (21%)	55 (8%)	13 (5%)
1/2 Mile	815 (43%)	635 (34%)	409 (22%)	170 (9%)	37 (5%)

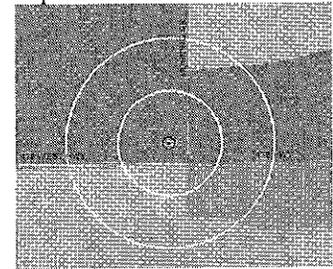
Note: Percentages indicate proportion of total population or households.

#### Future

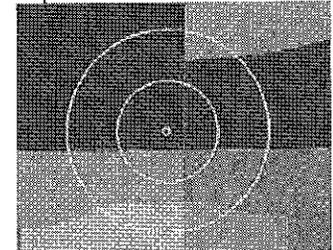
Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	697	46	1,002	55	1,281	55
1/2 Mile	1,941	126	3,300	154	4,726	162

Note: Units presented are density (people/jobs per square mile).

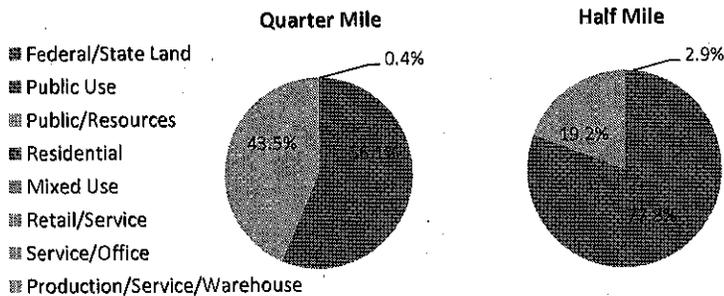
Population 2020



Population 2040



#### Land Use



<sup>13</sup> Maps display a ¼ mile and ½ mile buffer and are shown by TAZ. High concentrations are shown in orange to red for populations higher than 1,670.

### California Ave and Hwy 99

A potential transit center site is located just east of the intersection of California Avenue and Highway 99 due to its mixture of land use, access to transit, and employment growth projections. Regional and local access is provided by five GET bus routes (21, 43, 81, 83, and 92) and the 130 Kern Transit bus route; first and last mile connections enhance multimodal connectivity with an existing Class 1 bike route and a proposed Class 3 bike route identified in the City's Bicycle Transportation Plan. The site is also located along a primary corridor (California Ave) which provides access to the California HSR station planning area. Although there is not an existing high concentration of transit dependent populations, existing employment is moderately high and is expected to grow in the long-term.<sup>14</sup> In addition, a mixture of land uses will provide service for employers, residents, and retail shoppers.

#### Existing

Distance	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
1/4 Mile	279 (43%)	190 (29%)	171 (26%)	62 (10%)	20 (8%)
1/2 Mile	1,189 (44%)	855 (32%)	730 (27%)	274 (10%)	82 (8%)

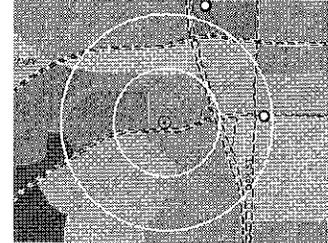
Note: Percentages indicate proportion of total population or households.

#### Future

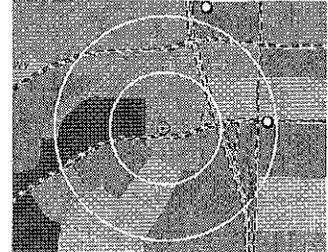
Distance	Base (2008)		2020		2040	
	People	Jobs	People	Jobs	People	Jobs
1/4 Mile	473	2,159	448	2,153	765	3,445
1/2 Mile	2,467	4,707	2,414	4,699	3,585	9,587

Note: Units presented are density (people/jobs per square mile).

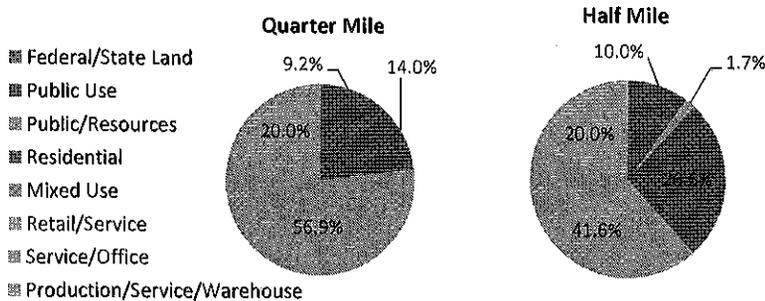
Employment 2020



Employment 2040



#### Land Use



<sup>14</sup> Maps display a 1/4 mile and 1/2 mile buffer and are shown by TAZ. High concentration of employment is shown in orange to red (995 and higher), medium concentrations are in orange (between 420 and 994), and yellow to green symbolizes low concentrations (less than 419).

## Conclusions and Next Steps

Several of the ten recommended transit centers identified throughout this study would be suitable for short-term implementation while others more suitable for the long term, horizon year of 2040. Of the ten sites, it is anticipated that the following could be enhanced (if existing) or implemented in the short term.

- Site #1: Bakersfield College
- Site #2: Downtown Transit Center
- Site #3: Southwest Transit Center
- Site #4: California State University Bakersfield
- Site #5a: Amtrak Station

This recommendation is based on it being an existing location, already identified as a potential transit center in the LRTP, minimal improvements are needed for implementation, or high demographic growth in 2020 is anticipated. While some sites were identified in the LRTP to be phased out in the interim years, these sites should be revisited for improvements and potential for TOD in the long-term.

The locations more suitable for the long-term are highly dependent on major future transit service such as the HSR to be successful, significant growth does not occur until 2035 or 2040, or land use designations or significant property acquisitions would be required. Some of the existing transit center sites planned to be phased out in the future according to the LRTP could be suitable for future TOD development and are therefore could see significant improvements in the long-term even while not identified as a long-term transit center. The following sites are recommended for long-term implementation.

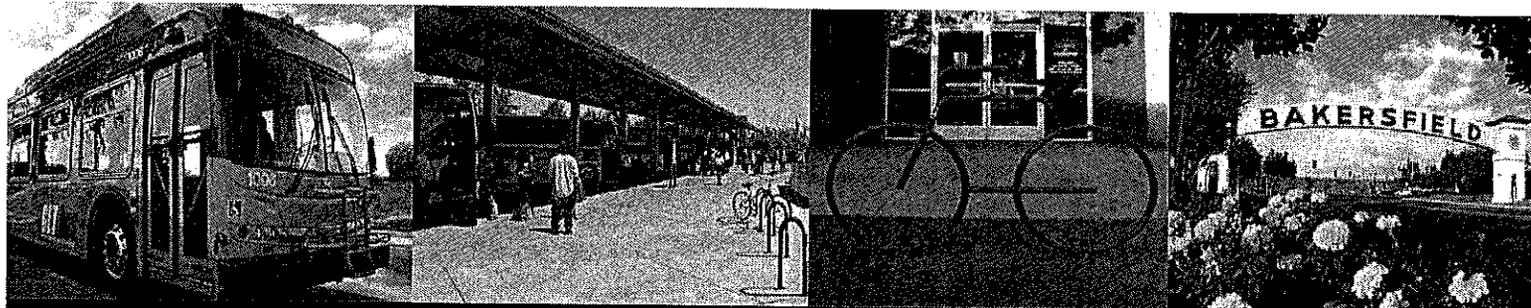
- Site #5b: California High Speed Rail Station
- Site #6: Niles and Mt. Vernon Avenue
- Site #7: Panama Lane and Highway 99
- Site #8: Mt. Vernon Avenue and Highway 178
- Site #9: F Street and Golden State Avenue

In addition to the recommended sites, other locations have also been identified which have the potential to become Transit Center or TOD site locations. These sites are not recommended at this time, however, should changes to land use patterns or unexpected growth in population, employment, or other transit dependent factors increase these sites should be reevaluated.

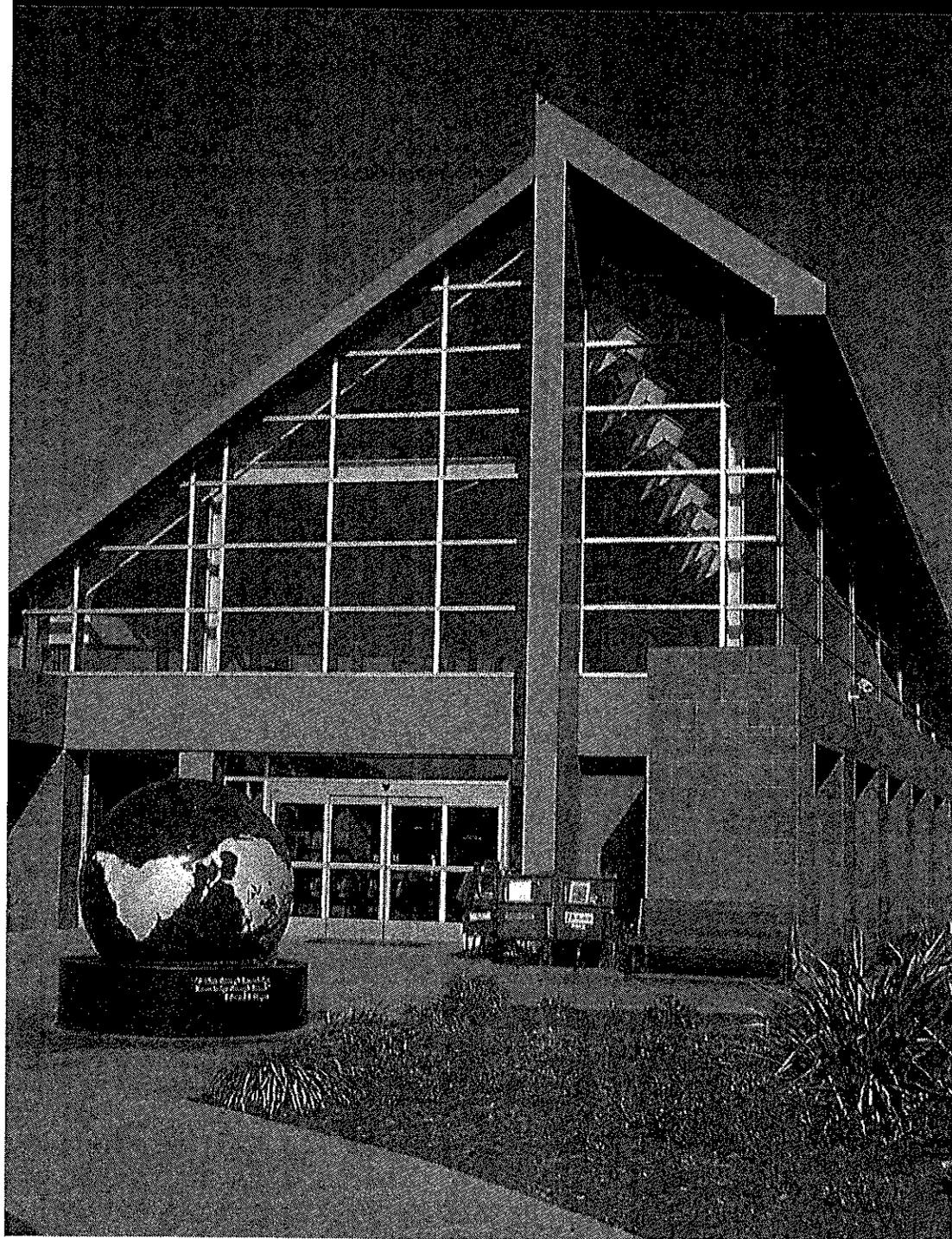
To build on the work completed under this Task to identify suitable transit center locations, the next steps will be to perform a market study on two of the selected sites for potential TOD. The

selection of the two sites to be studied in the market study will be determined by input from the project team which includes the stakeholders and consultant team. A thorough market study will be performed on the two selected sites and presented to the project team and project Steering Committee prior to presentation to the general public.





# METROPOLITAN BAKERSFIELD TRANSIT CENTER STUDY

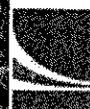


Market Assessment  
Study

Prepared by  
HDR

For  
CDM Smith

May 2015



Kern Council  
of Governments

**HDR**  
**CDM  
Smith**

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## **Executive Summary**

This Market Study summarizes the efforts of Task 5 for the Kern Council of Governments' Metropolitan Bakersfield Transit Center Study. The purpose of this study is to assess the Transit-Oriented Development (TOD) potential of each of the 9 station site alternatives considered by the Project Team for the proposed Transit Centers. HDR has recently performed similar market feasibility studies for several other cities throughout the State of California, including San Francisco, Los Angeles, Upland, and Santa Ana. These studies have coincided with a growing interest by municipalities to evaluate, capture and leverage the economic benefits and real estate value that are generated from public investments in new transit facilities. Key insights from each of the three main sections of the Market Study are summarized below.

***Station Site Development Potential.*** The Market Study provided an assessment of the potential for the future Transit Center to accommodate new retail uses on site. Many new transit centers in other cities have been designed to capitalize upon the significant levels of foot traffic and retail spending potential that the confluence of multiple transit services generate. Demand for retail space at the future Transit Centers will be strongly correlated with the number of daily boardings/alightings and hence level of foot traffic that the combined bus and/or rail services co-located at the Transit Center attract. The site alternatives encompass a broad range of existing and projected ridership levels, from approximately 76,000 boardings/alightings at the CSU-Bakersfield location (Site 4) to nearly 2 million projected annual boardings at the future California high-speed rail station (Site 5b).

***This TOD assessment is comprised of three main elements:***

- 1) a phased estimate of future demand for residential, retail, and office uses through 2040 within a half-mile radius of each of the station site alternatives;***
- 2) a zoning analysis of the quarter-mile and half-mile areas around station sites to determine the types of new development that are currently permitted and to assess the compatibility of those permitted uses with TOD; and***
- 3) a market feasibility study for different types of TOD-compatible building typologies, based on existing rents, vacancy rates, and other market related factors typically used by private-sector developers to assess feasibility.***

The annual spending by transit riders will support less than 1,000 square feet of transit center retail at the vast majority of the site alternatives. For these sites, successful retail formats may include carts and kiosks offering food and beverage items. The Amtrak Station and California High-Speed Rail Stations have sufficiently robust ridership levels to support more conventional retail space, such as food service establishments and convenience shops. A modest version of "destination" retail might even be appropriate for the future Transit Center co-located with HSR service at Site 5b.

***Projected Future Demand for Residential, Retail, and Office Uses.*** Demand forecasts for new development within a half-mile radius of each station site alternative (the "TOD Market Area") were developed using TAZ-level population and employment projections.

The TAZ-level projections do not take into account the potential growth inducement impacts of the planned California High Speed Rail (HSR) system, so those impacts were incorporated into the demand forecasts. The HSR system is projected to add about 1,000 more people and 5,800 more jobs within Kern County compared to the No Project Alternative, and at least 15 percent of that additional residential and employment growth is projected to occur within the half-mile TOD Market Area around the planned HSR station. The inducement analysis further indicates that the employment growth associated with new HSR service will be led by the professional services and Financial, Insurance, and Real Estate (FIRE) job sectors, which may support denser station-area development for office-style facilities.

*Residential Uses.* The long-term population forecast for Kern County estimates growth of 501,377 between 2015 and 2040, equivalent to 107,311 new households, an average annual growth rate of 1.2 percent. The half-mile TOD Market Areas are projected to capture only a tiny fraction of the countywide growth over this period, ranging from a low of 0.2% at the CSU-Bakersfield site (projected demand of 230 new residential units) to a high of 1.8% at the Downtown Transit Center (projected demand of 1,960 new residential units).

*Retail Uses.* In the near term (2015-2020), only one of the site alternatives, the Downtown Transit Center (Site 2), appears to have sufficient retail demand to support a major new shopping center in excess of 100,000 square feet, approximately the size of a large supermarket or an urban Big Box store, such as City Target. Over the long term (2021-2040), five of the nine site alternatives (Sites 2, 3, 5a, 5b, and 7) could potentially absorb a retail center of this scale. Because this type of “anchor” tenant attracts consumer spending from a radius beyond the half-mile Market Area, it helps to support a critical mass of new retail businesses and reduces the phenomenon of sales “leakage,” whereby residents spend more on retail products than local businesses capture. In the absence of a sufficient demand for an anchor, most of the new retail development at other site alternatives will likely be incremental, consisting of neighborhood-serving establishments.

*Office Uses.* Demand for office space is driven fundamentally by employment growth in four key sectors: FIRE, Government, Business and Professional Services, and Communications. While these four sectors are projected to account for an increased share of new job growth in the Bakersfield region, the average amount of office space utilized per worker has been on the decline for the past decade, with a broad range of industries moving towards more efficient office floor plans. Ten years ago, the average space occupied per worker was approximately 250 square feet. Today, the average space per worker is less than 200 square feet. Given uncertainties over traditional forecasting methodologies for new office demand, a conservative assumption of 170 square feet per new office worker was used in this analysis. The projections show the most robust office demand at station site alternatives located in Downtown Bakersfield, with a range of 840,000 to 1.3 million square feet of office space to be absorbed over the analysis period (2015-2040).

***Zoning-Based Assessment of TOD Potential.*** An analysis of the quarter-mile and half-mile areas around station sites was performed to determine the types of new development that are currently permitted by the City and to assess the compatibility of those permitted uses with TOD. The nine station site alternatives were ranked for TOD potential from “high” to “very low” based on the opportunities and

constraints observed in the distribution and types of zoned uses, the implied allowable development densities associated with each zoning classification, existing street block characteristics/level of walkability, other relevant physical site conditions, and projected levels of future growth assessed in the previous section of this report. Table 11 in the report provides a summary of this assessment. The TOD potential rankings are reproduced in Table ES-1 below.

**Table ES-1. Summary Ranking of Site TOD Potential**

<b>TOD Potential</b>	<b>Site(s)</b>
High	2-Downtown Transit Center
Medium-High	5a-Amtrak Station 5b-CAHSR Station
Medium	3-Southwest Transit Center 4-CSU-Bakersfield
Medium-Low	1-Bakersfield College 6-Niles/Vernon Avenue
Low	8-Mt Vernon Ave/Highway 178
Very Low	7-Panama Lane/Highway 99 9-California Ave/Highway 99

The analysis found the following:

- Few of the 9 candidate station areas are currently zoned for high-density residential buildings (R-4 zoning classification), and most are located in built-out neighborhoods with a lack of land availability for new “greenfield” construction (absent the conversion that would be required of land zoned “Agricultural” at Bakersfield College and CSU-Bakersfield). Most of the additional housing units will therefore have to be accommodated through the redevelopment and densification of existing properties.
- Based on current zoning, most of the station site alternatives currently permit only low-density commercial (C-1, C-2) and residential uses (R-1) that do not, in isolation or in combination, meet the threshold of 25 persons and jobs per acre typically required to encourage transit ridership and reduce auto dependence.
- Central Business (C-B) and Civic Center (C-C) are the only zoning classifications to allow high-density, mixed-use development “by right”—that is, without a conditional use permit; these zoning classifications exist only in the downtown Bakersfield area.

**Market Feasibility Analysis.** Imputed per-square foot sale prices and development costs were compared for different types of TOD-compatible building typologies, based on existing rents, vacancy rates, and other market related factors typically used by private-sector developers to assess market feasibility.

For each station site alternative, the analysis assessed whether the following TOD-compatible building typologies are feasible based on prevailing real estate market conditions:

- Townhomes (3 stories)
- Mid-rise apartments (4-7 stories)
- Low-rise office (3 stories)

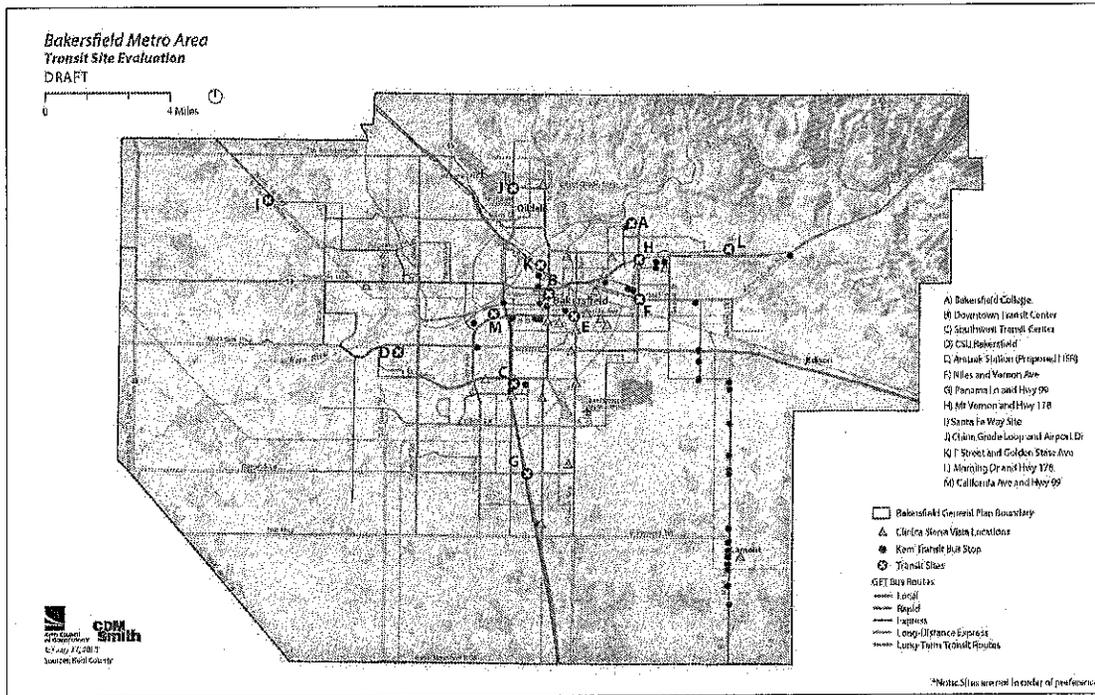
- Mid-rise office (4-7 stories)
- Medical office (1 story) – as a groundfloor use of a multistory mixed-use building
- Retail (1 story) – as a groundfloor use of a multistory mixed-use building

Overall, the market feasibility assessment shows limited near-term opportunities for these types of new development in the nine TOD Market Areas, as available inventory continues to suppress rent levels in many cases.

- CSU-Bakersfield (Site 4) appears to offer one of the more buoyant local real estate markets, driven by the ongoing expansion of the university, with a low vacancy rate (3.8 percent) and correspondingly higher property values. At that location, market conditions may be sufficiently favorable to support the construction of new townhomes and mid-rise office, despite low projected demand for these uses in the near term (which, as noted earlier, may not accurately capture future university expansion plans).
- Some new housing and retail development may be supportable in the near-term at the Southwest Transit Center (Site 3).
- Finally, Panama Lane/Highway 99 (Site 7) appears to be a strong market for new retail development; over the long term, office-based employment growth at this location is projected to generate sufficient retail demand for a major new shopping center in excess of 100,000 square feet.

Figure E-1 (below) displays the Transit Center site locations. Please note, while all sites are shown in the figure, secondary sites are not included in this Market Study.

**Figure E-1. Transit Center Sites**



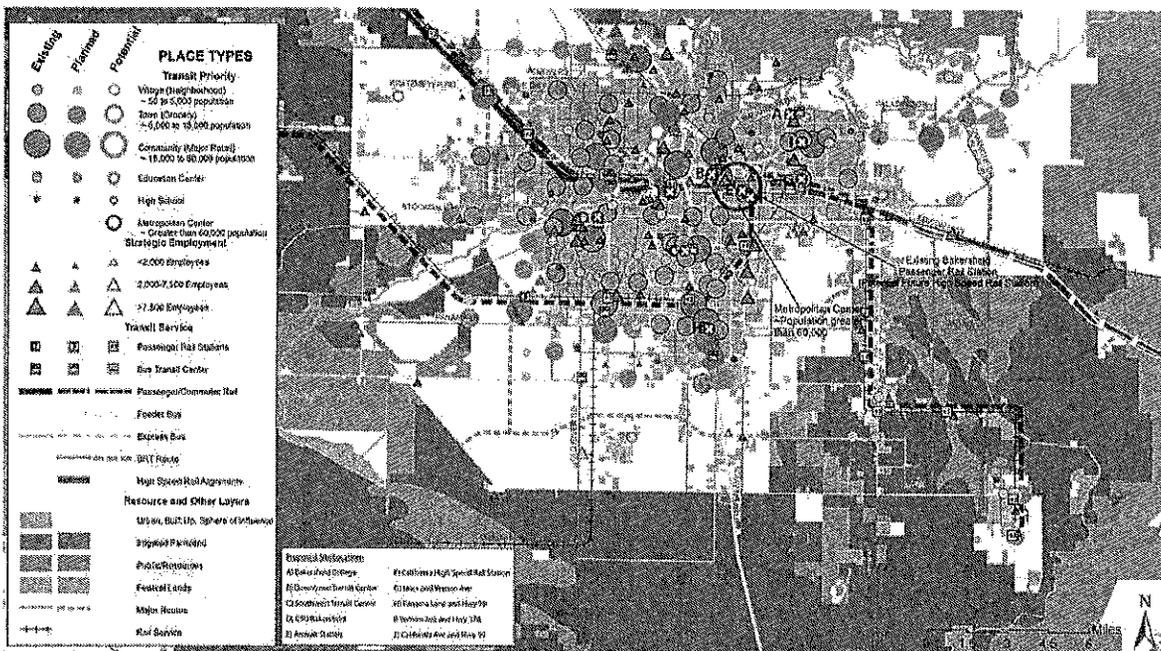
## Introduction

HDR was retained by the Kern Council of Governments (Kern COG) as part of a multi-disciplinary team led by CDM Smith to assess the transit-oriented development (TOD) market potential for each of the Transit Center site alternatives. HDR has recently performed similar market feasibility studies for several other cities throughout the State of California, including San Francisco, Los Angeles, Upland, and Santa Ana. These studies have coincided with a growing interest by municipalities to evaluate, capture and leverage the economic benefits and real estate value that are generated from public investments in new transit facilities. In the locations where it is called upon to perform these feasibility studies, HDR brings an unique perspective to the quantitative and qualitative assessment of TOD potential, combining an expertise in multimodal transportation planning with an understanding of land use economics.

Depending on its location, the proposed Transit Center in Bakersfield has the potential to integrate a range of intra-city, regional, and intercity bus and rail services, including intermodal transit interfaces with the existing Downtown Bakersfield Amtrak Station and proposed Bakersfield High-Speed Rail station. One of the primary objectives of the TOD market assessment is to optimize the future location of the Transit Center by identifying areas within Kern County whose land use and demographic characteristics will be supportive of transit ridership.

Each of the nine sites are located in Transit Priority Areas, identified in the Sustainable Communities Strategy (SCS), shown in Figure 1. Transit Priority Areas are locations within ½ mile of transit stations where urban uses exist or may be planned. Not all of these areas have been identified, as station planning is in the early stages for some routes.

**Figure 1. Sustainable Communities Strategy Transit Priority Areas**



Source: Draft 2014 RTP, Chapter 4 Sustainable Communities Strategy. <http://www.kerncog.org/regional-transportation-plan>

Table 1 provides a list of the nine station site alternatives that were considered. The Amtrak Station (Site 5a) and California High Speed Rail (HSR) Station (Site 5b) were grouped as variations on one alternative due to their geographic proximity and overlapping Market Areas.

**Table 1.** Transit Center Site Alternatives Considered

Site	
1	Bakersfield College
2	Downtown Transit Center
3	Southwest Transit Center
4	California State University Bakersfield
5a	Amtrak Station
5b	California High Speed Rail Station
6	Niles and Vernon Avenue
7	Panama Lane and Highway 99
8	Mt. Vernon Ave and Hwy 178
9	California Avenue and Highway 99

This TOD assessment is comprised of three main elements:

- 1) a phased estimate of future demand for residential, retail, and office uses through 2040 within a half-mile radius of each of the station site alternatives, based on TAZ-level population and employment projections;
- 2) a zoning analysis of the quarter-mile and half-mile areas around station sites to determine the types of new development that are currently permitted by the City and to assess the compatibility of those permitted uses with TOD; and
- 3) a market feasibility study for different types of TOD-compatible building typologies, based on existing rents, vacancy rates, and other market related factors typically used by private-sector developers to assess feasibility.

### **Projected Market Demand**

This component of the TOD market assessment consists of two components: 1) a calculation of the potential for new development located on the Transit Center site itself, supported by the retail purchases of waiting or transferring transit riders; and 2) projected market demand for new residential, retail, and office uses through 2040 in the half-mile radius around station sites (the "Market Area").

### **Station Site Development Potential**

Many new transit centers in other cities have been designed to capitalize upon the significant levels of foot traffic and retail spending potential that the confluence of multiple transit services generate, with some broadening their target markets to include not only transit riders who patronize the station as part of their commute, but local residents and visitors who live in the surrounding neighborhood. This type of

“destination” retail configuration is becoming increasingly common particularly as transit agencies seek new forms of revenue generation and creative partnerships with the private sector to operate and maintain station areas.

While many of the existing intercity and commuter rail stations in California have incorporated retail into their stations, at least two California cities with planned high-speed rail stations have also integrated a significant retail component into their station development plans. The new Transbay Transit Center in San Francisco is envisioned as a thriving transportation depot for eating, drinking, and shopping, with plans in the first phase for 100,000 square feet of leasable space divided over three levels.<sup>1</sup> The newly-constructed Anaheim Regional Transportation Intermodal Center (ARTIC) in Southern California, as a multimodal hub for Amtrak intercity rail, Metrolink commuter rail, and OCTA bus service, offers 12,000 square feet of retail and is expected to serve nearly 52,000 daily passengers at full buildout.<sup>2</sup> Whichever firm leases the retail space will also be responsible for cleaning and maintaining it.

Demand for retail space at the future Transit Centers will be strongly correlated with the number of daily boardings/alightings and hence level of foot traffic that the combined bus and/or rail services co-located at the Transit Center attract. Both San Francisco’s Transbay Transit Center and the ARTIC are, perhaps not coincidentally, terminus stations for Phase I of the California HSR alignment, with a larger proportion of origin or destination HSR trips than “pass-through” stations such as Bakersfield. The wait/transfer times associated with origin and destination trips offer a prime opportunity to capture retail spending by passengers. This factor bodes well for leveraging potential retail demand at the Amtrak station (Site 5a), which is the current terminus of San Joaquin Corridor service and a major transfer point for connections to Southern California via Amtrak Thruway Bus Service.

To calculate the retail potential of each site, HDR compiled 2013 boarding/alighting statistics associated with existing local and regional Golden Empire Transit (GET) and Kern Transit (KT) bus routes, Amtrak intercity rail and thruway bus service, and future California HSR.

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<sup>1</sup> J.K. Dineen, “Transbay Transit Center grand vision includes thriving retail hub,” *San Francisco Chronicle*, December 10, 2014, accessed on March 3, 2015 at <http://www.sfgate.com/bayarea/article/Transbay-Transit-Center-grand-vision-includes-5948997.php>

<sup>2</sup> N. Deshmukh (2010), “Anaheim Regional Transportation Intermodal Center: Case Study,” <http://www.slideshare.net/nainadesh/literature-case-study-artic>

Table 2. Annual Passenger 2013 Boardings/Alightings by Site Alternative

	Site										
	1	2	3	4	5a	5b	6	7	8		
Service	Bakersfield College	Downtown Ctr	SW Transit Ctr	CSU-Bakersfield	Amtrak	CAHSR	Niles/Vernon	Panama/99	Mt Vernon/178		
Amtrak San Joaquin	-	-	-	-	546,439	-	-	-	-		
Amtrak Thruway	-	-	-	-	338,792	-	-	-	-		
CAHSR	-	-	-	-	-	1,975,000*	-	-	-		
GET Route 21	26,229	81,524	-	24,812	-	-	24,103	-	17,014		
GET Route 22	-	-	68,220	39,795	-	-	-	-	-		
GET Route 41	19,358	-	31,392	-	-	-	17,789	14,650	-		
GET Route 42	13,131	40,814	21,294	-	-	-	-	9,937	-		
GET Route 43	-	46,431	-	-	-	-	-	-	9,690		
GET Route 44	22,120	-	35,871	-	-	-	-	-	14,348		
GET Route 45	-	67,505	-	-	7,044	-	19,958	-	-		
GET Route 47	-	-	-	-	-	-	-	-	-		
GET Route 61	8,680	-	-	8,211	-	-	-	6,569	-		
GET Route 62	-	-	9,303	-	-	-	-	4,341	-		
GET Route 81	8,318	25,852	13,488	-	-	-	-	-	-		
GET Route 82	-	9,246	-	2,814	-	-	-	-	-		
GET Route 83	-	-	4,452	-	-	-	-	-	-		
GET Route 84	-	7,648	-	-	-	-	-	-	-		
GET Route 92	-	-	-	-	-	-	-	-	-		
KT Route 100	21,000	21,850	-	-	1,300	-	-	-	-		
KT Route 115	-	4,150	-	-	-	-	-	-	-		
KT Route 130	-	3,050	3,100	-	250	-	-	-	-		
KT Route 140	21,850	27,500	850	-	-	-	9,900	-	-		

		Site							
	1	2	3	4	5a	5b	6	7	8
<b>Service</b>	Bakersfield College	Downtown Ctr	SW Transit Ctr	CSU-Bakersfield	Amtrak	CAHSR	Niles/Vernon	Panama/99	Mt Vernon/178
KT Route 150	1,000	13,150	-	-	-	-	1,750	-	-
<b>Total</b>	<b>141,687</b>	<b>348,719</b>	<b>187,970</b>	<b>75,632</b>	<b>893,825</b>	<b>1,975,000</b>	<b>73,499</b>	<b>35,497</b>	<b>41,052</b>

\* projected boardings only for 2025; CAHSR ridership projections do not specifically estimate the number of alightings by station.

Note that this compilation of ridership data in Table 2 reflects *existing service only* (with the exception of the planned HSR service) and does not attempt to forecast the impact of future service changes or route modifications. For example, the extension of HSR from Bakersfield to the Los Angeles Basin will likely reduce demand for Amtrak Thruway bus connections, as some passengers who currently transfer from rail to bus at the Amtrak station will prefer to take a "one-seat" ride on HSR to their destination in Southern California. This may in turn reduce the level of retail space that the Amtrak station can support, but the potential impacts are difficult to estimate or quantify given the many unknowns surrounding HSR implementation.

As Table 2 shows, the site alternatives encompass a broad range of existing and projected ridership levels, from approximately 76,000 boardings/alightings at the CSU-Bakersfield location (Site 4) to nearly 2 million projected annual boardings at the future California high-speed rail station (Site 5b). These ridership statistics can be used to estimate the annual level of on-site passenger spending, that is, the amount that passengers spend while waiting or transferring at a transit center. The average on-site spending per trip will vary based on the demographic profile of the riders and trip purpose. Based on onboard survey data, the *GET Short-Range Transit Plan* identifies the "profile" GET rider as between 25 and 44 years of age with a household income of less than \$20,000 per year. Intercity rail passengers on Amtrak California routes have a substantially higher median income estimated at \$76,000, based on a 2013 survey<sup>3</sup>, and accordingly, are likely to spend more than a local bus rider. This analysis used an average expenditure of \$4.05 per rail boarding and \$0.70 per bus boarding based on retail spending patterns at comparable transportation facilities. Applying these per-trip spending levels to the ridership statistics above, and using the Urban Land Institute's *Dollars and Cents of Shopping Centers* handbook on median sales per square foot<sup>4</sup> required to operate convenience retail profitably, it is possible to calculate the amount of retail space that each site could support.

<sup>3</sup> Amtrak California Summer 2013 Pacific Surfliner Ridership Profile Survey Results, <http://www.octa.net/pdf/lossanagenda1-15-14.pdf>

<sup>4</sup> See Table 1-8 in the *ULI Dollars & Cents of Shopping Centers* (2004). The median sales per square foot at neighborhood retail centers, which offer food service and convenience store items, was \$276.94 in 2004, or \$342.63 adjusted for inflation.

**Table 3. Supportable Level of On-Site Transit Center Retail**

	Site Alternative								
	1	2	3	4	5a	5b	6	7	8
	Bakersfield College	Downtown Ctr	SW Transit Ctr	CSU-Bakersfield	Amtrak	CAHSR	Niles/Vernon	Panama/99	Mt Vernon/178
Annual Boardings/Alightings	141,667	348,719	187,970	75,632	893,825	1,975,000	73,499	35,497	41,052
Annual Spending (in thousands)	\$99	\$244	\$132	\$53	\$2,456	\$7,999	\$51	\$25	\$29
Target Annual Sales PSF	\$343								
Supportable Retail SF	290	710	390	150	7,170	23,350	150	70	80

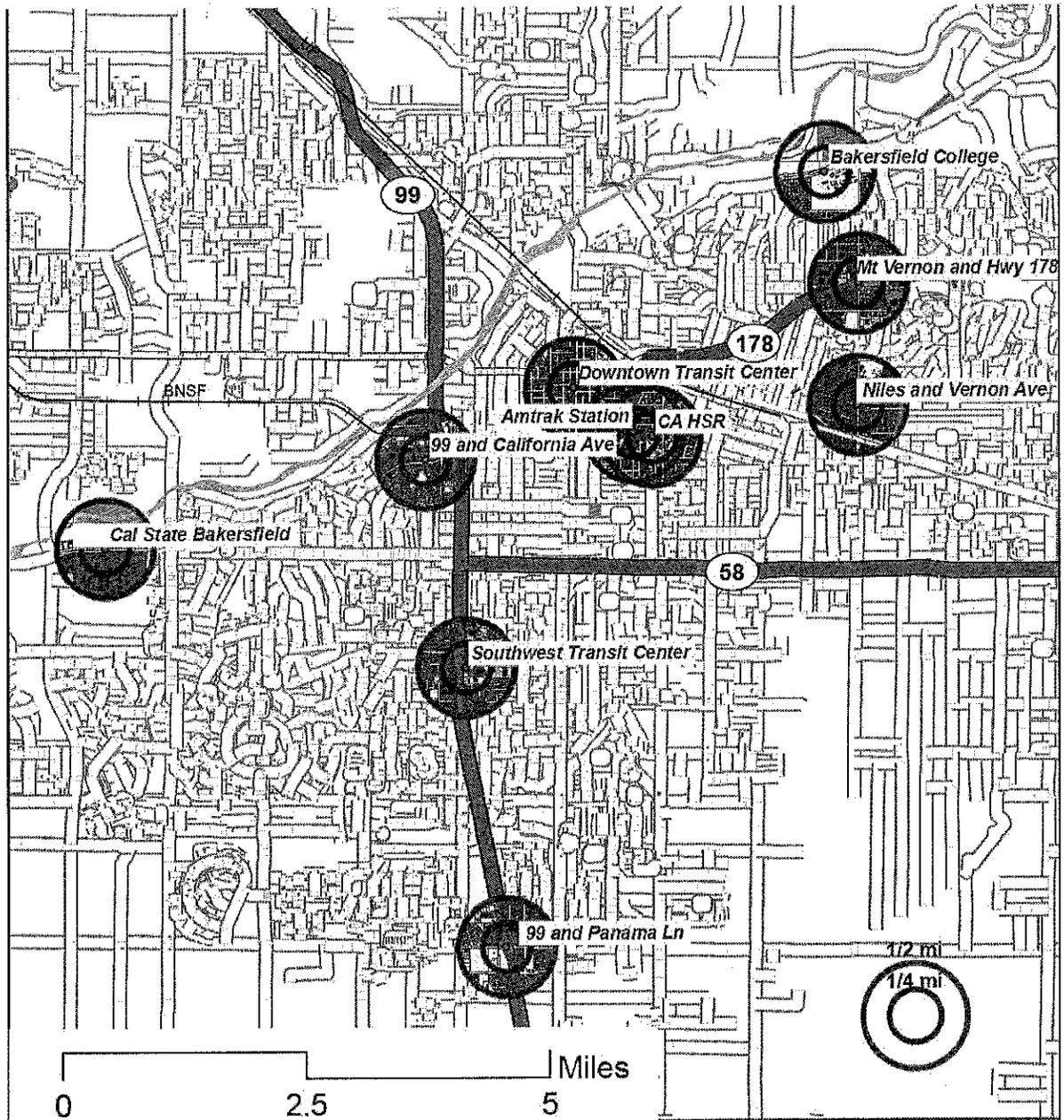
As shown in Table 3, the annual spending by transit riders will support less than 1,000 square feet of transit center retail at the vast majority of the site alternatives. For these sites, successful retail formats may include carts and kiosks offering food and beverage items. This is not only convenient for passengers in a hurry, but creates opportunities for small, local businesses to try out new concepts without the higher fixed costs of brick-and-mortar retail. The Amtrak Station and California High-Speed Rail Stations have sufficiently robust ridership levels to support more conventional retail space, such as food service establishments and convenience shops. A modest version of “destination” retail might even be appropriate for the future Transit Center if co-located with HSR service at Site 5b, given the proximity of the Bakersfield HSR station to downtown.

### **TOD Market Area Assessment**

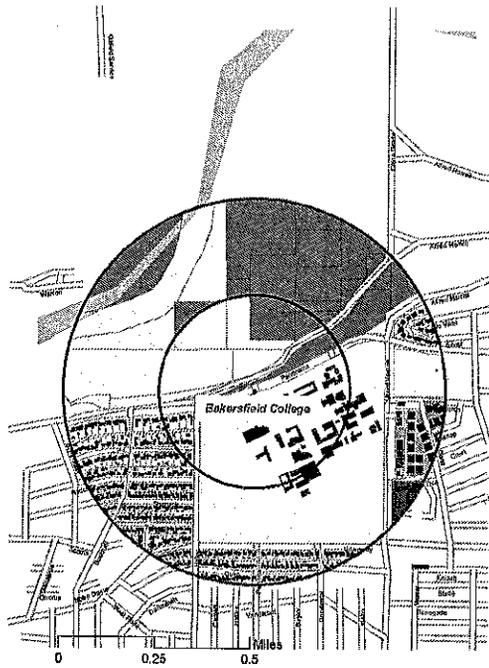
This assessment focuses on the one-half-mile buffer around the Transit Center site as the potential Market Area where TOD is likely to occur. One half-mile is generally considered the maximum distance that residents are willing to walk in order to access transit nodes for home-based trips, and conversely, the maximum distance that commuters are willing to walk in order to access places of employment in conjunction with a transit trip. Within this half-mile buffer, HDR analyzed population and employment projections provided at the Traffic Analysis Zone (TAZ) level to estimate future demand for residential, retail, and office uses through 2040.

Figure 2 provides a regional overview of the location of the 9 site alternatives, with Figure 3 providing a more detailed mapping of zoned uses within the one-mile radius around each site. Note that there is overlap between several of the TOD Market Areas, primarily in downtown Bakersfield. In order to be consistent, the Market Area analysis does not make adjustments for the overlaps. However, any market area overlaps are taken into consideration in estimating market demand and potential capture in the station areas.

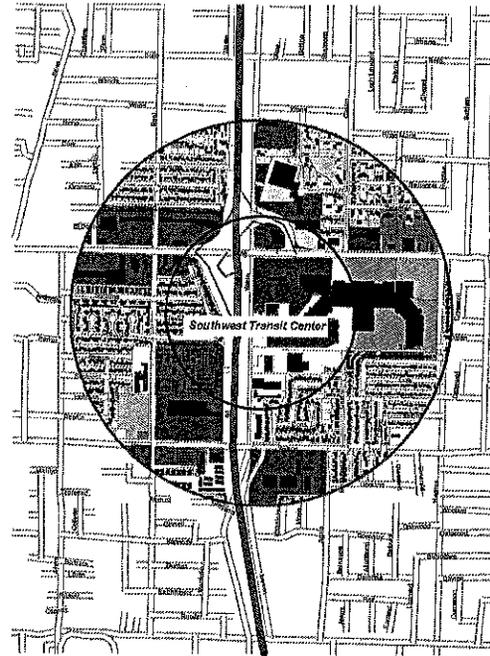
Figure 2. Regional Overview Map of Site Alternatives



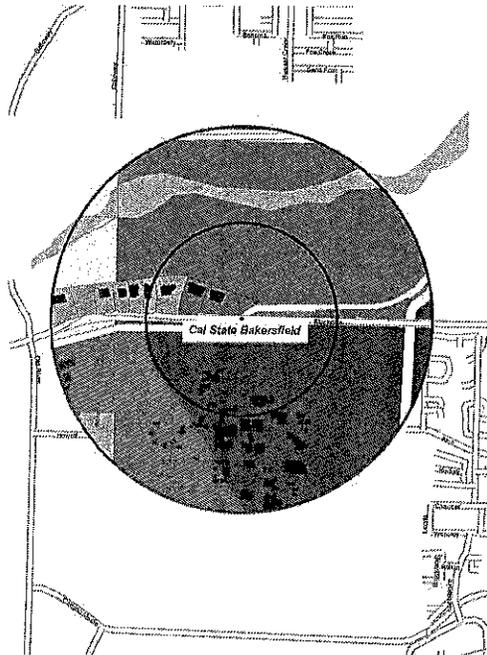
**Figure 3. Potential Station Areas with Existing Half-Mile Zoning**



**Site 1**



**Site 3**



**Site 4**

**Zoning Legend**

- A Agricultural;
- C-1 Limited Commercial
- C-2 Commercial
- C-B Central Business
- C-C Civic Center
- C-D Commercial and Professional Office
- MH Mobile Home
- OS Open Space - Flood Plain
- P Parking
- P.C.D. Planned Commercial Development
- P.U.D. Planned Unit Development
- R-1 One Family Dwelling
- R-2 Limited Multiple Family Dwelling Zone - 1 unit/2,500 sq. ft.
- R-3 Limited Multiple Family Dwelling Zone - 1 unit/1,250 sq. ft.
- R-4 Limited Multiple Family Dwelling Zone - 1 unit/600 sq. ft.
- R-S Residential Suburban
- R-S-10A Residential Suburban - 10 acre minimum;
- RE Recreation
- Parks
- Lakes

Figure 3. Potential Station Areas with Existing Half-Mile Zoning

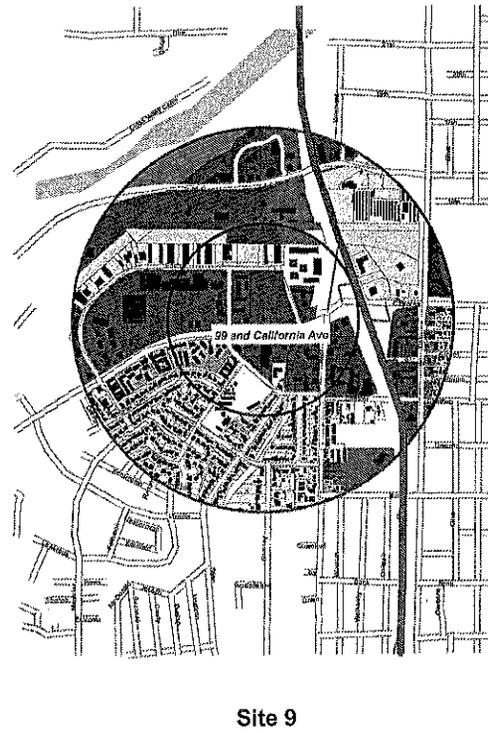
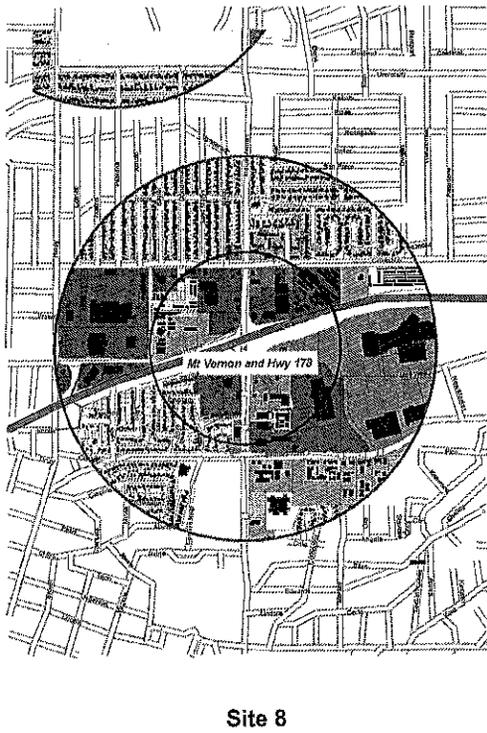
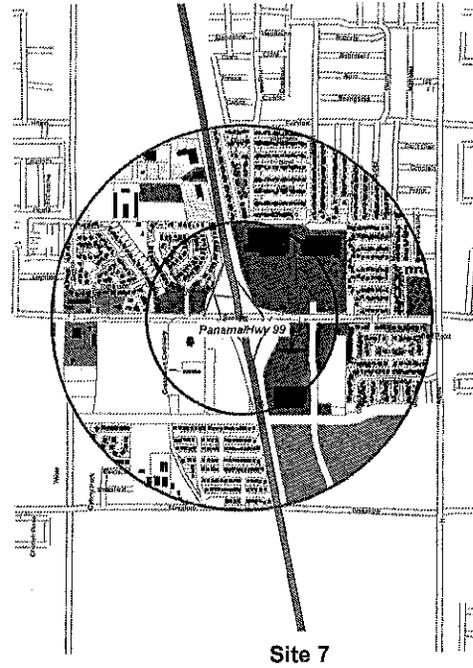
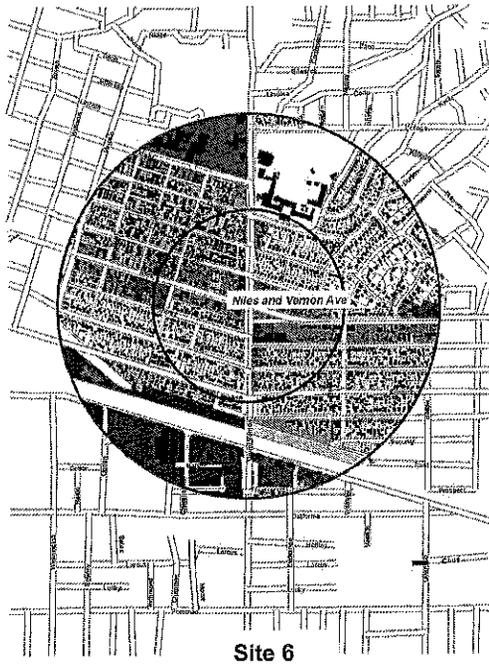
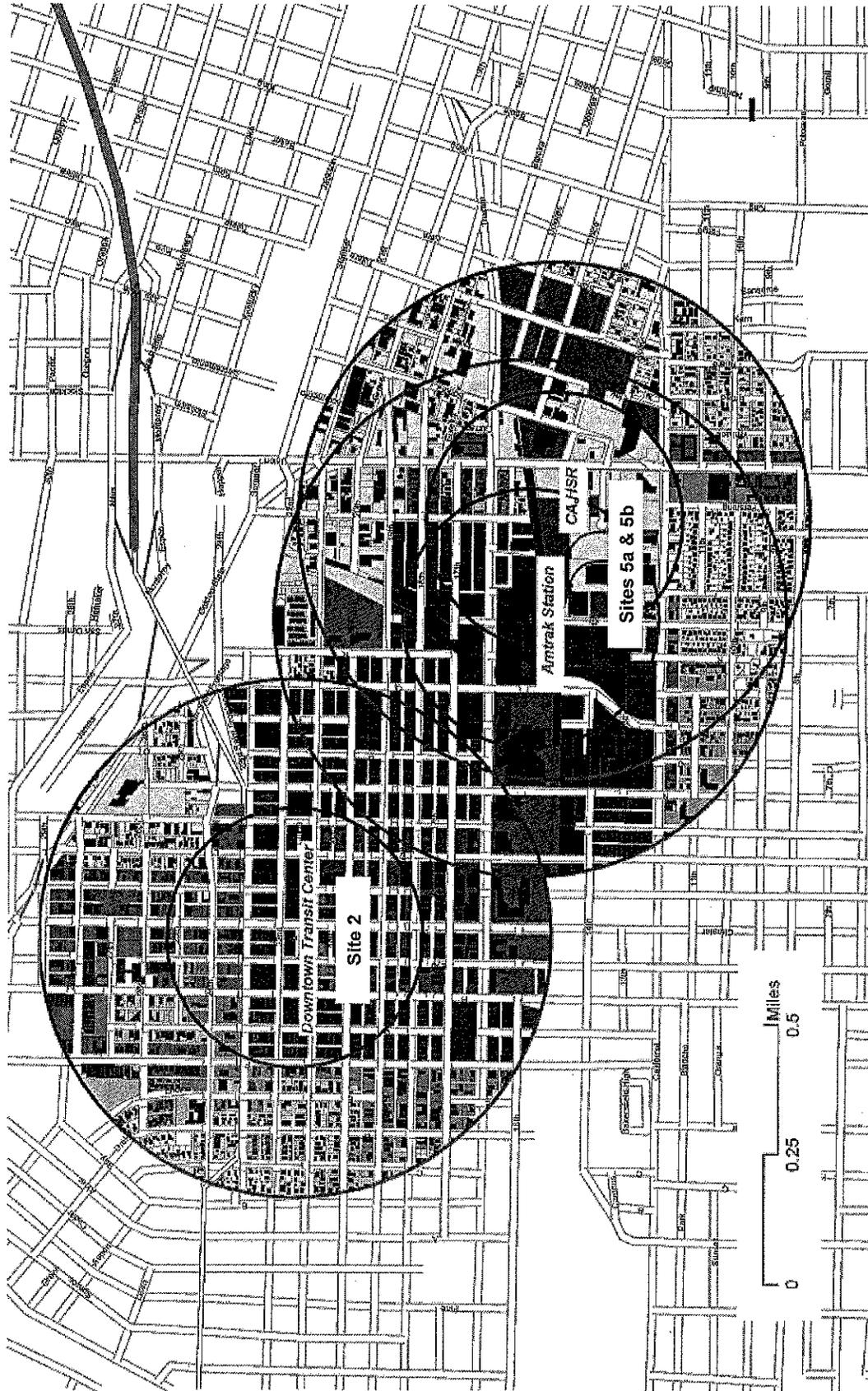


Figure 3. Potential Station Areas with Existing Half-Mile Zoning



The TAZ population and employment projections provide a baseline demand for new development potentials around each station site. These projections have *not* been adjusted to account for potential induced growth impacts attributable to the new Transit Center. Indeed, this analysis assumes that such impacts in the surrounding half-mile TOD Market Area are likely to be limited. This is a conservative approach, as academic research on the ability of conventional bus (as opposed to bus rapid transit) service to attract TOD is inconclusive at best. Most of the site alternatives considered in this study will feature only conventional bus service or, in the case of the Amtrak station, intercity rail service operating at >90 minute headways.

The preponderance of academic research on TODs concludes that fixed guideway projects, and specifically rail projects offering “high-quality transit service,” typically defined as peak hour headways of 15 minutes or less, are the most likely to stimulate additional demand for development around station areas. The private sector views these types of

infrastructure investments as long term and stable, whereas most bus services are perceived as more vulnerable to route modifications and service reductions, making them less attractive as a basis for capital-intensive real estate investment. The more limited city-shaping potential of bus transit also derives in part from the perception that it delivers fewer regional accessibility benefits than rail.<sup>5</sup>

There is, by contrast, supportive analysis to suggest that the Bakersfield HSR Station (Site 5b) will be transformative for the greater metropolitan area, inducing regional population and employment growth that would not have otherwise occurred under a “No Project” alternative. As part of its program-level Environmental Impact Report, the California High Speed Rail (CAHSR) Authority quantified the induced growth impacts associated with the introduction of HSR service in the Central Valley as a result of increased statewide connectivity. The growth-inducement analysis was conducted for the forecast year of

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<sup>5</sup> Robert Cervero, *BRT TOD: Leveraging transit oriented development with bus rapid transit investments*, Volume 36, November 2014, Pages 127–138. Accessed at <http://www.sciencedirect.com/science/article/pii/S0967070X14001802> on March 3, 2015.

2035, in which the HSR system is projected to add about 1,000 more people and 5,800 more jobs within Kern County compared to the No Project Alternative.<sup>6</sup>

There is the potential for the future Transit Centers, if co-located with the HSR Station at Site 5b, to capture a portion of this additional growth within its half-mile Market Area. Indeed, by improving accessibility to labor and customer markets, the HSR system is projected to enhance the operational efficiency of businesses located in close proximity to an HSR station. The inducement analysis indicates that the employment growth associated with new HSR service will be led by the professional services and Financial, Insurance, and Real Estate (FIRE) job sectors, which support denser station-area development for office-style facilities. Similarly, at 54 minutes, the anticipated HSR trip length between Bakersfield and downtown Los Angeles will also make long-range commuting a viable option, with the potential to attract residential growth in proximity to the Bakersfield HSR station. The projected demand for new residential, office, and retail uses, summarized in Tables 4 through 6 below, assume that the half-mile Market Area surrounding the Bakersfield HSR Station will conservatively capture 15 percent of the total countywide induced population and employment growth associated with the initiation of HSR service. The CAHSR EIR estimates that “the potential impacts of the induced growth, to the degree that they can be detected, would be most apparent around urban HST stations and airports, where the additional traffic generated by induced growth is expected to be concentrated.”

### Residential Demand

The population forecast for Kern County estimates population growth of 501,377 between 2015 and 2040, equivalent to 107,311 new households, an average annual growth rate of 1.2 percent. The half-mile TOD Market Areas are projected to capture only a tiny fraction of this countywide growth, ranging from a low of 0.2% at the CSU-Bakersfield site to a high of 1.8% at the Downtown Transit Center.

**Table 4. Half-Mile Market Area Residential Demand Summary**

		2015-2020	2021-2040	Total
		units		
1	Bakersfield College	10	440	450
2	Downtown Transit Center	1,550	410	1,960
3	Southwest Transit Center	0	1,100	1,100
4	California State University Bakersfield	10	220	230
5a	Amtrak Station	1,040	650	1,690
5b	California High Speed Rail Station	440	620	1,060
6	Niles and Vernon Avenue	10	330	340
7	Panama Lane and Hwy 99	130	730	860
8	Mt. Vernon Ave and Hwy 178	240	520	760
9	California Avenue and Hwy 99	0	430	430

This growth forecast assumes no changes to existing land use policies. Indeed, few of the 9 candidate station areas are currently zoned for high-density residential buildings (see Zoning Analysis), and most are located in built-out neighborhoods with a lack of land availability for new “greenfield” construction

<sup>6</sup> See Table 5.3-5, *California High-Speed Train Final Program EIR/EIS, Chapter 5: Economic and Growth Impacts*. Accessed at [http://www.hsr.ca.gov/docs/programs/eir-eis/statewide\\_final\\_EIR\\_vol1ch5.pdf](http://www.hsr.ca.gov/docs/programs/eir-eis/statewide_final_EIR_vol1ch5.pdf) on March 11, 2015.

(absent the conversion that would be required of land zoned "Agricultural" at Bakersfield College and CSU-Bakersfield). Most of the additional housing units will therefore have to be accommodated through the redevelopment and densification of existing properties.

This forecast does take into account the potential induced growth impacts of future California High Speed Rail service, which would likely be more focused on sites with proximity to downtown, if appropriately zoned.

### Retail Demand

The retail demand summary is comprised of two components: 1) residential-driven demand and 2) office-driven demand. New households generate additional retail space demand of approximately 30 square feet per capita (excluding automobile sales), based on their annual per capita retail spending in all categories divided into the median sales per square foot required to support a particular retail category, as illustrated in Table 5.

**Table 5.** Per Capita Retail Demand Factors (in Square Feet)

<b>Retail Use</b>	<b>Per Capita Demand</b>
<i>Local Serving</i>	
Supermarket	4.8
Convenience	1.7
Strip Retail/Miscellaneous	1.2
Service Stations	1.5
Subtotal	9.2
<i>Sub-Regional</i>	
Discount Stores	2.3
Super Drugstores	1.1
Home Improvement/Building Materials, Home Furnishings	4.5
Restaurant	4.0
Cinemas	0.8
Subtotal	12.7
<i>Regional</i>	
Department Stores	2.3
Apparel/Specialty Category/Other	2.8
Automotive, Boats, Vehicular Sales	4.3
Entertainment/Specialty Centers	2.2
Subtotal	11.6
Total	33.5
<b>Total (without automobile)</b>	<b>30.0</b>

Source: Economic Research Associates

Household-driven retail uses delineated in Table 5 are classified into three categories: 1) local serving, 2) subregional uses, and 3) regional uses. This distinction is important because each type of retail assumes a certain catchment area from which potential customers are drawn and requires a certain customer base in order to be financially viable. A local cafe needs about 2,000 residents; local shops generally need 5,000. Further up the scale, a small multiplex cinema needs 80,000. At the top end, big retailers often need to be within reach of 1 million people.

The TOD Market Areas are most likely to attract local-serving uses that are accessible via a short walking or biking trip and economically viable based on patronage by local residents alone, rather than dependent upon a larger customer base drawn from outside of the TOD Market Area. For subregional and regional retail, the catchment area is larger, so residents within the half-mile TOD Market Area are more likely to be served by existing retail establishments located outside of the TOD Market Area.

For other reasons as well, not all types of retail uses listed in Table 5 may be viable within the half-mile TOD Market Area of each site alternative. Physical constraints, such as lot size dimensions, may not be compatible with the larger footprint of department stores or entertainment uses, such as multiplex cinemas. Nor may some of the retail uses, such as service stations or auto dealerships, be desirable from an urban planning point of view, since they do not promote walkability or support transit use. Second, the demographics of a given Market Area may not be suitable, as certain regional-serving uses require population densities and median household incomes to be at or above a certain threshold for those uses to be sustainable and profitable, as noted above. Third, the advent of internet shopping has made local retail increasingly hard to sustain in many places.

Given all of these factors, the total retail space supportable by household spending is likely to be less than 30 square feet per capita. This analysis assumes that 30 percent of new household retail spending will be captured within a given TOD Market Area.

In addition to residential-driven retail demand, office developments also generate significant demand for new retail space. According to the International Council of Shopping Centers (ICSC), office workers spend about \$195 per week on all expenses associated with going to and returning from work and typical purchases around the office building during the workweek. The average-weekly spend on all goods and services by office workers in close vicinity of the worker’s office building is \$102. Among the expenditures on goods and services, grocery stores capture the largest spend, followed by discount stores.<sup>7</sup> Using ICSC’s figures, a back-of-the-envelope calculation shows that for every 100 sq. ft. of office space, another +/-9 sq. ft. of retail can be supported.

To avoid double-counting retail demand from office workers who may also reside within the half-mile Market Area, this analysis discounts the estimate of +/-9 sq. ft. of retail per new office worker by 30 percent, in recognition of the well-documented lifestyle preference of Millennials to “live, work, and play” within the same neighborhood, especially in walkable downtown locations well-served by transit connections. Table 6 shows the combined office- and residential-driven demand for retail space for the Market Area surrounding each site alternative. Note that this retail demand is distinct from the on-site transit center retail demand estimated above in Table 3.

**Table 6.** Half-Mile Market Area Retail Demand Summary

		2015-2020	2021-2040	Total
		sf		
1	Bakersfield College	600	35,900	36,500
2	Downtown Transit Center	108,000	80,000	188,000

<sup>7</sup> *Office-Worker Retail Spending in a Digital Age*, International Council of Shopping Centers, 2012.

3	Southwest Transit Center	0	140,900	140,900
4	California State University Bakersfield	700	15,500	16,200
5a	Amtrak Station	82,500	76,200	158,700
5b	California High Speed Rail Station	43,600	88,300	131,900
6	Niles and Vernon Avenue	200	37,800	38,000
7	Panama Lane and Hwy 99	15,500	88,900	104,400
8	Mt. Vernon Ave and Hwy 178	19,600	42,800	62,400
9	California Avenue and Hwy 99	0	62,500	62,500

The total level of projected retail demand through 2040 ranges from a low of 16,200 square feet within the CSU-Bakersfield Market Area (Site 4) to a high of 188,000 square feet at the Downtown Transit Center Market Area (Site 2). The retail demand projection for the CSU-Bakersfield Market Area may reflect uncertainty over the timing of the University's expansion plans rather than a lack of future growth. Indeed, the CSU-Bakersfield 2007 Master Plan Update calls for the construction of significant new teaching and research facilities that will drive additional demand for retail and residential uses within the half-mile Market Area.<sup>8</sup> The high estimate for the Downtown Transit Center is, on the other hand, indicative of strong demographic trends favoring redevelopment of the urban core.

To translate these quantitative retail demand projections into the physical form of the built environment, Table 7 provides an indicative overview of the gross leasable area associated with various types of TOD-compatible retail configurations. Compatibility with TOD in this context means neighborhood- or community-serving retail that can be accommodated on the ground floor of a mixed-use office/residential building or appropriately scaled to fit within a typical city block of 500 to 1,000 feet without detracting from the walkability of the streetscape.

**Table 7. Overview of TOD-Compatible Retail Typologies**

Type of Retail	Gross Leasable Area (SF)
Food Service Establishment	300-1,100
Coffee Shop/Cafe	500-1,500
Minimart	10,000-15,000
Pharmacy	15,000
Supermarket	30,000-100,000
Urban Big Box	80,000-125,000

In the near term (2015-2020), only one of the site alternatives, the Downtown Transit Center (Site 2), appears to have sufficient retail demand to support a major new shopping center in excess of 100,000 square feet, approximately the size of a large supermarket or an urban Big Box store, such as City Target. Over the long term (2021-2040), five of the nine site alternatives (Sites 2, 3, 5a, 5b, and 7) could

<sup>8</sup> The CSU-Bakersfield 2007 master plan update envisioned the near-term addition of twin 32-story residential and mixed-use buildings to the campus, but these projects did not move forward as a result of the real estate downturn. Over the long term, the campus is capable of accommodating up to 18,000 students at full buildout, an increase from its current enrollment of 6,000 students. The University's near-total site control means that any future development within the half-mile vicinity of the proposed Transit Center location will be contingent upon University expansion plans. See *Final Environmental Impact Report, California State University Bakersfield, Campus Master Plan Update, August 2007*, accessed on March 4, 2015 at <http://www.csub.edu/documents/FEIR.pdf>

potentially absorb a retail center of this scale. This type of “anchor” tenant attracts consumer spending from a radius beyond the half-mile Market Area and thereby supports a critical mass of new retail businesses. By drawing customers from a broader catchment area, an anchor tenant helps to reduce the phenomenon of sales “leakage,” whereby residents spend more on retail products than local businesses capture. In the absence of a sufficient demand for an anchor, most of the new retail development at other site alternatives will likely be incremental, consisting of neighborhood-serving establishments.

### **Office Demand**

Demand for office space is driven fundamentally by employment growth. Of the eight major employment categories identified by the Bureau of Labor Statistics, four generate demand for office space:

- **TCU** (Transportation, Communications, Utilities) – 20% of TCU employment generates demand for office space
- **FIRE** (Finance, Insurance, Real Estate)
- **SVCS** (Business and Professional Services)
- **GOV** (Government, including Education)

In 2014, these four categories accounted for 42.5% of all non-farm payroll jobs in the Bakersfield-Delano Metropolitan Statistical Area (MSA). The overall share of regional employment in these four sectors is projected to increase regardless of new transit facilities or services; however, areas served by high-quality transit service, and particularly rail service, may have a higher potential to attract office jobs, based on the experience of other commuter-friendly rail services in California. Approximately 60% of trips on the Amtrak Capitol Corridor are work-or business-related; 30% of fares are purchased via a monthly pass, and likely reflect regular commute trips to office-based employment centers.<sup>9</sup> Just over half (51%) of systemwide ridership consists of commuters who work in the Government (14%), FIRE (finance/insurance/real estate, 11%), Business and Professional Services (9%), and Communications (7%) sectors based on Metrolink, the regional rail system in Southern California. The half-mile Market Area around the future Transit Centers are likely to exhibit a similar tendency to attract a higher proportion of jobs in these sectors, ie. those most compatible with locations in higher-density corporate office settings.

Accordingly, the office demand projection assumes that 80% of the future employment growth occurring within the half-mile Market Area around the 9 site alternatives will occur in these four sectors, with an average space of 170 square feet per new office worker. This is a decrease from the historical norm. Over the last decade, there have been shifts in office space usage and in the types of industries driving leasing activity. A broad range of industries are moving towards more efficient office floor plans. Ten years ago, the average space occupied per worker was approximately 250 square feet. Today, the average space per worker ranges from approximately 135 to 240 square feet; the midpoint of this range has been used in these demand projections. There are multiple explanations for this trend including: economic uncertainty; advances in technology that have reduced tenants’ need for on-site storage and server

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<sup>9</sup> Amtrak Capitol Corridor 2010 Performance Report, p. 7, accessed at [http://www.capitolcorridor.org/included/docs/performance\\_reports/10 Performance Report.pdf](http://www.capitolcorridor.org/included/docs/performance_reports/10%20Performance%20Report.pdf) on April 19, 2015.

rooms; increased opportunities for employees to work remotely; and the growing practice of office space “hoteling” in which employees use workspaces on an as-needed basis.

**Table 8.** Half-Mile Market Area Office Demand Summary

		2015-2020	2021-2040	Total
		sf		
1	Bakersfield College	2,400	9,600	12,000
2	Downtown Transit Center	4,900	1,308,800	1,313,700
3	Southwest Transit Center	0	866,600	866,600
4	California State University Bakersfield	1,600	0	1,600
5a	Amtrak Station	140,900	699,600	840,500
5b	California High Speed Rail Station	138,200	875,900	1,014,100
6	Niles and Vernon Avenue	900	20,500	21,400
7	Panama Lane and Hwy 99	10,000	45,900	55,900
8	Mt. Vernon Ave and Hwy 178	0	0	0
9	California Avenue and Hwy 99	0	0	0

## Zoning Analysis

This analysis focuses on two key questions: Do existing land use plans around station sites support transit center investment and TOD? Are they able to accommodate future demand for residential, office, and retail uses? To investigate these questions, a zoning analysis was performed to identify the existing zoning around station areas and to evaluate the capacity of station areas to accommodate new types of development based on existing zoning regulations. This type of analysis is useful because, when paired with market demand projections, it can inform policymakers on whether existing zoning is adequately flexible to accommodate future demand for new residential, office, and retail uses identified in the TOD Market assessment. An analysis of General Plan Land Use is also included to show where planned mixed-use may occur.

This analysis identified a total of 18 distinct zoning classifications in the half-mile Market Area of the 9 site alternatives. The City of Bakersfield has, for example, five basic zoning classifications for residential uses, ranging from single-family homes on large lots (Residential Suburban) to multi-family dwelling units (R-4). Five of the 18 zoning classifications were for commercial uses at a range of scales, from neighborhood commercial (C-1) to Central Business (CB) district zoning, which also allows for high-density residential (ie mixed) uses. Other zoning classifications found in the half-mile Market Areas included agricultural uses (A), hospital uses (HOSP), light and general manufacturing (M-1, M-2), Mobile Homes (MH), Open Space (OS), parking (P), and Planned Commercial Development/Planned Unit Development (PCD/PUD), which are typically governed by more flexible zoning regulations negotiated by a masterplan developer for a large area. The amount of land zoned for each use within the one-quarter and one-half mile area around each site alternative is summarized below in Tables 9 and 10.

Table 9. Distribution of Zoned Uses within a Quarter-Mile Radius of Station Site Alternatives (in acres)

	Site	Zoning Classification																	
		A	C-1	C-2	C-B*	C-C*	C-O	HO SP	M-1	M-2	MH	OS	P	PCD/ PUD	R-1	R-2	R-3	R-4	R-S
1	Bakersfield College	47.4	-	-	-	-	-	-	-	-	-	-	-	-	62.0	-	-	-	-
2	Downtown Transit Center	-	4.7	12.3	19.9	28.9	0.0	-	1.0	-	-	-	-	-	-	-	-	-	-
3	Southwest Transit Center	-	-	33.8	-	-	-	-	-	-	-	-	-	-	27.7	-	14.9	-	0.4
4	California State University Bakersfield	6.7	-	56.6	-	-	8.5	-	-	-	-	-	-	-	-	-	-	-	-
5 a	Amtrak Station	-	0.8	0.5	8.7	58.3	0.9	-	30.7	8.1	-	-	-	-	-	-	-	1.3	-
5 b	California High Speed Rail Station	-	1.2	3.9	-	23.3	1.5	-	42.5	18.3	-	-	-	-	1.5	-	-	2.0	-
6	Niles and Vernon Avenue	-	24.6	4.9	-	-	1.2	-	-	-	-	-	-	-	31.8	16.8	14.3	-	-
7	Panama Lane and Highway 99	-	-	48.9	-	-	-	-	-	-	-	-	-	-	32.8	-	-	-	-
8	Mt. Vernon Ave and Hwy 178	-	5.3	50.3	-	-	-	-	-	-	-	-	-	-	7.3	3.7	13.9	-	-
9	California Avenue and Highway 99	-	-	55.9	-	-	-	-	16.8	-	-	-	-	-	13.9	-	7.4	-	-

\*Zoning Classifications C-B and C-C include Mixed-Use

**Table 10. Distribution of Zoned Uses within a Half-Mile Radius of Station Site Alternatives (in acres)**

	Site	Zoning Classification																	
		A	C-1	C-2	C-B*	C-C*	C-O	HO SP	M-1	M-2	MH	OS	P	PCD/ PUD	R-1	R-2	R-3	R-4	R-S
1	Bakersfield College	158.6	-	3.0	-	-	2.2	-	-	-	-	-	-	-	211.1	-	71.0	-	-
2	Downtown Transit Center	-	53.2	41.5	63.7	80.6	22.8	2.3	25.9	-	-	-	5.1	7.8	0.2	5.0	-	-	
3	Southwest Transit Center	-	11.0	132.9	-	-	-	-	-	-	-	8.5	-	136.3	18.7	50.2	-	26.6	
4	California State University Bakersfield	10.0	-	237.5	-	-	90.5	-	-	0.6	-	4.3	-	1.9	-	-	-	-	
5 a	Amtrak Station	-	2.5	11.6	33.2	123.0	1.5	-	82.6	20.6	-	8.1	-	32.4	0.2	13.0	2.2	-	
5 b	California High Speed Rail Station	-	2.9	32.1	8.8	85.3	1.5	-	116.1	38.4	-	8.1	-	62.4	15.2	5.6	2.4	-	
6	Niles and Vernon Avenue	-	44.3	32.3	-	-	1.3	-	1.4	41.7	-	-	-	130.7	63.8	62.6	-	-	
7	Panama Lane and Highway 99	0.6	6.4	100.8	-	-	-	-	10.6	-	16.5	-	-	231.5	3.1	-	-	-	
8	Mt. Vernon Ave and Hwy 178	-	6.3	111.1	-	-	1.8	-	-	-	-	-	-	145.9	4.6	52.5	-	-	
9	California Avenue and Highway 99	-	4.2	164.2	-	-	-	-	79.0	4.9	-	8.4	-	76.2	5.6	17.3	-	8.6	

\*Zoning Classifications C-B and C-C include Mixed-Use

### **Distribution of Zoned Uses Within TOD Market Areas**

Figure 4 shows each zoned use as a percentage of the total developable land area within both a one-quarter and half-mile radius around the station sites. Any land assigned a parcel number by the Kern County Assessor was generally considered “developable” for the purposes of this analysis. Public rights-of-way (sidewalks, streets, highways), natural features (bodies of water), and floodplains were excluded from the calculation of “developable” land. These non-developable elements typically comprised around 30 percent of the total land area within a one-quarter and one-half mile radius of station areas, with the variation among station site alternatives attributable to local infrastructure patterns.

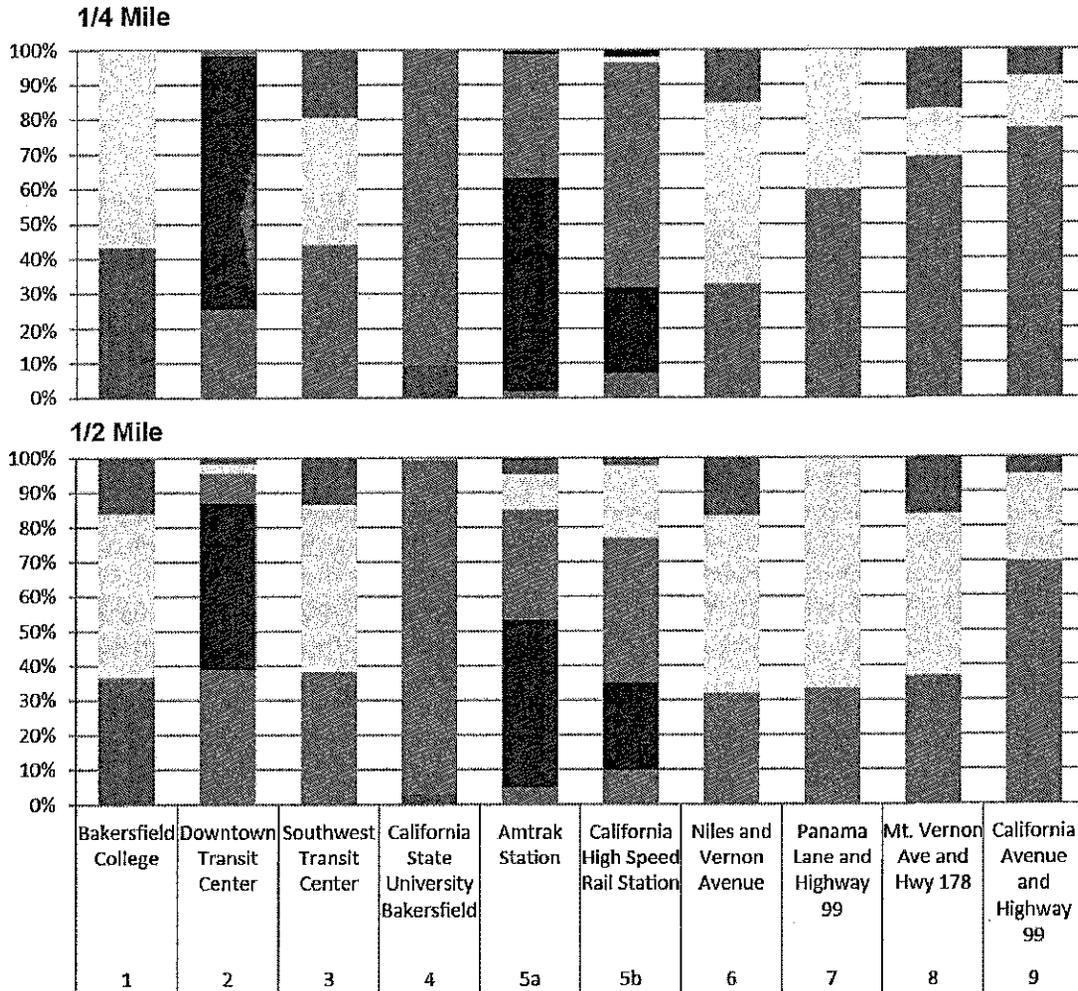
The distribution of zoned uses in each TOD Market Area indicates the presence of two important ingredients in TOD placemaking: 1) allowable development densities; and 2) diversity of land uses. First, there is a strong (though not guaranteed) correlation between density of development and transit ridership; long-term data from cities around the world appear to show that there is a fundamental density threshold of around 25 residents and jobs per acre where automobile dependence is significantly reduced.<sup>10</sup> Second, TOD tends to thrive in areas where a diversity of land uses in close proximity to one another allows residents, workers, and visitors to access a range of services efficiently via walking or biking.

Both development densities and the diversity of land uses are directly determined and enabled by zoning—and can be achieved either by permitting multiple, high-intensity uses on a single site (mixed use development) or by clustering different types of uses together within a given district.

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<sup>10</sup> Peter Newman and Jeffrey Kenworthy (2006) “Urban Design to Reduce Automobile Dependence”, *Opolis: An International Journal of Suburban and Metropolitan Studies*: Vol. 2: No. 1, Article 3. Accessed at <http://repositories.cdlib.org/cssd/opolis/vol2/iss1/art3> on March 16, 2015.

**Figure 4. Zoned Uses as a Percentage of Total Developable Land Area Within One-Quarter and One-Half Mile Radius of Station Site**



- Agricultural
- Commercial - Low-Density
- Commercial/Mixed-Use - High-Density
- Hospital
- Manufacturing
- Open Space
- Parking
- PCD/PUD
- Residential - Low-Density
- Residential - Medium-Density

### Zoning-Based Assessment of Station Site TOD Potential

The nine station site alternatives were ranked for TOD potential from “very low” to “high” based on the opportunities and constraints observed in the distribution and types of zoned uses, the implied allowable development densities associated with each zoning classification, existing street block characteristics/level of walkability, other relevant physical site conditions, and projected levels of future growth assessed in the previous section of this report.

**Table 11. Zoning-Based Assessment of Station Site TOD Opportunities and Constraints**

Site		TOD Potential	Opportunities	Constraints
1	Bakersfield College	MEDIUM-LOW	<ul style="list-style-type: none"> <li>Diversity of land uses on campus</li> <li>Student population a key transit ridership market</li> </ul>	<ul style="list-style-type: none"> <li>Low projected future growth</li> <li>Low density zoning</li> <li>Potential development pressures on adjacent agricultural land</li> </ul>
2	Downtown Transit Center	HIGH	<ul style="list-style-type: none"> <li>Flexible C-B zoning for high-density mixed use</li> <li>Transit-supportive 50% reduction in minimum parking requirements available “by right” in C-B and C-C zones (73 percent of developable land area)</li> <li>High employment densities and projected future growth</li> <li>Walkable street block configuration</li> <li>Market Area overlap with future Bakersfield HSR Station</li> <li>Mixed use general plan land use</li> </ul>	
3	Southwest Transit Center	MEDIUM	<ul style="list-style-type: none"> <li>High projected residential and office growth</li> <li>Sizable portion of developable land area (19 percent) currently zoned for medium-density residential zoning</li> </ul>	<ul style="list-style-type: none"> <li>Irregular parcelization and street grid</li> <li>Half-mile TOD Market Area bisected by Highway 99 with intrusive off-ramps</li> </ul>
4	California State University Bakersfield	MEDIUM	<ul style="list-style-type: none"> <li>Student population a key transit ridership market</li> <li>Consolidated land ownership/site control</li> </ul>	<ul style="list-style-type: none"> <li>Potential development pressures on adjacent agricultural land</li> </ul>
5a	Amtrak Station	MEDIUM-HIGH	<ul style="list-style-type: none"> <li>Flexible C-B zoning for high-density mixed use</li> <li>High employment densities and projected future growth</li> <li>Mixed use general plan land use</li> </ul>	<ul style="list-style-type: none"> <li>High percentage of adjacent manufacturing uses</li> </ul>
5b	California High Speed Rail Station			
6	Niles and Vernon Avenue	MEDIUM-LOW	<ul style="list-style-type: none"> <li>Diversity of zoned uses within half-mile TOD Market Area</li> <li>Walkable street block configuration</li> </ul>	<ul style="list-style-type: none"> <li>Low projected future growth</li> </ul>
7	Panama Lane and Highway 99	VERY LOW		<ul style="list-style-type: none"> <li>Predominantly low-density zoning</li> <li>Low projected future growth</li> <li>Half-mile TOD Market Area bisected by Highway 99</li> <li>Irregular parcelization within commercial and PCD areas</li> </ul>
8	Mt. Vernon Ave and Hwy 178	LOW	<ul style="list-style-type: none"> <li>Some vacant/underutilized medium-density commercial and residential zoned uses in close proximity to proposed station site</li> </ul>	<ul style="list-style-type: none"> <li>Low projected future growth</li> <li>Half-mile TOD Market Area bisected by Highway 178</li> </ul>

Site		TOD Potential	Opportunities	Constraints
9	California Avenue and Highway 99	VERY LOW		<ul style="list-style-type: none"> <li>• Low density zoning</li> <li>• Low projected future growth</li> <li>• Half-mile TOD Market Area bisected by Highway 99</li> <li>• High percentage of manufacturing uses</li> </ul>

Panama Lane/Highway 99 (Site 7), Mount Vernon Ave/Highway 178 (Site 8), and California Avenue/Highway 99 (Site 9) score very low on both allowable densities, diversity of land uses, and projected future demand for new uses; in addition, their half-mile-TOD Market Areas are bisected by a major highway, which lessens the desirability of these locations for walking and biking activity to and from the station.

Bakersfield College (Site 1) and CSU-Bakersfield (Site 4) both have low-density zoning, but contain a diverse mix of uses on their respective campuses; their student population constitutes a key target market for transit ridership; and both the college/universities retain site control over a large portion of the TOD Market Area, enabling more coordinated planning for future TOD and thereby justifying a “Medium-Low” to “Medium” ranking for TOD potential.

Similarly, Niles/Vernon Ave (Site 6) is ranked “Medium-Low,” as it has a sizable area zoned for medium-density housing and professional office space within the one-quarter mile TOD Market Area, both of which are transit-supportive. This site also has a coherent, walkable street block configuration that might lend itself to increased levels of future pedestrian activity with the appropriate investment in streetscape amenities and drafting of new development standards to encourage TOD, such as a transit overlay zone. Despite these advantages, the Niles/Vernon Ave location has low projected future growth, meaning that market demand may not be adequate to create the “critical mass” of new uses associated with a TOD district.

In the “Medium” category for TOD potential is the Southwest Transit Center (Site 3), largely based on its significant capture rate of future residential and employment growth. It has a significant amount of land already zoned for medium-density residential within a one-half mile radius to accommodate the forecast demand for 1,100 additional housing units over the next 25 years. The scale of forecast development may be significant enough to create a vibrant TOD district at this location, but substantial challenges remain with physical constraints on pedestrian circulation caused by the location of Highway 99 and associated off-ramps.

The sites in the Medium-High and High category for TOD potential - Sites 2, 5a, and 5b – are characterized by flexible zoning for high-density mixed use, high employment densities and projected future growth, and their Market Areas overlap with the future Bakersfield HSR station, with the potential to benefit from the “halo” effect of new station area development associated with HSR. Site 2, the highest ranking site, also has a walkable street block configuration that could lend itself to increased levels of pedestrian activity.

## **Additional Observations**

The zoning analysis generated these additional observations on existing land use plans around station sites:

- Based on current zoning, most of the station site alternatives currently permit only low-density commercial (C-1, C-2) and residential uses (R-1) that do not, in isolation or in combination, meet the threshold of 25 persons and jobs per acre typically required to encourage transit ridership and reduce auto dependence.
- Light and general manufacturing (M-1, M-2) comprise a large percentage of zoned uses within one-half mile of the California High-Speed Rail Station (40.6 percent), Amtrak Station (30.6 percent), and California Avenue/Highway 99 (22.5 percent); the transit ridership and TOD potential associated with these uses is generally suboptimal due to low employment densities (workers per square foot) and lack of compatibility with adjacent residential and office uses.
- Central Business (C-B) is the only zoning classification to allow high-density, mixed-use development “by right”—that is, without a conditional use permit; this zoning classification exists only in the downtown Bakersfield area.
- R-4, the highest-density residential zone available under Bakersfield’s municipal ordinance, comprises less than one percent of the zoned uses at Amtrak Station and the California High Speed Rail Station (Sites 5a and 5b); none of the other sites has R-4 zoning.

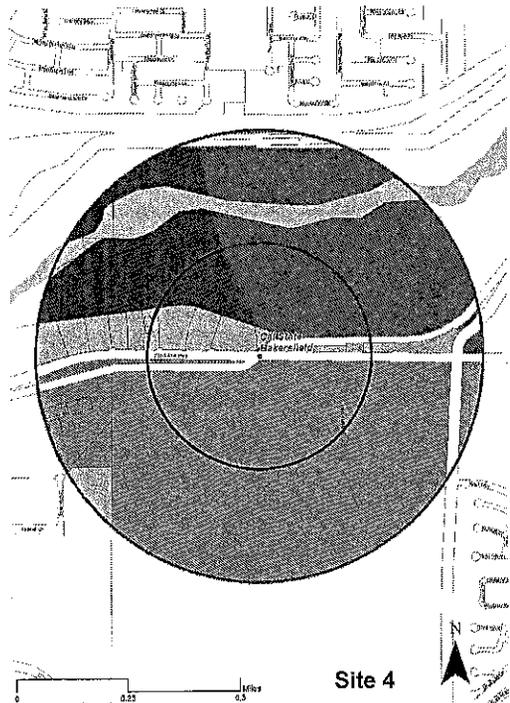
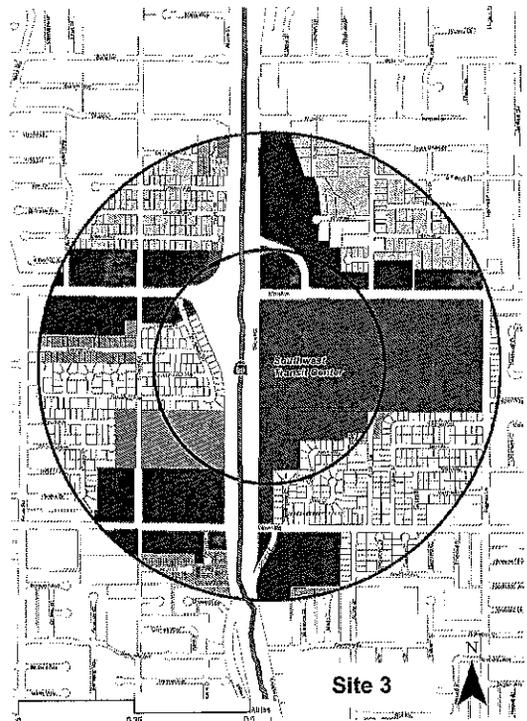
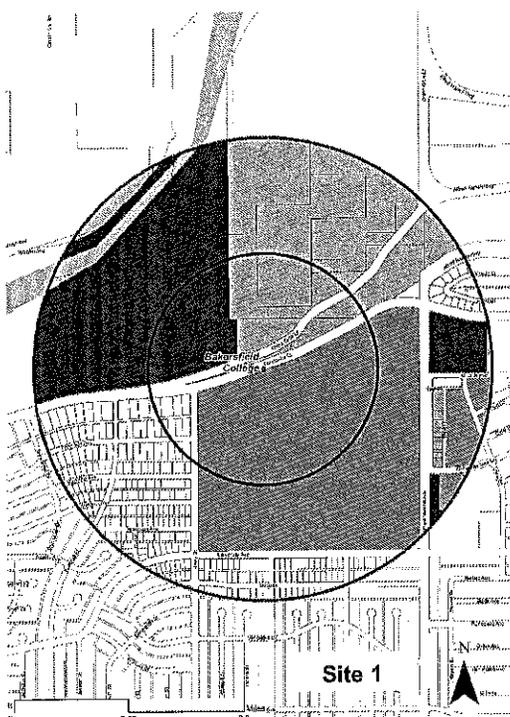
This zoning analysis indicates that many of the “by right” zoned and permitted uses within the one-quarter to one-half mile radius of stations areas are adequate to accommodate future growth, but not necessarily compatible with accommodating the denser development patterns typically associated with TOD.

## **General Plan Land Use**

Included as part of the zoning analysis is an additional evaluation of the general plan land uses within the half-mile Market Area of the 9 site alternatives. The Metropolitan Bakersfield General Plan includes a series of sub category land uses within six general land use classifications – Residential, Commercial, Industrial, Resource, Public Facilities, and Open Space.

This evaluation identified a total of 12 land uses within the half-mile Market Area of the 9 site alternatives. Residential uses ranged from low-density single-family detached housing (LR and SR) to multi-family high-density housing (HMR, LMR, HR) such as apartments. Commercial uses included all five of the general commercial land use classification including highway (HC), general (GC), major (MC), office (OC), and mixed use (MUC). Other land uses found within the half-mile Market Areas include agricultural uses (R-IA, R-EA, R-MP), industrial uses (LI, SI, HI), open space uses (OS, OS-P, OS-S), and public facility uses (P, PS, PT, P-SW). Among the identified land uses, mixed use land use is identified at the three site alternatives within the downtown area: Downtown Transit Center, Amtrak Station, and the California High Speed Rail Station. Figure 5 provides detailed mapping of general plan land uses within a half-mile radius around each site. Tables 12 and 13 provide acreages by General Plan Land Use categories within a quarter-mile and half-mile of station sites.

Figure 5. Potential Station Areas with Half-Mile General Plan Land Uses



**Land Use Legend**

-  Agriculture (R-IA, R-EA, R-MP)
-  Major Commercial (MC)
-  General Commercial (GC)
-  Highway Commercial (HC)
-  Office Commercial (OC)
-  Mixed Use (MUC)
-  Low Density Residential (LR, SR/LR, SR)
-  Medium Density Residential (LMR, LMR/LR)
-  High Density Residential (HMR/LMR, HMR, HR)
-  Industrial (LI, SI, HI)
-  Open Space (OS, OS-P, OS-S)
-  Public Sector (P, PS, PT, P-SW)

Figure 5. Potential Station Areas with Half-Mile General Plan Land Uses

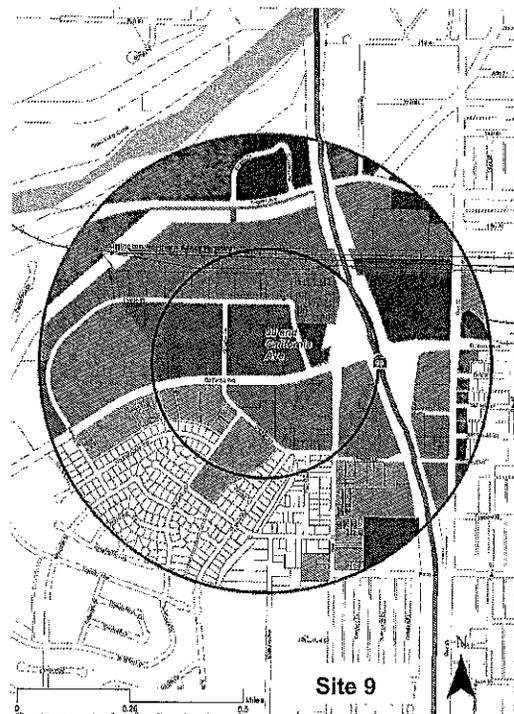
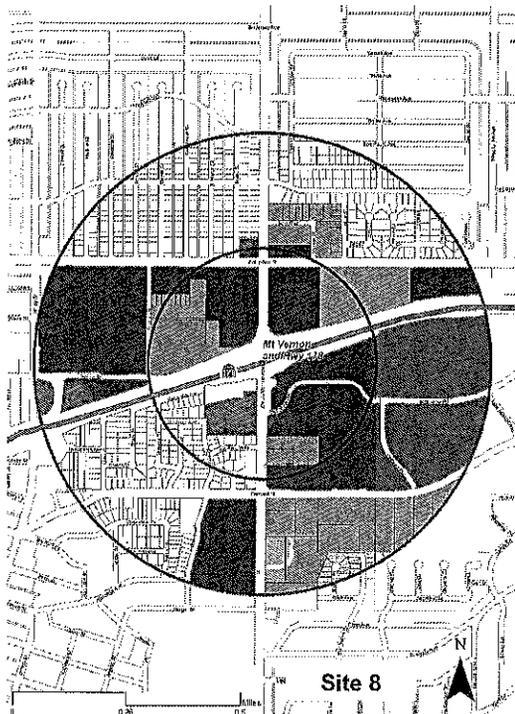
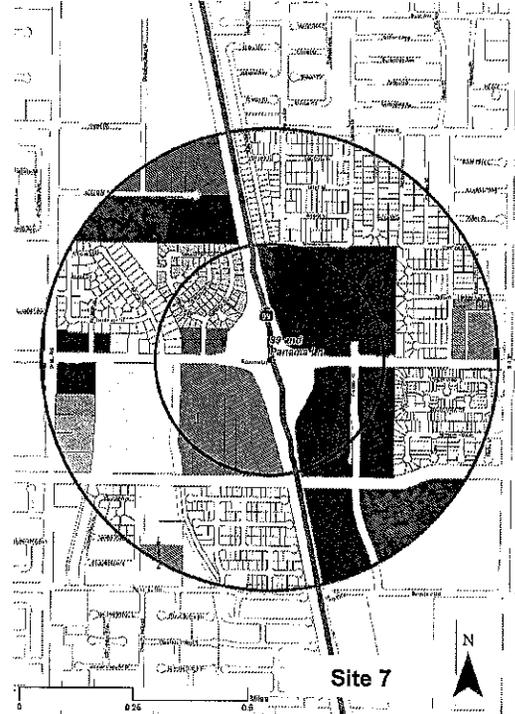
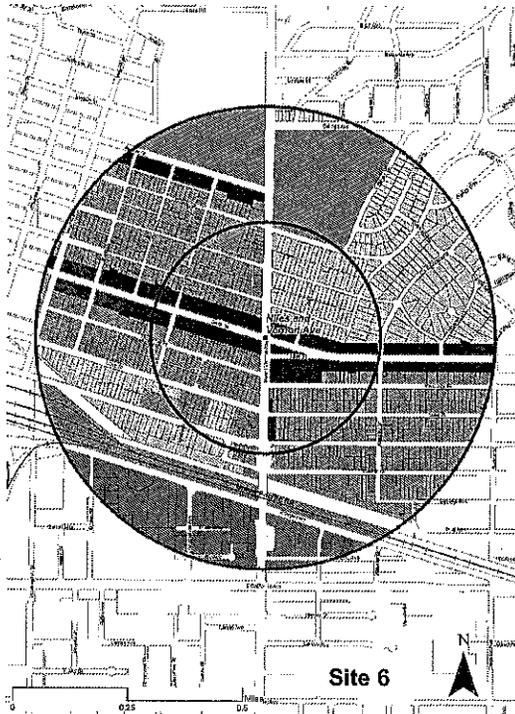
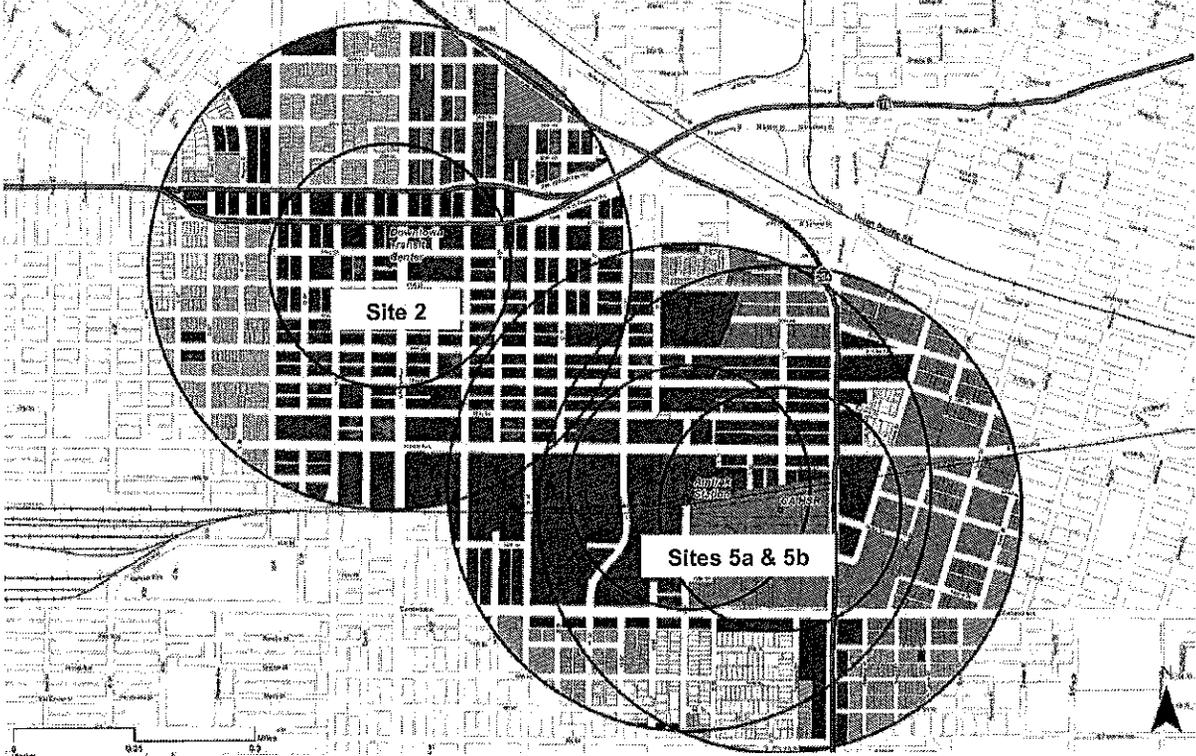


Figure 5. Potential Station Areas with Half-Mile General Plan Land Uses



**Table 12.** Distribution of Zoned Uses within a Quarter-Mile Radius of Station Site Alternatives (in acres)

Site	General Plan Land Use											
	Agriculture	Major Commercial	General Commercial	Highway Commercial	Office Commercial	Mixed Use	Low Density Residential	Medium Density Residential	High Density Residential	Industrial	Open Space	Public Sector
1 Bakersfield College	98.76	-	-	-	-	-	11.73	-	-	-	107.96	134.14
2 Downtown Transit Center	-	6	11.19	-	14.08	59.67	-	-	-	-	-	-
3 Southwest Transit Center	-	88.63	46.02	-	-	-	45.7	-	-	-	-	-
4 California State University Bakersfield	-	-	-	-	32.05	-	-	-	-	-	198.97	204.83
5a Amtrak Station	-	-	2.11	-	-	68.23	-	-	-	29.22	-	-
5b California High Speed Rail Station	-	-	19.4	-	-	23.01	0.47	-	-	52.07	-	-
6 Niles and Vernon Avenue	-	-	23.6	-	-	-	-	53.71	77.37	-	-	32.04
7 Panama Lane and Highway 99	-	-	67.81	3.1	-	-	45.2	12.95	-	-	-	29.12
8 Mt. Vernon Ave and Hwy 178	-	29.09	71.81	-	-	-	21.93	-	20.17	-	-	8.62
9 California Avenue and Highway 99	-	58.33	2.88	29.68	-	-	34.13	-	9.73	59.15	-	9.68

**Table 13.** Distribution of Zoned Uses within a Half-Mile Radius of Station Site Alternatives (in acres)

	Site	General Plan Land Use											Public Sector
		Agriculture	Major Commercial	General Commercial	Highway Commercial	Office Commercial	Mixed Use	Low Density Residential	Medium Density Residential	High Density Residential	Industrial	Open Space	
1	Bakersfield College	102.57	-	1.53	-	2.45	-	66.06	-	9.14	-	117.61	135.82
2	Downtown Transit Center	-	30.86	30.66	-	60.21	138.9	12.62	-	0.93	1.52	-	5.24
3	Southwest Transit Center	-	88.63	103.36	-	-	-	91.82	54.18	30.19	0.68	-	3.69
4	California State University Bakersfield	-	-	1.05	-	36.84	-	-	-	4.25	-	199.33	223.93
5a	Amtrak Station	-	-	42.1	-	-	158.36	32.2	3.97	14.73	86.41	8.22	0.15
5b	California High Speed Rail Station	-	-	45.68	-	-	102.65	33.75	0.53	23.63	136.82	8.09	-
6	Niles and Vernon Avenue	-	-	41	-	-	-	-	93.19	142.25	36.83	-	69.46
7	Panama Lane and Highway 99	-	-	122.71	3.1	2.54	-	172.02	21.08	6.96	11.75	-	31.42
8	Mt. Vernon Ave and Hwy 178	-	49.21	118.26	-	2.37	-	117.71	3.28	63.86	-	16.11	8.62
9	California Avenue and Highway 99	-	60.66	59.16	42.6	-	-	77.06	-	28.49	77.9	17.47	18.88

## Market Feasibility Analysis for TOD Typologies

The final component of this study investigates the financial feasibility of different TOD-compatible building typologies, based on existing rents, vacancy rates, and other market metrics typically used by private-sector developers to assess the favorability of real estate market conditions for particular uses. This analysis indicates whether new construction is financially viable based on a comparison of total development costs and the total market value of a particular building typology.

There is no “one size fits all” definition of building typologies considered “TOD-compatible.” That being said, cities looking to incentivize TOD at specific locations generally allow a higher level of density (defined as units per acre or floor area ratio) than otherwise permitted in surrounding areas, reduce mandatory minimum parking requirements, encourage a diverse mix of uses within a given TOD district (or even within a single building) via flexible zoning codes, and mandate building design features that are intended to activate the public realm and encourage pedestrian activity (such as curb cut limitations, display windows on groundfloor buildings, awnings that provide shade coverage, landscaping, and/or entrances oriented toward the street).

Examples of TOD-compatible building typologies include townhomes, mid- and high-rise office and residential buildings, multi-story mixed-use buildings comprised of groundfloor retail and upper-floor apartments. Single-family homes, “strip” malls, industrial office space, and manufacturing facilities, by contrast, are not generally considered TOD-compatible due to their auto-oriented building form and lack of vertical density.

For each station site alternative, this analysis assessed whether the following TOD-compatible building typologies are feasible based on prevailing real estate market conditions:

- Townhomes (3 stories)
- Mid-rise apartments (4-7 stories)
- Low-rise office (3 stories)
- Mid-rise office (4-7 stories)
- Medical office (1 story) – as a groundfloor use of a multistory mixed-use building
- Retail (1 story) – as a groundfloor use of a multistory mixed-use building

### Capitalized Value Methodology

For each of these building typologies, the average sale price per square foot for each type of use was imputed from existing rents using the capitalization valuation method. This method uses the amount of net operating income (NOI) generated annually by a property (gross rent paid by the tenant(s) net of owner operating expenses) to derive an indication of market value. This calculation can be summarized by the following formula:

$$\frac{\text{NOI (gross rent less operating expenses)}}{k \text{ (capitalization rate)}} = \text{Capitalized market value}$$

NOI is divided by the capitalization rate (k), or cap rate, which is itself a reflection of the average ratio between the NOI and recorded sale price for comparable properties in the same asset class. This valuation method is generally considered most appropriate for income-producing properties such as apartments, offices, and retail stores. The average imputed sale price per square foot was calculated for each station site alternative based on prevailing market rents for different property types observed in Q4 2014.

The average imputed sale price per square foot was then compared against the total development cost per square foot (PSF) for each building typology, inclusive of both “hard” and “soft” construction costs, land acquisition, and parking costs. PSF costs were derived from RSMMeans, the industry standard for estimating building costs, and adjusted to reflect the local cost of labor and materials in the Bakersfield-Delano MSA. Parking costs were based on the minimum parking requirements per square feet of building use specified in Section 17.58.110 of the Bakersfield Municipal Code. For Sites 2, 5a, and 5b, a 50 percent reduction in parking requirements applicable to Zones C-B and C-C was assumed, consistent with Section 17.58.120 of the Bakersfield Municipal Code. For all other sites, a 10 percent reduction in parking requirements associated with the “Transit Credit” provision of Section 17.58.055, applicable to areas located within 1,000 feet of the front or main customer door of a transit facility, was assumed. Even with the reduction in parking minimums, it should be noted that this requirement added on average 43 percent to the total PSF development cost, a finding consistent with a recent UCLA study of cost impacts associated with minimum parking requirements.<sup>11</sup> This added cost greatly impacts the feasibility of new construction.

**Results of Market Feasibility Assessment**

The results of the market feasibility analysis are summarized below in Table 14. Six different TOD typologies were assessed for financial viability at each of the 9 station sites using available market data, including existing rent levels per square foot, vacancy rates, and capitalization rates. Total development costs per square foot (PSF), including construction, land, and other “soft” costs, were compared against the imputed sale price PSF. There were 3 possible scores for each of the 48 building type/location combinations tested (6 building typologies multiplied by 8 Market Areas, with Sites 5a and 5b considered a single Market Area).

**Table 14.** Definitions of Market Feasibility

Score		Definition		
F	Feasible	total PSF development costs	<	imputed sale price PSF
M	Marginal Feasibility	total PSF development costs	<	120 percent of the imputed sale price PSF
NF	Not Feasible	total PSF development costs	>	imputed sale price PSF

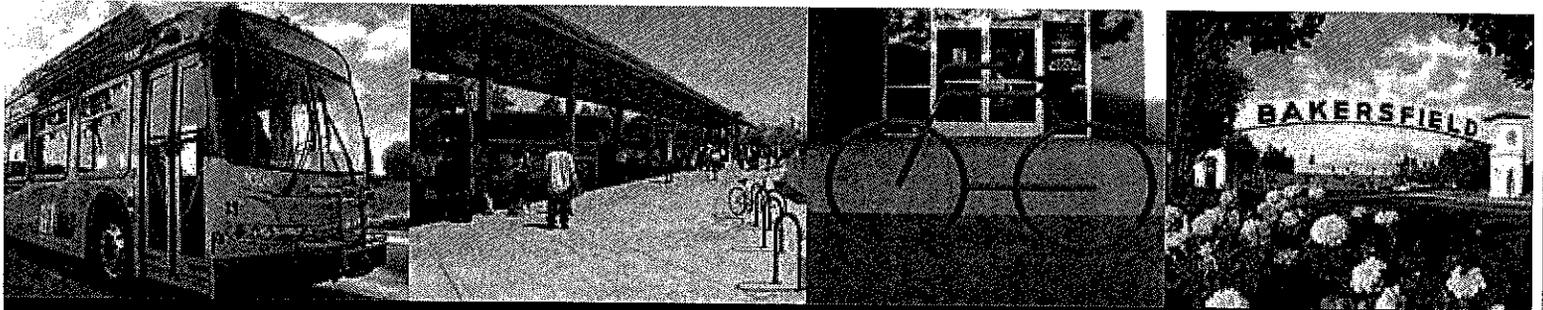
<sup>11</sup> See Table 2, Donald Shoup, “The High Cost of Minimum Parking Requirements,” *Parking: Issues and Policies Transport and Sustainability*, Volume 5, 87-113, accessed at <http://shoup.bol.ucla.edu/HighCost.pdf> on March 18, 2015

The “marginal feasibility” (M) score takes into account the fact that there is typically a PSF rent premium of up to 20 percent for new construction compared to older properties on which the imputed sales price PSF is based. Assuming this rent premium is supported by the market, new construction may be feasible.

Overall, the market feasibility assessment shows limited *near-term* opportunities for new construction in the eight TOD Market Areas, as available inventory continues to suppress rent levels in many cases. The market demand projections tell a somewhat different story, as they are focused on the aggregate potential of new development over the next 20 years. Some of the areas with the highest *long-term* potential for growth in Bakersfield, such as the Downtown Transit Center, do not appear ripe for new development at this time. The apparent disconnect between the near-term market feasibility assessment and the long-term projected market demand may be explained simply by the fact that an additional growth cycle is needed to absorb excess capacity in certain Market Areas and drive rents upward to the point of sustaining new construction.

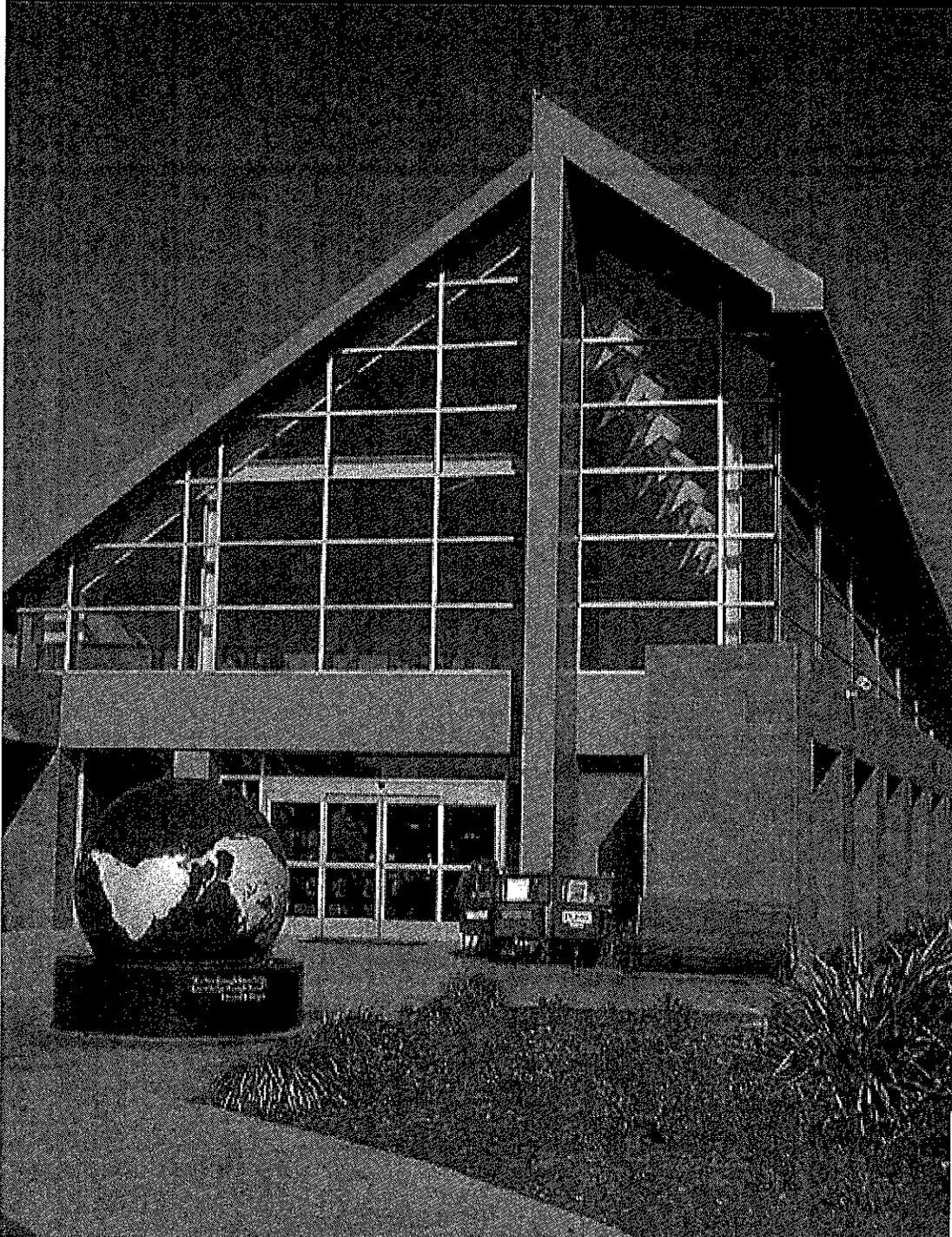
At this time, CSU-Bakersfield (Site 4) appears to offer one of the more buoyant local real estate markets, driven by the ongoing expansion of the university, with a low vacancy rate (3.8 percent) and correspondingly higher property values. At that location, market conditions may be sufficiently favorable to support the construction of new townhomes and mid-rise office, despite low projected demand for these uses in the near term (which, as noted earlier, may not accurately capture future university expansion plans). Some new housing and retail development may be supportable in the near-term at the Southwest Transit Center (Site 3). Finally, Panama Lane/Highway 99 (Site 7) appears to be a strong market for new retail development; over the long term, office-based employment growth at this location is projected to generate sufficient retail demand for a major new shopping center in excess of 100,000 square feet.





# METROPOLITAN BAKERSFIELD TRANSIT CENTER STUDY

Final Report



August 2015



Kern Council  
of Governments





**Acknowledgements**

TBD

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# 1

## EXECUTIVE SUMMARY

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### **BACKGROUND AND PURPOSE**

The purpose of the Metropolitan Bakersfield Transit Center Study is to identify locations for transit centers in Bakersfield due to anticipated growth and higher demand for transit service as well to identify the need for connectivity of various existing and future transit service connections. As a means to update the Transit Center Plans from the 2009 Metropolitan Bakersfield Transit System Long-Range Plan (LRTP), Kern Council of Governments (Kern COG) is partnering with Golden Empire Transit (GET), the City of Bakersfield, the County of Kern, and various stakeholders to determine how best to meet the public transit needs of the residents of Metropolitan Bakersfield over the next twenty years.

To ensure consistency throughout Metropolitan Bakersfield and Kern County, this study includes a thorough review of existing planning documents at the City and Regional level of how they relate to the Bakersfield Transit Center Study. In addition, the Study also addresses transit related policies and strategies of the Sustainable Community Strategy and Regional Transportation Plan (SCS/RTP).

### **PUBLIC OUTREACH**

As part of the planning process the study included various outreach efforts for community support and understanding of the project. These efforts included two public workshops intended to engage stakeholders and members of the public with open discussions of transit centers, their role within Metropolitan Bakersfield, and potential site locations. In addition, online surveys were conducted to further capture the community's input and feedback.

## SUITABLE TRANSIT CENTER SITE LOCATIONS

Through a culmination of existing planning documents, existing demographics, projected population and employment, and public input, a total of eight primary and five secondary site locations were identified.

Proposed transit center locations were based on several factors including the plans and goals outlined in the Bakersfield Transit System Long-Range Plan (LRTP), the City of Bakersfield Bicycle Transportation Plan, California High Speed Rail Station Area Plans, existing and planned transit routes, land uses and demographics of surrounding potential sites, first and last mile connections, potential for TOD, population and employment growth trends, and public outreach. These sites (shown in **Figure 1**) include:

- Bakersfield College;
- Downtown Transit Center;
- Southwest Transit Center;
- California State University Bakersfield;
- Amtrak Station;
- California High Speed Rail Station (with HSR);
- Niles and Mt. Vernon Avenue;
- Panama Lane and Hwy 99;
- Mt. Vernon Avenue and Hwy 178; and
- F Street and Golden State Avenue.

Throughout the outreach process, which included general public outreach and meetings with stakeholders and steering committee members, additional secondary sites were identified. These locations were not included as recommended sites due to their limited use patterns, population, employment, or other transit dependent factors, reducing the site's ability to support a transit center or TOD site. However, should any of these factors unexpectedly increase; these sites have the potential to become ideal locations for a transit center or TOD site. These sites (shown in **Figure 2**) include:

- Santa Fe Way and 7th Standard Road;
- China Grade Loop at Airport Drive;
- China Grade Loop at North Chester Avenue;
- Morning Drive and Highway 178; and
- California Avenue and Highway 99.

Figure 1 Proposed Site Locations

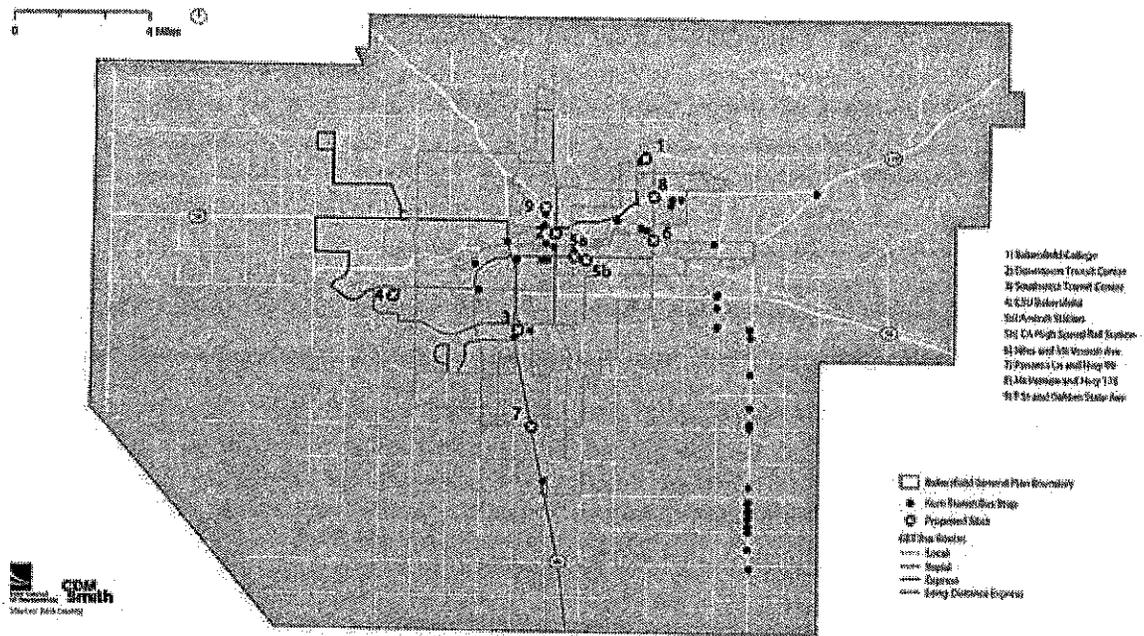
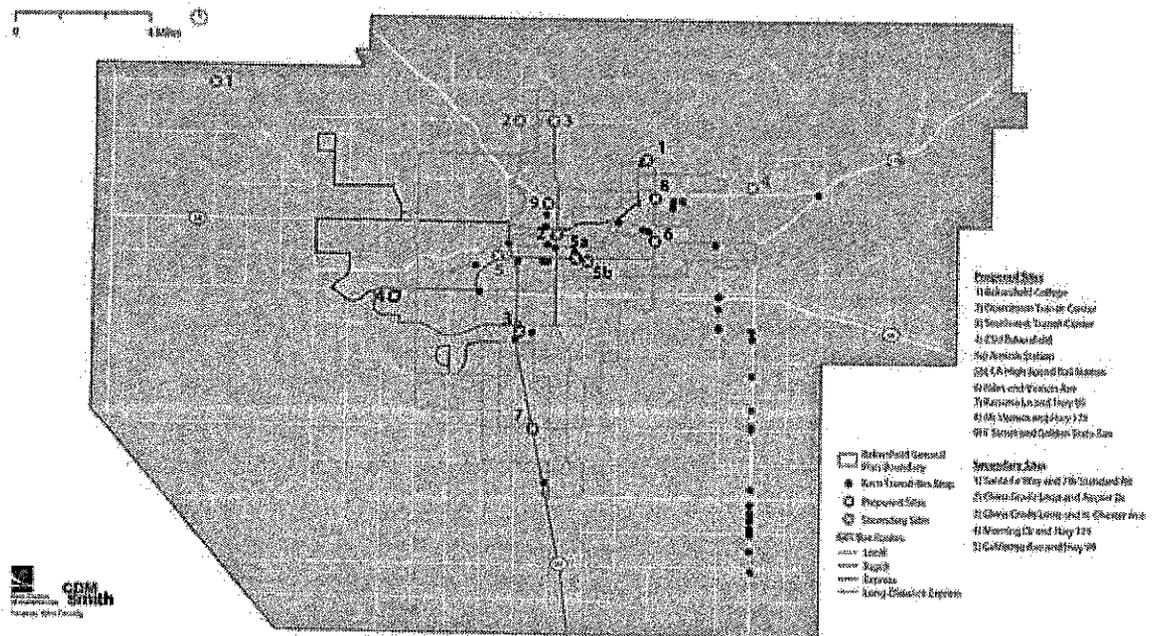


Figure 2 Secondary Site Locations



## MARKET STUDY ASSESSMENT

A Market Study Assessment was conducted for the Bakersfield Transit Center Study to assess the TOD potential of the potential primary site locations. The objective of the study was to optimize the future location of the Transit Center by identifying areas within Kern County where land use and demographic characteristics would be supportive of transit ridership. This study included a zoning analysis, TOD market feasibility analysis, and a projected market demand analysis.

Overall, the eight potential transit center site locations were ranked according to the TOD potential ranging from “Very Low” to “High” (see **Table 1**) based on a cumulative assessment of the criteria used throughout the TOD Market Study Assessment, including:

- Opportunities and constraints observed in the distribution and types of zoned uses;
- Implied allowable development densities associated with each zoning and use classification;
- Existing street block characteristics/level of walkability;
- Other relevant physical site conditions;
- Near-term market feasibility; and
- Projected market demand for residential, retail, and office uses.

**Table 1 Zoning Potential for TOD**

TOD Potential	Site(s)
High	Downtown Transit Center
Medium-High	Amtrak Station
Medium	Southwest Transit Center CSU-Bakersfield
Medium-Low	Bakersfield College Niles/Vernon Avenue
Low	Mt Vernon Ave/Highway 178
Very Low	Panama Lane/Highway 99

## EVALUATION CRITERIA

As part of the Bakersfield Transit Center Study an assessment was conducted using criteria to evaluate the elements needed for a successful transit center and/or TOD project. A total of nine distinct criteria was used for the eight potential transit center site locations. These criteria were broken into four categories including station location, station design, nonmotorized access, and Transit Oriented Development potential. The results from the transit center and TOD evaluation are shown below in **Table 2** for each criteria. Among the eight transit center sites, the two sites located in the Downtown area (Downtown Transit Center and Amtrak Station) and the two colleges (Bakersfield College and CSU Bakersfield) were awarded the highest overall scores; all other sites received scores under 30.

Table 2 Evaluation Criteria Matrix

Evaluation Criterion	Transit Center Site Location								
	Bakersfield College	Downtown Transit Center	Southwest Transit Center	CSU Bakersfield	Amtrak Station	Niles and Mt. Vernon	Panama Lane and Hwy 99	Mt. Vernon and Hwy 178	
<i>Station Location Criteria</i>									
1	Potential to attract transit dependent riders	2	3	3	2	3	4	3	3
2	Access to GET and Kern Transit Buses	4	5	3	3	4	4	4	3
3	Access to statewide transit	4	5	3	3	5	4	3	3
<b>Subtotal</b>		10	13	9	8	12	12	10	9
<i>Station Design Criteria</i>									
4	Lighting, Aesthetics and Safety	2	4	4	3	5	3	1	4
5	Parking	5	1	5	5	3	1	5	4
<b>Subtotal</b>		7	5	9	8	8	4	6	8
<i>Nonmotorized Access Criteria</i>									
6	Pedestrian access and circulation	3	5	1	5	5	3	1	2
7	Bicycle access and circulation	4	4	2	5	5	3	3	3
8	Multimodal access and circulation	4	2	1	5	5	3	4	3
<b>Subtotal</b>		11	11	4	15	15	9	8	8
<b>Transit Center Total Score</b>		28	29	22	31	35	25	24	25
<i>Transit Oriented Development (TOD) Potential</i>									
9	Market feasibility	3	3	3	3	3	1	5	1
<b>Subtotal</b>		3	3	3	3	3	1	5	1
<b>Total</b>		31	32	25	34	38	26	29	26

## RECOMMENDATIONS

Through an iterative process including coordination with key stakeholders and members of the general public, a total of eight potential transit site locations were identified. These identified sites were based on several factors including existing planning documents, existing and planned transit routes, land uses and demographics of surrounding areas, and population and employment growth projections. Based on these factors, the eight transit site locations were selected for their ability to support a transit center. In addition, secondary sites were identified which currently do not exhibit optimum features to support a transit center, however, they are worth additional research should changes occur to affect the site's ability to effectively support a transit center.

Among the eight potential transit site locations identified, several would be suitable for short-term (2020) implementation while others would be more suitable for the long term horizon year of 2040.

**Short-Term**

The following sites are recommended for short-term implementation. These recommendations are based on being an existing location, already identified as a potential transit center in the Bakersfield LRTP, minimal improvements are needed for implementation, or high demographic growth in 2020 is anticipated. Although some of these sites were identified in the Bakersfield LRTP to be phased out in the interim years, these sites should be revisited for improvements and potential for TOD in the long-term.

- Bakersfield College
- Downtown Transit Center
- California State University Bakersfield
- Amtrak Station
- Southwest Transit Center

**Long-Term**

The following sites are recommended for long-term implementation. These recommendations are based on their need for major or significant changes to occur such as land use designations, property acquisitions, or growth not occurring until 2035 or 2040. These sites would require more detailed studies evaluating the policy, funding, and/or infrastructure needs.

- Panama Lane and Highway 99
- Mt. Vernon Avenue and Highway 178
- Niles and Mt. Vernon Avenue

# 2

## INTRODUCTION

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The purpose of the Metropolitan Bakersfield Transit Center Study is to identify locations for transit centers in Bakersfield due to anticipated growth and higher demand for transit service as well to identify the need for connectivity of various existing and future transit service connections. As a means to update the Transit Center Plans from the 2009 Metropolitan Bakersfield Transit System Long-Range Plan (LRTP), Kern Council of Governments (Kern COG) is partnering with Golden Empire Transit (GET), the City of Bakersfield, the County of Kern, and various stakeholders to determine how best to meet the public transit needs of the residents of Metropolitan Bakersfield over the next twenty years.

A primary goal of this study is to address emerging intra-city transit system needs. This effort provides assistance to public, transit and social service agencies within Metropolitan Bakersfield and assists with integrating these services to improve efficiency. In addition, the Study also addresses transit related policies and strategies of the Sustainable Community Strategy and Regional Transportation Plan (SCS/RTP).

### **PLANNING PROCESS**

The planning process for this project included the evaluation of existing and future transit network; identification of potential transit centers and those suitable for Transit Oriented Development (TOD); and transit, multimodal, traffic, and environmental assessments of proposed sites. Key components of this process included a Technical Memorandum describing the methodology behind the selection of potential site locations and a TOD Market Assessment Study evaluating and identifying areas within Kern County where land use and demographic characteristics would be supportive of transit ridership. These reports were presented to the Kern COG Regional Planning Advisory Committee (RPAC), Technical Planning Policy Committee (TPPC), Kern COG Board of Directors and the Golden Empire Transit (GET) Board of Directors.

Throughout this process, community support and understanding of the project was obtained through the formation of a steering committee and public workshop meetings to elicit feedback and

input from stakeholders and the general public. A Study Fact Sheet (see **Appendix A**) which provided an overview of the study including the public engagement process, transit site evaluation process, and a list of the evaluated sites was made available to the public and provided at outreach events.

### **Stakeholders**

While the project has the potential to affect several groups and organizations, key stakeholders include Kern COG, City of Bakersfield, GET, and Kern Transit. The Bakersfield Transit Center Study plays an important role for each of these organizations. Kern COG is Bakersfield's Council of Governments and is responsible for the Regional Transportation Plan (RTP) and the Sustainable Communities Strategy. The City of Bakersfield is responsible for ensuring the goals and objects of the Metropolitan Bakersfield General Plan are maintained. Local and regional bus transit is provided by GET and Kern Transit.

Representatives from each of these organizations were present at public outreach events and included as part of the steering committee.

### **Steering Committee**

A steering committee, established by Kern COG, was formed to address coordination with other agencies and groups to guide the development of the Bakersfield Transit Center Study. The committee included at least two (2) representatives from:

- Kern COG
- City of Bakersfield
- Kern Transit
- Golden Empire Transit (GET)
- Kern County Public Health Department
- Clinica Sierra
- Downtown Business Association
- Kern Transportation Foundation
- Consolidated Transportation Service Agency
- Bike Bakersfield
- California State University Bakersfield

The purpose of this committee was to provide technical input and feedback for the project team. The steering committee met quarterly throughout the lifespan of the project and included agendas with recorded minutes. A total of four meetings occurred providing project updates and eliciting feedback/comments from the members of the committee.

### **Study Time Line**

The study began in 2014 with project kick-off taking place May 1st, 2014 and took approximately 12 months to complete. Project milestones include the completion of a Technical Memorandum summarizing the selection of the proposed transit center locations, a TOD Market Study Assess-

ment evaluating the potential sites for supportive transit ridership, and two public workshops which took place on October 9th, 2014 and February 26th, 2015.

## **DOCUMENT OVERVIEW**

This report is organized to include the following sections:

- **Background:** An overview of applicable existing planning documents as it relates to the Bakersfield Transit Center Study.
- **Public Outreach:** A detailed description of the public workshop outreach efforts to elicit public input.
- **Suitable Transit Center Locations:** A detailed description of the transit center site selection process and the proposed transit center site locations.
- **TOD Market Study Assessment:** An overview of potential transit center site locations' market potential for TOD development.
- **Transit Center and TOD Evaluation:** An overview of the criteria used to evaluate site locations for their potential as a transit center and/or TOD development.
- **Conclusion and Recommendations:** A description of the results from the Bakersfield Transit Center Study with recommendations and next steps.

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# 3

## BACKGROUND

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The following section provides a review of applicable planning documents as it relates to the Bakersfield Transit Center Study. The planning documents consist of plans from Metropolitan Bakersfield and Kern Council of Governments. An overview of each document is provided highlighting its relevancy to a Bakersfield Transit Center. A complete description of these planning documents can be found in **Appendix B**.

### **METROPOLITAN BAKERSFIELD**

#### **Metropolitan Bakersfield General Plan**

The Metropolitan Bakersfield General Plan, adopted in 2002, provides comprehensive long range guidance to carry out the vision of the Bakersfield area. The circulation element outlines goals and policies for focus areas which include streets, transit, bikeways, parking, and airports. The goals for transit include:

- Provide planning area residents with a choice of travel nodes.
- Provide a street system and land development policies that support public transportation.
- Provide cost effective public transportation services.
- Reduce traffic congestion and parking requirements and improve air quality through improved transportation services.
- Enhance rail service capacities and usage in the planning area.

#### **Metropolitan Bakersfield Transit System Long-Range Plan**

The Kern Council of Governments (Kern COG) and the Golden Empire Transit District (GET) prepared the Metropolitan Bakersfield Transit System Long-Range Plan (LRP) in April 2012. The LRP reviews existing conditions, best practices, and public outreach to recommend (1) short-term and (2) midterm & long-term service plans. Additionally, the plan includes financial scenarios for the two service plans, identifies potential new funding sources, and provides an implementation plan.

The existing transit network includes two transit centers – Downtown Transit Center and Southwest Transit Center – with a third transit center at Bakersfield College currently under construction.

The Short-Term (2013-2020) service plan seeks to attract new riders by providing faster Bus Rapid Transit (BRT) and express services and provide high levels of transit service where demand is likely to be highest.

The Midterm (2021-2025) & Long-Term (2026-2035) service plans allow for a higher service network but implements a different type of network, a “grid” system. The grid system allows for transfers to be made at points throughout the system rather than at central Transit Centers requiring route deviations. As such, the Downtown Transit Center and Southwest Transit Center will be phased out for these service plans. The grid network, however, would be dependent on more frequent service, as transfers cannot be timed at many different locations.

### **Greater Bakersfield Vision 2020**

The Bakersfield Vision 2020 was created in 2001 from the efforts of more than 13,000 individuals including residents and local, state, and federal officials. The goal of the document is to provide a long-term vision and action plan for the community. A total of seven topics are covered, each including a set of strategies and specified actions necessary to carry out the vision.

As it relates to the Metropolitan Bakersfield Transit Center Study, the Transportation Vision includes a set of 11 strategies to carry out the Vision and states:

*“Greater Bakersfield is a community that is proud of its efficient, environmentally friendly transportation system that serves all areas of the community. As an international gateway with a modern airport, our community is connected to major cities within California through a high-speed rail system.”*

## **KERN COUNCIL OF GOVERNMENTS**

### **Kern COG Regional Blueprint Program**

The Regional Blueprint Program was adopted by Kern COG in 2008. The goal of the program was to create a mutual vision, create a set of guiding principles promoting the region’s unique quality of life, and formulate an alternative scenario of how the region could grow.

The program sought input through an extensive participatory program which reached out to the public, elected officials, and various organizations including public agencies and many others. Through a range of public participation opportunities, such as 34 town hall meetings, a total of nine principles were developed to provide guidelines for growth.

In addition, the blueprint program projected growth scenarios which were presented to the public. Based on the various growth scenarios and the input and feedback from the public, a preferred growth alternative was identified. As it relates to the Metropolitan Bakersfield Transit Center Study, this alternative scenario is used to develop various alternative options for growth and transportation systems.

## Kern COG 2014 Regional Transportation Plan and Sustainable Community Strategy

### Regional Transportation Plan

The 2014 Regional Transportation Plan (RTP) is a long-range plan which acts as a blueprint to establish a set of regional transportation goals, policies and actions to guide development of a multimodal transportation system in Kern County. In addition, the RTP provides a list of projects for 2014 through 2040 and beyond. A summary of these projects as they relate to the Metropolitan Bakersfield Transit Center Study are included in **Table 3**.

**Table 3 Summary of RTP Projects**

Location	Project Scope	YOE Cost (in dollars) <sup>1</sup>
<b>2014-2040 (Constrained Projects)<sup>2</sup></b>		
Metropolitan Bakersfield	3 Transfer Stations	15,000,000
Metropolitan Bakersfield	Park and Ride Lots (1,500 spaces)	6,000,000
Bakersfield	High Speed Rail Station – Bakersfield	50,000,000
Region	High Speed Rail Alignment and Facilities Fresno to Bakersfield	1,000,000,000
Region	Amtrak Station – Phase II	13,000,000
<b>Beyond 2035 (Unconstrained Projects)<sup>3</sup></b>		
Shafter, Bakersfield	Amtrak San Joaquin's stop in North/ West Bakersfield	5,000,000
Delano Shafter, Bakersfield	Up to 4 Amtrak San Joaquin's stops on BNSF	20,000,000
Buttonwillow, Southwest Bakersfield	Metro/Southwest Corridor	158,300,000
Arvin, Lamon, Southeast Bakersfield	Metro/Southeast Corridor	162,400,000
Wasco, Shafter, Northwest Bakersfield	Metro/Northwest Corridor	220,600,000
Bakersfield	Metropolitan Bakersfield Light Rail System	4,000,000,000
Kern, L.A. County	Northwest of Bakersfield to Palmdale HSR (initial operation segment from Madera to Palmdale Metrolink Service)	20,000,000,000
Source: Draft 2014 Kern COG Regional Transportation Plan		
1: YOE - Year of Expenditure		
2: Constrained Projects – Projects with identified funding source		
3: Unconstrained Projects – Projects which have no identified funding source		

### Sustainable Community Strategy

The goal of the Kern COG Sustainable Community Strategy (SCS) is to reduce greenhouse gas emissions from automobiles and light trucks to assist with the state's emissions reduction targets.

The Sustainable Community Strategy (SCS) is a required chapter of the Kern COG Regional Transportation Plan (RTP) and outlines how the region will meet the emission reduction targets.

Pertinent to the Metropolitan Bakersfield Transit Center Study the SCS chapter discusses place types (Transit Priority Areas – Metropolitan, Community, Town, and Village, and Strategic Employment



finding program, installing signs at key decision points along with confirmation signs that display destinations and mileage.

Finally, the Plan recommends the City undertake a feasibility study for a bike share system. Often seen as an extension of transit, bike share systems provide users with “on-demand” bicycles for fast and easy transportation, helping to complete the first- and last-mile dilemma faced by many transit riders. CSU Bakersfield and Bakersfield College are recommended to be considered for potential bike share stations.

### **Kern County Bicycle Master Plan and Complete Streets Recommendations**

The Kern County Bicycle Master Plan and Complete Streets Recommendations (October 2012) focuses on improving conditions for bicycling in the unincorporated areas of Kern County, including Metropolitan Bakersfield. In addition to proposed bicycle related improvements, this plan also presents recommendations for complete streets.

The recommended improvements for bicycle facilities include extending existing or planned facilities within the City of Bakersfield into the surrounding suburban and exurban developed areas, as well as developing regional bikeways to link communities in Kern County.

The recommended improvements for complete streets are general policy and guidance recommendations that describe common best practices in designing complete streets for pedestrians, bicyclists, transit users, and motorists. Connections between bicycling and transit are called out, noting the importance of providing secure bicycle parking at transit stops and offering clear route and schedule information.

## **RAIL PLANS**

### **California State Rail Plan**

In May of 2013 California Department of Transportation (Caltrans) produced the 2013 California State Rail Plan (CSRP). The goal of the CSRP is to establish a statewide vision and objectives, set priorities, and develop implementation strategies to enhance passenger and freight rail service in the public interest. The CSRP acts as a guide for federal and state rail investments and provides a comprehensive listing of long-range investment needs for California’s passenger and freight infrastructure.

The CSRP integrates the California High Speed Rail Authority’s (Authority) implementation plans, and the 2012 Revised Business Plan. Pertinent to the Metropolitan Bakersfield Transit Center Study, Bakersfield is among the first of many cities to be served by HSR. The 2012 Revised Business Plan outlines a blended approach, a key element to the implementation of the HSR system, which contains two phases. The first phase aims to connect San Francisco, the Central Valley, and Los Angeles/Anaheim with the use of a blended system of dedicated HSR and existing rail. The final phase will complete the statewide system by extending to Sacramento and San Diego.

### **Kern Commuter Rail Feasibility Study**

In July of 2012 Kern Council of Governments (Kern COG) developed the Commuter Rail Feasibility Study to evaluate potential commuter rail service within Metropolitan Bakersfield and the

surrounding areas of Kern County. The study identifies six potential commuter rail corridors which were screened based on a set of evaluation criteria (including socioeconomic data, costs, operations, etc.) using forecast year 2035 conditions to determine the “need” of the corridors. The results of this screening process identified two alternatives for ridership modeling.<sup>1</sup> Among these two alternatives, a preferred alternative was selected comprising of pieces from the Northwest and Southwest potential commuter rail corridors; running from Delano West through Downtown Bakersfield to the Frito-Lay plant.

The study findings indicated that limited implementation of a commuter rail service within Kern County can be recommended only if conditions are present. These conditions are highly dependent on the implementation and construction of the California High Speed Rail (HSR) project; ridership projections without the California HSR were found to be too low to justify implementation. The study concludes that if the California High Speed Rail Services are implemented before 2035, there may be potential for justification for Kern COG to implement limited commuter rail services between Delano and Bakersfield, and perhaps to locations south of Bakersfield in Arvin and Buena Vista.

### Kern Transit Operational Reports

Kern Transit provides bus service to Metropolitan Bakersfield with seven bus routes. The bus routes, days of service, service areas, and total maximum riders are highlighted below. The total maximum bus riders does not provide ridership, however, it does provide some indication of which routes are used more heavily (Table 4).

Table 4 Kern Transit Bus Operations

Route	Days of Operation	Service Areas	Total Maximum Bus Riders <sup>1</sup>		
			Weekday	Saturday	Sunday
East Kern Express	Monday - Sunday	Bakersfield, Keene, Tehachapi, Mojave, Rosamond, and Lancaster	654	665	674
Frazier Park	Monday - Saturday	Bakersfield, Gorman, Pinon Pines, Lake of the Woods, Lebec, and Frazier Park	112	115	--
Kern River Valley	Monday - Saturday	Kernville, Lake Isabella, Onyx	140	149	--
Lamont/ Bakersfield	Monday - Saturday	Bakersfield, Lamont, Weedpatch, Arvin	531	301	--
Lost Hills	Thursday and Saturdays	Bakersfield, Shafter, and Wasco, Lost Hills	62	34	--
North Kern Express	Monday - Sunday	Bakersfield, Shafter, Wasco, McFarland, and Delano	365	493	301
Westside Express	Monday - Saturday	Bakersfield, Taft Heights, Ford City, and Taft	351	189	--

1: Total of the maximum number of riders on the bus at each stops for all trips throughout the day

<sup>1</sup> The ridership model was developed based on a model used for the Altamont Commuter Express (ACE)

## **OTHER APPLICABLE DOCUMENTS**

### **Charlotte Region Transit Station Area Joint Development**

As it relates to the Metropolitan Bakersfield Transit Center Study, the Charlotte Region Transit Station Area Joint Development provides an example of principles and policy guidelines for transit station development.

To ensure long-term success in the establishment of an extensive rapid transit system in the Charlotte region of North Carolina, the Transit Station Area Joint Development Principles were adopted in 2002. The goal of the principles was “to provide a framework to be used by local governments to encourage and promote transit supportive development at transit stations.” As a means to implement the principles a set of policy guidelines were provided to act as tools for implementation.

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# 4

## **PUBLIC OUTREACH**

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In coordination with Kern COG and members of the steering committee, public outreach efforts were conducted. These outreach efforts included a focus on engaging stakeholders and the general public in the planning process and providing them with multiple opportunities to participate. These efforts included public workshop meetings, online surveys, and additional outreach at various public engagement events; all printed material presented at public events were provided in both English and Spanish.

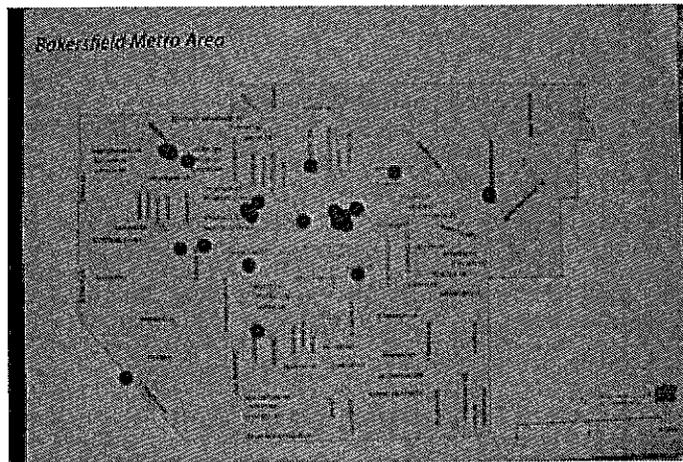
### **PUBLIC WORKSHOP**

The project team conducted two public workshops throughout the duration of the project. The first of the two workshops engaged stakeholders and members of the general public with an open discussion of transit centers, their role within Metropolitan Bakersfield, and opened initial discussion of potential site locations. The last of the two workshops presented initial site selections to elicit feedback and opened discussion to additional site locations outside of the initial sites. In addition, these same exercises were conducted at the Third Thursday's Public Fairs held at Central Park during the Fall and at the annual GIS Day conference held in November 2014.

### Public Workshop 1

The first public workshop was held on October 9<sup>th</sup>, 2014 and introduced the project to stakeholders and members of the public. In addition to a presentation on transit centers, surveys were conducted and attendees were given the opportunity to discuss and recommend potential site locations; the survey was also made available online for 30 days to enhance outreach efforts. Survey respondents were given the opportunity to provide initial comments on the project, components they would like to see in the transit center, and location preferences.

A full description of the survey results are found in **Appendix C**. The survey resulted in a total of 26 responses. As it relates to the Metropolitan Bakersfield Transit Center Study, the top two site locations included Downtown and California State University Bakersfield. Additionally, the top preference for amenities was a bicycle rack, indicating the desire for a multi-modal transit center. Photos from the workshop are shown below.

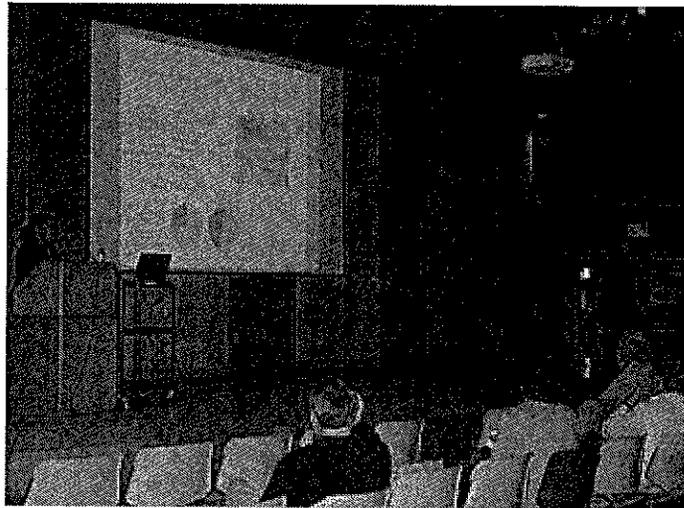
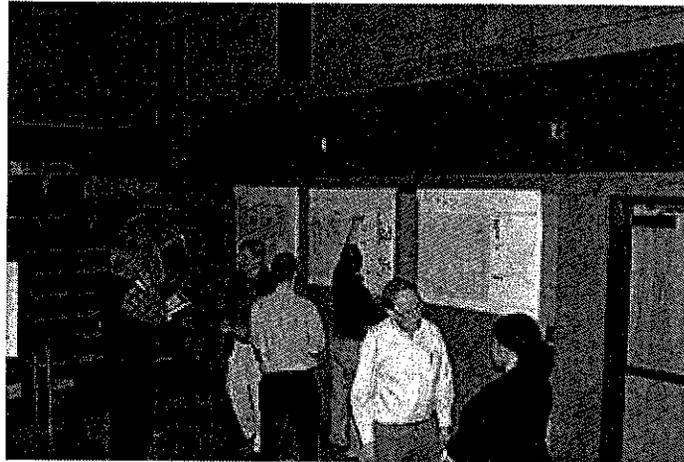


*Photos from Public Workshop 1*

## Public Workshop 2

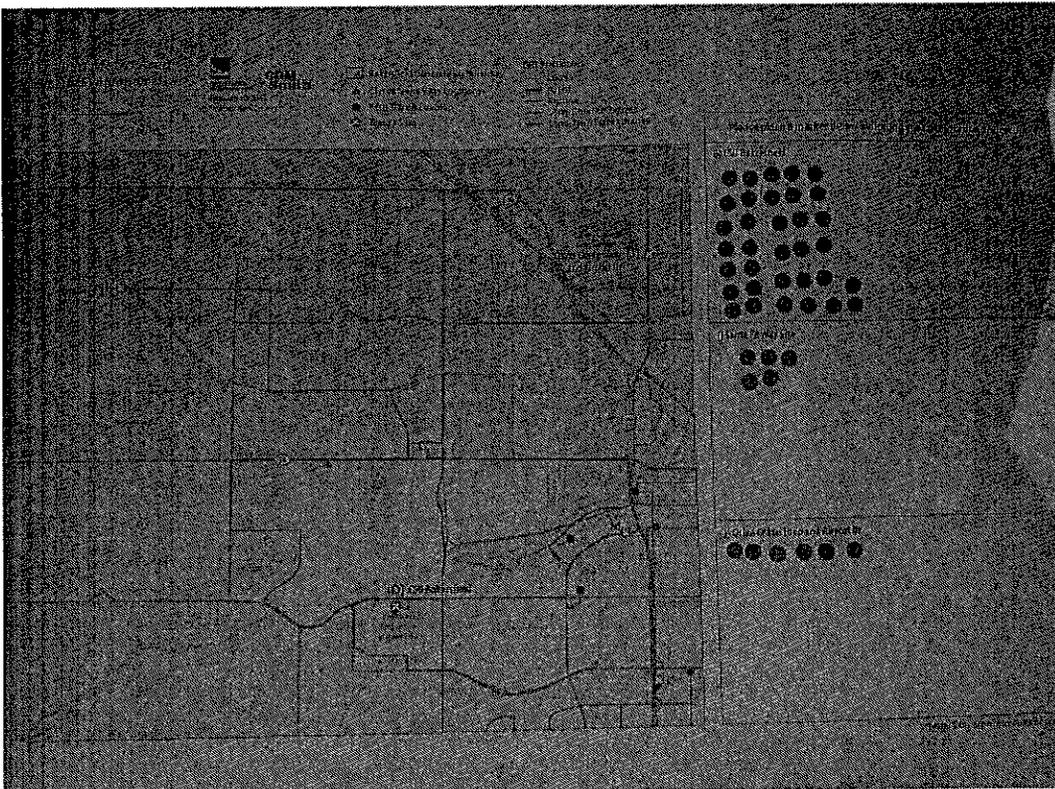
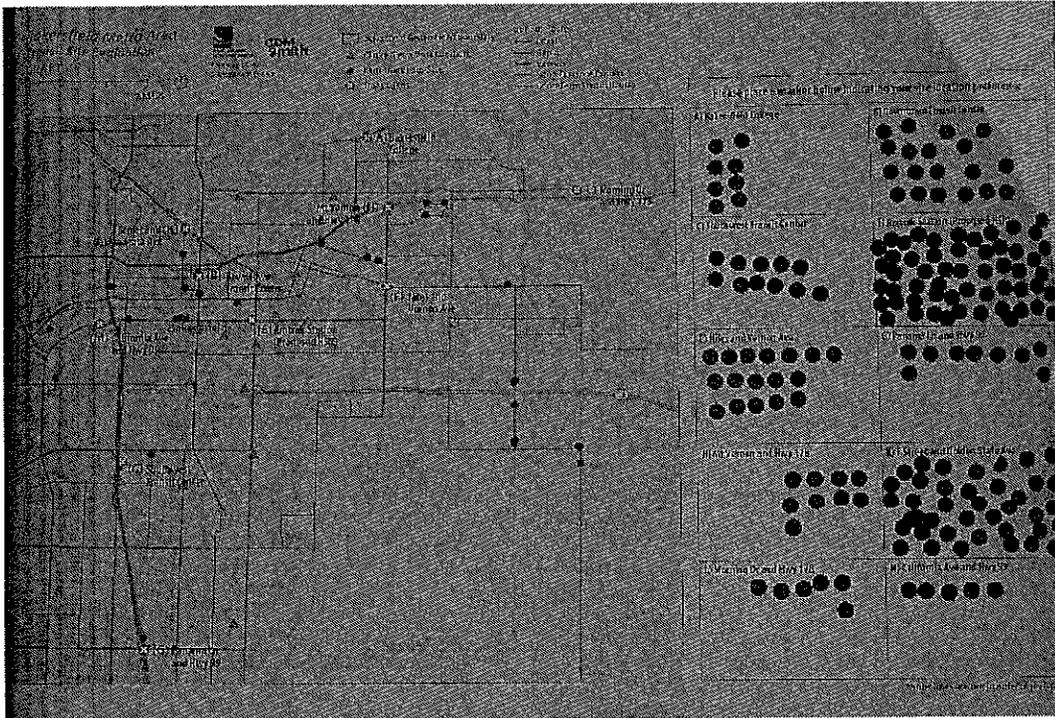
The second public workshop was held on February 26<sup>th</sup>, 2015 and presented potential site locations to stakeholders and members of the public. Following a presentation of the potential site locations, attendees were given an opportunity to indicate their transit center site location preference through a sticker exercise. The sticker exercise allowed attendees to place five stickers to site locations at their preference. In addition, attendees were asked to complete a paper survey also indicating their site location preference. A full description of the survey results are found in **Appendix D**.

The top three site location preferences (see **Figure 4**) from the sticker exercise included the Amtrak Station, F Street/ Golden State Avenue, and California State University Bakersfield; the top three site location preferences from the survey included the Amtrak Station, Downtown, and California State University Bakersfield.



*Photos from Public Workshop 2*

Figure 4 Public Workshop 2 Results



# 5

## SUITABLE TRANSIT CENTER LOCATIONS

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This section summarizes the selection process of proposed transit center site locations for the Metropolitan Bakersfield area. Through the analysis and evaluation of planning documents, existing demographics, projected population and employment, and public input, a total of ten primary and five secondary site locations were identified. A Technical Memorandum (see **Appendix E**) was prepared describing the methodology behind the selection of the potential site locations and a detailed description of each site location.

### PRIMARY SITE LOCATIONS

Proposed transit center locations were based on several factors including the plans and goals outlined in the Bakersfield Transit System Long-Range Plan (LRTP), the City of Bakersfield Bicycle Transportation Plan, California High Speed Rail Station Area Plans, existing and planned transit routes, land uses and demographics of surrounding potential sites, first and last mile connections, potential for TOD, and population and employment growth trends; additionally, public outreach was conducted (discussed further in the next section).

A total of ten sites were identified including existing and proposed locations (shown in **Figure 5**). Each site is described in further detail in the following section; sites are not listed in order of priority.<sup>2</sup> Existing transit center locations are included for a baseline comparison against potential future locations and for evaluating the potential for Transit Oriented Development (TOD). It is important to note, two locations (California High Speed Rail Station, and F Street and Golden State Avenue) were initially identified as primary site locations but have since been under consideration by the California High Speed Authority as potential High Speed Rail sites and are thus not under analysis as a potential site for the Bakersfield Transit Center Study. The primary sites include:

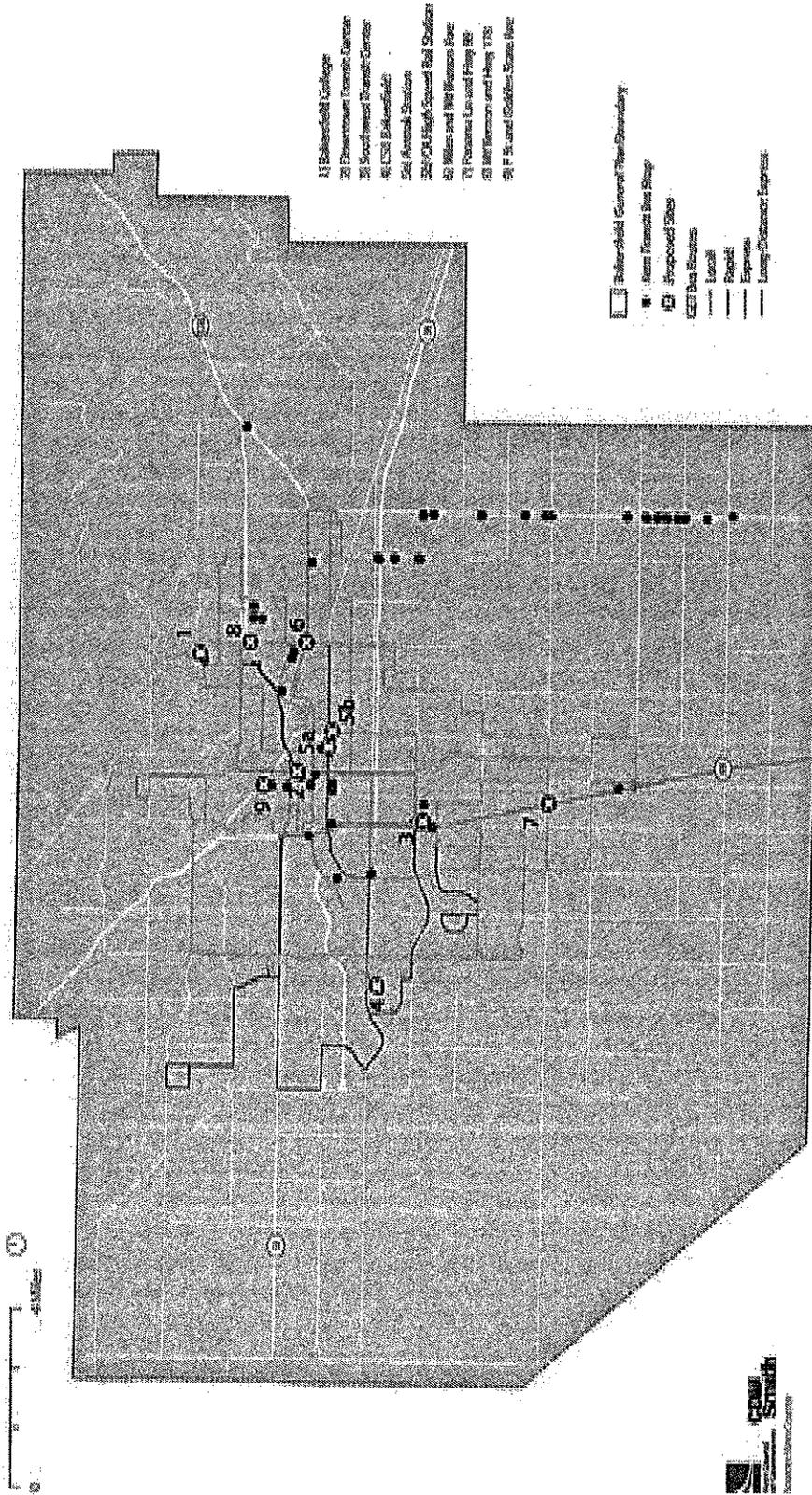
- **Bakersfield College:** North of campus along Panorama Drive.

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<sup>2</sup> To provide an example of the level of analysis conducted in the Technical Memorandum, the Southwest Transit Center and the Niles and Mt. Vernon Avenue sites include detailed charts and figures.

- **Downtown Transit Center:** Existing Transit Center along Chester Avenue between 22nd and 21st Streets.
- **Southwest Transit Center:** Existing Transit Center along Wible Road adjacent to the Valley Plaza Mall.
- **California State University Bakersfield:** Planned Transit Center in the Bakersfield LRTP.
- **Amtrak Station (without HSR):** Existing Transit Center providing regional access with Amtrak.
- **California High Speed Rail Station (with HSR):** Potential Transit Center site providing regional access with Amtrak/HSR.
- **Niles and Mt. Vernon Avenue:** Potential Transit Center site located in eastern Bakersfield.
- **Panama Lane and Hwy 99:** Potential Transit Center site located in southern Bakersfield.
- **Mt. Vernon Avenue and Highway 178:** Potential Transit Center site located in northeastern Bakersfield.
- **F Street and Golden State Avenue:** Potential Transit Center site located north of Downtown Bakersfield.

Figure 5 Proposed Site Locations



Demographic and land uses surrounding the transit center sites are shown below in **Tables 5 and 6**. The demographic assessment focused on transit dependent users such as low-income, minority, youth, senior, and households with no vehicles; high concentrations were criteria for site recommendation. Surrounding land uses are also vital to support a transit center, as the immediate adjacent area's ability to attract and/or produce activity offer ridership for a transit center.

**Table 5 Existing Demographics**

Site	Description	Total Population	Total Households	Low-Income Population	Minority Population	Youth Population	Senior Population	Households with No Vehicle
Quarter Mile (Existing)								
1	Bakersfield College	206	85	87 (42%)	102 (50%)	38 (18%)	40 (19%)	2 (2%)
2	Downtown Transit Center	180	63	113 (63%)	94 (53%)	24 (13%)	15 (8%)	18 (29%)
3	Southwest Transit Center	1,000	313	515 (52%)	516 (52%)	417 (42%)	84 (8%)	20 (7%)
4	Cal State Bakersfield	201	87	64 (32%)	52 (26%)	19 (10%)	14 (7%)	9 (10%)
5a	Amtrak Station	258	102	195 (75%)	168 (65%)	53 (21%)	34 (13%)	36 (36%)
5b	HSR Station	388	117	251 (65%)	201 (52%)	80 (21%)	39 (10%)	34 (29%)
6	Niles and Vernon Ave	2,069	588	1368 (66%)	1012 (49%)	743 (36%)	72 (3%)	162 (28%)
7	Panama Ln and Hwy 99	1,077	259	610 (57%)	530 (49%)	360 (33%)	51 (5%)	18 (7%)
8	Vernon Ave and Hwy 178	1,245	391	657 (53%)	554 (45%)	403 (32%)	146 (12%)	60 (15%)
9	F St and Golden State Ave	310	121	118 (38%)	94 (30%)	64 (21%)	33 (11%)	23 (19%)
Half Mile (Existing)								
1	Bakersfield College	1,493	552	548 (37%)	505 (34%)	345 (23%)	238 (16%)	28 (5%)
2	Downtown Transit Center	1,156	496	699 (60%)	519 (45%)	168 (15%)	111 (10%)	106 (21%)
3	Southwest Transit Center	4,681	1448	2590 (55%)	2126 (45%)	1750 (37%)	405 (9%)	133 (9%)
4	Cal State Bakersfield	1,021	415	284 (28%)	309 (30%)	174 (17%)	101 (10%)	40 (10%)
5a	Amtrak Station	2,440	700	1660 (68%)	1119 (46%)	475 (19%)	268 (11%)	175 (25%)
5b	HSR Station	2,904	740	1910 (66%)	1174 (40%)	623 (21%)	240 (8%)	137 (19%)
6	Niles and Vernon Ave	6,790	1780	4490 (66%)	3435 (51%)	2609 (38%)	276 (4%)	527 (30%)
7	Panama Ln and Hwy 99	4,262	1062	2329 (55%)	2065 (48%)	1414 (33%)	225 (5%)	58 (5%)
8	Vernon Ave and Hwy 178	5,263	1682	2530 (48%)	2174 (41%)	1588 (30%)	594 (11%)	201 (12%)
9	F St and Golden State Ave	2,173	849	1108 (51%)	695 (32%)	468 (22%)	209 (10%)	158 (19%)

**Table 6 Projected Demographics**

Site	Description	Population				Employment			
		Base	2020	2035	2040	Base	2020	2035	2040
<b>Quarter Mile (Projected)</b>									
1	Bakersfield College	71	70	237	315	420	437	452	454
2	Downtown Transit Center	274	2,267	2,469	2,486	3,511	3,548	5,249	5,279
3	Southwest Transit Center	620	704	2,007	2,009	1,753	1,767	4,377	4,377
4	Cal State Bakersfield	32	32	86	122	674	679	711	679
5a	Amtrak Station	163	788	1,227	1,228	3,998	5,569	7,290	7,293
5b	HSR Station	211	393	666	666	1,117	2,265	4,030	4,036
6	Niles and Mt. Vernon Ave	1,972	1,972	2,059	2,247	54	57	57	95
7	Panama Ln and Hwy 99	122	161	343	343	365	39	39	39
8	Mt. Vernon Ave and Hwy 178	842	850	880	1,001	785	695	695	695
9	F St and Golden State Ave	424	362	380	424	978	1,044	2,393	2,693
<b>Half Mile (Existing)</b>									
1	Bakersfield College	1,223	1,266	2,179	2,450	1,183	1,224	1,249	1,292
2	Downtown Transit Center	1,137	6,827	7,649	7,760	11,627	11,710	20,837	20,986
3	Southwest Transit Center	4,481	4,378	7,862	7,928	3,628	3,496	9,553	9,638
4	Cal State Bakersfield	508	556	894	1,073	2,437	2,464	2,464	2,464
5a	Amtrak Station	1,499	5,898	7,404	7,512	9,746	12,407	17,351	17,365
5b	HSR Station	1,630	4,038	5,777	5,823	8,448	11,103	16,401	16,441
6	Niles and Mt. Vernon Ave	6,769	6,785	7,110	8,017	612	627	631	772
7	Panama Ln and Hwy 99	3,324	4,441	7,345	7,345	656	846	1,113	1,171
8	Mt. Vernon Ave and Hwy 178	4,128	4,053	4,494	5,868	2,124	2,069	2,069	2,069
9	F St and Golden State Ave	1,952	2,123	2,232	2,913	3,494	3,598	8,330	9,079

While the Technical Memorandum evaluates various existing and projected demographics, the following are presented to provide examples of the analysis conducted. Low-Income Population, Projected 2040 Population and Employment, and existing transit maps are shown in **Figures 6, 7, 8 and 9**.

Figure 6 Low-Income Population by TAZ



Figure 7 Projected 2040 Population by TAZ



Figure 8 Projected Employment by TAZ

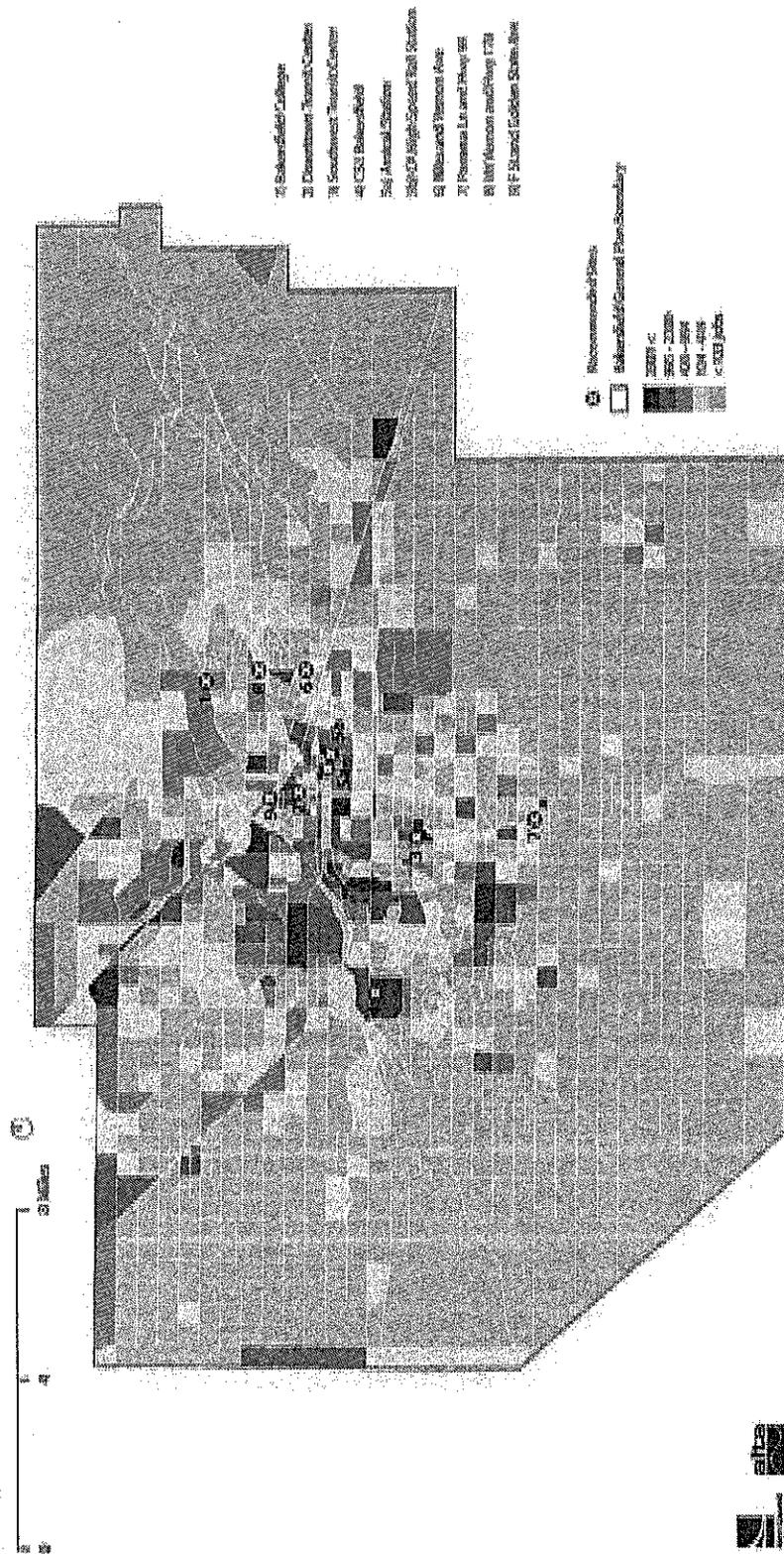
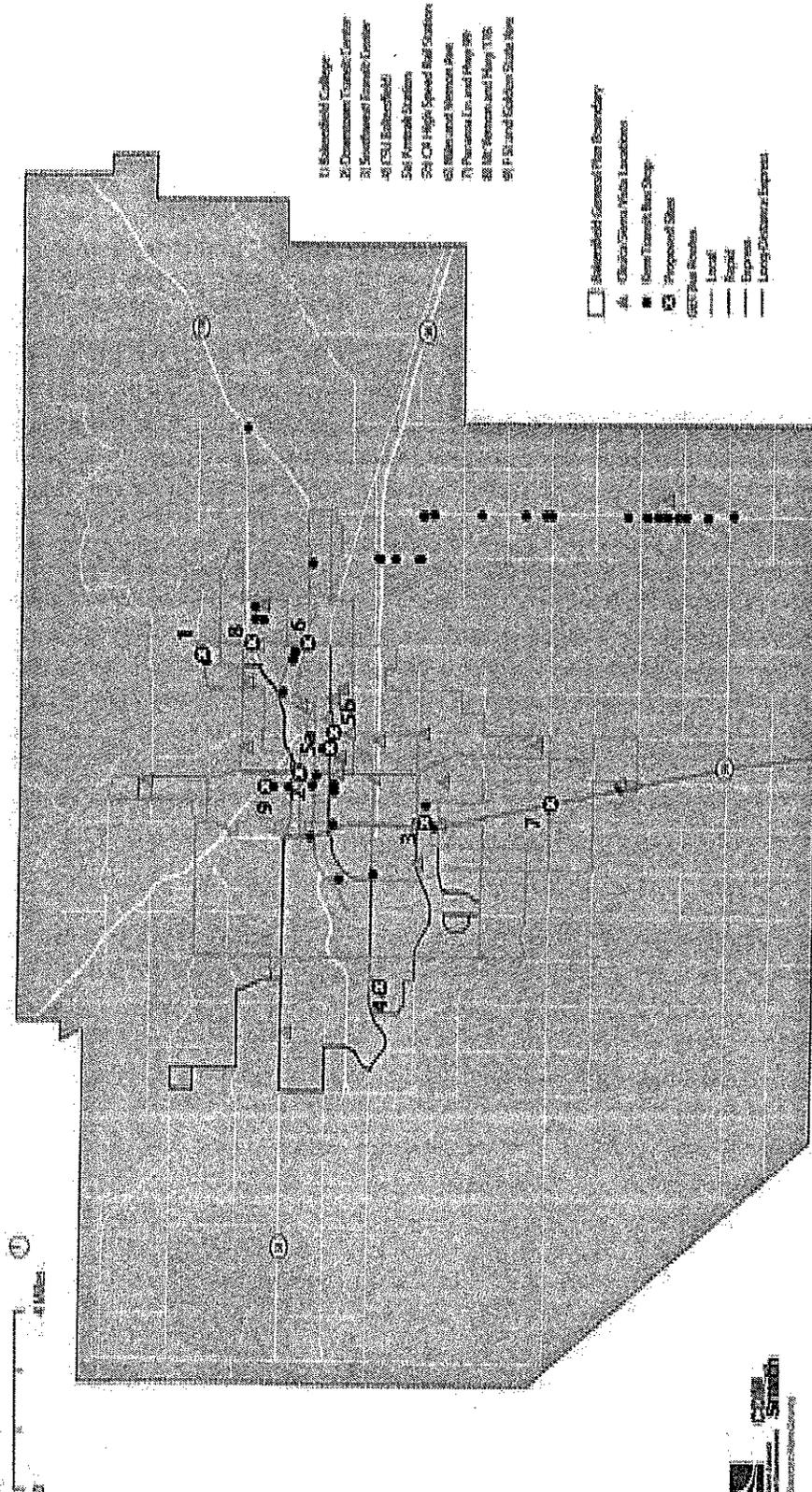


Figure 9 Existing Transit



## Bakersfield College

The Bakersfield College site location is an existing transit center site with access to GET and Kern Transit bus service. The site has been identified in the Bakersfield LRTP as a location planned for fast and frequent service enhancing the site's ability to be a suitable transit center site; additionally, expanded bicycle access is provided with plans for additional future routes. The site also exhibits moderately high populations of two of the five transit dependent populations (low-income and minority) with moderately high employment in the short-term (2020) and long-term (2040).

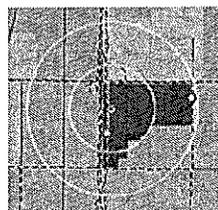
## Downtown Transit Center

While the Downtown Transit Center site location is identified in the Bakersfield LRTP as an existing transit center that would be phased out in the midterm (2021-2025) and long-term (2026-2035) service plans, the site itself can be utilized for potential Transit Oriented Development (TOD). The site includes access to transit through several GET and Kern Transit bus routes and a high amount of surrounding mixed-use land use; additionally, the site is within close proximity of the Bakersfield Amtrak station providing statewide access. Population is also anticipated to become significantly denser in the short-term and continue to grow in the long-term.

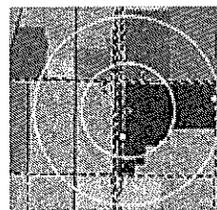
## Southwest Transit Center

The Southwest Transit Center is also identified in the Bakersfield LRTP as a transit center that will be phased out in the midterm (2021-2025) and long-range (2026-2035) service plans, similar to the Downtown Transit Center. Also similar to the Downtown Transit Center site, the Southwest Transit Center site can be utilized for TOD potential. The site includes access to transit through several GET and Kern Transit bus routes and is located adjacent to the Valley Plaza shopping mall enhancing TOD potential. However, the Valley Plaza shopping mall currently has several large retailers on the site, a relocation to the south could optimize TOD potential by providing higher variety in dense land uses. The site is also suitable with high concentrations of employment expected in the short-term (2020) and those projections will more than double by the long-term (2040), further supporting transit center and TOD activity. Existing land uses and employment projections are shown below. To provide an example of the level of analysis conducted for the Technical Memorandum, existing land uses and employment projections are shown below.

Employment 2020



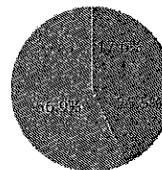
Employment 2040



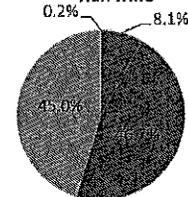
Land Use

- Federal/State Land
- Public Use
- Public/Resources
- Residential
- Mixed Use
- Retail/Service
- Service/Office
- Production/Service/Warehouse

Quarter Mile



Half Mile



### **California State University Bakersfield**

The California State University Bakersfield site location has been identified in the Bakersfield LRTP as a planned transit center and provides existing access with a ¼ mile to GET and Kern Transit bus routes. The bicycle access for the site is highlighted with existing and proposed routes planned in the City of Bakersfield Bicycle Transportation Plan. In addition, the Bicycle Transportation Plan also recommends this site as a potential bike share location supporting multi-modal access. Although the site does not observe a high concentration of transit dependent populations, usage will still occur as the University creates high trip attraction. Lastly, existing and projected demographics show employment is high and is anticipated to remain high in the short-term and long-term.

### **Amtrak Station**

The Amtrak Station is included as a site location due to its regional access. Amtrak users have access to GET and Kern Transit bus routes and bicycle routes. The site is also under consideration by the California High Speed Rail Authority and is located immediately south of the Amtrak Station further enhancing the station's access. The site was selected for short-term implementation until the HSR station is implemented. Improvements to the station include the enhancement of bicycle facilities as planned in the City's Bicycle Transportation Plan and Kern COG 2014 Regional Transportation Plan. Additionally, the site provides TOD opportunity as it is surrounded with a growing high concentration of employment and a mix of supporting land uses in the adjacent areas; high amounts of transit dependent populations are also observed including low-income and minority populations and households with no vehicles.

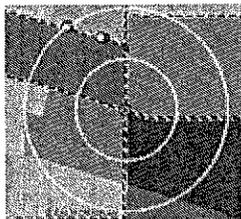
### **HSR Station**

The HSR Station site is included as a site location due to its connectivity to the planned California HSR system for regional access. Local access is provided through GET and Kern Transit bus routes. Additional access is provided with existing and planned future bicycle routes as identified in the City's Bicycle Transportation Plan. The HSR Station site was selected for long-term implementation and is dependent on the implementation of a HSR station at the site location. The surrounding demographics indicate a high concentration of transit dependent populations including low-income, minority, and households with no vehicle with employment density expected to drastically intensify by long-term year 2040.

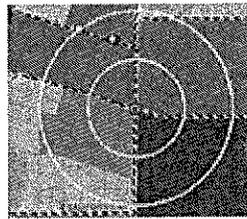
**Niles and Mt. Vernon Avenue**

Parcels immediately adjacent to the intersection of Niles Street and Mt Vernon Avenue are shown to exhibit suitable factors for a transit center. Existing site location provides access to GET and Kern Transit bus services and will be enhanced with multimodal access with planned future bicycle routes as identified in the City’s Bicycle Transportation Plan. The demographics surrounding the site support the transit center as it is densely populated with transit dependent users. And while the land use surrounding the site is primarily residential and does not allow for mixed-use development, this dense population of transit dependent users allows this site to be an ideal location for a transit center and has potential for TOD.

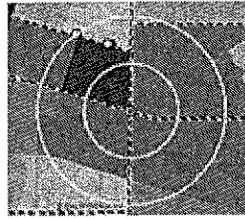
Population 2020



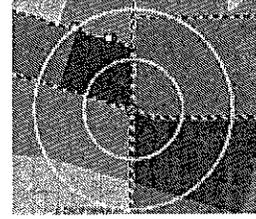
Population 2040



No Vehicle HH's



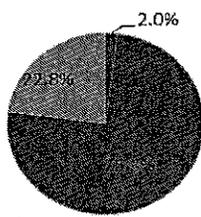
Youth Population



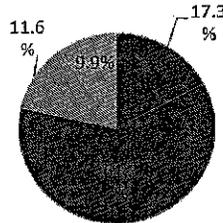
Land Use

- Federal/State Land
- Public Use
- Public/Resources
- Residential
- Mixed Use
- Retail/Service
- Service/Office
- Production/Service/Warehouse

Quarter Mile



Half Mile



**Panama Lane and Highway 99**

The Panama Lane and Highway 99 site location is found outside the center of Metropolitan Bakersfield and capitalizes on projected growth. Population density between the short-term and long-term years are expected to double with a moderately high amount of transit dependent users. Access is provided with GET and Kern Transit bus routes and access will be enhanced with proposed future bicycle routes as identified in the City’s Bicycle Transportation Plan. The site location can improve upon existing accessibility for transit dependent users and assist with population growth between short and long-term years.

**Mt. Vernon Avenue and Highway 178**

South along Mount Vernon Avenue at the intersection of Highway 178 is a site location suitable for a transit center and potentially eligible for TOD. Regional access is provided with GET bus service and multimodal access is provided with existing and future bicycle routes. Adjacent population densities are anticipated to remain relatively consistent between short and long-term years, however, moderately high amounts of transit dependent populations are present to provide support for a transit center. The land uses for the site are primarily retail and residential with a mixture of public

use, and while mixed-use is not observed, the nearby East Hills Shopping Mall and the concentration of transit dependent populations enhance the site's potential to become eligible for TOD.

### **F Street and Golden State Avenue**

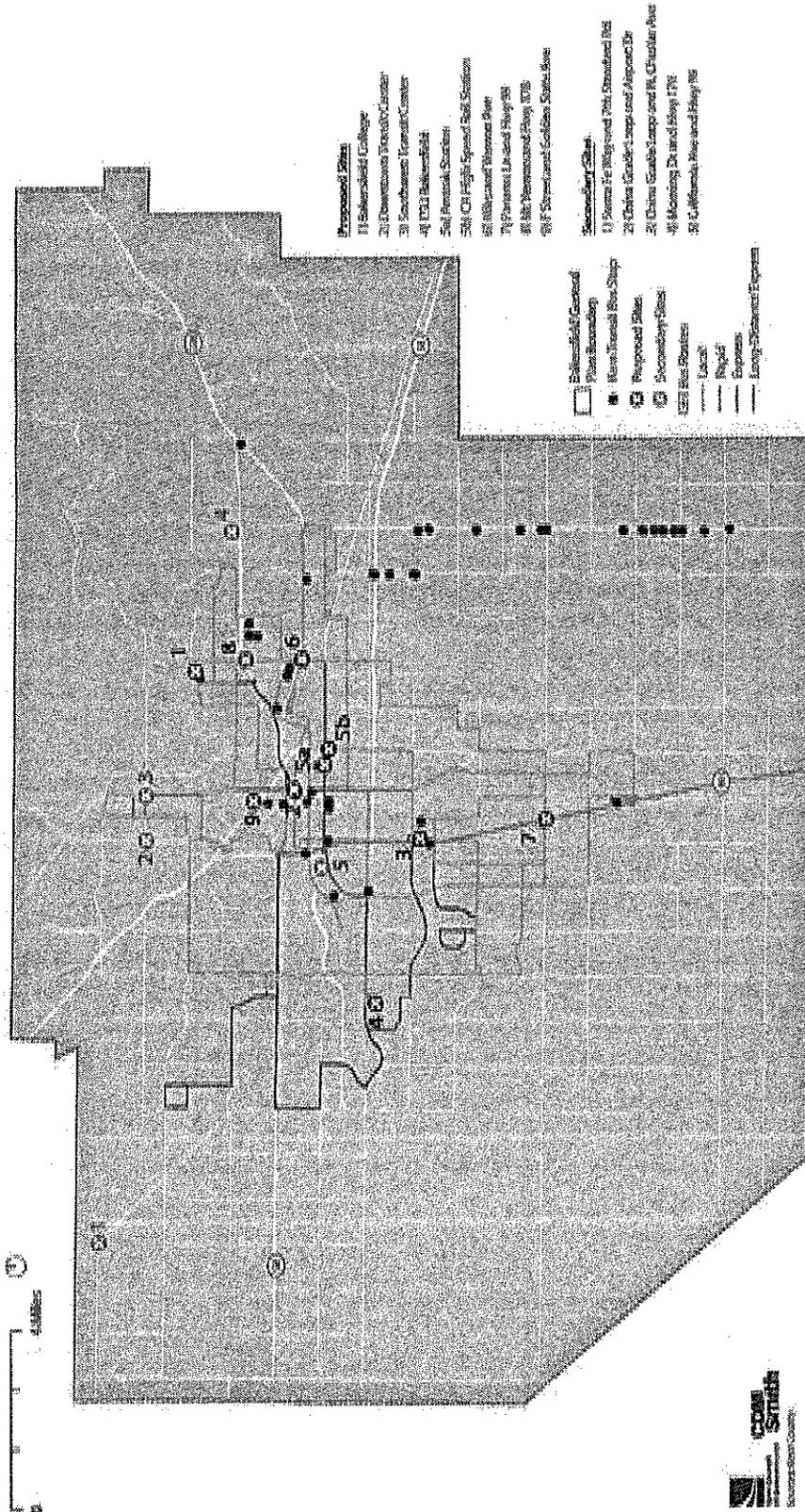
North of Downtown Bakersfield at the intersection of F Street and Golden State Avenue is a site location for a potential transit center. The surrounding area contains a high amount of retail/service land use within walking distance from the site providing support for a transit center. Access is provided with GET and Kern Transit and existing and planned future bicycle routes proposed in the City's Bicycle Transportation Plan. While there is not a not a high concentration of existing transit dependent populations, employment projections are anticipated to triple by long-term year 2040. This transit center can assist with the anticipated employment growth by providing multi-modal access to nearby future employment centers.

### **SECONDARY SITE LOCATIONS**

Throughout the outreach process, which included general public outreach and meetings with stakeholders and steering committee members, additional secondary sites were identified. These locations were not included as recommended sites due to their limited use patterns, population, employment, or other transit dependent factors, reducing the site's ability to support a transit center or TOD site. However, should any of these factors unexpectedly increase; these sites have the potential to become ideal locations for a transit center or TOD site. A total of seven locations were identified as shown in **Figure 10** and include:

- Santa Fe Way and 7th Standard Road
- China Grade Loop at Airport Drive
- China Grade Loop at North Chester Avenue
- Morning Drive and Highway 178
- California Avenue and Highway 99

Figure 10 Secondary Site Locations



# 6

## TOD MARKET STUDY ASSESSMENT

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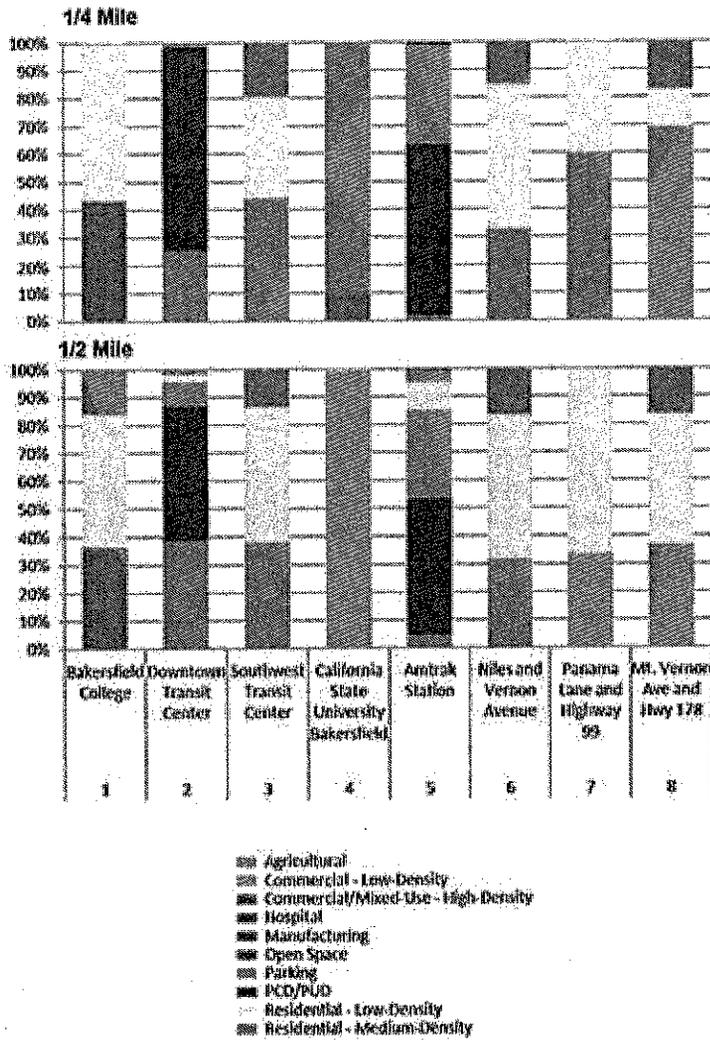
This section provides a summary of the Market Study Assessment conducted for the Bakersfield Transit Center Study to assess the TOD potential of the potential site locations. The objective of this study is to optimize the future location of the Transit Center by identifying areas within Kern County where land use and demographic characteristics will be supportive of transit ridership. Each of the potential site locations are located in Transit Priority Areas, as identified in the Sustainable Communities Strategy (SCS), ensuring the proposed site locations are aligned with the goals outlined in the SCS section of the 2014 Kern COG Regional Transportation Plan.

The Market Study evaluates three sections including projected market demand, zoning analysis, and TOD market feasibility. The complete market study assessment can be found in **Appendix F**.

### ZONING ANALYSIS

The zoning analysis is an analysis of the quarter-mile and half-mile areas around station sites to determine the types of development that are currently permitted by the City and to assess the compatibility of those permitted uses with TOD (**Figure 11**). Each of the potential sites were evaluated for opportunities and constraints observed in the distribution and types of zoning and/or land uses, development densities associated with each use, existing street/block characteristics for level of walkability, and physical site conditions. Results of this analysis found that majority of the site locations currently allow low-density commercial and residential uses with high-density mixed-used development isolated to the downtown area; indicating sites such as the Downtown Transit Center Site and the Amtrak station have the highest TOD potential.

Figure 11 Zoning Distribution<sup>3</sup>



### TOD MARKET FEASIBILITY

The TOD market feasibility section of the Market Study Assessment evaluated the potential site locations for their ability to accommodate a TOD-compatible building. These TOD-compatible buildings included townhomes, mid-rise apartments, low/mid-rise offices, and mixed use establishments with ground floor retail or medical offices. Site locations' ability to accommodate these TOD-compatible buildings were based on several factors including existing rents, vacancy rates, and capitalization rates. Total development costs per square foot (PSF), including construction, land, and other "soft" costs, were compared against the imputed sale price PSF. A total of three possible scores were assigned to each TOD-compatible building at each of the transit center site locations – feasible, marginal feasibility, and not feasible (Table 7).

<sup>3</sup> The California High Speed Rail Station is currently under investigation by the Authority and is not considered a potential site location. The California Avenue and Hwy 99 site was determined to be a secondary site location and not considered a primary potential site location.

**Table 7 TOD Market Feasibility Criteria**

Score	Definition
Feasible	Total PSF development costs < imputed sale price PSF
Marginal Feasibility	Total PSF development costs < 120 percent of the imputed sale price PSF
Not Feasible	Total PSF development costs > imputed sale price PSF

The results from the market feasibility analysis (Table 8) generally show limited near-term opportunities for new construction of TOD-compatible building at the transit center site locations. Among the transit center sites, CSU Bakersfield, Southwest Transit Center, and the Panama Lane and Highway 99 sites exhibit markets which could support TOD development. While the Southwest Transit Center may be supportable of new housing and retail development, CSU Bakersfield offers the more supportive real estate markets with the university’s ongoing expansions, low vacancy rates, and correspondingly higher property values. Finally, the Panama Lane and Highway 99 site displays a strong market for new retail development; over the long term, office-based employment growth is projected to generate sufficient retail demand for a major new shopping center in excess of 100,000 square feet.

**Table 8 TOD Market Feasibility Results<sup>4</sup>**

Site	TOD Building Typology					
	Townhome	Apartment	Medical Office	Office	Office	Retail Store
	3 Story	4-7 Story	1 Story	2-4 Story	5-10 Story	1 Story
1 Bakersfield College	NF	NF	NF	N/A	N/A	M
2 Downtown Transit Center	NF	NF	NF	NF	NF	NF
3 Southwest Transit Center	M	NF	N/A	NF	NF	M
4 CSU-Bakersfield	M	NF	M	M	M	NF
5 Amtrak Station	NF	NF	NF	NF	NF	NF
6 Niles/Vernon Avenue	NF	NF	N/A	NF	NF	NF
7 Panama Lane/Hwy 99	NF	NF	N/A	NF	NF	F
8 Mt. Vernon Ave/Hwy 178	NF	NF	N/A	N/A	N/A	NF

**PROJECTED MARKET DEMAND**

The projected market demand section of the Market Study consists of two components, the potential for new development located at the transit center site itself, and projected market demand for development through 2040 in a half-mile radius from the station site.

Many new transit centers are being designed to capitalize upon the level of foot traffic taking place at transit centers with the use of retail establishments. For the potential site locations, demand for retail space was determined based on 2013 boarding/alighting statistics from existing local and regional GET and Kern Transit bus routes, Amtrak rail and bus service, and future California HSR service. These ridership statistics were used to estimate the annual level of on-site passenger spending which can take place while waiting or transferring at a transit center. The results from this

<sup>4</sup> Notes: F – Feasible; NF – Not Feasible; M – Marginally Feasible; N/A – Market Data Unavailable

analysis indicate all sites are capable of supporting retail formats which include carts and/or kiosks offering food and beverage items; only the Amtrak station indicated sufficient ridership levels to support higher amounts of retail space, such as food service and convenience shops.

As part of the projected market demand section, a TOD market area assessment evaluated the market demand from a half-mile radius from the station sites for residential, retail, and office development through 2040 (see **Table 9**). Residential development around the sites is anticipated to be relatively low, as the sites capture approximately 0.2 to 1.8 percent of the anticipated 107,311 new households between 2015 and 2040. While short term (2015 - 2020) retail development is limited to the Downtown Transit Center site as being the only site capable of supporting a shopping center, in the long-term (2020 and beyond) it is expanded to include the Southwest Transit Center, Amtrak Station, and Panama Lane and Hwy 99 in addition to the Downtown Transit Center site. Office development is anticipated to be isolated to the downtown area, limiting development to sites such as the Downtown Transit Center and Amtrak Station.

**Table 9 Projected Market Demand (Half-Mile)**

Site Location	Residential Demand (Units)			Retail Demand (sq. ft.)			Office Demand (sq. ft.)		
	Short Term	Long Term	Total	Short Term	Long Term	Total	Short Term	Long Term	Total
Bakersfield College	10	440	450	600	35,900	36,500	2,400	9,600	12,000
Downtown Transit Center	1,550	410	1,960	108,000	80,000	188,000	4,900	1,308,800	1,313,700
Southwest Transit Center	0	1,100	1,100	0	140,900	140,900	0	866,600	866,600
CSU Bakersfield	10	220	230	700	15,500	16,200	1,600	0	1,600
Amtrak Station	1,040	650	1,690	82,500	76,200	158,700	140,900	699,600	840,500
Niles and Vernon Avenue	10	330	340	200	37,800	38,000	900	20,500	21,400
Panama Lane and Hwy 99	130	730	860	15,500	88,900	104,400	10,000	45,900	55,900
Mt. Vernon Ave and Hwy 178	240	520	760	19,600	42,800	62,400	0	0	0

## CUMULATIVE ASSESSMENT OF STATION SITE TOD POTENTIAL

Overall, the eight potential transit center site locations were ranked according to TOD potential ranging from “very low” to “high” (see **Table 10**) based on a cumulative assessment of the criteria used throughout the TOD Market Study Assessment, including:

- Opportunities and constraints observed in the distribution and types of zoned uses;
- Implied allowable development densities associated with each zoning and use classification;
- Existing street block characteristics/level of walkability;
- Other relevant physical site conditions;
- Near-term market feasibility; and
- Projected market demand for residential, retail, and office uses.

**Table 10 Zoning Potential for TOD**

TOD Potential	Site(s)
High	Downtown Transit Center
Medium-High	Amtrak Station
Medium	Southwest Transit Center CSU-Bakersfield
Medium-Low	Bakersfield College Niles/Vernon Avenue
Low	Mt Vernon Ave/Highway 178
Very Low	Panama Lane/Highway 99

Panama Lane/Highway 99 and Mt Vernon Ave/Highway 178 each score “Low” or “Very Low” based on their allowable densities, diversity of land uses, and projected future demand for new uses. The half-mile TOD market areas are also bisected by a major highway, limiting the potential walking and bicycle activity to and from the station.

While Bakersfield College and California State University Bakersfield both have low density zoning, they contain a diverse mix of uses on their respective campuses. Their student population constitutes a key target market for transit ridership, and both the college and university retain site control over a large portion of adjacent areas enabling more coordinated planning for future TOD; thereby justifying a “Medium-Low” to “Medium” ranking for TOD potential.

Niles/Vernon Ave is ranked “Medium-Low” as it has a sizable area of transit supportive zoning including medium-density housing and professional office space. The site also has a walkable street block configuration could lend itself to increased levels of future pedestrian activity. However, despite these advantages, the site location has low projected future growth indicating market demand may not be adequate for new uses associated with a TOD district.

The Southwest Transit Center received a “Medium” score largely based on its significant capture rate of future residential and employment growth. It has a significant amount of land already zoned

for medium-density residential within a one-half mile radius to accommodate the forecast demand for 1,100 additional housing units over the next 25 years. In addition, the scale of forecast development may be significant enough to create a vibrant TOD district at this location. But substantial challenges remain with physical constraints on pedestrian circulation caused by the location of Highway 99 and associated off-ramps.

The site locations ranked Medium-High and High for TOD potential, Downtown Transit Center and the Amtrak Station, are characterized by flexible zoning for high-density mixed use, high employment densities, and projected future growth. These sites offer the highest level of market potential for TOD districts in addition to walkable street block configurations that could lend itself to increased levels of pedestrian activity.

# 7

## TRANSIT CENTER AND TOD EVALUATION

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This section covers the criteria used to evaluate the elements needed for a successful transit center and/or TOD project. Several factors affect the success of a transit center and/or TOD project, an evaluation of nine distinct criteria was conducted for the eight potential transit center site locations. These criteria are broken into four categories including station location, station design, nonmotorized access, and Transit Oriented Development Potential. Sites meeting the criterion were awarded a score of 3 with higher and lower scores awarded based on their ability to meet or exceed the criterion. The full evaluation can be found in **Appendix G**.

### EVALUATION CRITERIA

#### Station Location

The station location category evaluates how the site's location interacts with potential transit riders, their ability to access local and regional busses, and their ability to access statewide transit through the use of Amtrak. These are important to the station location as it measures the site ability to attract ridership to support the location and provide transit network connectivity at the local, regional, and statewide level.

#### Criteria #1: Ability to attract transit dependent riders

This criteria evaluates the site's ability to attract transit dependent riders based on nearby demographics. Transit dependent riders include youth, senior, low-income, minority, and households with no vehicles.

#### Criteria #2: Access to GET and Kern Transit buses

This criteria evaluates the site's ability to provide riders with access to the local and regional bus networks – GET and Kern Transit.

### **Criteria #3: Access to statewide transit**

This criteria evaluates the site's ability to provide riders with statewide access through the Bakersfield Amtrak Station.

### **Station Design**

The station design category evaluates the potential for each site location's ability to design a station with adequate lighting, aesthetics, safety, and parking. These are important to the station location as it measures the site's ability to provide a safe, inviting, and accessible station for potential riders.

### **Criteria #4: Lighting, Aesthetics, and Safety**

This criteria evaluates the site's ability to accommodate good line of sight/"eyes on the street," lighting without negatively impacting the surrounding community, and allows for standard security equipment and options without the need for excess security resources, etc.

### **Criteria #5: Parking**

This criteria evaluates the site's ability to provide on-site parking for existing site locations or the capacity to provide on-site parking for planned site locations.

### **Nonmotorized Access**

The nonmotorized access category evaluates the site location as it pertains to pedestrian, bicycle, and multimodal access and circulation. This is an important criteria as it plays an important role in providing accessibility to all potential riders with pedestrian, bicycle, transit, and vehicle access.

### **Criteria #6: Pedestrian access and circulation**

This criteria evaluates the site's ability to provide a pedestrian friendly environment including horizontal and vertical walking distances, quality of lighting along routes, directness of routes, and protection for crossing major roadways.

### **Criteria #7: Bicycle access and circulation**

This criteria evaluates the site's ability to provide a bicycle friendly environment including classification of nearby bicycle routes, parking facilities, protection for crossing major roadways, quality of lighting along routes, and directness of routes.

### **Criteria #8: Multimodal access and circulation**

This criteria evaluates the site's ability to provide multimodal access including pedestrian, bicycle, public transit, and vehicle access.

### **Transit Oriented Development Potential**

The TOD development potential category evaluates the site location's ability to accommodate TOD development including adjacent land use and financial feasibility.

### **Criteria #9: Market feasibility**

This criteria evaluates the site's adjacent land use and financial feasibility to accommodate TOD-compatible buildings such as mixed-use apartments, office, and retail buildings based on market data including existing rent levels, vacancy rates, etc.; the financial feasibility is based on findings from TOD Market Study Assessment (see previous section).

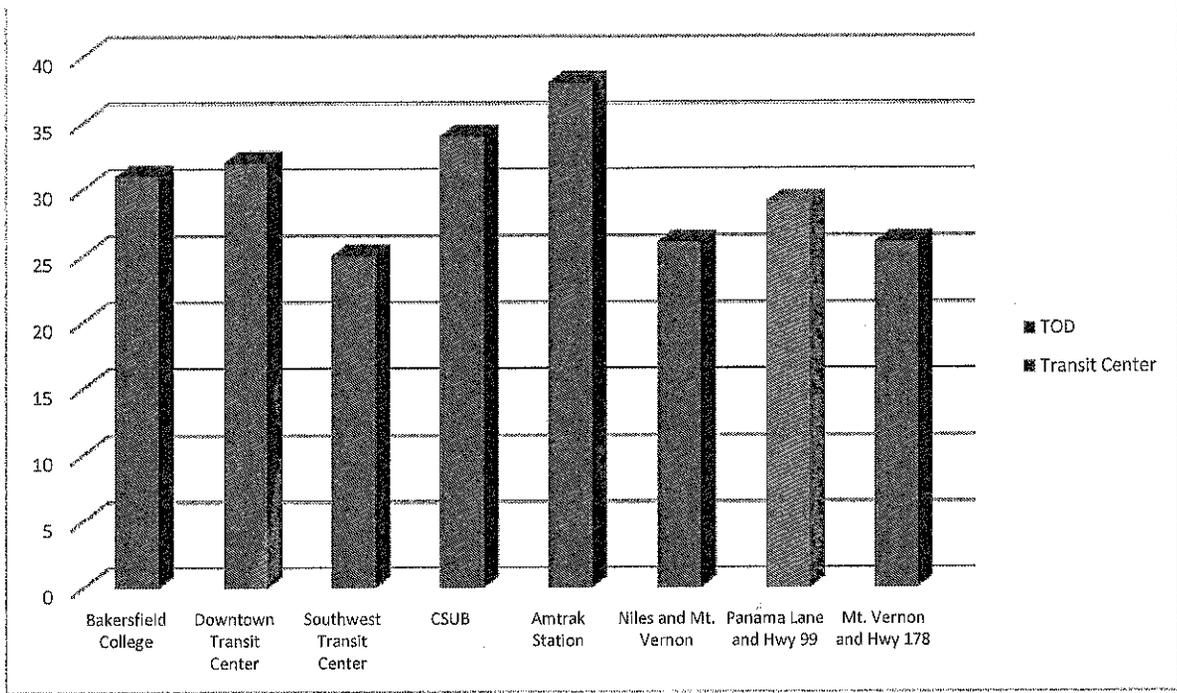
## EVALUATION RESULTS

The results from the transit center and TOD evaluation are shown below in **Table 11** for each criteria. Among the eight transit center sites, the two sites located in the Downtown area (Downtown Transit Center and Amtrak Station) and the two colleges (Bakersfield College and CSU Bakersfield) were awarded the highest overall scores (shown in **Figure 12**); all other sites received scores under 30. This does not necessarily indicate that a transit center site can be implemented at these sites, rather they require fewer enhancements and/or investment to support a transit center. It should also be noted that these scores do not preclude these sites from being suitable transit center site locations.

**Table 11 Evaluation Criteria Matrix**

Evaluation Criterion	Transit Center Site Location								
	Bakersfield College	Downtown Transit Center	Southwest Transit Center	CSU Bakersfield	Amtrak Station	Niles and Mt. Vernon	Panama Lane and Hwy 99	Mt. Vernon and Hwy 178	
<i>Station Location Criteria</i>									
1	Potential to attract transit dependent riders	2	3	3	2	3	4	3	3
2	Access to GET and Kern Transit Buses	4	5	3	3	4	4	4	3
3	Access to statewide transit	4	5	3	3	5	4	3	3
<b>Subtotal</b>		10	13	9	8	12	12	10	9
<i>Station Design Criteria</i>									
4	Lighting, Aesthetics and Safety	2	4	4	3	5	3	1	4
5	Parking	5	1	5	5	3	1	5	4
<b>Subtotal</b>		7	5	9	8	8	4	6	8
<i>Nonmotorized Access Criteria</i>									
6	Pedestrian access and circulation	3	5	1	5	5	3	1	2
7	Bicycle access and circulation	4	4	2	5	5	3	3	3
8	Multimodal access and circulation	4	2	1	5	5	3	4	3
<b>Subtotal</b>		11	11	4	15	15	9	8	8
<b>Transit Center Total Score</b>		28	29	22	31	35	25	24	25
<i>Transit Oriented Development (TOD) Potential</i>									
9	Market feasibility	3	3	3	3	3	1	5	1
<b>Subtotal</b>		3	3	3	3	3	1	5	1
<b>Total</b>		31	32	25	34	38	26	29	26

Figure 12 Transit Center Site Evaluation Matrix



# 8

## CONCLUSION AND RECOMMENDATIONS

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Through an iterative process including coordination with key stakeholders and members of the general public, a total of eight potential transit site locations were identified. These identified sites were based on several factors including existing planning documents, existing and planned transit routes, land uses and demographics of surrounding areas, and population and employment growth projections. Based on these factors, the eight transit site locations were selected for their ability to support a transit center. In addition, secondary sites were identified which currently do not exhibit optimum features to support a transit center, however, they are worth additional research should changes occur to affect the site's ability to effectively support a transit center.

Among the eight potential transit site locations identified, several would be suitable for short-term (2020) implementation while others would be more suitable for the long term horizon year of 2040.

### **Short-Term**

The following sites are recommended for short-term implementation. These recommendations are based on being an existing location, already identified as a potential transit center in the Bakersfield LRTP, minimal improvements are needed for implementation, or high demographic growth in 2020 is anticipated. Although some of these sites were identified in the Bakersfield LRTP to be phased out in the interim years, these sites should be revisited for improvements and potential for TOD in the long-term.

#### *Bakersfield College*

The existing Bakersfield College transit center is currently identified in the LRTP as a site for fast and frequent transit service. This planned investment into the site allows this site to be an optimum site in the short-term as less additional investment would be needed for the implementation of an enhanced transit center. Investments at the site include enhancements to the site's design with improved lighting, walkways, bicycle parking facilities, etc.

### *Downtown Transit Center*

The Downtown Transit Center is anticipated to be phased out in the mid and long-term years in the Bakersfield LRTP. However, the site presents opportunity for TOD development with a high amount of surrounding mixed-use land use, significantly dense population growth in the short-term, and access to a high amount of GET and Kern Transit bus services. Initial investment at the site can include site design enhancements such as improvements to safety with lighting, pedestrian and bicycle access, etc. These enhancements can assist in spurring TOD development at the site.

### *California State University Bakersfield*

The California State University Bakersfield site location is a planned transit center identified in the Bakersfield LRTP. The identification of the site as a transit center in the LRTP in combination with the trip generation from the school itself provides support for a transit center with minimal investment; initial investment at the site can include enhancements to lighting, pedestrian and bicycle access, etc.

### *Amtrak Station*

The Amtrak site location exhibits a high concentration of growth for employment and provides TOD opportunity with a mix of supporting land uses in the adjacent areas. Initial investment to the site in the short term can help support TOD development. Additionally, the site plays an important role in regional access for Bakersfield and is just north of a site location under consideration by the California High Speed Rail Authority.

### *Southwest Transit Center*

The Southwest Transit Center site is anticipated to be phased out in the mid and long-term in the Bakersfield LRTP. However, the Southwest Transit Center site can be utilized for TOD potential. Immediately adjacent to the site is the Valley Plaza shopping mall, an existing destination. Investment to enhance the TOD potential at the site location can improve the site's ability to attract TOD development activity. Initial enhancements to the site can include lighting improvements and improvements to pedestrian and bicycle access as these are existing challenges for the site. It is also recommended to develop conceptual visualization of TOD to provide an example of the opportunities available at the site in the short-term.

## **Long-Term**

The following sites are recommended for long-term implementation. These recommendations are based on their need for major or significant changes to occur such as land use designations, property acquisitions, or growth not occurring until 2035 or 2040. These sites would require more detailed studies evaluating the policies, funding, and/or infrastructure needs.

### *Panama Lane and Highway 99*

The Panama Lane and Highway 99 site location has the opportunity to capitalize on projected growth in the long-term. The site exhibits significant growth in population density by the long-term year 2040; population density is anticipated to double between the short-term and long-term years. A revisit to this site would be worthwhile again in the future to reevaluate the site's near-term potential as it is dependent upon population growth.

#### *Mt. Vernon Avenue and Highway 178*

The Mt. Vernon Avenue and Highway 178 site location is adjacent to a major highway, retail shopping, and a high school. The site is currently not a location of high activity and presents challenges for pedestrian and bicycle station access. However, within a half-mile distance from the site, high amounts of transit dependent populations are present. The surrounding demographics can support a transit center but further study and investment would be needed to optimize the site's potential.

#### *Niles and Mt. Vernon Avenue*

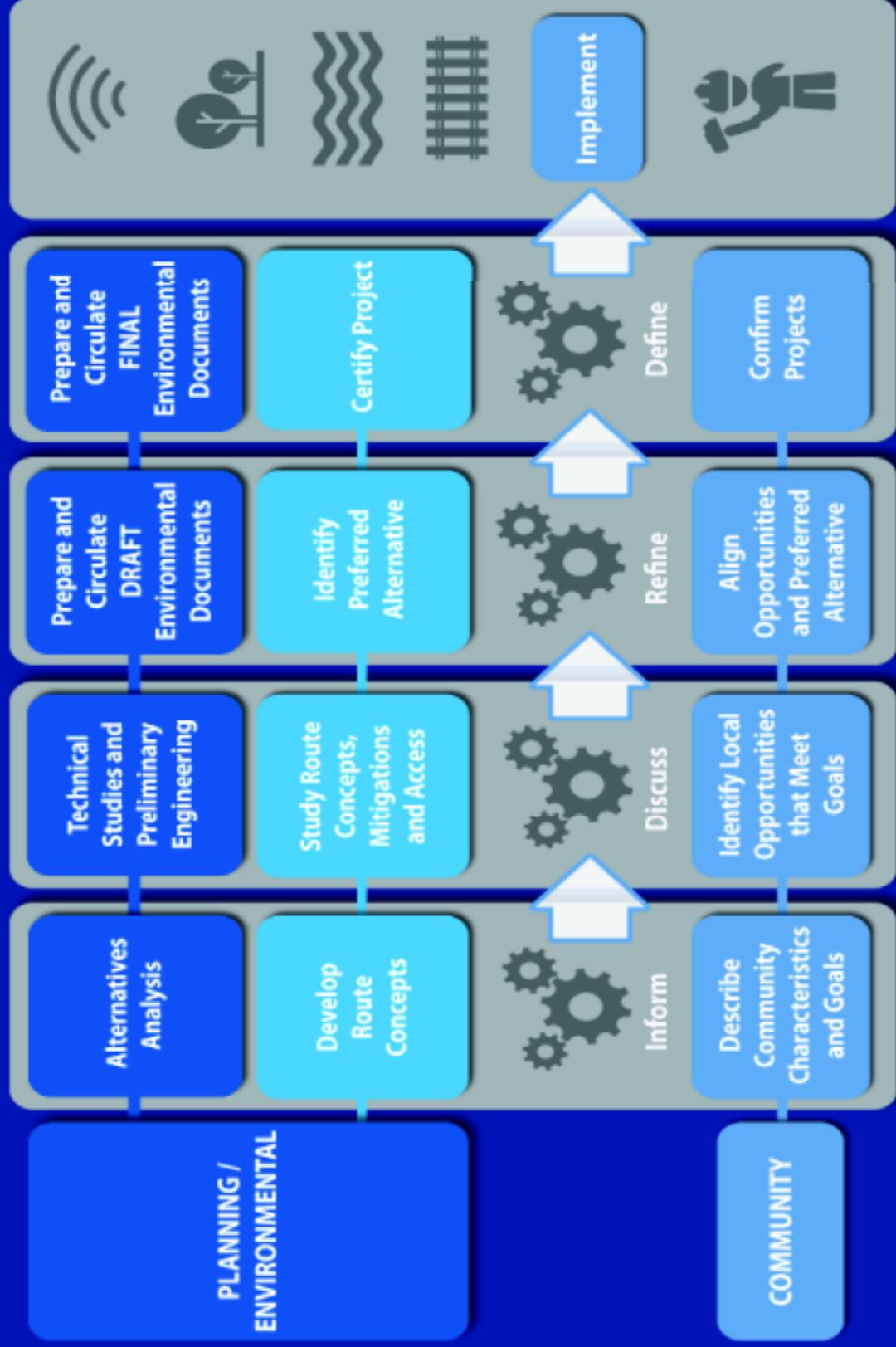
The Niles and Mt. Vernon Avenue site location provides opportunity for TOD in the long-term. The site is densely populated with transit dependent population to support a transit center and TOD. It is also recommended to develop conceptual visualization of TOD to provide an example of the TOD opportunities available at the site for the long-term year 2040. However, it should be noted that property acquisition may be required for the implementation of the site as no vacant parcels are available at the location. As a result, this site should be reevaluated at a later time for its ability to be implemented.

#### **Next Steps**

To build upon the work conducted under this study and in preparation for the future California High Speed Rail system, a future study using similar methodology and analysis of HSR station sites should be performed as a separate study or as a supplemental to this study.



# ENVIRONMENTAL REVIEW PROCESS



RESOLUTION NO. 118-03

**A RESOLUTION OF THE COUNCIL OF THE CITY OF  
BAKERSFIELD ENDORSING THE DOWNTOWN  
TRUXTUN AVENUE SITE FOR THE HIGH SPEED RAIL  
TERMINAL**

**WHEREAS**, the matter of designating a preferred site for the Metropolitan Bakersfield High-Speed Rail Terminal has been under consideration by the City of Bakersfield for over six years; and,

**WHEREAS**, City staff have reviewed issues concerning the siting of the Metropolitan Bakersfield High-Speed Rail Terminal and have participated on a regional steering committee created by the Kern Council of Governments; and,

**WHEREAS**, the Kern Council of Governments retained a consultant team to analyze three (3) potential High-Speed Rail Terminal sites in the Bakersfield Metropolitan area; and,

**WHEREAS**, after careful consideration of available information, the consultant team has issued a report recommending that the site identified as the Downtown Truxtun Avenue site be named as the most attractive site for the Bakersfield region; and,

**WHEREAS**, City staff has reviewed the consultant report and concurs with the findings, including the concept that having one locally adopted preferred site will allow the community to better focus its efforts to support and promote its preference to the California High-Speed Rail Authority.

**NOW, THEREFORE, BE IT RESOLVED**, incorporating the above recitals herein, by the Council of the City of Bakersfield as follows:

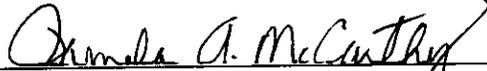
1. The above recitals are true and correct;
2. The Council of the City of Bakersfield endorses the Downtown Truxtun Avenue site as the preferred base system local alternative site for the Metropolitan Bakersfield High-Speed Rail Terminal;
3. The City Clerk shall send copies of this Resolution to the California High-Speed Rail Authority.

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I **HEREBY CERTIFY** that the foregoing Resolution was passed and adopted by the Council of the City of Bakersfield at a regular meeting thereof held on JUL 9 2003, by the following vote:

AYES:	COUNCILMEMBER COUCH, CARSON, BENHAM, MAGGARD, HANSON, SULLIVAN, SALVAGGIO
NOES:	COUNCILMEMBER <u>none</u>
ABSTAIN:	COUNCILMEMBER <u>none</u>
ABSENT:	COUNCILMEMBER <u>none</u>

  
CITY CLERK and Ex Officio Clerk of the  
Council of the City of Bakersfield

APPROVED JUL 9 2003

By   
HARVEY L. HALL  
Mayor

APPROVED AS TO FORM:

**BART J. THILTGEN**  
City Attorney

By   
BART J. THILTGEN  
City Attorney

**CALIFORNIA HIGH-SPEED RAIL AUTHORITY**  
**MEETING MINUTES**  
**July 22, 2003**  
**LOS ANGELES, CALIFORNIA**

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The meeting of the California High-Speed Rail Authority was called to order on July 22 at 10:00 a.m. at the Los Angeles Metropolitan Transportation Authority, Los Angeles, CA.

Members Present:        Joseph E. Petrillo, Chairperson  
                              Jerry Epstein, Vice Chairperson  
                              Fran Florez, Vice Chairperson  
                              Rod Diridon, Sr.  
                              T.J. Stapleton  
                              Leland Wong

Members Absent:        Dr. Ernest A. Bates  
                              Bob Giroux

**Approval of Minutes for June 24, 2003 Meeting**

Chairperson Petrillo presented the minutes for approval. Vice Chairperson Florez moved to approve the June 24, 2003 meeting minutes. Vice Chairperson Epstein seconded the motion, which carried 6-0.

**Authority Members' Meetings for Compensation**

Chairperson Petrillo presented the list of meetings for compensation for approval. Member Diridon moved to approve the list of meetings for compensation. Member Wong seconded the motion, which carried, 6-0.

**Members Reports**

Chairperson Petrillo reported on the High Speed Ground Transportation Association (HSGTA) Annual Conference held May 12-15, 2003 in Orange, CA. The HSGTA Board will expand its Policy Board to add four additional members. Chairperson Petrillo reported on the Los Angeles Town Hall Group & Common Wealth Club "High-Speed Rail Symposium" held in San Francisco and Los Angeles on July 17 and July 18. Both events experienced good attendance and were successful in providing information pertaining to the proposed high-speed rail project to the public. Chairperson Petrillo reported that the Memorandum of Understanding (MOU) between the Spanish Government and the Authority was signed in the Governor's office on July 9, 2003.

**Executive Director's Report**

Executive Director Morshed announced Donna Andrews, former Authority Member and High-Speed Rail Commissioner as being present in the audience.

Executive Director Morshed reported on the state budget. Being that the budget has not been signed as of today, there may be a delay in the release of the draft EIR/EIS document.

Executive Director Morshed reported that the next Authority Board Meeting will be in September and he expects that the draft EIR/EIS report will be available at that time.

Executive Director Morshed reported that as a result of the MOU between the Spanish Government and the Authority to share information, a trip to Spain is being considered September 24, 2003 -

October 3, 2003 for Board Members and Legislators. The trip will not be funded by the State and travelers will have to personally finance their trip.

Executive Director Morshed reported that the Public Policy Institute of California recently published a poll pertaining to air quality in which sixty-five percent of residents indicated they would vote yes on the Reliable High-Speed Passenger Train Bond Act slated for the ballot in November 2004.

Executive Director Morshed reported that the Public Outreach Request for Proposal (RFP) has been released. Executive Director Morshed explained the interview process and stated that as a practice, the Authority assigns two Members to the interview panel as observers. Therefore, if the Board wishes to continue this practice, Chairperson Petrillo should assign two Members to the interview panel. Chairperson stated that immediately following the Board Meeting he will assign Members to the interview panel.

### **Summary of Selected Topics from Draft Technical Studies**

Executive Director Morshed stated the studies conducted by the Authority would be summarized into the draft EIR document. Kip Field, Project Manager of Parsons Brinckerhoff presented a summary of the preliminary results from the draft environmental technical studies on Transportation, Air Quality, Noise and Vibration, Energy, Local Area Land Use, Farmland and Agriculture, Hazardous Materials/Wastes, Biological Resources/Wetlands, Wetlands, and EMI/EMF.

### **Public Comment**

#### **John Bacon**

Mr. Bacon expressed his concern that high-speed rail express-loops around population centers through Bakersfield and Fresno would be too costly due to noise mitigation requirements.

### **Review and Approval of Implementation Plan Request for Proposal (RFP)**

Staff presented the RFP for an Implementation Plan contract to the Board for approval. Member Wong moved to approve the RFP for an Implementation Plan contract as a working draft, delegating authority to the Executive Director to make changes prior to release. Member Diridon seconded the motion, which carried, 6-0.

### **Identification of Date and Location of Next Meeting**

The date and location of the next Authority Board meeting is September 23, 2003 in San Francisco.

### **Public Comment**

#### **Harvey Hall, Mayor of Bakersfield**

Mayor Hall reported that a consensus has been reached in Bakersfield on a preferred location for a proposed high-speed rail station. During the month of July, the Kern Council of Governments (COG), Board of Supervisors approved and recommend the proposed Truxton Avenue station location. The Bakersfield City Council by resolution passed endorsement for the proposed Truxton Avenue station location and the consultant hired by Kern COG Consultant also recommended the proposed Truxton Avenue station location. Mayor Hall also expressed support for a high-speed rail maintenance station to be located in Bakersfield.

Meeting was adjourned at 12:10 p.m.

## S.0 Summary

### S.1 Introduction and Background

The California High-Speed Rail Authority (Authority), a state governing board formed in 1996, has responsibility for planning, designing, constructing, and operating the California High-Speed Train (HST). Its mandate is to develop a high-speed rail system coordinating with the state's existing transportation network, which includes intercity rail and bus lines, regional commuter rail lines, urban rail and bus transit lines, highways, and airports.

The California High-Speed Train System (HST system) will provide intercity, high-speed service on more than 800 miles of tracks throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego. Figure S-1 shows this system. It will use state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automated train-control systems, with trains capable of operating up to 220 miles per hour (mph) over a fully grade-separated, dedicated track alignment.

#### High-Speed Train System

The system that includes the HST guideways, structures, stations, traction-powered substations, and maintenance facilities.

The Authority plans two phases. Phase 1<sup>1</sup> will connect San Francisco to Los Angeles/Anaheim via the Pacheco Pass and the Central Valley with a mandated express travel time of 2 hours and 40 minutes or less. Phase 2 will connect the Central Valley to the state's capital, Sacramento, and will extend the system from Los Angeles to San Diego.

The Fresno to Bakersfield HST Section, shown in Figure S-2, is a critical Phase 1 link connecting to the Merced to Fresno and Bay Area HST sections to the north and the Bakersfield to Palmdale and Palmdale to Los Angeles HST sections to the south. The Fresno to Bakersfield Section includes HST stations in the cities of Fresno and Bakersfield, with a third potential station located in the vicinity of Hanford (Kings/Tulare Regional Station) that would serve the Hanford, Visalia, and Tulare area. The Fresno and Bakersfield stations are this section's beginning and ending points, or project termini.

### S.2 Tiered Environmental Review: Final Statewide Program EIR/EIS and Fresno to Bakersfield Section Project EIR/EIS

The Council on Environmental Quality provides for National Environmental Policy Act (NEPA) decision-making through a phased process. This process is referred to as *tiered* decision making. This phased decision-making process provides for a broad-level programmatic decision at the first tier, with a first-tier environmental impact statement (EIS), to be followed by more specific decisions at the second-tier, with one or more second-tier EISs. The NEPA tiering process allows for incremental decision-making for large projects that would be too extensive and cumbersome to analyze in a traditional project EIS. The California Environmental Quality Act (CEQA) also encourages tiering and also provides for first-tier and second-tier environmental impact reports (EIRs).

The Fresno to Bakersfield Section EIR/EIS is a second-tier EIR/EIS that tiers off two first-tier, program EIR/EIS documents, and provides project-level information for decision-making on this

<sup>1</sup> Phase 1 would be built in stages dependent on funding availability.

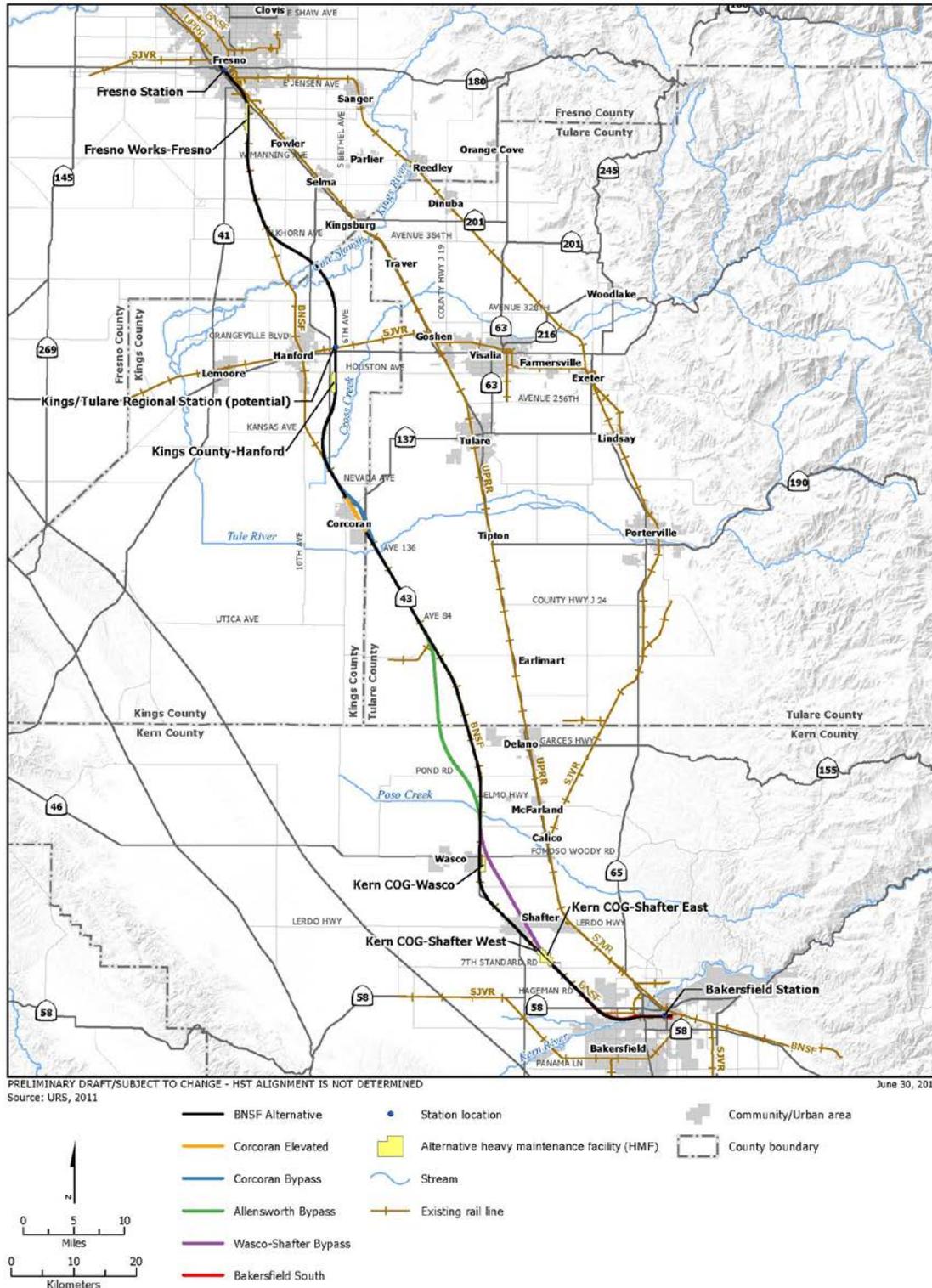
portion of the HST system. The 2005 *Final Program EIR/EIS for the Proposed California High-Speed Train System EIR/EIS* (Statewide Program EIR/EIS) (Authority and Federal Railroad Administration [FRA] 2005) provided a first-tier analysis of the general effects of implementing the HST System across two-thirds of the state. The 2008 *Bay Area to Central Valley HST Final Program EIR/EIS* (Bay Area to Central Valley Program EIR/EIS) (Authority and FRA 2008), and the Authority's 2010 Revised Final Program EIR (Authority 2010) for the Bay Area to Central Valley HST, were also first-tier and programmatic, but focused on the Bay Area to Central Valley region. These first-tier EIR/EIS documents provided the FRA and the Authority with the environmental analysis necessary for the evaluation of the overall HST System, and for making broad decisions about general high-speed train alignments and station locations for further study in second-tier EIR/EISs. These documents are available on the Authority's website: [www.cahighspeedrail.ca.gov](http://www.cahighspeedrail.ca.gov). The Fresno to Bakersfield Section EIR/EIS analyzes the environmental impacts and benefits of implementing the high-speed train in the more geographically limited area between Fresno and Bakersfield, and is based on more detailed project planning and engineering. The analysis therefore builds on the earlier decisions and program EIR/EISs, and provides more site-specific and detailed analysis.

### S.3 Issues Raised during the Scoping Process

The Authority held five public scoping meetings were held between March 18 and March 26, 2009, in the Fresno to Bakersfield Section project corridor, with a total of 400 people attending the five meetings. Scoping helps determine the focus and content of an EIR/EIS. The Authority and FRA received a total of 188 comments from individuals and organizations, as well as comments from 33 agencies, on the proposed project. Major issues identified as a result of scoping follow:.

- Visual impacts of the project in general, stations, elevated track, glare.
- HST emissions, particularly dust and its effects on agriculture.
- Conversion of agricultural land to nonagricultural uses.
- Compliance with the Williamson Act.
- Impacts on farm operations.
- Impacts on low-income and minority communities.
- Impacts on community cohesion.
- Fiscal impacts on the state and local jurisdictions.
- Construction impacts.
- System safety with regard to derailments.
- Growth-inducing effects of new transportation system in the San Joaquin Valley.
- Water resource impacts.
- Harm to historic structures.
- Hazardous materials impacts.
- Electromagnetic field impacts on humans and animals.
- Impacts on special-status species and their habitats.
- Noise impacts.
- Transportation impacts: crossings, blocked roads, blocked intersections, congestion if the HST is not implemented.
- Impacts on Amtrak.
- Global warming effects if the HST is not implemented.





**Figure S-2**  
 Fresno to Bakersfield Section project alternatives

## **S.4 Purpose of and Need for the HST System and the Fresno to Bakersfield Section**

### **S.4.1 Purpose of the HST System**

The purpose of the California HST System is to provide a reliable high-speed electric-powered train system that links the major metropolitan areas of the state, and that delivers predictable and consistent travel times. A further objective is to provide an interface with commercial airports, mass transit, and the highway network, and to relieve capacity constraints of the existing transportation system as increases in intercity travel demand in California occur, in a manner sensitive to and protective of California's unique natural resources.

### **S.4.2 Purpose of the Fresno to Bakersfield Section**

The purpose of this project is to implement the Fresno to Bakersfield Section of the California HST System to provide the public with electric-powered high-speed rail service that provides predictable and consistent travel times between major urban centers and connectivity to airports, mass transit, and the highway network in the south San Joaquin Valley and connects the northern and southern portions of the system.

### **S.4.3 Objectives for the HST System Statewide and Within the Central San Joaquin Valley Region**

The Authority has responded to its mandate to plan, build, and operate an HST system that is coordinated with California's existing transportation network by adopting the following objectives and policies for the proposed HST system:

- Provide intercity travel capacity to supplement critically over-used interstate highways and commercial airports.
- Meet future intercity travel demand that will be unmet by current transportation systems, and increase capacity for intercity mobility.
- Maximize intermodal transportation opportunities by locating stations to connect with local transit, airports, and highways.
- Improve the intercity travel experience for Californians by providing comfortable, safe, frequent, and reliable high-speed travel.
- Provide a sustainable reduction in travel time between major urban centers.
- Increase the efficiency of the intercity transportation system.
- Maximize the use of existing transportation corridors and rights-of-way, to the extent feasible.
- Develop a practical and economically viable transportation system that can be implemented in phases by 2020 and generate revenues in excess of operations and maintenance costs.
- Provide intercity travel in a manner sensitive to and protective of the region's natural and agricultural resources and reduce emissions and vehicle miles traveled for intercity trips.

The approximately 114-mile-long Fresno to Bakersfield Section is an essential part of the statewide HST System. As part of the Central Valley section of the HST system, it would provide

Fresno, Visalia, Tulare, Hanford, and Bakersfield access to a new transportation mode, and would contribute to increased mobility throughout California. This section will connect the south San Joaquin Valley region to the rest of the statewide HST system via Fresno, Kings, Tulare, and Kern counties (see Figure S-1).

#### **S.4.4 Need for the HST System Statewide and Within the South San Joaquin Valley Region**

The need for an HST system exists statewide, with regional areas contributing to this need. The Fresno to Bakersfield Section is an essential component of the statewide HST system.

The capacity of California's intercity transportation system, including the south San Joaquin Valley region, is insufficient to meet existing and future travel demands, and the current and projected future congestion of the system will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The current transportation system has not kept pace with the increase in population, economic activity, and tourism within the state, including that in the south San Joaquin Valley region. The interstate highway system, commercial airports, and conventional passenger rail system serving the intercity travel market are operating at or near capacity and will require large public investments for maintenance and expansion to meet existing demand and future growth over the next 25 years and beyond. Moreover, the feasibility of expanding many major highways and key airports is uncertain; some needed expansions might be impractical or are constrained by physical, political, and other factors. The need for improvements to intercity travel in California, including intercity travel between the southern San Joaquin Valley, the Bay Area, Sacramento, and Southern California relates to the following issues:

- Future growth in demand for intercity travel, including the growth in demand within the south San Joaquin Valley region.
- Capacity constraints that will result in increasing congestion and travel delays, including those in the south San Joaquin Valley region.
- Unreliability of travel stemming from congestion and delays, weather conditions, accidents, and other factors that affect the quality of life and economic well-being of residents, businesses, and tourism in California, including the south San Joaquin Valley region.
- Reduced mobility as a result of increasing demand on limited modal connections between major airports, transit systems, and passenger rail in the state, including the south San Joaquin Valley region.
- Poor and deteriorating air quality and pressure on natural resources and agricultural lands as a result of expanded highways and airports and urban development pressures, including those within the south San Joaquin Valley region.

Geographically, the Fresno to Bakersfield Section is located in the center of California. This region significantly contributes to the statewide need for a new intercity transportation service that would connect it with the major population and economic centers and to other regions of the state. The major population, economic, and political centers are located on the coasts of Northern and Southern California and in the Sacramento Valley.

## **S.5 Alternatives**

This section summarizes the alternatives evaluated in the Draft Fresno to Bakersfield Section Project EIR/EIS. The 2005 Statewide Program EIR/EIS (Authority and FRA 2005), the 2008 Bay Area to Central Valley Program EIR/EIS (Authority and FRA 2008), public and agency input from

the scoping process, extensive local and agency involvement during Technical Working Group<sup>2</sup> (TWG) meetings, and other stakeholder meetings provided input to the Authority in developing these alternatives.

The track alignment, stations, and heavy maintenance facility (HMF) have been through an alternatives analysis screening process, which considered the effects of the alternatives on the social, natural, and built environment. The screening was performed in collaboration with teams for the adjacent Merced to Fresno Section where the Fresno to Bakersfield and Merced to Fresno sections overlap. In addition to the HST alternatives, a No Project Alternative and HMF alternatives were studied. The HMF would support the assembly, testing, commissioning, and acceptance of high-speed train vehicles (rolling stock) prior to the start-up of operations. After initial operations begin, the HMF would assume maintenance and major repair functions to sustain the regular system operation and assembly of new rolling stock.

### **S.5.1 No Project Alternative**

The No Project Alternative is the basis for comparison of the HST alternatives. The No Project Alternative represents the state's transportation system (highway, air, bus, conventional rail) as it is currently and as it would be after implementation of programs or projects that are currently projected in regional transportation plans (RTPs), have identified funds for implementation, and are expected to be in place by 2035, as well as any major planned land use changes. The entire San Joaquin Valley is projected to grow at a rate higher than any other region in California. The four counties—Fresno, Kings, Tulare, and Kern—are projected to continue to grow at an average of about 3% per year. By 2035, the four-county study area will grow from a 2010 population of 2,397,451 to 4,127,624 for a net increase of 1,730,173 people, or 72%. Accommodating this new population will require land and necessitate the construction of new infrastructure, including roadways, electric power generation, water and wastewater facilities, sewer, schools, hospitals, and commercial and industrial facilities. To support this growth, development would consume an estimated 173,000 acres because, according to current planning trends, these counties would develop at a density of approximately 10 persons per acre (see Section 2.4.1, No Project Description, for justification).

### **S.5.2 Fresno to Bakersfield Section High-Speed Train Alternatives**

This EIR/EIS evaluates six HST alternatives: the BNSF Alternative, the Corcoran Elevated Alternative, the Corcoran Bypass Alternative, the Allensworth Bypass Alternative, the Wasco-Shafter Bypass Alternative, and the Bakersfield South Alternative. Figure S-2 shows the six alternatives carried forward in this EIR/EIS. They would extend between and include the proposed Downtown Fresno and Downtown Bakersfield stations, and a potential Kings/Tulare Regional Station located east of Hanford. The estimated trip time between the Fresno and Bakersfield stations would be approximately 40 minutes. The three stations would see a mix of stopping trains and through trains; the number of trains would peak after the system has been built out. Scenarios were developed to take into account various levels of ridership that could occur. In 2035 for the high ridership scenario, the full system would see four trains per hour stop at each of the Fresno, potential Kings/Tulare Regional, and Bakersfield stations in each direction at the peak, and six trains run through. At the off-peak, the same number of stops would be made, but the through trains would decrease to three per hour.

The BNSF Alternative is a single continuous alignment that extends from the northern end of the Fresno station tracks to the southern end of the Bakersfield station tracks. This is the alternative that most closely follows the preferred alignment identified in the Statewide Program EIR/EIS

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<sup>2</sup> Technical Working Groups were composed of senior staff from county and city public works, planning, economic development, and administrative departments.

(FRA 2005). It begins in Downtown Fresno on the west side of the Union Pacific Railroad (UPRR) tracks, proceeds south through Fresno adjacent to the UPRR tracks, crossing under East Jensen Avenue and then over Golden State Boulevard and SR99 as it curves south to join the BNSF Railway. The BNSF Alternative diverges from the BNSF Railway north of the Kings River and travels east of the city of Hanford before rejoining the BNSF Railway on its western side, north of the city of Corcoran. From there, the BNSF Alternative follows the BNSF Railway south through Corcoran, Wasco, and Shafter into the Bakersfield Metropolitan Area where it generally follows the BNSF Railway corridor through Bakersfield to the Bakersfield Station.

The additional five alternative alignments diverge from the BNSF Alternative at various locations between Fresno and Bakersfield. The Corcoran Elevated Alternative would be the same as the corresponding segment of the BNSF Alternative except that it would pass through the city of Corcoran on the eastern side of the BNSF Railway right-of-way on an elevated structure. The Corcoran Bypass Alternative would diverge from the BNSF Alternative at approximately Nevada Avenue and swing east of Corcoran, rejoining the BNSF Alternative at Avenue 136 south of Corcoran. The Allensworth Bypass Alternative would diverge from the BNSF Alternative at Avenue 84 in Tulare County and swing west of Allensworth State Historic Park, rejoining the BNSF Alternative at Elmo Highway in Kern County. The Wasco-Shafter Bypass Alternative would diverge from the BNSF Alternative between Sherwood Avenue and Fresno Avenue, bypassing Wasco and Shafter to the east, and rejoin the BNSF Alternative at 7th Standard Road. The Bakersfield South Alternative parallels the BNSF Alternative from Rosedale Highway (SR 58) to Chester Avenue at varying distances to the north. The alternative then curves south, and parallels California Avenue to its terminus at the southern end of the Bakersfield station tracks.

### **S.5.3 Station Area Development**

The presence of an HST would provide tremendous opportunities to revitalize the downtowns of Fresno and Bakersfield through urban design; diversity of higher density mixed use development; and improved transit, bike, and pedestrian connectivity. The higher densities in the station areas would result in higher levels of transit and the stations could become major transit hubs. The presence of the stations would also attract office development to the downtown areas because of the improved access to the larger markets of Los Angeles and the Bay Area, and the stations could become 24-hour destinations as more commercial businesses are attracted to the area. In addition, residential growth would be expected as a result of increases in retail, nightlife, and improved multimodal connectivity, which could lessen the desire of residents to commute to Los Angeles or the Bay Area (Authority and FRA 2008).

The cities of Fresno and Bakersfield are updating their general plans to reflect the addition of an HST station in their downtown areas. Both downtowns are poised to become strong activity centers with the addition of the HST. The projected growth for this region is approximately an additional 1.6 million persons by 2035, with comparable growth in employment even before adding the HST to the Central Valley. The project is estimated to bring 8,400 and 9,200 daily passengers to Fresno and Bakersfield respectively, and, when combined with the projected growth for the valley, would result in an abundance of people in the downtown areas. The HST would provide a catalyst to concentrate the investment created by population growth at the urban centers that provide interregional connectivity with other metropolitan centers. The Fresno and Bakersfield HST stations would be compatible with local zoning for higher density development and would build upon existing activity centers. The station areas and the surrounding regions would realize beneficial effects, including increased employment, recreation, and community cohesion. No incompatible changes in land use patterns or intensities are anticipated.

The Kings/Tulare Regional Station is one of the few stations in the California HST System that is not proposed in a downtown urban area. The site for this station was selected to serve residents

in the Lemoor/Hanford, Visalia, and Tulare areas. It is located immediately east of the city of Hanford's primary sphere of influence adjacent to the intersection of SR198 and SR43. These two highways would provide access to the station for shuttle bus service from the communities in the area. The proposed Kings/Tulare Regional Station site has the largest population within a 20-mile area of any of the sites considered for this regional station. The 2007 population within the 20-mile catchment area for the Kings/Tulare Regional Station site was 424,700, projected to increase to 683,300 people by 2030 (Authority 2007).

Hanford and Kings County land use designations and zoning for the site are compatible with an HST station; however, the site and surrounding land is currently in agricultural production, and Hanford wishes to direct future growth towards the western side of the city instead of the east. The Authority would work with the city and county to develop a station area plan that protects agricultural use of the lands between Hanford and Visalia. This would include limiting parking spaces at the Kings/Tulare Regional Station and providing additional parking, as appropriate, at transit centers in the cities served by the station. The Authority would also acquire agricultural conservation easements in the vicinity of the station as part of mitigation for project impacts to agricultural land.

### S.5.4 Heavy Maintenance Facility

The Fresno to Bakersfield Section may include an HMF centrally located on the main north-south line of the HST System to support delivery, testing, and commissioning on the network's first completed segment. The HMF concept plan indicates that the site should encompass approximately 150 acres to accommodate guideways, maintenance shops, parking, administrative offices, roadways, power substation, and storage areas.

The HMF would perform the following functions:

- Trainset assembly
- Testing and commissioning
- Train storage
- Inspection
- Maintenance
- Retrofitting
- Overhaul

This EIR/EIS evaluates five HMF site alternatives (refer to Chapter 2, Alternatives) that are shown on Figure S-2:

- Fresno Works–Fresno HMF Site – Located within the southern limits of the city and county of Fresno next to the BNSF Railway right-of-way between SR 99 and Adams Avenue.
- Kings County–Hanford HMF Site – Located southeast of the city of Hanford, adjacent to and east of SR 43, between Houston and Idaho avenues.
- Kern Council of Governments–Wasco HMF Site – Located east of the city of Wasco between SR 46 and Filburn Street.
- Kern Council of Governments–Shafter East HMF Site – Located in the city of Shafter on the eastern side of the BNSF Railway right-of-way between Burbank Street and 7th Standard Road.

#### HST Heavy Maintenance Facility

The California HST HMF would support the assembly, testing, commissioning, and acceptance of high-speed rolling stock prior to the start-up of operations. After initial operations begin, the HMF would assume maintenance and major repair functions to sustain the regular operation of the system and activation of new rolling stock as it is delivered.

- Kern Council of Governments–Shafter West HMF Site – Located in the city of Shafter on the western side of the BNSF Railway right-of-way between Burbank Street and 7th Standard Road.

## S.6 Measures to Avoid and Minimize Impacts

The HST project includes alternatives and design features to avoid and minimize impacts. Project design incorporates the following measures:

- Follows existing transportation corridors to the extent feasible
- Uses shared right-of-way when feasible
- Narrowed footprint with elevated or retained cut profile
- Spans water crossings where practical
- Includes passages for wildlife movement
- Avoids sensitive environmental resources to the extent practical

## S.7 No Project Alternative Impacts

Projected growth and conversion of land to urbanized uses associated with the No Project Alternative are anticipated to have the greatest environmental effect in the study area over the 2010 to 2035 planning period.

Based on the California DOF estimates (2010), which reported that these four counties recorded an average of 3.2 persons per dwelling unit and the preferred residential densities adopted in the San Joaquin Valley Blueprint (ranging from 5.3 units/acre in Tulare County to 8 units/acre in Fresno and Kern counties), it would take about 86,100 acres of land to accommodate future housing. However, this land consumption estimate does not take into account related commercial, transportation, and supporting infrastructure such as parks, water treatment, and medical facilities. With necessary supporting infrastructure, including commercial, office, transportation, parks, and schools, a typical density for an area similar to the San Joaquin Valley would result in 8 to 10 people per acre of land development<sup>3</sup> (US 36 AADEIS, CDOT 2006). Under this scenario, the total four-county growth projections are for approximately 173,000 acres of land development. Additionally, this development is anticipated to follow current patterns dispersed along the edges of city growth boundaries and into unincorporated areas along highways.

### Vehicle Miles Traveled (VMT)

A transportation planning term that measures the extent of motor vehicle operation. Specifically, it measures the total number of miles traveled by a vehicle in a specific area over a given period of time.

An increase in population and employment creates an increasing need to travel between destinations. The regional measure for growth in travel is the amount of VMT during a year’s timeframe. Between 2010 and 2035, VMT is projected to increase by 16% in Fresno County and 67% in Kern County; during this time period, VMT is expected to decrease by 13% in Tulare County and 5% in Kings County. Based on estimates by Cambridge Systematics and Caltrans (2009), the four-county region is projected to increase from almost 62 million to 80 million miles traveled per day in 2035. This increase would require an estimated 796,000 gallons of petroleum per day in the Fresno to Bakersfield region alone (Bureau of Transportation Statistics 2010).

The conversion of vacant and agricultural land for development will affect and change the character of many of the environmental resources in the study area.

<sup>3</sup> In Denver, the Colorado Department of Transportation studied the land use density as part of the preparation for the US 36 Project Alternative Analysis/EIS (2006). The study conducted a GIS analysis of 50 years of land use trends based on historical aerial photos digitized, and then measured actual census data to determine that the gross use of an acre of land supported an average of 10 persons.

Increasingly stringent federal and state emission control requirements and the replacement of older, higher-polluting vehicles with newer, less-polluting ones would reduce basin-wide air pollution emissions under the No Project Alternative and air quality would improve. Noise would stay at a similar level because local general plans and noise and vibration ordinances are in place to ensure that standards are met.

Future conditions from increased development would likely result in the additional use of electricity and radio frequency (RF) communications that would increase the generation of electromagnetic fields (EMFs) and electromagnetic interference (EMI) in the area. Demand for energy would also increase at a level commensurate with population growth under the No Project Alternative, which would require additional generation and transmission capacity. As stated above, daily VMT in Fresno, Kings, Tulare, and Kern counties would increase, requiring additional demand for petroleum.

Existing trends affecting biological resources are expected to continue or worsen, including habitat loss from development, mortality from vehicle strikes, habitat degradation from pollution (e.g., polluted runoff from stormwater, inadvertent spills of hazardous materials), and noise and dust from development. Effects of the current built environment on hydrology and water resources would continue, including effects from continued operation of existing highways, airports, and railways.

A consequence of the No Project Alternative would be that the project vicinity would not include the higher-density, transit-oriented development planned around proposed urban HST stations, and the continuation of low-density development might be more likely. This development pattern would increase impervious ground area and an associated increase in stormwater runoff in the urban fringe. Additionally, increases in traffic in Fresno and Kern counties would degrade water quality because of increased pollutants in stormwater from vehicles on roadways. Infrastructure and development projects could cause water or wind erosion, loss of valuable topsoil, and constraints on the potential for oil and gas resource development.

Current trends for accidents related to hazardous materials and wastes would continue with operation of commercial and industrial facilities or during transport of these goods. Under the No Project Alternative, safety and security in the study area would follow current trends. Increased vehicular traffic volumes in Fresno and Kern counties over the next 25 years would be expected to result in increased traffic accidents; however, with planned roadway improvements, it is expected that existing accident trends in the study area would continue into the future. Counties and cities have the financial mechanisms in place to meet service level goals for emergency responders with the population growth planned for the study area. For these reasons, no adverse or significant impact on accident prevention or emergency response are anticipated.

The No Project Alternative would not have the community benefits associated with the HST project: reduction of traffic congestion on highways and major roadways and improved mobility and access to jobs, educational opportunities, and recreational resources. To the extent the net increase in housing units and industrial space in the region occurs in incorporated cities, it would be consistent with adopted general plans and policies, which aim to strengthen socioeconomic conditions in existing communities and improve neighborhood amenities, potentially benefiting community cohesion. Emergency response times and access would likely be enhanced from transportation improvements but challenged by dispersed development. The planned projects comprising the No Project Alternative would require acquisition of land and may result in displacement of residences and/or businesses, resulting in some economic benefits as well as potential fiscal and employment losses as a result of relocations. Planned transportation improvements would be made to rail, highway, airport, and transit systems, and commercial and residential development projects would occur throughout the region, which as a whole has

substantial numbers of communities of concern. As a result, these planned projects may disproportionately affect minority and/or low-income populations.

As described above, the No Project Alternative would result in up to 173,000 acres of land for future housing and necessary supporting infrastructure. While some infill development could occur without the HST to act as a catalyst, little TOD development is likely to be attracted to the downtown areas of Fresno and Bakersfield with the No Project Alternative. As an example, newly planned residential development proposed in the four counties would primarily be located on currently undeveloped land. Isolated development and roadway transportation projects would not provide the same opportunities for redevelopment within the downtown areas of Fresno and Bakersfield as would the development of HST stations. Overall, the No Project Alternative would not be as strong a catalyst in supporting the development envisioned in these general plans and other planning documents as would the HST alternatives.

Growth would occur on agricultural lands under the No Project Alternative. The eight San Joaquin Valley counties that participated in the San Joaquin Valley Blueprint planning process developed a forecast of farmland conversion to nonagricultural uses by 2050 based on current development patterns. Given continuation of these patterns, 327,000 acres of farmland would be converted by 2050 (San Joaquin Valley Blueprint 2009). Because of the extent and quality of farmland in these counties, most of this growth is likely to occur on Important Farmlands<sup>4</sup>. Most development in the southern San Joaquin Valley that is currently being planned or permitted is located in the vicinity of urban centers and/or along SR 99. Most of this development would take place on currently unincorporated county land that is largely classified as Prime Farmland<sup>5</sup>. A total of approximately 5,100 acres of farmland would be converted to nonagricultural uses by development planned or permitted within 2 miles of the Fresno to Bakersfield Section alternatives by 2035.

The No Project Alternative would not cause or accelerate substantial physical deterioration of parks, recreation, and open space resources. Continuing the pattern of converting farmland to development, the No Project Alternative would increase the loss of rural views while resulting in limited improvement to the generally moderate to moderately low visual quality in proposed redevelopment areas.

Under the No Project Alternative, cultural resources will continue to be affected in the Central Valley urban areas through the development of land resulting from growth. Changes in land use, and ground disturbance associated with other transportation infrastructure improvements will occur with the expansion of existing highways to accommodate the state's growing population. Adverse effects on eligible resources could result in the loss of historic properties.

Fresno and Bakersfield land use plans encourage infill and higher-density development in urban areas and concentration of uses around transit corridors to provide more modal choices for residents and workers. The San Joaquin Valley Blueprint identifies the HST as a critical element in meeting the goal of increased urban densification, and the No Project Alternative would conflict with this goal. Under the No Project Alternative, cities would have a more difficult time reducing low-density sprawl and encouraging higher-density development, and fewer modal choices would be available.

Construction of planned development and transportation projects, including the expansion of SR 99, would generate short-term construction employment in the region and a small number of

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<sup>4</sup> Important Farmland is Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance identified by the California Department of Conservation.

<sup>5</sup> Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods.

long-term permanent jobs to maintain new and expanded facilities. Under the No Project Alternative, fewer business and employment opportunities would exist in comparison to the HST alternatives. Employment growth would continue to follow existing patterns and would attract fewer of the higher-wage jobs in the financial, insurance, and real estate sectors than would occur under the HST alternatives.

## S.8 HST Alternatives Evaluation

The following section provides an overview of the effects, including benefits common to all HST alternatives and proposed mitigation, and compares differences between the impacts and costs of the six alternative alignments and the HMF alternatives. Table S-1 provides a high-level comparison of key design features associated with each of the alternative alignments being carried forward. This section then presents discussions of the impacts that differentiate the alternatives (and proposed mitigation measures) and the HMF alternatives (and proposed mitigation measures), as well as cost estimates for each alternative.

**Table S-1**  
 Design Features of Alternatives Carried Forward\*

Design Option	BNSF Alternative	Alternatives to BNSF Alignment				
		Corcoran Elevated	Corcoran Bypass	Allensworth Bypass	Wasco-Shafter Bypass	Bakersfield South
Total length (linear miles)	114	4(4)	21(21)	19(19)	23(24)	9(9)
At-grade profile (linear miles)	91	0(4)	20(20)	17(16)	19(17)	2(2)
Elevated profile (linear miles) (including Retained Fill)	23	4(0)	1(1)	2(3)	4(7)	7(7)
Number of Straddle Bents	29	7(0)	4(0)	0(0)	4(0)	38(27)
Number of Railroad Crossings	9	8(1)	1(1)	1(1)	1(1)	3(2)
Number of Major Water Crossings	7	0(0)	2(2)	0(0)	1(1)	1(1)
Number of Road Crossings	124	6(5)	19(16)	8(8)	27(14)	6(2)
Number of Roadway Closures	37	1(2)	8(7)	2(2)	18(5)	4(1)
Number of Roadway Overcrossings and Undercrossings	55	0(4)	9(13)	4(6)	7(9)	1(1)

\*Note: Equivalent numbers for the corresponding segment of the BNSF Alternative are presented in parenthesis.

### S.8.1 HST Benefits

Of the 8,400 daily riders who would board the HST at the Downtown Fresno Station in 2035, approximately 84% would have otherwise taken an automobile trip to their destination. Overall, the HST project would reduce daily VMT by 11% in Fresno County, 15% in Kings County, 5% in Tulare County, and 10% in Kern County, resulting in the benefits of decreased fuel consumption, decreased congestion, improved travel time, and reductions in air pollution emissions. The HST also would reduce the demand and substitute for commercial air travel within California.

Although the HST project would increase electricity consumption compared to the No Project Alternative, the HST project would reduce vehicle and air travel miles with corresponding reductions in fuel consumption and air emissions, for a substantial net reduction in emissions. In addition, the State of California requires that an increasing fraction (33% by 2020) of the electricity generated for the state's power portfolio come from renewable energy sources. As such, the emissions generated for powering the HST system are expected to be lower in the future than the estimates included in this EIR/EIS. The Authority has adopted a policy goal to purchase all HST system power from renewable energy sources, which would result in a greater overall reduction in emissions from the HST project.

The HST stations would have the benefit of encouraging high-density, transit-oriented development in Fresno and Bakersfield and would attract development away from the edges of urban boundaries (also called sprawl) in these cities. The Authority would work with the city of Hanford and Kings County to develop plans to protect land from urban development round the Kings/Tulare Regional Station, including acquisition of agricultural conservation easements in the station vicinity and limiting parking at the station to promote the use of transit between the station and local communities. The HST project could improve water quality in Fresno and Kern counties compared to the No Project Alternative because of decreased VMT and the encouragement of transit-oriented development, which in turn would reduce non-point source pollutants through trip reduction and increased density. The HST project may induce slight population and employment growth throughout the region, including in the communities that would not have an HST station. Indirect impacts would increase employment opportunities and economic vitality throughout the region, a result not likely under the No Project Alternative. Under current city and county general plans, communities in the region have adopted urban growth boundaries to accommodate growth beyond the 2035 planning horizon, including any growth induced by the HST project. HST-induced growth would, therefore, not require farmland conversion beyond what is planned for conversion. Generally, low-income and minority populations reside throughout the Fresno-to-Bakersfield corridor; therefore, benefits such as improved mobility, air quality, and employment would accrue to these low-income and minority populations because they compose such a large percentage in the region.

The analysis of all HST alternatives determined that by applying required federal and state regulations and engineering criteria standards, the operation of the project would not have substantial effects on public utilities and energy; land use; geology, soils, and seismicity; hazardous materials and wastes; hydrology and water resources; station planning, land use, and development; and regional growth.

### S.8.2 Adverse Effects Common to All HST Alternatives

The following potentially significant impacts would occur with all HST alternatives. Note that some impact numbers and mitigation measure numbers correspond to impacts and mitigation measures listed in Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures, organized by resource.

- Transportation:** The project would grade-separate many existing at-grade crossings of the BNSF Railway between Fresno and Bakersfield, benefiting traffic safety and circulation. Project operation would increase traffic congestion at numerous intersections around the Fresno, Bakersfield, and Kings/Tulare Regional stations. Mitigation measures for operational impacts include a wide variety of roadway improvements including restriping, installation of signals, modification of signal timing, and roadway widening. Following mitigation, traffic impacts at all intersections except for the H Street intersections at Tulare and Divisadero in Fresno would be negligible under NEPA and less than significant under CEQA. Traffic congestion would continue to be substantial under NEPA and significant under CEQA at the two intersections in Fresno because adjacent development makes improvements to these intersections not practicable.
- Air Quality:** The San Joaquin Valley does not meet National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) for ozone and particulate matter (particles) less than 2.5 micrometers (PM<sub>2.5</sub>), and does not meet CAAQS for particulate matter (particles) between 2.5 and 10 micrometers (PM<sub>10</sub>). Fresno and Bakersfield are under EPA-approved plans to maintain carbon monoxide (CO) concentrations at or below current levels. Project construction for all HST alternatives would result in substantial emissions of ozone precursors (volatile organic compounds [VOCs] and nitrogen oxides [NO<sub>x</sub>]), PM<sub>10</sub>, PM<sub>2.5</sub>, and CO. Project construction for all HST alternatives would also conflict with regional attainment plans and exceed CEQA significance thresholds for VOCs and NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

Hauling materials needed for track construction could violate air quality standards for NO<sub>x</sub> in some air basins outside the San Joaquin Valley. This would be mitigated by reducing emissions from on-road construction equipment, and purchasing emissions offsets if necessary, but in some air basins this impact could remain substantial under NEPA and significant under CEQA.

Construction also may expose residences, preschools, schools, daycare centers, and hospitals (sensitive receptors) to substantial pollutant concentrations resulting from concrete batch plant operations. Construction impacts would be temporary and mitigation of construction impacts would include standard best management practices (BMPs) during construction, reducing fugitive dust during material hauling, reducing criteria exhaust emissions from construction and on-road equipment, reducing VOC emissions from paint, and reducing the potential impact of concrete batch plants. Because of the large volume of emissions associated with project construction, air quality effects would remain substantial under NEPA and the impacts would be significant under CEQA following mitigation.

Project operations for all HST alternatives would result in a net benefit to air quality because the HST project would result in lower mobile source air toxics (MSATs), greenhouse gases (GHG), VOC, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions compared to the No Project Alternative. Operation of the HMF at either the Fresno or Wasco sites (Figure S-2) could expose sensitive receptors to substantial toxic air contaminant concentrations. Mitigation of this operational impact includes locating emission sources within the HMF property away from possible sensitive receptors and using best industry practices or alternative equipment to reduce emissions. The air quality effect of HMF emissions at the Fresno and Wasco sites would continue to be substantial under NEPA and the impact would be significant under CEQA following mitigation.

- Noise and Vibration:** All HST alternatives would create noise impacts during construction. Mitigation for these impacts includes noise monitoring during construction and requiring the contractor to implement one or more noise control measures to meet noise limits.

Construction noise effects would be negligible under NEPA and the impacts would be less than significant under CEQA following mitigation.

Building damage from construction vibration is only anticipated from impact pile driving very close to buildings. Damage from construction vibration is not anticipated if pile driving takes place more than 25 to 50 feet from buildings, or if alternative methods such as push driving or augur installation can be used. Mitigation includes preconstruction surveys to document the existing condition of buildings located within 50 feet of pile installation and using methods other than a hammer to install piles close to buildings that could be damaged by vibration. This mitigation would make construction vibration effects negligible under NEPA and impacts less than significant under CEQA.

All HST alternatives would create operational noise and vibration impacts. Mitigation for noise includes noise barriers, building insulation, special track work at crossovers and turnouts, and vehicle noise specifications. For vibration impacts, mitigation measures include trenches, building modification, and buffer zones. At some locations operational noise and vibration effects could continue to be substantial under NEPA and significant under CEQA following mitigation.

- **EMF/EMI:** Under all HST alternatives, HST workers with implanted medical devices would be adversely affected by exposure to EMF at electrical facilities, such as traction power facilities. Impacts to workers with implanted medical devices would be mitigated by implementing a safety program that would educate such workers to EMF hazards and exclude them from entering any facility with electrical equipment that could endanger them. This mitigation would make EMF effects to workers negligible under NEPA and the impact would be less than significant under CEQA. The Bakersfield South Alternative could cause electromagnetic interference with medical equipment at Mercy Hospital in Bakersfield. This impact would be mitigated through design provisions to prevent interference, such as establishing RF-resistant walls around sensitive equipment or installing RF filters in sensitive equipment. This would make the EMI effect negligible under NEPA and the impact would be less than significant under CEQA.
- **Biological Resources:** Construction of the HST alternatives could introduce noxious weeds; could disturb plant species that are rare or protected under state and/or federal law (special-status species), breeding birds, wildlife, and habitat with potential for supporting special-status wildlife species; convert substantial acreage of native habitat including annual grasslands, alkali desert scrub, and riparian areas; reduce the functionality of wildlife corridors and linkages; and disturb trees protected by local ordinances. Operation of the project would permanently impact suitable habitat for special-status plant and animal species; permanently impact sensitive plant communities and jurisdictional waters; impact critical habitat of vernal pool fairy shrimp (branchiopods); impact U.S. Fish and Wildlife Service (USFWS) recovery plans for threatened or endangered species; impact the Allensworth Ecological Reserve; remove protected trees; and reduce the functionality of wildlife movement corridors and linkages.

Construction and project period common mitigation measures that avoid and or minimize impacts on all biological resources and wetlands include monitoring, worker awareness training, weed control, implementing a biological resources management plan, implementing a restoration and revegetation plan, identification of environmentally sensitive areas and environmentally restricted areas, installation and use of approved fencing, and compliance reporting. Construction period mitigation measures to avoid or minimize impacts on biological resources include mapping special-status plants species and communities to avoid, protocol and/or preconstruction surveys of special-status wildlife species, construction timing, and implementation of resource specific guidelines and/or restoration of habitats and monitoring.

Mitigation for impacts during project operation include coordinating with the regulatory agencies (i.e., USFWS, U.S Army Corps of Engineers [USACE], California Department of Fish and Game [CDFG]); compensating for impacts on special-status plant species and plant communities; compensating for impacts on special-status wildlife species; implementing agency-approved guidelines and a habitat mitigation and monitoring plan; compensating for impacts on jurisdictional waters; compensating for the loss of protected trees; and providing and monitoring wildlife crossing restoration. Following mitigation, the project-related reduction in the functionality of wildlife movement corridors and habitat linkages would remain substantial under NEPA and a significant impact under CEQA.

- **Safety and Security:** All HST alternatives could increase demand for local emergency responders around the stations due to station activity and associated redevelopment and economic activity. This could increase response times and require new or physically altered government facilities that might impact the environment. This is a potentially moderate impact under NEPA and a significant impact under CEQA. As mitigation, emergency response to station and HMF incidents would be monitored, and if determined that the HST project does result in increased demand, a fair share impact fee to local service providers would be negotiated, reducing effects to negligible under NEPA and less than significant under CEQA.

The Corcoran Bypass Alternative would affect a private airstrip. This impact would be mitigated by compensating the owner for the loss of the airstrip, resulting in a negligible effect under NEPA and a less than significant impact under CEQA.

- **Socioeconomics, Communities, and Environmental Justice:** All HST alternatives would result in the division of existing communities east of Hanford and in northeast Bakersfield. All alternatives would result in displacement impacts of community facilities. Mitigation measures include coordination with the respective parties before land acquisition to assess potential opportunities to reconfigure land use and buildings and/or relocate affected facilities, as necessary, to minimize disruption of facility activities. Following mitigation, the effect of community division would remain substantial under NEPA.
- **Agricultural Lands:** Construction and operation of all alternatives would result in permanent conversion of agricultural land to nonagricultural use. Mitigation of this impact includes preservation of Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland and creation of a farmland consolidation program to sell non-economic remnant parcels to neighboring landowners. Because farmland cannot be replaced, the effect would remain substantial under NEPA and the impact would be significant under CEQA following mitigation.
- **Parks, Recreation, and Open Space:** Operation of all HST alternatives would affect the Amtrak playground in Bakersfield. Mitigation of construction impacts includes compensation for park use during construction. Mitigation of operation impacts includes financial compensation for purchase and development of replacement property and increased maintenance requirements. Following mitigation, construction and operation effects on the Amtrak playground would be negligible under NEPA and less than significant under CEQA.
- **Visual and Aesthetic Resources:** All HST alternatives would cause visual disturbance during construction including new sources of light and glare, and visual nuisance. All HST facilities, including sound barriers, would affect visual quality throughout the length of the project. Mitigation measures to reduce these impacts include minimizing clearing, preserving existing vegetation, using screens where possible, incorporating design criteria for elevated and station elements to adapt to local context, planting trees along edges of the right-of-way adjacent to residential areas, installing landscape treatments along HST overcrossings and retained fill elements, designing noise barriers in consideration of visual quality, and

screening of traction power system facilities. Following mitigation, views would continue to be blocked by some sound barriers and visual quality would be reduced in Bakersfield by HST elevated structures. These effects would continue to be substantial under NEPA and significant impacts under CEQA.

- **Cultural and Paleontological Resources:** All HST alternatives have the potential to cause impacts on historic properties (Section 106) and historic resources (CEQA) representing both archaeological and architectural resources, and areas of high paleontological sensitivity. HST alternatives would affect historically significant architectural resources. Mitigation for these impacts includes implementing a resource treatment plan for prehistoric and historic resources developed in coordination with the California State Historic Preservation Officer as well as complying with the mitigation framework outlined in the Section 106 Programmatic Agreement for cultural resources protection that has been developed for this project. For paleontological resources, the mitigation includes implementing a paleontological resources monitoring and mitigation plan, and halting construction if paleontological resources are found until they can be evaluated and recorded, as appropriate. Following mitigation, effects to some historic properties would remain substantial under NEPA and the impact would be significant under CEQA.

### S.8.3 Comparison of HST Alignment Alternatives

The BNSF Alternative is a single continuous alignment from Fresno to Bakersfield. The additional five alternative alignments considered in this EIR/EIS deviate from the BNSF Alternative for portions of the route. There are 24 possible combinations of these alternatives to make a continuous alignment from Fresno to Bakersfield.

Table S-2 at the end of the summary lists those impacts that differentiate each of the 24 project alignment alternatives. There are other environmental impacts associated with the alignment alternatives that are not listed in Table S-2 because they are of similar magnitude among the alternatives and therefore do not provide a means of differentiating between alternatives. Table S-3 at the end of the summary lists all substantial and significant project impacts.

Many regulations require standard measures to avoid and minimize environmental impacts. The Authority will comply with these regulations, and therefore these measures are not summarized here. Table S-3 at the end of the summary presents all of the mitigation measures proposed for the project. In addition, the Authority will strive to avoid and minimize impacts further as design progresses.

The five base alternatives that deviate from the BNSF Alternative were developed to reduce environmental impacts of the HST project. The principal benefits and impacts of these alternatives relative to the BNSF Alternative follow.

The Corcoran Elevated Alternative would have impacts similar to those of the corresponding segment of the BNSF Alternative, since both of these alignments follow the same general corridor through the city of Corcoran. The Corcoran Elevated Alternative would result in fewer residential and business displacements than the BNSF Alternative, and would be less disruptive of the roadway network in Corcoran. The Corcoran Elevated Alternative would result in noise impacts on more sensitive receptors such as residences and schools than the BNSF Alternative, and would have a greater visual impact to residents of the community than the BNSF Alternative.

The Corcoran Bypass Alternative avoids the city of Corcoran, deviating from the BNSF Railway. The Corcoran Bypass Alternative would have fewer noise impacts on sensitive receptors, affect fewer low-income and minority communities, cause less community disruption, and result in fewer business displacements than the BNSF Alternative. The Corcoran Bypass Alternative would

result in a smaller loss in property tax revenues, a greater loss in agricultural sales, conversion of more agricultural land to nonagricultural uses, and a greater loss of land protected under the Williamson Act than the BNSF Alternative.

The BNSF Alternative would require the acquisition of property from Allensworth State Historic Park and the Allensworth Ecological Reserve. This alternative would also cause visual and noise impacts on the park. The Allensworth Bypass Alternative would avoid these impacts and reduce the acreage of jurisdictional waters permanently affected by the project. However, the Allensworth Bypass Alternative would have a greater property tax revenue reduction, cause more agricultural business impacts, convert more acres of farmland to nonagricultural uses, and affect more acres of Williamson Act land than the BNSF Alternative.

The Wasco-Shafter Bypass Alternative avoids the communities of Wasco and Shafter, while the BNSF Alternative goes through these communities adjacent to the BNSF Railway. The Wasco-Shafter Bypass Alternative would have fewer noise impacts, affect fewer acres of waters of the United States, affect fewer low-income and minority communities, cause less community disruption, and result in fewer residential and business displacements than the BNSF Alternative. The Wasco-Shafter Bypass Alternative would result in a greater loss in agricultural sales, more conversion of agricultural land to nonagricultural uses, and a greater loss of land protected under the Williamson Act than the BNSF Alternative.

The Bakersfield South Alternative would also have impacts similar to those of the corresponding segment of the BNSF Alternative, since these two alternatives are only several hundred feet apart as they cross through metropolitan Bakersfield. Noise associated with the HST on the Bakersfield South Alternative would affect more sensitive receptors than the corresponding segment of the BNSF Alternative. The Bakersfield South Alternative would have EMI impacts on medical equipment in Mercy Hospital. Unlike the BNSF Alternative, the Bakersfield South Alternative would not encroach on the campus of Bakersfield High School. The Bakersfield South Alternative would have fewer residential and business relocations and have a smaller property and sales tax revenue reduction than the corresponding section of the BNSF Alternative. A greater number of religious facilities would be displaced with the Bakersfield South Alternative than the BNSF Alternative. The Bakersfield South Alternative would cross through the Mill Creek Redevelopment Area between the Amtrak Station and California Avenue. The BNSF Alternative would be located north of this redevelopment area.

#### **S.8.4 Comparison of HMF Alternative Sites**

As indicated above, five alternative sites were evaluated for an HMF facility along the Fresno to Bakersfield Section. Table S-4 at the end of the summary provides a comparison of impacts among these five sites.

#### **S.8.5 Capital Cost**

Table S-2 at the end of the summary provides a cost estimate in 2010 dollars for each of the 24 alignment alternatives. All of these estimates use the Fresno Mariposa Street Station Alternative. Although the estimated cost for the Fresno station at Mariposa Street and Kern Street would be the same, construction of the station at Kern Street would be \$27 million more than a station at Fresno Street because of increased track, site work, electric traction work, and design costs.

The HMF sites would all contain the same facilities to provide maintenance services for the HST system. The HMF at any of the sites would cost about \$620 million, based on conceptual site and functional layouts for the facilities.

## **S.9 Section 4(f)/Section 6(f)**

### **S.9.1 Section 4(f)**

Under Section 4(f) of 49 United States Code (U.S.C.) 303, an operating agency of the U.S. Department of Transportation may not approve a project that uses properties protected under this section of the law unless there are no prudent or feasible alternatives and the project includes all possible planning to minimize harm to such properties. Properties protected under Section 4(f) are publicly owned lands of a park, recreation area, or wildlife and waterfowl refuge or land of a historical site of national, state, or local significance as determined by the federal, state, regional, or local officials having jurisdiction over the resource.

There are 12 publicly-owned public parks, the Allensworth Ecological Reserve, and 25 historic properties in the vicinity of project alternatives that qualify for protection under Section 4(f). All of the alternatives would cross four irrigation canals that are on the National Register of Historic Places (NRHP) or eligible for the NRHP: the Washington Colony Canal and North Branch of Oleander Canal in Fresno County, the Peoples Ditch in Kings County, and the Friant-Kern Canal in Kern County. Because these canals are oriented in an east-west direction and the HST alternatives are oriented north-south, it is not possible to avoid these canals without substantial out-of-direct travel that would prevent the HST from operating within mandated travel times.

The BNSF Alternative would have direct use of two properties protected under Section 4(f): the Colonel Allensworth State Historic Park and the Allensworth Ecological Reserve. The BNSF Alternative would use 1.7 acres of the Allensworth State Historic Park and 7.3 acres of the Allensworth Ecological Reserve. Section 4(f) uses of the parks would be avoided with implementation of the Allensworth Bypass Alternative.

### **S.9.2 Section 6(f)**

Section 6(f) properties are recreation resources funded by the Land and Water Conservation Fund (LWCF) Act. These properties also cannot be used for transportation project unless there is no prudent or feasible alternative, and their use must be fully mitigated to the satisfaction of the National Park Service and the local jurisdiction administering the recreation resource. Funds from a 1994 LWCF development grant to the California Department of Parks and Recreation were used for new recreational facilities at Colonel Allensworth State Historic Park/Allensworth Historic District. Therefore, this park is considered a 6(f) property. As indicated above, the BNSF Alternative Alignment would require conversion of approximately 1.7 acres of the park. Section 6(f) impacts on the park would be avoided with implementation of the Allensworth Bypass Alternative.

## **S.10 Areas of Controversy**

Based on the scoping meetings and public outreach efforts throughout the environmental review process, the following are known areas of controversy:

- Selection of the preferred HST alternative.
- Impacts on special-status plants and wildlife and wildlife habitat preserves.
- Impacts on corridor communities (including noise, visual quality impacts, loss of community character and cohesion, and right-of-way acquisition).

- Impacts on farmlands (including severance of farmlands, loss of productive farmland, and loss of agricultural enterprises).
- Trade-offs between corridor communities and agricultural lands.

## **S.11 Next Steps in the Environmental Process**

The Authority and FRA are circulating the Draft EIR/EIS to affected local jurisdictions, state and federal agencies, tribes, community organizations, other interest groups, interested individuals, and the public. The document also is available at the Authority offices, public libraries in the study area, and on the Authority's website. The following discussion outlines the next steps in the environmental process, from public and agency comment on the Draft EIR/EIS to construction and operation.

### **S.11.1 Public and Agency Comment**

The Draft EIR/EIS will be circulated for a 45-day comment period, which will include public hearings. Information about the schedule of public hearings is available on the Authority's website at [www.cahighspeedrail.ca.gov](http://www.cahighspeedrail.ca.gov).

### **S.11.2 Identification of Preferred Alternative**

After considering public and agency comments, the Authority and FRA will identify a preferred alignment alternative, site for each station, and a preferred HMF facility alternative from among the HMF alternatives. The Authority and FRA will prepare a Fresno to Bakersfield Section Final EIR/EIS that will include responses to comments and a description of the preferred alternative and proposed mitigation.

#### **A. FRA DECISION-MAKING**

Upon completion of the environmental process with publication of the Fresno to Bakersfield Section Final EIR/EIS, the FRA expects to issue a Record of Decision (ROD) for compliance with NEPA. The ROD will describe the project and alternatives considered, describe the selected alternative; make environmental findings and determinations with regard to air quality conformity, Endangered Species Act, Section 106, Section 4(f), and environmental justice; and require mitigation measures. Issuance of the ROD is a prerequisite for any federal funding or approvals.

#### **B. U.S. ARMY CORPS OF ENGINEERS DECISION-MAKING**

The Fresno to Bakersfield Section of the HST system will require a permit from the USACE under Section 404 of the Clean Water Act and Section 14 of the Rivers and Harbors Act (33 U.S.C. 408). The USACE is using the Fresno to Bakersfield Section EIR/EIS to integrate the procedural and substantive requirements of NEPA and its permitting responsibilities (including EPA's 404(b)(1) Guidelines) to provide a single document that streamlines and enables informed decision-making by the USACE, including but not limited to, adoption of the EIS, issuance of necessary RODs, Section 404 permit decisions, and Section 408 permit decisions (as applicable) for alteration/modification of completed federal flood risk management facilities and any associated operation and maintenance, and real estate permissions or instruments (as applicable).

#### **C. CALIFORNIA HIGH-SPEED RAIL AUTHORITY DECISION-MAKING**

After completion of the environmental process, the Authority will consider whether to certify the Final EIR/EIS for compliance with CEQA. Once the Authority certifies the Final EIR/EIS, it can approve the project and make related CEQA decisions (findings, mitigation plan, and potential

statement of overriding considerations). The required CEQA findings prepared for each significant effect will be one of the following:

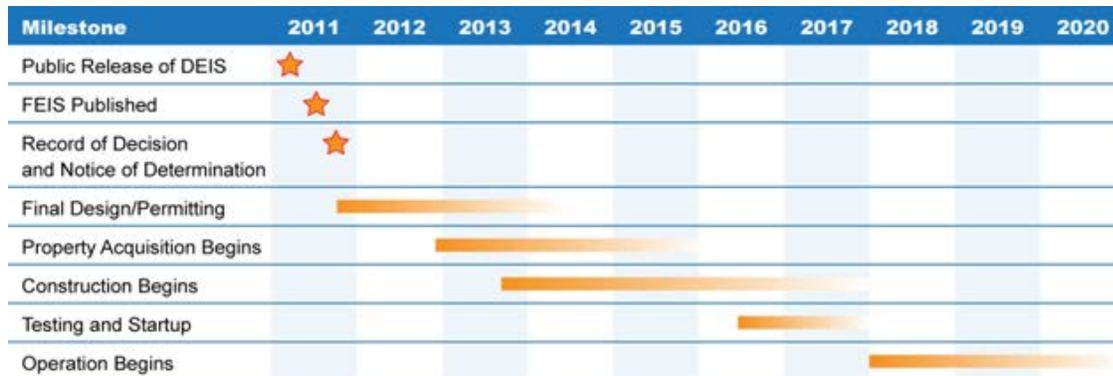
- Changes or alternatives have been required or incorporated into the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
- Changes or alternatives are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or HST alternatives identified in the Final EIR.

If the Authority proceeds with approval of the project, the Authority would file a Notice of Determination (NOD) that describes the project and whether the project will have a significant effect on the environment. If the Authority approves a project that will result in the occurrence of significant effects identified in the Final EIR but not avoided or substantially lessened, CEQA requires the preparation of a Statement of Overriding Considerations which provides specific reasons to support the project, including economic, legal, social, technological, or other benefits of the proposed project that outweigh unavoidable adverse environmental effects. If such a statement is prepared, the Authority's NOD will reference the statement.

For purposes of this Fresno to Bakersfield Section EIR/EIS, project approval would include selection of a north/south alignment alternative and selection of station locations. The Authority anticipates identifying a preferred HMF facility site from among the HMF alternative sites examined in this document. The Authority is also considering HMF facility alternative sites as part of the Merced to Fresno Section EIR/EIS, and anticipates identifying a preferred HMF facility site from among the alternatives in that EIR/EIS. A final decision on the HMF facility location is anticipated to occur at a date later than the decisions on the north/south alignments and stations, and based on the Authority's consideration of the preferred HMF alternative sites from both the Fresno to Bakersfield and Merced to Fresno sections.

**D. PROJECT IMPLEMENTATION**

After the issuance of the FRA's ROD and the Authority's NOD, the Authority would complete final design, obtain construction permits, and acquire property prior to construction, as shown in Figure S-3.



**Figure S-3**  
 Next steps scheduled

**Table S-2**  
 Comparison of Impacts of HST Alignment Alternatives

Impact	HST Alternatives (See footnote at end of table for numbered alternative descriptions)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Project Costs																								
Project costs (not including HMF) by alternative Base Year FY 2010 Dollars (millions)	\$7,011	\$7,187	\$6,856	\$6,804	\$6,643	\$6,950	\$6,980	\$6,819	\$7,126	\$6,581	\$6,919	\$6,520	\$6,758	\$6,649	\$6,488	\$6,795	\$6,250	\$6,588	\$6,189	\$6,427	\$6,405	\$6,743	\$6,344	\$6,582
Transportation and Traffic																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for transportation and traffic.																								
Project Impacts																								
TR #1: Total number of permanent road closures.	37	36	38	37	50	41	36	49	40	49	40	53	53	38	51	42	51	42	55	55	50	41	54	54
Noise and Vibration																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for noise and vibration.																								
Project Impacts																								
N&V #3: Number of severe operational noise impacts to sensitive receivers.	5,513	5,714	5,206	5,482	3,858	5,513	5,683	4,059	5,714	4,028	5,683	4,028	4,059	5,175	3,551	5,206	3,520	5,175	3,520	3,551	3,827	5,482	3,827	3,858
N&V #4: Number of operational vibration impacts to sensitive receivers.	39	28	48	47	36	39	26	25	28	23	26	23	25	46	45	48	43	46	43	45	34	37	34	36
Electromagnetic Fields and Electromagnetic Interference																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for electromagnetic field and electromagnetic interference.																								
Project Impacts																								
EMF/EMI #2: Impacts to sensitive medical devices or imaging equipment.	No	No	No	No	No	Yes	No	No	Yes	No	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Public Utilities and Energy																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for public utilities and energy.																								
Project Impacts - There are no significant differentiating project impacts between alternatives for public utilities and energy.																								
Biological Resources and Wetlands																								
Construction Impacts																								
Special-Status Plants																								
BIO #1: Number of acres temporarily impacted that has potential to support special-status plant species.	29	32	32	49	32	30	52	34	32	54	52	55	35	52	34	32	54	52	55	35	52	50	52	32
Special-Status Wildlife Species																								
BIO #2 through BIO #6: Number of acres temporarily impacted that has potential to support special-status wildlife species.	1,967	1,979	1,973	1,964	1,918	1,969	1,974	1,928	1,979	1,923	1,974	1,924	1,928	1,969	1,922	1,973	1,918	1,969	1,918	1,923	1,913	1,965	1,914	1,918
Special-Status Plant Communities																								
BIO #7: Number of acres temporarily disturbed that supports special-status plant communities and riparian areas.	30	32	32	49	32	30	52	35	32	54	52	54	35	52	35	33	54	52	55	35	52	50	52	33
Jurisdictional Waters																								
BIO #8: Number of acres directly and indirectly temporarily impacted that contain jurisdictional waters.	8.06	8.10	9.24	9.89	7.77	8.84	9.93	7.81	8.88	9.64	10.71	10.42	8.59	11.07	8.95	10.02	10.78	11.85	11.56	9.73	9.60	10.67	10.38	8.55

**Table S-2**  
 Comparison of Impacts of HST Alignment Alternatives

Impact	HST Alternatives (See footnote at end of table for numbered alternative descriptions)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Conservation Areas																								
BIO #10: Number of acres temporarily impacted that are located in USFWS recovery plans.	422	422	430	562	425	427	562	425	427	565	567	570	430	567	433	435	573	575	578	438	565	567	570	430
Project Impacts																								
Special-Status Plant Species																								
BIO #15: Number of acres impacted that has potential to support special-status plant species.	114	112	134	187	114	114	185	113	113	186	186	187	114	207	135	135	208	208	209	136	188	187	188	115
Special-Status Wildlife Species																								
BIO #16 through BIO #20: Number of acres impacted that has potential to support special-status wildlife species.	2,851	2,796	2,780	2,886	2,860	2,781	2,830	2,804	2,726	2,839	2,760	2,769	2,734	2,815	2,789	2,710	2,823	2,745	2,753	2,719	2,894	2,815	2,824	2,790
Special-Status Plant Communities																								
BIO #21: Number of acres disturbed that supports special-status plant communities and riparian areas.	129	127	150	199	130	127	198	128	126	199	196	197	126	220	150	148	221	218	219	149	200	197	198	128
Jurisdictional Waters																								
BIO #22: Number of acres directly and indirectly impacted that contain jurisdictional waters	60.94	59.32	52.17	57.64	60.27	60.51	56.02	58.65	58.89	55.35	55.59	54.92	58.22	48.87	51.50	51.74	48.20	48.44	47.77	51.07	56.97	57.21	56.54	59.84
Conservation Areas																								
BIO #24: Number of acres that would disturb portions of recovery plans.	705	705	606	742	720	639	742	720	638	757	675	690	653	643	620	539	658	576	591	553	757	676	690	653
BIO #25: Number of acres that would disturb portions of the Allensworth Ecological Reserve.	8	8	8	0	8	8	0	8	8	0	0	0	8	0	8	8	0	0	0	8	0	0	0	8
Hydrology and Water Resources																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for hydrology and water quality.																								
Project Impacts - There are no significant differentiating project impacts between alternatives for hydrology and water quality.																								
Geology, Soils, and Seismicity																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for geology and soils.																								
Project Impacts - There are no significant differentiating project impacts between alternatives for geology and soils.																								
Hazardous Materials and Wastes																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for Hazardous Materials and Wastes.																								
Project Impacts - There are no significant differentiating project impacts between alternatives for Hazardous Materials and Wastes.																								

**Table S-2**  
 Comparison of Impacts of HST Alignment Alternatives

Impact	HST Alternatives (See footnote at end of table for numbered alternative descriptions)																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Safety and Security																									
Construction Impacts - There are no significant differentiating construction impacts between alternatives for safety and security.																									
Project Impacts																									
S&S #1: Proximity of a private airstrip to HST facilities	No	No	Yes	No	Yes	No	No	No	No																
Socioeconomics, Communities, and Environmental Justice																									
Construction Impacts - There are no significant differentiating construction impacts between alternatives for socioeconomics, communities, and environmental justice.																									
Project Impacts																									
SO #4: Displacement of Bakersfield High School's Industrial Arts building.	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No	No	No	
SO #5: Displacement of the Mercado Latino Tianguis.	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No	No	No	
SO #7: Displacement of Mercy Hospital medical complex facilities.	No	No	No	No	No	Yes	No	No	Yes	No	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	
SO #8: Displacement of religious facilities.	7	6	8	7	7	9	6	6	8	6	8	8	8	8	8	10	8	10	10	10	7	9	9	9	
Estimated number of housing units displaced in EJ areas	192	142	131	187	184	173	137	134	123	129	118	110	115	126	123	112	118	107	99	104	179	168	160	165	
Station Planning, Land Use, and Development																									
Construction Impacts - There are no significant differentiating construction impacts between alternatives for station planning, land use, and development.																									
Project Impacts - There are no significant differentiating project impacts between alternatives for station planning, land use, and development.																									
Agricultural Lands																									
Construction Impacts - There are no significant differentiating construction impacts between alternatives for agricultural lands.																									
Project Impacts																									
AG #1: Number of acres of agricultural land converted to nonagricultural use.	2,192	2,192	2,201	2,263	2,317	2,192	2,263	2,317	2,192	2,388	2,263	2,388	2,317	2,272	2,326	2,201	2,397	2,272	2,397	2,326	2,388	2,263	2,388	2,317	
AG #2: Number of acres of agricultural parcels split creating parcels too small to economically farm.	108	108	112	132	182	108	132	182	108	206	132	206	182	136	186	112	210	136	210	186	206	132	206	182	
Parks, Recreation, and Open Space																									
Construction Impacts																									
PK #1: Activities would create noise to some areas of Father Wyatt Park.	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes																
PK #3: Activities would create noise to some areas of Bakersfield High School.	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	Yes	Yes	No	Yes	No	No	No	Yes	No	No	No	
Project Impacts																									
PK#4: Required acquisition of Allensworth State Historic Park land.	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	No	No	Yes	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes	
PK#5: Required acquisition of Allensworth Ecological Reserve land.	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	No	No	Yes	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes	
PK#6: Addition of a modern feature not consistent with the historic atmosphere of Allensworth State Historic Park.	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	No	No	Yes	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes	

**Table S-2**  
 Comparison of Impacts of HST Alignment Alternatives

Impact	HST Alternatives (See footnote at end of table for numbered alternative descriptions)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
<b>Aesthetics and Visual Quality</b>																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for agricultural lands.																								
<b>Project Impacts</b>																								
VQ #5: Lower visual quality in Corcoran, Wasco, Shafter, and Allensworth State Historic Park Landscape Units.	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No	No	No	No	No	No	Yes	No							
<b>Cultural and Paleontological Resources</b>																								
Construction Impacts																								
Impact CUL #1: Effect on significant prehistoric and historic-era archaeological resources.	3	3	3	4	3	3	4	3	3	4	4	4	3	4	3	3	4	4	4	3	4	4	4	3
CUL #2: Effect on historically significant built- environment resources.	27	27	27	28	25	24	28	25	24	26	25	23	22	28	25	24	26	25	23	22	26	25	23	22
Project Impacts - There are no significant differentiating project impacts between alternatives for cultural and paleontological resources.																								
<b>Regional Growth</b>																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for regional growth.																								
Project Impacts - There are no significant differentiating project impacts between alternatives for regional growth.																								
<b>Cumulative Impacts</b>																								
Construction Impacts - There are no significant differentiating construction impacts between alternatives for cumulative impacts.																								
Project Impacts - There are no significant differentiating project impacts between alternatives for cumulative impacts.																								
Footnote: Each alternative combination was given a different number. Listed below is every single possible combination that may occur from the proposed alignment and alternatives. If an alternative alignment is not mentioned than the BNSF alternative is being used.																								
<ol style="list-style-type: none"> <li>1. BNSF only</li> <li>2. Corcoran Elevated</li> <li>3. Corcoran Bypass</li> <li>4. Allensworth Bypass</li> <li>5. Wasco Shafter Bypass</li> <li>6. Bakersfield South</li> <li>7. Corcoran Elevated and Allensworth Bypass</li> <li>8. Corcoran Elevated and Wasco Shafter Bypass</li> <li>9. Corcoran Elevated and Bakersfield South</li> <li>10. Corcoran Elevated and Allensworth Bypass and Wasco Shafter Bypass</li> <li>11. Corcoran Elevated and Allensworth Bypass and Bakersfield South</li> <li>12. Corcoran Elevated and Allensworth Bypass and Wasco Shafter Bypass and Bakersfield South</li> <li>13. Corcoran Elevated and Wasco Shafter Bypass and Bakersfield South</li> <li>14. Corcoran Bypass and Allensworth Bypass</li> <li>15. Corcoran Bypass and Wasco Shafter Bypass</li> <li>16. Corcoran Bypass and Bakersfield South</li> <li>17. Corcoran Bypass and Allensworth Bypass and Wasco Shafter Bypass</li> <li>18. Corcoran Bypass and Allensworth Bypass and Bakersfield South</li> <li>19. Corcoran Bypass and Allensworth Bypass and Wasco Shafter Bypass and Bakersfield South</li> <li>20. Corcoran Bypass and Wasco Shafter Bypass and Bakersfield South</li> <li>21. Allensworth Bypass and Wasco Shafter Bypass</li> <li>22. Allensworth Bypass and Bakersfield South</li> <li>23. Allensworth Bypass and Wasco Shafter Bypass and Bakersfield South</li> <li>24. Wasco Shafter Bypass and Bakersfield South</li> </ol>																								

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>Transportation and Traffic</b>		
<b>Construction Impacts</b>		
There are no construction impacts for transportation and traffic.	Transportation and traffic avoidance and minimization measures 1 through 10.	N/A
<b>Project Impacts</b>		
<b>TR #1:</b> Permanent road closures.	<b>TR-MM #1:</b> Access maintenance for property owners.	<b>Less than Significant</b>
<b>TR #2:</b> HST station area roadway impacts.	<b>TR-MM #7:</b> Add New Lanes to roadway.	<b>Less Than Significant</b>
<b>TR #2:</b> HST station area intersection impacts.	<b>TR-MM #2, TR-MM #3, TR-MM #4, TR-MM #5, TR-MM #6</b>  These mitigation measures propose to improve intersections, traffic lights and lane movement.	<b>Less Than Significant/Significant</b>
<b>TR #3:</b> HMF site roadway impacts.	<b>TR-MM #7:</b> Add New Lanes to roadway.	<b>Less Than Significant</b>
<b>TR #3:</b> HMF site intersection impacts.	<b>TR-MM #2, TR-MM #3, TR-MM #4, TR-MM #5, TR-MM #6</b>  These mitigation measures propose to improve intersections, traffic lights and lane movement.	<b>Less Than Significant</b>
<b>Air Quality and Global Climate Change</b>		
<b>Construction Impacts</b>		
<b>AQ #1:</b> Construction would exceed the CEQA emissions thresholds for VOCs and NOx. Therefore, it could potentially cause violations of NO <sub>2</sub> and O <sub>3</sub> air quality standards or contribute substantially to NO <sub>2</sub> and O <sub>3</sub> existing or projected air quality violations.	<b>AQ-MM #2:</b> Reduce VOC Emissions from Paint.  <b>AQ-MM #4:</b> Reduce Criteria Exhaust Emissions from Construction Equipment.  <b>AQ-MM #5:</b> Reduce Criteria Exhaust Emissions from On-Road Construction Equipment.	<b>Significant</b>
<b>AQ #2:</b> Construction would exceed the CEQA emissions thresholds for PM <sub>10</sub> and PM <sub>2.5</sub> . Therefore, it could potentially cause violations of PM <sub>10</sub> and PM <sub>2.5</sub> air quality standards or contribute substantially to existing or projected PM <sub>10</sub> and PM <sub>2.5</sub> violations.	<b>AQ-MM #1, AQ-MM #3, AQ-MM #4, AQ-MM #5</b>  These mitigation measures propose to reduce dust and PM during construction.	<b>Significant</b>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>AQ #3:</b> Material hauling outside the SJVAB would exceed CEQA emission thresholds for NO <sub>x</sub> in the Bay Area AQMD, East Kern APCD, Mojave Desert AQMD, and the South Coast AQMD for certain hauling scenarios.	<b>AQ-MM #5:</b> Reduce Criteria Exhaust Emissions from On-Road Construction Equipment.  <b>AQ-MM #9:</b> Purchase offsets for emissions associated with hauling ballast material in SCAQMD.	<b>Less Than Significant/Significant</b>
<b>AQ #4:</b> Construction of the HST alternatives would exceed the CEQA emissions thresholds for VOC and NO <sub>x</sub> . Therefore, it would conflict with the 1-hour Ozone Attainment Plan and the 8-hour Ozone Attainment Plan.	<b>AQ-MM #2:</b> Reduce VOC Emissions from Paint.  <b>AQ-MM #4:</b> Reduce Criteria Exhaust Emissions from Construction Equipment.  <b>AQ-MM #5:</b> Reduce Criteria Exhaust Emissions from On-Road Construction Equipment.	<b>Significant</b>
<b>AQ #5:</b> Construction of the HST alternatives would exceed the CEQA emissions thresholds for PM <sub>10</sub> and PM <sub>2.5</sub> . Therefore, it would conflict with the PM <sub>10</sub> and PM <sub>2.5</sub> Attainment Plans.	<b>AQ-MM#1, AQ-MM#3, AQ-MM#4, AQ-MM#5</b>  These mitigation measures propose to reduce dust and PM during construction.	<b>Significant</b>
<b>AQ # 6:</b> Construction of the alignment may expose sensitive receptors to temporary substantial pollutant concentrations.	<b>AQ-MM #8:</b> Reduce the Potential Impact of Concrete Batch Plants.	<b>Less than significant</b>
<b>Project Impacts</b>		
<b>AQ #7:</b> Operation of the HMF may expose sensitive receptors within 1000 ft from the HMF boundary to substantial TAC pollutant concentrations.	<b>AQ-MM #6:</b> Reduce the Potential Impact of Toxics.  <b>AQ-MM #7:</b> Reduce the Potential Impact of Stationary Sources.	<b>Less than significant</b>
<b>AQ #8:</b> Operation of the HMF may cause the total PM <sub>10</sub> and PM <sub>2.5</sub> ambient concentrations exceed CAAQS due to the existing exceedances in the area.	<b>AQ-MM #7:</b> Reduce the Potential Impact of Stationary Sources.	<b>Significant</b>
<b>Noise and Vibration</b>		
<b>Construction Impacts</b>		
<b>N&amp;V #1:</b> Construction Noise	<b>N&amp;V-MM#1:</b> Construction noise mitigation measures.	<b>Less than significant</b>
<b>N&amp;V #2:</b> Construction Vibration	<b>N&amp;V-MM#2:</b> Construction vibration mitigation measures.	<b>Less than significant</b>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>Project Impacts</b>		
<b>N&amp;V #3:</b> Number of moderate and severe operational noise impacts to sensitive receivers.	<b>N&amp;V-MM #3 through N&amp;V-MM #7</b> These mitigation measures proposed to decrease noise impacts to sensitive receivers.	<b>Potentially Significant</b>
<b>N&amp;V #4:</b> Number of moderate and severe operational vibration impacts to sensitive receivers.	<b>N&amp;V #8:</b> Implement project vibration mitigation.	<b>Potentially Significant</b>
<b>Electromagnetic Fields and Electromagnetic Interference</b>		
<b>Construction Impacts</b>		
There are no construction impacts for electromagnetic fields and electromagnetic interference.	No mitigation required	N/A
<b>Project Impacts</b>		
<b>EMF/EMI #1:</b> Effects on workers with implanted medical devices.	<b>EMF/EMI-MM #1:</b> Protect workers with implanted medical devices.	<b>Less than Significant</b>
<b>EMF/EMI #2:</b> Impacts to sensitive medical devices or imaging equipment.	<b>EMF/EMI-MM #2:</b> Protect sensitive equipment.	<b>Less than Significant</b>
<b>Public Utilities and Energy</b>		
<b>Construction Impacts</b>		
There are no construction impacts for public utilities and energy.	No mitigation required	N/A
<b>Project Impacts</b>		
There are no project impacts for public utilities and energy.	No mitigation required	N/A
<b>Biological Resources and Wetlands</b>		
<b>Construction Impacts</b>		
<b>Special-Status Plants</b>		
<b>BIO #1:</b> Number of acres impacted that has potential to support special-status plant species.	<b>AQ-MM#1, AQ-MM#3, Bio-MM#16, Bio-MM#17, Bio-MM#51, WR-MM#1</b> These mitigation measures propose to reduce dust and require pre-construction surveys.	<b>Less than Significant</b>
<b>Special-Status Wildlife Species</b>		
<b>BIO #2:</b> Construction would disturb suitable habitat that has potential to support special-status invertebrate species.	<b>AQ-MM #1, AQ-MM #3, Bio-MM #18, through Bio-MM #21, Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #52, Bio-MM #53, Bio-MM #59, Bio-MM #61, WR-MM #1</b> These mitigation measures propose to reduce dust, require pre-construction surveys, and require restoration after construction.	<b>Less than Significant</b>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>BIO #3:</b> Construction would disturb the suitable habitat that has potential to support special-status reptiles and amphibian species.	<b>Bio-MM #22 through Bio-MM #26, Bio-MM #45, Bio-MM #46, Bio-MM #54, Bio-MM #55, Bio-MM #61</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>BIO #4:</b> Construction would disturb habitat that has the potential to support special-status fish (i.e., Kern brook lamprey) species.	<b>Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #59, Bio-MM #60, Bio-MM #61, WR-MM #1, WR-MM #2</b> These mitigation measures propose to require restoration after construction.	<b>Less than Significant</b>
<b>BIO #5:</b> Construction would disturb suitable habitat that has potential to support nesting special-status bird species (including raptors).	<b>Bio-MM #27 through Bio-MM #34, Bio-MM #56, Bio-MM #57</b> These mitigation measures propose require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>Bio#6:</b> Construction would disturb suitable habitat that has the potential to support special-status mammal species.	<b>Bio-MM #35 through Bio-MM #43, Bio-MM #58</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>Special-Status Plant Communities</b>		
<b>BIO #7:</b> Number of acres disturbed that supports special-status plant communities and riparian areas.	<b>Bio-MM #16, Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #51, Bio-MM #59, Bio-MM #60, Bio-MM #61</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>Jurisdictional Waters</b>		
<b>BIO #8:</b> Number of acres directly and indirectly impacted that contain jurisdictional waters.	<b>Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #59, Bio-MM #60, Bio-MM #61, WR-MM #1, WR-MM #2</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>Critical Habitat</b>		
<b>BIO #9:</b> Construction would disturb critical habitat for vernal pool branchiopods.	<b>Bio-MM #18, Bio-MM #19, Bio-MM #20, Bio-MM #46, Bio-MM #52, Bio-MM #61</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>Conservation Areas</b>		
<b>BIO #10:</b> Number of acres located in USFWS recovery plans.	<b>Construction and Project Period Mitigation Measures Bio-MM #16 through Bio-MM #64</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>BIO #12:</b> Construction would disturb portions of habitat conservation plan areas.	<b>Construction and Project Period Mitigation Measures Bio-MM #16 through Bio-MM #64</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>Protected Trees</b>		
<b>BIO #13:</b> Construction of the HST alternatives would disturb protected trees.	<b>Bio-MM #47:</b> Monitoring of Protected Trees. <b>Bio-MM #62:</b> Compensate for Impacts to Protected Trees.	<b>Less than Significant</b>
<b>Wildlife Movement Corridors</b>		
<b>BIO #14:</b> Construction would result in site preparation activities that would temporarily obstruct or startle wildlife and reduce the functionality of wildlife movement corridors and habitat linkages.	<b>Bio-MM #48, Bio-MM #49, Bio-MM #50, Bio-MM #63, Bio-MM #64</b> These mitigation measures propose to implement measures to maintain wildlife movement.	<b>Less than Significant</b>
<b>Project Impacts</b>		
<b>Special-Status Plant Species</b>		
<b>BIO #15:</b> Number of acres impacted that has potential to support special-status plant species.	<b>AQ-MM #1, AQ-MM #3, Bio-MM #16, Bio-MM #17, Bio-MM #51, WR-MM #1</b> These mitigation measures propose to reduce dust and require pre-construction surveys.	<b>Less than Significant</b>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>Special-Status Wildlife Species</b>		
<p><b>BIO #16:</b> Impacts would permanently impact suitable habitat that has the potential to support special-status invertebrate species.</p>	<p><b>AQ-MM #1, AQ-MM #3, Bio-MM #18, through Bio-MM #21, Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #52, Bio-MM #53, Bio-MM #59, Bio-MM #61</b>                      These mitigation measures propose to reduce dust, require pre-construction surveys, and require restoration after construction.</p>	<p><b>Less than Significant</b></p>
<p><b>BIO #17:</b> Impacts would permanently impact suitable habitat that has the potential to support special-status reptiles and amphibian species.</p>	<p><b>Bio-MM #22 through Bio-MM #26, Bio-MM #45, Bio-MM #46, Bio-MM #54, Bio-MM #55, Bio-MM #61</b>                      These mitigation measures propose to require pre-construction surveys and require restoration after construction.</p>	<p><b>Less than Significant</b></p>
<p><b>BIO #18:</b> Impacts would permanently impact suitable habitat that has the potential to support special-status fish species (i.e., Kern brook lamprey).</p>	<p><b>Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #59, Bio-MM #60, Bio-MM #61, WR-MM #1, WR-MM #2</b>                      These mitigation measures propose to require pre-construction surveys and require restoration after construction.</p>	<p><b>Less than Significant</b></p>
<p><b>BIO #19:</b> Impacts would permanently impact suitable habitat that has the potential to support special-status bird species (including raptors).</p>	<p><b>Bio-MM #27 through Bio-MM #34, Bio-MM #56, Bio-MM #57</b>                      These mitigation measures propose require pre-construction surveys and require restoration after construction.</p>	<p><b>Less than Significant</b></p>
<p><b>BIO #20:</b> Impacts would permanently impact suitable habitat that has the potential to support special-status mammal species.</p>	<p><b>Bio-MM #35 through Bio-MM #43, Bio-MM #58</b>                      These mitigation measures propose require pre-construction surveys and require restoration after construction.</p>	<p><b>Less than Significant</b></p>
<b>Special-Status Plant Communities</b>		
<p><b>BIO #21:</b> Number of acres disturbed that supports special-status plant communities and riparian areas.</p>	<p><b>Bio-MM #16, Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #51, Bio-MM #59, Bio-MM #60, Bio-MM #61</b>                      These mitigation measures propose to require pre-construction surveys and require restoration after construction.</p>	<p><b>Less than Significant</b></p>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>Jurisdictional Waters</b>		
<b>BIO #22:</b> Number of acres directly and indirectly impacted that contain jurisdictional waters	<b>Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #59, Bio-MM #60, Bio-MM #61, WR-MM #1, WR-MM #2</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>Critical Habitat</b>		
<b>BIO #23:</b> Project impacts to critical habitat for vernal pool species.	<b>Bio-MM #18, Bio-MM #19, Bio-MM #20, Bio-MM #46, Bio-MM #52, Bio-MM #61</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>Conservation Areas</b>		
<b>BIO #24:</b> Number of acres that would disturb portions of recovery plans.	<b>Construction and Project Period Mitigation Measures Bio-MM #16 through Bio-MM #64</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>BIO #25:</b> Number of acres that would disturb portions of the Allensworth Ecological Reserve.	<b>PC-MM #1:</b> Compensation for Staging in Park Property for Construction. <b>PP-MM #1:</b> Acquisition of Park Property.	<b>Less than Significant</b>
<b>BIO #26:</b> Project impacts from the BNSF Alternative would disturb portions of habitat conservation plans.	<b>Construction and Project Period Mitigation Measures Bio-MM #16 through Bio-MM #64</b> These mitigation measures propose to require pre-construction surveys and require restoration after construction.	<b>Less than Significant</b>
<b>Protected Trees</b>		
<b>BIO #27:</b> Impacts would permanently affect protected trees.	<b>Bio-MM #47:</b> Monitoring of Protected Trees. <b>Bio-MM #62:</b> Compensate for Impacts to Protected Trees.	<b>Less than Significant</b>
<b>Wildlife Movement Corridors</b>		
<b>BIO #28:</b> Impacts would permanently reduce the functionality of wildlife movement corridors and habitat linkages.	<b>Bio-MM #48, Bio-MM #49, Bio-MM #50, Bio-MM #63, Bio-MM #64</b> These mitigation measures propose to implement measures to maintain wildlife movement.	<b>Significant</b>

**Table S-3**  
 HST Mitigation Measures

<b>Impact</b>	<b>Mitigation Measure</b>	<b>CEQA Level of Significance after Mitigation</b>
<b>Hydrology and Water Resources</b>		
<b>Construction Impacts</b>		
There are no construction impacts for hydrology and water quality.	No mitigation required	N/A
<b>Project Impacts</b>		
There are no project impacts for hydrology and water quality.	No mitigation required	N/A
<b>Geology, Soils, and Seismicity</b>		
<b>Construction Impacts</b>		
There are no construction impacts for geology, soils, and seismicity.	No mitigation required	N/A
<b>Project Impacts</b>		
There are no project impacts for geology, soils, and seismicity.	No mitigation required	N/A
<b>Hazardous Materials and Wastes</b>		
<b>Construction Impacts</b>		
<b>HMW #1:</b> Handling of Extremely Hazardous Materials within 0.25 mile of a School	<b>HMW-MM #1:</b> No use of extremely hazardous substances or a mixture thereof in a quantity equal to or greater than the state threshold quantity within 0.25 mile of a school.	<b>Less than significant</b>
<b>Project Impacts</b>		
There are no project impacts for hazardous materials and wastes.	No mitigation required	N/A
<b>Safety and Security</b>		
<b>Construction Impacts</b>		
There are no construction impacts for safety and security.	No mitigation required	N/A
<b>Project Impacts</b>		
<b>S&amp;S #1:</b> Proximity of a private airstrip to HST facilities.	<b>S&amp;S-MM #1:</b> Compensation for loss of private airstrip.	<b>Less than Significant</b>
<b>S&amp;S #2:</b> Increased demand for fire, rescue, and emergency services at stations and HMFs	<b>S&amp;S-MM #2:</b> Pay impact fee to local fire, rescue, and emergency service providers for services at stations and at the HMF.	<b>Less than Significant</b>
<b>Socioeconomic, Communities, and Environmental Justice</b>		
<b>Construction Impacts</b>		
There are no construction impacts for socioeconomics, communities, and environmental justice.	<b>SO-MM #1:</b> Develop and implement a construction management plan. <b>SO-MM #2:</b> Develop a relocation mitigation plan.	N/A

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>Project Impacts</b>		
<p><b>SO #1:</b> Division of existing community. Ponderosa Rd./Edna Way, northeast of Hanford and the Newark Ave. vicinity northeast of Corcoran.</p> <p>Displacement of residents of small tightly knit communities.</p>	<p><b>SO-MM #3:</b> Implement measures to reduce impacts associated with the division of existing communities in the unincorporated areas northeast of Hanford and Corcoran.</p>	<p><b>Significant</b></p>
<p><b>SO #2:</b> Division of existing community in Bakersfield's Northeast District.</p>	<p><b>SO-MM #4:</b> Implement measures to reduce impacts associated with the division of existing communities in the Northeast District of Bakersfield.</p>	<p><b>Significant</b></p>
<p><b>SO #3:</b> Division of existing community in Bakersfield's Northwest District.</p>	<p><b>SO-MM #5:</b> Implement measures to reduce impacts associated with the division of existing communities in the Northwest District of Bakersfield.</p>	<p><b>Significant</b></p>
<p><b>SO #4:</b> Displacement of Bakersfield High School's Industrial Arts building.</p>	<p><b>SO-MM #6:</b> Implement measures to reduce impacts associated with the displacement of Bakersfield High School facilities.</p>	<p><b>Less than Significant</b></p>
<p><b>SO #5:</b> Displacement of the Mercado Latino Tianguis.</p>	<p><b>SO-MM #6:</b> Implement measures to reduce impacts associated with the displacement of the Mercado Latino Tianguis.</p>	<p><b>Less than Significant</b></p>
<p><b>SO #6:</b> Displacement of the Fresno Rescue Mission and associated facilities.</p>	<p><b>SO-MM #6:</b> Implement measures to reduce impacts associated with the displacement of the Fresno Rescue Mission and associated facilities.</p>	<p><b>Less than Significant</b></p>
<p><b>SO #7:</b> Displacement of Mercy Hospital medical complex facilities.</p>	<p><b>SO-MM #6:</b> Implement measures to reduce impacts associated with the displacement of Mercy Hospital medical facilities.</p>	<p><b>Less than Significant</b></p>
<p><b>SO #8:</b> Displacement of religious facilities.</p>	<p><b>SO-MM #6:</b> Implement measures to reduce impacts associated with the displacement of religious facilities.</p>	<p><b>Less than Significant</b></p>

**Table S-3**  
 HST Mitigation Measures

<b>Impact</b>	<b>Mitigation Measure</b>	<b>CEQA Level of Significance after Mitigation</b>
<b>Station Planning, Land Use, and Development</b>		
<b>Construction Impacts</b>		
There are no construction impacts for station planning, land use, and development.	No mitigation required	N/A
<b>Project Impacts</b>		
There are no project impacts for station planning, land use, and development.	No mitigation required	N/A
<b>Agricultural Lands</b>		
<b>Construction Impacts</b>		
There are no construction impacts for agricultural lands.	No mitigation required	N/A
<b>Project Impacts</b>		
<b>AG #1:</b> Permanent Conversion of Agricultural Land to Nonagricultural Use.	<b>AG-MM #1:</b> Preserve the total amount of prime, statewide, local, and unique farmland.	<b>Significant</b>
<b>AG #2:</b> Permanent Conversion of Agricultural Land from Parcel Splits.	<b>AG-MM #2:</b> Consolidate Non-Economic Remnants.	<b>Significant</b>
<b>Parks, Recreation, and Open Space</b>		
<b>Construction Impacts</b>		
<b>PK #1:</b> Construction activities would create noise at Father Wyatt Park.	Mitigation Measures as outlined in Section 3.4, Noise and Vibration.	<b>Less than Significant</b>
<b>PK #2:</b> Construction activities would create closures of some areas of Kern River Parkway, including bike and equestrian facilities.	<b>PC-MM #1:</b> Compensation for Staging in Park Property for Construction.	<b>Less than Significant</b>
<b>PK #3:</b> Construction activities would create noise at Bakersfield High School.	Mitigation Measures as outlined in Section 3.4, Noise and Vibration.	<b>Significant</b>
<b>Project Impacts</b>		
<b>PK #4:</b> The project would require the acquisition of approximately 1.7 acres of Allensworth State Historic Park.	<b>PP-MM#1:</b> Acquisition of Park Property. <b>PP-MM#2:</b> Avoidance of Allensworth State Historic Park.	<b>Less than Significant</b>
<b>PK #5:</b> The project would require the acquisition of approximately 7.3 acres of Allensworth Ecological Reserve.	<b>PP-MM#1:</b> Acquisition of Park Property.	<b>Less than Significant</b>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>PK #6:</b> The project would introduce a modern feature not consistent with the historic atmosphere of Allensworth State Historic Park.	Mitigation Measures as outlined in Section 3.16, Aesthetics and Visual Resource	<b>Significant</b>
<b>PK #7:</b> The project would create an increase in usage that would result in physical deterioration of the Bakersfield Amtrak Station Playground.	<b>PP-MM #3:</b> Collect Additional Maintenance Funds.	<b>Less than Significant</b>
<b>Aesthetics and Visual Quality</b>		
<b>Construction Impacts</b>		
<b>VQ #1:</b> Visual disturbance during construction.	<b>VQ-MM #1:</b> Minimize Visual Disruption during Construction.	<b>Less than Significant</b>
<b>VQ#2:</b> Nighttime Lighting during construction.	<b>VQ-MM #1:</b> Minimize Visual Disruption during Construction.	<b>Less than Significant</b>
<b>Project Impacts</b>		
<b>VQ #3:</b> Lower visual quality in the Central Fresno Landscape Unit.	<b>VQ-MM #2, VQ-MM #3, VQ-MM #3a, VQ-MM #3b, VQ-MM #4a, VQ-MM #6</b> These mitigation measures propose to require landscaping and treatment for sound walls and elevated structures.	<b>Less than Significant</b>
<b>VQ #4:</b> Lower visual quality in the Rural Valley/Agricultural Landscape Unit.	<b>VQ-MM #2, VQ-MM #3, VQ-MM #3a, VQ-MM #3b, VQ-MM #4a, VQ-MM #4b, VQ-MM #5, VQ-MM #6, VQ-MM #7</b> These mitigation measures propose to require landscaping and treatment for sound walls and elevated structures.	<b>Significant</b>
<b>VQ #5:</b> Impacts on existing visual character or quality of the site and its surroundings due to at-grade and elevated structures, HST, road overcrossings, or other prominent project features.	<b>VQ-MM #3, VQ-MM #3a, VQ-MM #3b, VQ-MM #4a, VQ-MM #4b, VQ-MM #5, VQ-MM #6</b> These mitigation measures propose to require landscaping and treatment for sound walls and elevated structures.	<b>Significant (BNSF, Corcoran Elevated, Corcoran Bypass, Wasco-Shafter Bypass)</b> <b>Less than significant (Allensworth Bypass)</b>
<b>VQ #6:</b> Lower visual quality in the Rosedale, Kern River, and Central Bakersfield Landscape Units.	<b>VQ-MM #2, VQ-MM #3, VQ-MM #3a, VQ-MM #3b, VQ-MM #4a, VQ-MM #6</b> These mitigation measures propose to require landscaping and treatment for sound walls and elevated structures.	<b>Significant</b>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>VQ #7:</b> The HST project would create a new source of substantial light and glare.	<b>VQ-MM #2:</b> Minimize Light Disturbance.	<b>Less than significant</b>
<b>VQ #8:</b> TPSS would alter visual character or block views.	<b>VQ-MM #7:</b> Screen Traction Power Distribution Stations.	<b>Less than significant</b>
<b>VQ #9:</b> Lower visual quality due to HMF alternatives.	<b>VQ-MM #1:</b> Minimize Visual Disruption during Construction. <b>VQ-MM #2:</b> Minimize Light Disturbance. <b>VQ-MM #4a:</b> Replant Unused Portions of Lands Acquired for the HST.	<b>Less than significant</b>
<b>VQ #10:</b> Noise wall would block views.	<b>VQ-MM #3, VQ-MM #3a, VQ-MM #4a, VQ-MM #6</b> These mitigation measures propose to require landscaping and treatment for sound walls and elevated structures.	<b>Significant</b>
<b>Cultural and Paleontological Resources</b>		
<b>Construction Impacts</b>		
<b>CUL #1:</b> Effect on Significant Prehistoric and Historic-Era Archaeological Resources During Construction.	<b>Arch-MM #1, Arch-MM #2, Arch-MM #3, Arch-MM #4</b> These mitigation measures propose to conducting training, planning, and monitoring prior to construction.	<b>Less than Significant</b>
<b>CUL #2:</b> Effect on Historically Significant Built- Environment Resources During Construction.	<b>Hist-MM #1, Hist-MM #3, Hist-MM #11</b>	<b>Less than Significant</b>
	<b>Hist-MM #2, Hist-MM #4, Hist-MM #5, Hist-MM #6, Hist-MM #7, Hist-MM #8, Hist-MM #9, Hist-MM #10</b> These mitigation measures propose to minimize impacts through construction methods, movement of structures, and preparing and submitting plans.	<b>Significant and Unavoidable</b>

**Table S-3**  
 HST Mitigation Measures

Impact	Mitigation Measure	CEQA Level of Significance after Mitigation
<b>CUL #3:</b> Effect on Paleontological Resources during Construction.	<p><b>Pal-MM #1:</b> Engage paleontological resources specialist to direct monitoring during construction.</p> <p><b>Pal-MM #2:</b> Prepare and implement a paleontological resource monitoring and mitigation plan (PRMMP).</p> <p><b>Pal-MM #3:</b> Halt construction when paleontological resources are found.</p>	<b>Less than Significant</b>
<b>Project Impacts</b>		
<b>CUL #4:</b> Effect on Historically Significant Built-Environment Resources During Operation.	<p><b>Hist-MM #2:</b> Develop Protection and Stabilization Measures</p> <p><b>Hist-MM #8 :</b> Prepare Historic Structure Reports</p>	<b>N/A</b>
<b>Regional Growth</b>		
<b>Construction Impacts</b>		
There are no construction impacts for regional growth.	No mitigation required	<b>N/A</b>
<b>Project Impacts</b>		
There are no project impacts for regional growth.	No mitigation required	<b>N/A</b>
<b>Cumulative Impacts</b>		
<b>Construction Impacts</b>		
Cumulative noise impacts.	Coordinate HST activities with other nearby, concurrent construction projects to the extent feasible.	<b>Significant and Unavoidable</b>
Cumulative safety and security impacts.	Coordinate with local jurisdictions where road closures would be required to ensure that emergency response services are not disrupted.	<b>Less than Significant</b>
Cumulative socioeconomic, communities, and environmental justice impacts.	Coordinate HST activities with other nearby, concurrent construction projects to the extent feasible.	<b>Less than Significant</b>
<b>Project Impacts</b>		
There are no construction impacts for cumulative impacts.	No mitigation required	<b>N/A</b>
<p>Acronyms:                      CEQA = California Environmental Quality Act                      CRHR = California Register of Historical Resources                      HABS = Historic American Buildings Survey                      HAER = Historic American Engineering Record                      HALS = Historic American Landscapes Survey                      HST = high-speed train                      NRHP = National Register of Historic Places</p>		

**Table S-4**  
 Environmental Impacts Differentiating HMF Alternatives

Impact	HMF Alternatives					Mitigation Measure	CEQA Level of Significance after Mitigation
	Fresno	Hanford	Wasco	Shafter East	Shafter West		
<b>Transportation and Traffic</b>							
<b>Project Impacts</b>							
TR #3: Number of HMF Site Roadway Impacts.	0	1	0	0	0	TR-MM #7: Add New Lanes to roadway.	Less than Significant
TR #3: Number of HMF Site Intersection Impacts.	2	2	2	1	1	TR-MM #2 through TR-MM #6	Less than Significant
<b>Noise and Vibration</b>							
<b>Project Impacts</b>							
N&V #3: Number of sensitive receivers impacted by HMF Operational Noise.	100	6	327	6	5	N&V-MM#3: Implement California High-Speed Train Project Noise Mitigation Guidelines. N&V-MM#4: Vehicle Noise Specification. N&V-MM#5: Special Trackwork at Crossovers and Turnouts.	Potentially Significant

**Table S-4**  
 Environmental Impacts Differentiating HMF Alternatives

Impact	HMF Alternatives					Mitigation Measure	CEQA Level of Significance after Mitigation
	Fresno	Hanford	Wasco	Shafter East	Shafter West		
<b>Biological Resources and Wetlands</b>							
<b>Project Impacts</b>							
<b>Bio #29:</b> Impacts to areas that have potential to support special-status plant species	Yes	Yes	No	No	No	AQ-MM#1, AQ-MM#3, Bio-MM#16, Bio-MM#17, Bio-MM#51, WR-MM#1	Less than Significant
<b>Bio #29:</b> Impacts to areas that support special-status plant communities.	Yes	Yes	No	No	No	Bio-MM #16, Bio-MM #44, Bio-MM #45, Bio-MM #46, Bio-MM #51, Bio-MM #59, Bio-MM #60, Bio-MM #61	Less than Significant
<b>Bio #29:</b> Impacts to jurisdictional waters.	Yes	Yes	Yes	Yes	No	Bio-MM#44 through Bio-MM#46, Bio-MM#59 through Bio-MM#61, WR-MM#1, WR-MM#2	Less than Significant
<b>Bio #29:</b> Impacts to a recovery plan.	No	No	Yes	No	No	Bio-MM#16 through Bio-MM#64.	Less than Significant
<b>Bio #29:</b> Impacts to a habitat conservation plan area.	Yes	No	Yes	Yes	Yes	Bio-MM#16 through Bio-MM#64.	Less than Significant

**Table S-4**  
 Environmental Impacts Differentiating HMF Alternatives

Impact	HMF Alternatives					Mitigation Measure	CEQA Level of Significance after Mitigation
	Fresno	Hanford	Wasco	Shafter East	Shafter West		
<b>Bio#29:</b> Impacts to protected trees.	Yes	No	No	No	No	<b>Bio-MM#47, Bio-MM#62</b>	<b>Less than Significant</b>
<b>Bio#29:</b> Impacts to a wildlife movement corridor.	No	No	Yes	No	No	<b>Bio-MM#49, Bio-MM#50</b>	<b>Less than Significant</b>
<b>Hazardous Materials and Wastes</b>							
<b>Project Impacts</b>							
<b>HMW #1:</b> Handling of Extremely Hazardous Materials within 0.25 mile of a School.	No	No	Yes	No	No	<b>HMW-MM #2:</b> No use of extremely hazardous substances or a mixture thereof in a quantity equal to or greater than the state threshold quantity	<b>Significant and Unavoidable</b>
<b>Agricultural Impacts</b>							
<b>Project Impacts</b>							
<b>AG #1:</b> Permanent Conversion of Agricultural Land to Nonagricultural Use.  Operation of the project would affect Important Farmland by converting to nonagricultural uses.	409 acres impacted	465 acres impacted	409 acres impacted	490 acres impacted	457 acres impacted	<b>Ag-MM#1:</b> Preserve the Total Amount of Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland.	<b>Significant and Unavoidable</b>
Acronyms: CEQA = California Environmental Quality Act HMF = heavy-maintenance facility							

**DEPARTMENT OF TRANSPORTATION**

**Office of the Secretary of Transportation**

**Docket No. DOT-OST-2012-0044**

**Department of Transportation Updated Environmental Justice Order 5610.2(a)**

**AGENCY:** Office of the Secretary of Transportation, DOT

**ACTION:** Final DOT Environmental Justice Order

**SUMMARY:**

The Department of Transportation (the Department or DOT) is issuing an update to Departmental Order 5610.2(a) (Actions to Address Environmental Justice in Minority Populations and Low-Income Populations). This Order updates the Department's original Environmental Justice Order, which was published April 15, 1997. The Order continues to be a key component of the Department's strategy to promote the principles of environmental justice in all Departmental programs, policies, and activities.

DOT Order 5610.2(a) sets forth the DOT policy to consider environmental justice principles in all (DOT) programs, policies, and activities. It describes how the objectives of environmental justice will be integrated into planning and programming, rulemaking, and policy formulation. The Order sets forth steps to prevent disproportionately high and adverse effects to minority or low-income populations through Title VI analyses and environmental justice analyses conducted as part of Federal transportation planning and NEPA provisions. It also describes the specific measures to be taken to address instances of disproportionately high and adverse effects and sets forth relevant definitions.

This updated Order reaffirms DOT's commitment to environmental justice and clarifies certain aspects of the original Order, including the definitions of "minority" populations in compliance with the Office of Management and Budget's (OMB) Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity of October 30, 1997. The revisions clarify the distinction between a Title VI analysis and an environmental justice analysis conducted as part of a NEPA review, and affirm the importance of considering environmental justice principles as part of early planning activities in order to avoid disproportionately high and adverse effects. The updated Order maintains the original Orders general framework and procedures and DOT's commitment to promoting the principles of environmental justice in all DOT programs, policies, and activities.

This Order is effective upon its date of issuance.

**FOR FURTHER INFORMATION CONTACT:** Beth Osborne, Deputy Assistant Secretary for Transportation Policy, telephone (202) 366-8979, or [EJ@dot.gov](mailto:EJ@dot.gov), U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington DC 20590

## **Order 5610.2(a)**

### **Subject: Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations**

#### **1. Purpose and Authority**

a. This Order updates and clarifies environmental justice procedures for the Department in response to the Memorandum of Understanding on Environmental Justice signed by heads of Federal agencies on August 4, 2011, DOT's revised environmental justice strategy issued on March 2, 2012, and Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, dated February 11, 1994.

The Department's original Environmental Justice Order, issued April 15, 1997, was a key component of the Department's original strategy and established procedures to be used by DOT to comply with Executive Order 12898. This revised Order continues to be a key component of DOT's environmental justice strategy. It updates and clarifies certain aspects of the original Order while maintaining its general framework and procedures and DOT's commitment to promoting the principles of environmental justice in all DOT programs, policies, and activities. Relevant definitions are in the Appendix.

b. Executive Order 12898 requires each Federal agency, to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, to achieve environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including interrelated social and economic effects, of its programs, policies, and activities on minority populations and low-income populations in the United States. Compliance with this DOT Order is a key element in the environmental justice strategy adopted by DOT to implement the Executive Order, and can be achieved within the framework of existing laws, regulations, and guidance.

c. Consistent with paragraph 6-609 of Executive Order 12898, this Order is limited to improving the internal management of DOT and is not intended to, nor does it, create any rights, benefits, or trust responsibility, substantive or procedural, enforceable at law or equity, by a party against the Department, its Operating Administrations, its officers, or any person. Nor should this Order be construed to create any right to judicial review involving the compliance or noncompliance with this Order by the Department, its Operating Administrations, its officers or any other person.

## **2. Scope**

This Order applies to the Office of the Secretary, DOT's Operating Administrations, and all other DOT components.

### **3. Effective Date**

This Order is effective upon its date of issuance.

### **4. Policy**

a. It is the policy of DOT to promote the principles of environmental justice (as embodied in the Executive Order) through the incorporation of those principles in all DOT programs, policies, and activities. This will be done by fully considering environmental justice principles throughout planning and decision-making processes in the development of programs, policies, and activities, using the principles of the National Environmental Policy Act of 1969 (NEPA), Title VI of the Civil Rights Act of 1964 (Title VI), the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (URA), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Public Law 109-59; SAFETEA-LU) and other DOT statutes, regulations and guidance that address or affect infrastructure planning and decision-making; social, economic, or environmental matters; public health; and public involvement.

b. In complying with this Order, DOT will rely upon existing authority to collect data and conduct research associated with environmental justice concerns. To the extent permitted by existing law, and whenever practical and appropriate to assure that disproportionately high and adverse effects on minority or low income populations are identified and addressed, DOT

shall collect, maintain, and analyze information on the race, color, national origin, and income level of persons adversely affected by DOT programs, policies, and activities, and use such information in complying with this Order.

## **5. Integration with Existing Operations**

a. The Office of the Secretary and each Operating Administration shall determine the most effective and efficient way of integrating the processes and objectives of this Order with their existing regulations and guidance.

b. In undertaking the integration with existing operations described in paragraph 5a, DOT shall observe the following principles:

(1) Environmental justice principles apply to planning and programming activities, and early planning activities are a critical means to avoid disproportionately high and adverse effects in future programs, policies, and activities. Planning and programming activities for policies, programs, and activities that have the potential to have a disproportionately high and adverse effect on human health or the environment shall include explicit consideration of the effects on minority populations and low-income populations. Procedures shall be established or expanded, as necessary, to provide meaningful opportunities for public involvement by members of minority populations and low-income populations during the planning and development of programs, policies, and activities (including the identification of potential effects, alternatives, and mitigation measures).

(2) Steps shall be taken to provide the public, including members of minority populations and low-income populations, access to public information concerning the human health or environmental impacts of programs, policies, and activities, including information that will address the concerns of minority and low-income populations regarding the health and environmental impacts of the proposed action.

c. Future rulemaking activities undertaken pursuant to DOT Order 2100.5 (which governs all DOT rulemaking), and the development of any future guidance or procedures for DOT programs, policies, or activities that affect human health or the environment, shall address compliance with Executive Order 12898 and this Order, as appropriate.

d. The formulation of future DOT policy statements and proposals for legislation that may affect human health or the environment will include consideration of the provisions of Executive Order 12898 and this Order.

## **6. Ongoing DOT Responsibility**

Compliance with Executive Order 12898 is an ongoing DOT responsibility. DOT will continuously monitor its programs, policies, and activities to ensure that disproportionately high and adverse effects on minority populations and low-income populations are avoided, minimized or mitigated in a manner consistent with this Order and Executive Order 12898. This Order does not alter existing assignments or delegations of authority to the Operating Administrations or other DOT components.

## **7. Preventing Disproportionately High and Adverse Effects**

- a. Under Title VI, each Federal agency is required to ensure that no person, on the ground of race, color, or national origin, is excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving Federal financial assistance. This statute affects every program area in DOT. Consequently, DOT managers and staff must administer their programs in a manner to assure that no person is excluded from participating in, denied the benefits of, or subjected to discrimination by any program or activity of DOT because of race, color, or national origin. While Title VI is a key tool for agencies to use to achieve environmental justice goals, it is important to recognize that Title VI imposes statutory and regulatory requirements that are broader in scope than environmental justice. There may be some overlap between environmental justice and Title VI analyses; however, engaging in environmental justice analysis under Federal transportation planning and NEPA provisions will not necessarily satisfy Title VI requirements. Similarly, a Title VI analysis would not necessarily satisfy environmental justice requirements, since Title VI does not include low-income populations. Moreover, Title VI applies to all Federally-funded projects and activities, not solely those which may have adverse human health or environmental effects on communities.

b. It is DOT's policy to actively administer and monitor its operations and decision-making to assure that nondiscrimination and the prevention of disproportionately high and adverse effects are an integral part of its programs, policies, and activities. DOT currently administers policies, programs, and activities which are subject to the requirements of NEPA, Title VI, URA, SAFETEA-LU and other statutes that involve human health or environmental matters, or interrelated social and economic impacts. These requirements will be administered so as to identify, early in the development of the program, policy or activity, the risk of discrimination and disproportionately high and adverse effects so that positive corrective action can be taken. In implementing these requirements, the following information should be obtained where relevant, appropriate and practical:

--Population served and/or affected by race, color or national origin, and income level;

--Proposed steps to guard against disproportionately high and adverse effects on persons on the basis of race, color, or national origin, and income level;

--Present and proposed membership by race, color, or national origin, in any planning or advisory body that is part of the program, policy or activity.

c. Statutes governing DOT operations will be administered so as to identify and avoid discrimination and avoid disproportionately high and adverse effects on minority populations and low-income populations by:

(1) identifying and evaluating environmental, public health, and interrelated social and economic effects of DOT programs, policies, and activities,

(2) proposing measures to avoid, minimize and/or mitigate disproportionately high and adverse environmental and public health effects and interrelated social and economic effects, and providing offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals affected by DOT programs, policies, and activities, where permitted by law and consistent with the Executive Order,

(3) considering alternatives to proposed programs, policies, and activities, where such alternatives would result in avoiding and/or minimizing disproportionately high and adverse human health or environmental impacts, consistent with the Executive Order, and

(4) eliciting public involvement opportunities and considering the results thereof, including soliciting input from affected minority and low-income populations in considering alternatives.

## **8. Actions to Address Disproportionately High and Adverse Effects**

a. Following the guidance set forth in this Order and its Appendix, the head of each Operating Administration and the responsible officials for other DOT components shall determine whether programs, policies, or activities for which they are responsible will have

an adverse human health or environmental effect on minority and low-income populations and whether that adverse effect will be disproportionately high.

b. In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancements measures that will be implemented and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas.

c. The Operating Administrators and other responsible DOT officials will ensure that any of their respective programs, policies or activities that will have a disproportionately high and adverse effect on minority populations or low-income populations will only be carried out if further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effect are not practicable. In determining whether a mitigation measure or an alternative is “practicable,” the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects will be taken into account.

d. The Operating Administrations and other responsible DOT officials will also ensure that any of their respective programs, policies, or activities that will have a disproportionately high and adverse effect on populations protected by Title VI (“protected populations”) will only be carried if:

(1) a substantial need for the program, policy, or activity exists, based on the overall public interest; and

(2) alternatives that would have less adverse effects on protected populations (and that still satisfy the need identified in subparagraph d(1) above), either

(a) would have other adverse social, economic, environmental or human health impacts that are severe; or

(b) Would involve increased costs of extraordinary magnitude.

e. DOT's responsibilities under Title VI and related statutes and regulations are not limited by this paragraph, nor does this paragraph limit or preclude claims by individuals or groups of people with respect to any DOT programs, policies, or activities under these authorities.

Nothing in this Order adds to or reduces existing Title VI due process mechanisms.

f. The findings, determinations, and/or demonstration made in accordance with this section must be appropriately documented, normally in the environmental impact statement or other NEPA document prepared for the program, policy, or activity, or in other appropriate planning or program documentation.

## Appendix

### 1. Definitions

The following terms were used in this Order shall have the following meanings:

a. DOT means the Office of the Secretary, DOT Operating Administrations, and all other DOT components.

b. Low-Income means a person whose median household income is at or below the Department of Health and Human Services poverty guidelines.

c. Minority means a person who is:

(1) Black: a person having origins in any of the black racial groups of Africa;

(2) Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;

(3) Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;

(4) American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition; or

(5) Native Hawaiian and Other Pacific Islander: people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

d. Low-Income Population means any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity.

e. Minority Population means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy or activity.

f. Adverse effects means the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources;

destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons,

businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of DOT programs, policies, or activities.

g. Disproportionately high and adverse effect on minority and low-income populations means an adverse effect that:

(1) is predominately borne by a minority population and/or a low-income population, or

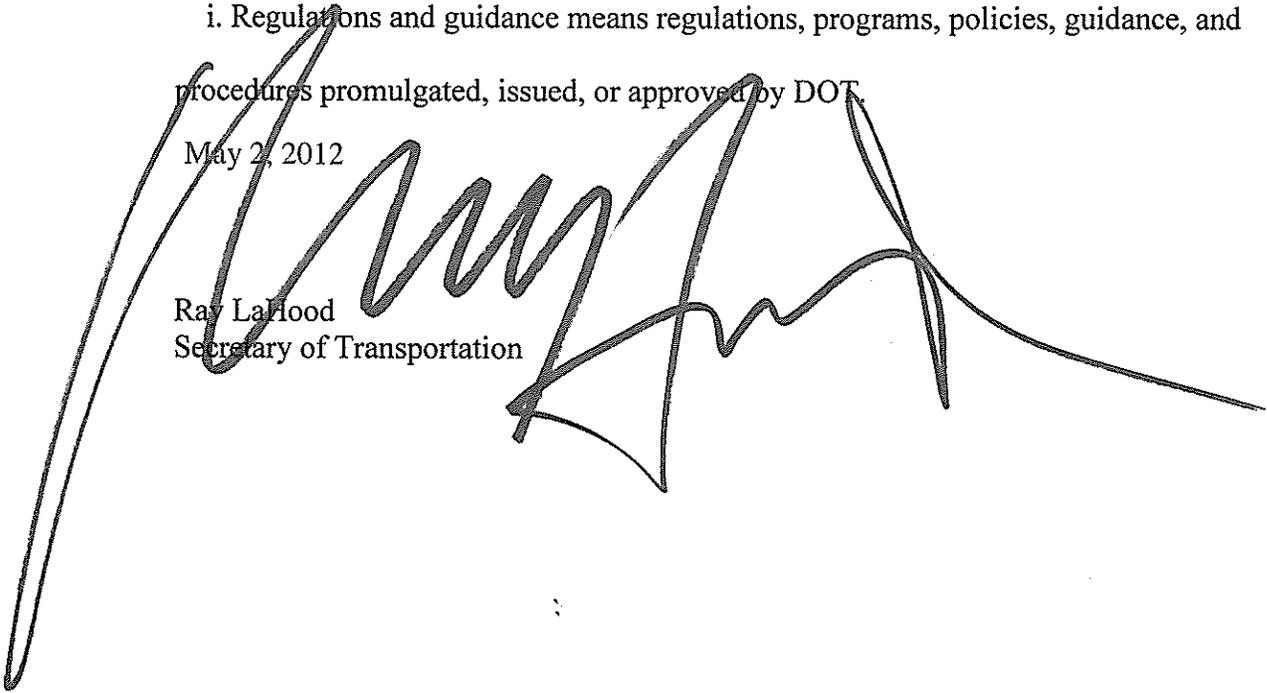
(2) will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

h. Programs, policies, and/or activities mean all projects, programs, policies, and activities that affect human health or the environment, and which are undertaken or approved by DOT. These include, but are not limited to, permits, licenses, and financial assistance provided by DOT. Interrelated projects within a system may be considered to be a single project, program, policy or activity for purposes of this Order.

i. Regulations and guidance means regulations, programs, policies, guidance, and procedures promulgated, issued, or approved by DOT.

May 2, 2012

Ray LaHood  
Secretary of Transportation



## **FACT SHEET**

### **Project Name**

California High-Speed Train Project, Fresno to Bakersfield Section

### **Project Description**

The California High-Speed Rail Authority (Authority) proposes that the Fresno to Bakersfield Section project will consist of building and operating an approximately 114-mile portion of a larger high-speed train (HST) system that is intended to connect to sections traveling west to San Francisco, south to Los Angeles and, later, north to Sacramento. The project is designed as a steel-wheel-on-steel-railway completely grade-separated from other modes. The need for this project is directly related to the projected population growth and increased intercity travel demand over the next 20 years and beyond, and the increased travel delays and congestion that would result on California's highways and airports. Additionally, Fresno, Kings, Tulare, and Kern counties have limited connectivity with the state's larger urban metropolitan areas.

This Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) considers 12 alternatives, including the No Project Alternative and the 11 HST alternatives: the BNSF, Hanford West Bypass 1, Hanford West Bypass 2, Hanford West Bypass 1 Modified, Hanford West Bypass 2 Modified, Corcoran Elevated, Corcoran Bypass, Allensworth Bypass, Wasco-Shafter Bypass, Bakersfield South, and Bakersfield Hybrid alternatives. Each contains one station in Fresno, one station in Bakersfield, and a Kings/Tulare Regional Station near Hanford. The Federal Railroad Administration and Authority have identified the Preferred Alternative to consist of portions of the BNSF Alternative in combination with the Corcoran Bypass, Allensworth Bypass, and Bakersfield Hybrid alternatives. The HST in this section has the ability to travel up to 220 mph along the alignment. Potential environmental impacts of the alternatives include displacement of commercial, residential, and agricultural properties; community and neighborhood disruption; increase in noise;

increase in traffic at each of the stations; impacts on historic and archaeological sites; impacts on parks and recreational resources; visual impacts; impacts on sensitive biological resources and wetlands; and use of energy. Mitigation measures are described to address impacts identified in the Final EIR/EIS.

### **Joint Lead Agencies**

Federal Railroad Administration  
1200 New Jersey Avenue SE MS-20  
Washington, D.C. 20590

California High-Speed Rail Authority  
770 L Street, Suite 800  
Sacramento, CA 95814

### **NEPA Lead Agency**

The Federal Railroad Administration is the lead agency for National Environmental Policy Act (NEPA) compliance.

### **Responsible NEPA Official**

David Valenstein, Chief  
Environmental and Systems Planning Division  
Federal Railroad Administration  
1200 New Jersey Avenue, SE, MS-20, W38-303  
Washington, DC 20590

### **CEQA Lead Agency**

The California High-Speed Rail Authority is the lead agency for CEQA

### **Responsible CEQA Official**

Jeff Morales, Chief Executive Officer  
California High-Speed Rail Authority  
770 L Street, Suite 800  
Sacramento, CA 95814

### **Document Availability**

This Final EIR/EIS is available online at:

<http://www.hsr.ca.gov/>

Printed copies of the Final EIR/EIS and related appendices are available at the California High-Speed Rail Authority, public libraries, and community centers (see List of Recipients beginning on page 9-1).

### **Contact Information**

To obtain a copy of the environmental documents, contact:

Michael Penzkover  
California High-Speed Rail Authority  
770 L Street, Suite 800  
Sacramento, CA 95814

(916) 324-1541

E-mail: [mpenzkover@hsr.ca.gov](mailto:mpenzkover@hsr.ca.gov)

## Permits, Approvals, and Consultations Federal

- **Surface Transportation Board** – Permission to construct the project in accordance with Section 10501(b) of the Interstate Commerce Commission Termination Act of 1995.
- **U.S. Army Corps of Engineers** – Section 404 Permit for Discharge of Dredge or Fill Materials into Waters of the U.S., including wetlands. Also, Section 10 Permit for construction of any structure in or over any Navigable Water of the U.S.
- **U.S. Environmental Protection Agency** – Review of Environmental Justice conclusions; General Conformity Determination
- **Federal Railroad Administration**, in consultation with the **California Office of Historic Preservation** and the **Advisory Council on Historic Preservation** – National Historic Preservation Act, Section 106 Consultation
- **U.S. Department of Transportation** – Section 4(f) Evaluation
- **U.S. Department of Interior/National Park Service** – Section 6(f) Evaluation

## State

- **California Department of Fish and Wildlife** – California Endangered Species Act (CESA) permits; Section 1602 Lake and Streambed Alteration Agreement; use of Title 14 lands for the Allensworth Ecological Reserve
- **California Department of Transportation** – Encroachment permits
- **California Public Utilities Commission** – Approval for construction and operation of railroad crossing of public roads and for construction of new transmission lines and substations.
- **California State Lands Commission** – Lease for crossing state sovereign lands

## Regional

- **San Joaquin Valley Air Pollution Control District** – Permits under Rule 201, General Permit Requirements; Rule 403, Fugitive Dust; Rule 442 Architectural Coatings; Rule 902 Asbestos
- **Regional Water Quality Control Board** – Permits under Clean Water Act Section 401 Water Quality Certification; Section 402 National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit; Statewide Stormwater General Permit for Construction; Statewide Stormwater General Permit for Industrial Activities, Dewatering Permit (Order No. 98-67); Spill Prevention, Control and Countermeasures (SPCC) Plan (part of Section 402 process); Stormwater Construction and Operation Plan (part of Section 402 process)
- **Central Valley Flood Protection Board** – Encroachment permit under Section 208.10 (designated streams, flood control and protection facilities)

## Authors and Principal Contributors

Please see List of Preparers under **Chapter 10** of the Final EIR/EIS

## Date Issued

April 2014

## Subsequent Steps

The California High-Speed Rail Authority Board will make a final decision on the project alternative to be implemented after the Final EIR/EIS is issued. Following completion of the Final EIR/EIS, the Board will consider certifying the Final EIR/EIS for compliance with CEQA and making a final decision on the project. If the Board certifies the Final EIR/EIS and makes a project decision, it will file a notice of determination with the State Clearinghouse. The Federal Railroad Administration's decision under NEPA is not final until it certifies the Record of Decision on the Final EIR/EIS. Issuance of the Record of Decision is expected in spring 2014.



April 4, 2016

Chairman Dan Richard and Members of the Board of Directors  
California High-Speed Rail Authority  
770 L Street, Suite 620 MS-1  
Sacramento, CA 95814

Attn: Draft 2016 Business Plan

Dear Mr. Richard and Members of the Board of Directors:

Thank you for the opportunity for the City of Bakersfield (City) to provide its comments regarding your draft 2016 Business Plan (Draft Business Plan). As the ninth largest city in the State of California and 1 of 12 station cities on Phase I of the High-Speed Rail (HSR) system, we believe that our comments should be of heightened interest and significance.

The City has sincerely appreciated the substantially improved working relationship with the High-Speed Rail Authority (HSRA) under the leadership of Mr. Jeff Morales. In particular, HSRA's efforts to evaluate and consider the Bakersfield F Street Station Alignment (BFSSA Alignment) have been appreciated. The City sincerely believes that the BFSSA Alignment will be a more advantageous and less impactful alignment for the City and the community as a whole.

With respect to the Draft Business Plan, the City's primary concern is the addition of an "interim" station at Poplar Avenue. Prior to the public release of the Draft Business Plan, it had been commonly anticipated that a change to the Initial Operating Segment (IOS) would be forthcoming, with Bakersfield becoming the new southerly terminus of the IOS. What was wholly unexpected and highly disconcerting was the Draft Business Plan proposes the IOS might in fact terminate at the end of Construction Package (CP) 4 at Poplar Avenue, which is approximately 23 miles short of downtown Bakersfield.

#### Reasons for Opposing Poplar Avenue Interim Station

It is acknowledged and appreciated that the Draft Business Plan also states that the IOS should and will extend to downtown Bakersfield if additional federal funding is obtained, but for the following reasons, the City adamantly opposes terminating the IOS at a Poplar Avenue station:

1. **The establishment of an interim station at Poplar Avenue (instead of downtown Bakersfield) does not comply with multiple provisions of Proposition 1A and reduces the stand-alone value of the IOS.**
2. **The environmental impacts of an interim station at Poplar Avenue have not yet even begun to be identified or evaluated; the speculative environmental impacts are substantial.**
3. **The establishment of an interim station at Poplar Avenue is incompatible with the Sustainable Community Strategy and greenhouse gas reduction requirements of SB 375.**
4. **The establishment of an interim station at Poplar Avenue is impracticable from a business perspective.**
5. **Other options exist to bring HSR service to downtown Bakersfield as part of the IOS on an interim basis if additional funding to construct beyond CP 4 does not materialize.**

#### Caveats

While the City is opposed to an interim station being located at Poplar Avenue under any circumstance, it is important to note two critical caveats regarding the City's position.

Firstly, in discussions with HSRA staff since the release of the Draft Business Plan, the City has been informed that even if the IOS ultimately does end at Poplar Avenue, that this will not stall, delay, or in any other way negatively affect the ability and timing of HSRA's acquisition of property and relocation of affected businesses along the balance of the adopted Fresno to Bakersfield alignment any differently than if it was included as part of the IOS.

Secondly, it is represented in the Draft Business Plan and has been reinforced through discussions with HSRA staff that an interim station at Poplar Avenue, if constructed, would only be an interim facility until the further extension of Phase I. Furthermore, there are no plans or intentions to retain the Poplar Avenue interim station as a permanent station upon extension of Phase I to Bakersfield, either in addition to or in place of the planned permanent station in downtown Bakersfield.

**Both of these caveats are absolutely critical to the City and any deviance or departure from them will be adamantly challenged and opposed.**

#### Information Regarding Poplar Avenue Station Site

In order to help understand some of the City's reasons for opposing the Poplar Avenue station location, the following information is offered:

- The proposed interim station is located at the end of CP 4, which is located at the point where the adopted HSR alignment (generally adjacent to the BNSF Railroad) intersects Poplar Avenue, approximately four miles northwest of central Shafter. While the Draft Business Plan does not attempt to identify any more precise location for the station, there is virtually no existing urban development within over a mile of this point. Other than an agricultural trucking/warehousing facility, the area surrounding this location is privately-owned farmland.
- There is no urban infrastructure that exists within the vicinity of the proposed Poplar Avenue interim station. Other than State Highway 43 (a four-lane highway between Shafter and Wasco), the only streets in the surrounding area are two-lane rural roads.
- The Poplar Avenue station site has virtually no existing transportation connectivity. The only form of public transit available to the site is Kern Transit, which runs small intra-regional busses six times per day to and from Bakersfield. Even by car, the site is approximately seven to eight miles to the nearest freeway (State Route 99 via Lerdo Highway).
- Note attached Figure 1, which shows the relative locations of the proposed Poplar Avenue interim station and the Bakersfield F Street Station. Particular attention is drawn to the urbanization in proximity to each station location.

### Supporting Information

The following information is provided in support of the City's reasons for opposing this proposal.

**1. The establishment of an interim station at Poplar Avenue (instead of downtown Bakersfield) does not comply with multiple provisions of Proposition 1A.**

Among the provisions of Proposition 1A (Streets and Highways Code Section 2704) are the following:

**Sec. 2704.08(f):** In selecting corridors or usable segments thereof for construction, the authority shall give priority to those corridors or usable segments thereof that are expected to require the least amount of bond funds as a percentage of total cost of construction. Among other criteria it may use for establishing priorities for initiating construction on corridors or usable segments thereof, the authority shall include the following: (1) projected ridership and revenue, (2) the need to test and certify trains operating at speeds of 220 miles per hour, (3) the utility of those corridors or usable segments thereof for passenger train services other than high-speed train service that will not result in any unreimbursed operating or maintenance costs

to the authority, and (4) the extent to which corridors include facilities contained therein to enhance the connectivity of the high-speed train network to other modes of transit, including, but not limited to, conventional rail (intercity rail, commuter rail, light rail, or other rail transit), bus, or air transit.

**Sec. 2704.09(h):** Stations shall be located in areas with good access to local mass transit or other modes of transportation.

**Section 2704.09(i):** The high-speed rail system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment.

For the reasons cited above, the Poplar Avenue station location clearly does not meet the cited requirements of Proposition 1A. The station location has no meaningful connectivity to any mass transit or other modes of transportation. The negative impacts of this circumstance become even more acute and relevant when taking into consideration the fact that the Poplar Avenue station would function as the southerly terminus of the IOS.

One of the essential supporting purposes of locating a station in downtown Bakersfield and the core areas of other HSR station cities is to help in facilitating more dense and compact urban forms in core areas and conversely to help alleviate more accelerated urban sprawl (see Sec. 2704.09(i) above). Even as an interim facility, the Poplar Avenue station will have the opposite effect of this goal.

It will delay and diminish efforts (currently being planned via the Bakersfield Station Area Plan) to focus new development in downtown Bakersfield leveraged off of the Bakersfield HSR station. Conversely, it will have an inducing effect on the predominately rural/suburban urban form in the general vicinity of the Poplar Avenue station location. Even after the interim station is abandoned, a portion of the ancillary development attracted by the Poplar Avenue station will remain, possibly inducing the premature conversion of productive farmland and/or producing urban decay.

**2. The environmental impacts of an interim station at Poplar Avenue have not yet even begun to be identified or evaluated; the speculative environmental impacts are substantial.**

To the City's knowledge, no CEQA or NEPA review, or any preliminary environmental screening has been conducted for the Poplar Avenue station. For a considerable public improvement with considerable associated impacts to be located in a remote and rural location, it can only be rationally concluded that the environmental impacts will be substantial. Conducting such formal CEQA/NEPA review would be involved and time consuming and vulnerable to legal challenge when considering the substantial change and impact to a rural location. Insofar as one of the tenants for proposing the interim Poplar

Avenue station is to help ensure that the IOS can begin operating as soon as possible, the distinct possibility of environmental complications, challenges, and delays would be counter to that objective.

While it is acknowledged that the Poplar Avenue station is proposed to be an interim station only, a public facility of this nature and magnitude cannot avoid producing substantial direct and indirect impacts; including, but not limited to:

- **Traffic and Circulation:** These impacts will be greatly heightened given the limited nature and capacity of the existing circulation system in the area of the station.
  - **Land Use:** As stated, the area around the station is completely rural in character and mostly comprised of productive farmland. The station and its future demand for ancillary uses will constitute a complete and dramatic change from the existing nature and character of the area.
  - **Agricultural Resources:** The Poplar Avenue station location is situated directly in the middle of an area of productive farmland. Either this farmland will be permanently lost to urban development, or there will be substantial costs to converting it and placing it back into agricultural production after the station is abandoned.
  - **Air Quality:** The cumulative added vehicle miles traveled for Bakersfield area passengers to travel to and from this remote station location will have a considerably exacerbating effect on air quality emissions compared to a downtown Bakersfield station.
- 3. The establishment of an interim station at Poplar Avenue is incompatible with the Sustainable Community Strategy and greenhouse gas reduction requirements of SB 375.**

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, each of California's Metropolitan Planning Organizations (MPOs) must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region.

In July 2014, the Kern Council of Governments (KernCOG) adopted the RTP/SCS for Kern County, which includes Bakersfield.

The SCS identifies specific implementation strategies that local governments, KernCOG, and other stakeholders may consider in order to successfully implement the SCS. This includes construction and upgrades to transit facilities within the metropolitan area, identification of transit-priority areas within Metropolitan Bakersfield, encouragement of infill along major transit corridors that is consistent with the Central Core Area of Bakersfield, and other implementation strategies.

These strategies facilitate future development that efficiently moves the public and goods throughout the region while connecting homes to major regional employment centers. The SCS demonstrates that placement of the HSR Station within Metropolitan Bakersfield would be consistent with the goals and policies of SB 375, and ensures that the City and Kern County continue to meet the Greenhouse Gas Emissions and Vehicle Trip reduction targets established by the California Air Resources Board.

**4. The establishment of an interim station at Poplar Avenue is impracticable from a business and cost perspective.**

Table 6.3 in the Ridership and Revenue Forecasting Technical Supporting Document attempts to forecast ridership for various operating scenarios, including differences between the Valley to Valley (VtoV) IOS (San Jose to Poplar Avenue) and the Valley to Valley Extended (VtoV Ext.) IOS (San Francisco to Bakersfield).

The City contends that HSR ridership between the Bakersfield area and other San Joaquin Valley stations in particular (Kings/Tulare and Fresno) will be dramatically different between a station located at Poplar Avenue and downtown Bakersfield. At an established fare of \$40 for the 33-mile trip between the Fresno and Kings/Tulare stations, it must be assumed that ridership on this segment will be relatively limited. Since the only other San Joaquin Valley station on the IOS is in the Bakersfield area, the majority of travel within the San Joaquin Valley (based on cost and time efficiency) would be between the Bakersfield area and the other two stations.

For travel within the San Joaquin Valley, Table 6.3 estimates 2025 annual ridership on the VtoV segment (Poplar Avenue station) at 700,000 passengers with annual revenues at \$37.04 million. By contrast, intra-San Joaquin Valley travel on the VtoV Ext. segment (Bakersfield station) is estimated at 1,000,000 passengers (43% greater) with revenues of \$55.47 million (50% greater). For the minimum four year difference between the completion of the IOS and Phase I, this is at least \$73.72 million (\$18.43 million/year) viewed as a missed opportunity by not extending the IOS to downtown Bakersfield.

While these differences are substantial, the City contends that the differences in ridership (and revenue) estimates for these two scenarios would actually be greater than forecasted. The reason for this is not based on complicated modeling, but rather simple math. Using the established fare between Bakersfield and Fresno of \$56, the estimated time and cost of driving from Bakersfield to the Poplar Avenue station, and the estimated time and cost of driving from Bakersfield to Fresno, a passenger taking a HSR train all the way from downtown Bakersfield to Fresno would be paying about the same as driving (based on total driving costs) while saving about 40 minutes in travel time.

By comparison, a Bakersfield resident taking HSR from the Poplar Avenue station to Fresno would be paying an additional cost of \$10 compared to driving (additional \$45 based on gas costs only) to save only about 20 minutes in overall travel time. To the average consumer, the differences in value are significant and would lead one to assume that only a limited number of consumers would chose the HSR option for travel between Fresno and the Bakersfield area with the station at Poplar Avenue.

To our knowledge, the Draft Business Plan does not contain a separate estimate of the direct and indirect costs of constructing an interim station at Poplar Avenue. It is reasonably assumed that as an interim station, facilities would be limited to only those nominally needed, but even with that, the costs cannot be insubstantial. In addition to the basic cost of rail platforms and station facilities, the following would be needed for an interim station:

- A very large amount of (assumed) surface parking, increased by the fact that this would serve as the southerly terminus of the IOS.
  - Bus facilities to accommodate an estimated 72 bus trip ends per day to provide feeder bus service to southern California.
  - Improving and widening access roads and approaches. Merced Avenue, the most direct route from the Poplar Avenue station to State Route 99, currently does not cross the Friant-Kern Canal.
  - Extending needed utilities and infrastructure for an unknown distance to an isolated rural location.
  - While the sum of all these costs will be considerable, the effective cost is even more compounded when considering: (1) that all of these facilities will only have an estimated functional life of four years; and (2) the added cost of removing the majority of the facilities or converting them to an alternative use upon the extension of the HSR system to downtown Bakersfield.
- 5. Other options exist to bring HSR service to downtown Bakersfield as part of the IOS on an interim basis if additional funding to construct beyond CP 4 does not materialize.**

As noted, the Poplar Avenue station is 23 miles northwest of downtown Bakersfield. Not only is the interim station remote and inconvenient to potential HSR riders from the Bakersfield area, the station location is perhaps even more unattractive to potential HSR riders arriving at Bakersfield. Unlike the proposed bus feeder service to southern California, there is no proposed feeder service to central Bakersfield and no significant existing transit service. Passengers arriving at the Poplar Avenue station and destined for the Bakersfield area would essentially be "stuck" if they did not have access to a waiting vehicle.

As noted above, the Poplar Avenue interim station poses numerous disadvantages and negative impacts, and the direct and indirect costs of constructing (and ultimately abandoning) an interim station at that location would be very substantial. If funding is unavailable to construct the 23-mile segment of the HSR system from CP 4 to Bakersfield as part of the IOS, please consider these other less costly options to bring HSR service to Bakersfield on an interim basis, as follows:

1. Electrify the adjacent BNSF/Amtrak rail line in order to allow HSR trains to continue to the existing Bakersfield Amtrak station on an interim basis.
2. Utilize ultra-clean diesel engines that could be used to propel HSR trains from a staging point at Poplar Avenue to the Bakersfield Amtrak station on an interim basis. While this would lengthen travel times from Poplar Avenue to Bakersfield compared to the first option, it would be substantially less costly. It would also be much less costly and impactful than constructing and abandoning a Poplar Avenue interim station. In addition to providing a one-seat ride on the IOS to downtown Bakersfield, it would also make the proposed feeder bus service to southern California more efficient and effective by being able to utilize the existing feeder bus terminal adjacent to the Bakersfield Amtrak station.

#### Impacts to Shafter Heavy Maintenance Facility Site

As a separate, but also significant final concern regarding the possibility of ending the IOS at the end of CP 4, it is noted that doing so would by default preclude the opportunity to locate the HSR Heavy Maintenance Facility (HMF) at the proposed site just south of Shafter. The City is supportive of establishing the HMF at one of the two proposed sites in Kern County (Shafter or Wasco).

The HSRA has prepared an evaluation matrix of 12 proposed HMF sites. Based on eight separate criteria used to evaluate the sites, the Shafter site received the highest possible rating in 6 of 8 criteria. None of the other 11 sites received the highest rating in more than three criteria categories. To eliminate the Shafter HMF site from consideration simply and solely because it was located a few miles beyond the established end of the IOS would be doing a disservice to Kern County and, ultimately, the efficiency of the entire HSR system.

Summary and Conclusion

In conclusion, it is reiterated that the City is appreciative of the efforts that Mr. Morales and the HSRA have made to address and respond to the City's HSR-related issues and concerns. The City is also appreciative of the Draft Business Plan's stated goal to attempt to extend the IOS to downtown Bakersfield. However, for the aforementioned reasons, the City must go on record stating its firm opposition to the possibility of locating an interim station at Poplar Avenue, and requesting that the Draft Business Plan be modified to eliminate this option, or, at a minimum, evaluate and consider the identified options to extend IOS service to downtown Bakersfield through interim means.

Thank you for thoughtful and meaningful consideration of the City's comments, which were approved by a vote of the Bakersfield City Council on March 30, 2016.

Sincerely,



Alan Tandy  
City Manager

cc: *Steven Teglia, Assistant City Manager*  
*Andrew Heglund, Deputy City Attorney*  
*Nick Fidler, Public Works Director*  
*Doug McIsaac, Community Development Director*

# Enviromental Justice Map - HSR Alignments

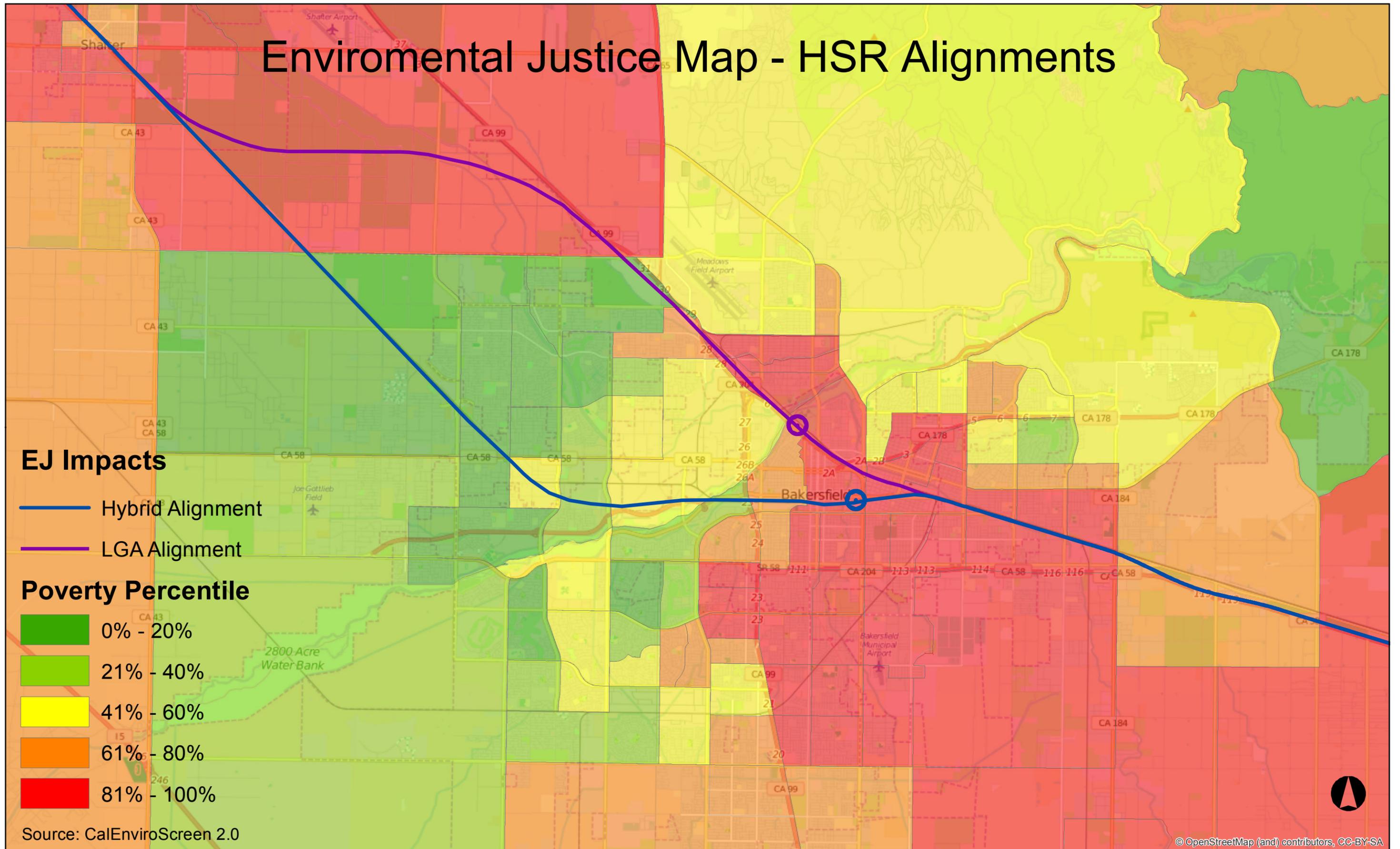
## EJ Impacts

- Hybrid Alignment
- LGA Alignment

## Poverty Percentile

- 0% - 20%
- 21% - 40%
- 41% - 60%
- 61% - 80%
- 81% - 100%

Source: CalEnviroScreen 2.0



Final Report

**DISPLAY  
COPY**

# Metropolitan Bakersfield **HIGH SPEED RAIL** **TERMINAL IMPACT ANALYSIS**

**Kern Council of Governments**



ENGINEERS-  
PLANNERS  
ECONOMISTS

**Wilbur Smith Associates**

in association with

**QUAD KNOFF, INC.  
REDMAN CONSULTING**

July 2003

FINAL REPORT

Metropolitan Bakersfield  
**HIGH SPEED RAIL**  
**TERMINAL IMPACT ANALYSIS**

prepared for

**Kern Council of Governments**



Wilbur Smith Associates

July 2003

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# **EXECUTIVE SUMMARY**

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The purpose of the Bakersfield High Speed Rail Terminal Impact Analysis is to determine a community preferred station site for Bakersfield's future high speed rail station. The Kern Transportation Foundation had previously (2001) identified three site areas as offering the greatest promise: Airport Area, Golden State/M Street, and Truxtun Avenue/S Street. The new assessment of each of these three potential station site vicinities was performed considering a range of issues including station design characteristics, operational constraints, technical service requirements, access consideration, site acquisition, physical and environmental constraints, land use compatibility, growth considerations, and multi-modal connectivity. A series of outreach meetings was conducted in order to understand community objectives and preferences for a station site. Depending on the physical and land use constraints for each site, several illustrative concept plans were developed.

## **PURPOSE AND NEED**

The California High Speed Rail Authority (CHSRA) is in the process of completing their EIR/EIS for the HSR system. The EIR/EIS process is not site specific in terms of station locations. Two HSR service routes, San Diego to San Francisco and San Diego to Sacramento will be served by a Bakersfield Station. Kern COG has commissioned this *Metropolitan Bakersfield High Speed Rail Terminal Impact Analysis* to recommend a locally preferred station site to be forwarded to the CHSRA. This study is not intended to include final station design concepts or cite specific environmental impacts, but rather be used as a tool for CHSRA to understand the Bakersfield's community concerns as well as potential partnering opportunities.

## **THE CALIFORNIA HIGH SPEED RAIL PLAN**

In order to understand the opportunities and concerns of each potential station site, features of the High Speed Rail Plan relating to station design were reviewed including service routes, station stops, relationship to Amtrak service, travel times, fare schedule, and the schedule for system development. Two basic types of HSR stations possibly could be developed in Bakersfield. For station sites located directly along the main HSR alignment, four track main line stations would be constructed. For station sites not directly located along the main HSR alignment, a two track "off-line" station would be constructed. The HSR Plan proposes a 16 year development period for HSR with service beginning around 2020.

Two rail corridors in the Central Valley, the Union Pacific or the Burlington Northern Santa Fe, could potentially serve high speed passenger rail service and two basic alignment options could be used to link Bakersfield with Los Angeles. The EIS is currently investigating whether to link Bakersfield to Los Angeles via the Grapevine or via Tehachapi. The alignment choice could have important implications for the Bakersfield Station site. Both the Airport and the Golden State station sites are located directly along the UP corridor, while the Truxtun site is located along the BNSF

corridor. According to the CHSRA, however, any of these alignments could potentially support each of the three station sites.

The station site evaluation review took into account that the HSR Plan had only initial cost estimates with a number of important unknowns including approach and departure corridors for Bakersfield, potential Bakersfield commuter markets, long term relationship with Amtrak, and the inclusion of off-line stations along with CHSRA's funding responsibility. The costs for off-line stations have yet to be publicly defined, but would appear to be in excess of \$25 million per mile for double track HSR facilities.

Although these financial details were not available, the HSR Plan did provide specific physical plans for the stations. These plans provided critical features such as track cross sections, station cross sections and transition track requirements between the mainline tracks and the station tracks. The Bakersfield station would require 1,300 foot passenger platforms, around 18,900 square feet of building area, and approximately 750 parking spaces. Mainline stations would have a 141 foot wide platform area cross section and would need 1.5 mile acceleration/deceleration transition station tracks. Off-line stations would not require station area transition tracks at the stations themselves and would have a cross section of 80 feet.

### **KEY ISSUES/UNKNOWNNS**

A number of unknowns will have important bearing on selection of the best HSR station site for Bakersfield.

- Alignment (BNSF versus UP north of Bakersfield and Grapevine versus Tehachapi south of Bakersfield) selected for HSR service in the Valley;
- The post-HSR future for the Amtrak San Joaquin service;
- CHSRA's definition of the "Base System" – will it include off-line station access track costs?
- Willingness of UP and BNSF to share their rights of way as well as other rail upgrade investment coordination;
- Decisions regarding the Crosstown Centennial Freeway and the Golden State Freeway;
- The Southern California Association of Government's feasibility finding regarding Meadows Field's role as a satellite regional airport serving the Los Angeles Region;
- The difficulty and cost of property acquisition and relocation efforts as well as how these relate to freeway development efforts; and
- Findings from the systemwide HSR EIS.

## **AIRPORT STATION**

The Kern Transportation Foundation Study identified the station along the west side of the UP main line railroad tracks, just south of 7<sup>th</sup> Standard Road. The on-going HSR EIS identifies the station site to be on the east side of SR-99 just south of 7<sup>th</sup> Standard Road. For the Bakersfield HSR Terminal Analysis, both potential station sites were assessed understanding that the east side site is most favored by CHSRA. A four track main line HSR station is anticipated for this site.

The Airport Station site was envisioned to complement the expansion of Meadows Field Airport. Although there is a campaign to develop Meadows Field Airport into a satellite airport serving the Los Angeles Region, specific financial and marketing demand studies have yet to be finalized.

The potential success of the Airport Station site is dependent on several unknowns as well as mitigation of several problematic issues. Selection of the Tehachapi route for HSR between Los Angeles and Bakersfield would appear to complicate the vision of Meadows Field becoming a satellite regional airport. This route would also serve another possible satellite airport in Palmdale. Building a successful relationship between Meadows Field Airport and the HSR site would also require additional costs to create a seamless connection with the airport passenger terminal and the HSR station.

## **GOLDEN STATE STATION**

The Golden State Station site was identified by the Kern Transportation Foundation to be along Golden State Avenue near M Street. A HSR station at Golden State would be a four-track at grade mainline station. The best site for the station would be south of the UP tracks between the Kern Canal and Chester Avenue as identified by the HSR EIS.

Details of plans to upgrade Golden State Avenue into a higher capacity expressway/freeway facility have not yet been finalized. If freeway plans were to eliminate access and or cover this site with an elevated freeway structure, another site might prove more attractive for a HSR station along the Golden State corridor.

Three site areas were examined to determine which would offer the best potential access and economic revitalization. A station site centered on Chester Avenue would concentrate too much traffic immediately in front of the depot building as well as having only limited space for the station and circulation. The M Street site could be problematic due to limited site depth and the high traffic speeds from the Niles off-ramp. A station located at the F Street appears to offer the greatest promise along this corridor in terms of access and economic development. Details of plans for an upgraded Golden State Freeway running elevated between the UP tracks and Golden State Avenue would have a major influence on a station development located south of the UP tracks. If the freeway plans preclude the opportunity to site an attractive station south of the tracks, it might be necessary to develop the HSR station on the north side of the UP tracks. A station located on the north side of the UP tracks would conflict with the established residential neighborhood on the north side (parking and traffic) and also would be perceived as very remote from the downtown core.

The success of the Golden State Station site would be dependent on potential environmental and community impacts. A station located south of the tracks could be developed with minimal adverse traffic and parking impacts on neighboring properties, but property acquisition would be difficult and may involve significant relocation costs.

Acquisition of the station site would require displacement of private and public owned business including those related to Restoration Village. The station does show potential related economic benefits to surrounding areas with connections to a variety of small businesses as well as various office and mixed used developments. The presence of an elevated freeway and Golden State Avenue between the HSR station and potential development areas would limit economic benefits. For stations located on the north side of the tracks, potential benefits would be further limited by the width of the UP and HSR rail corridor.

### **TRUXTUN STATION**

The Truxtun Station site was defined by the Kern Transportation Foundation to be located within a half-mile of the current Amtrak station. It is west of Union Avenue and east of Chester Avenue along the BNSF corridor. The HSR EIS has identified the station site between S Street and Sonora Street as the most promising area, but has indicated a possible alternative with a north-south orientation along Union Avenue. The BNSF has a large freight yard located along west of the Truxtun site and has at-grade crossings at N Street and L Street. The Truxtun Station is located within walking distance of the downtown area including two hotels, the convention center, many government office buildings and Bakersfield's new Ice Center and new McMurtrey Aquatic Center

A HSR station could be developed for this area in a number of ways depending on decisions: regarding the Crosstown Centennial Freeway; regarding the post-HSR future of Amtrak's San Joaquin service; and regarding BNSF's interest improving its freight yard. The Truxtun Station design would be possible whether the HSR alignments follow along the UP corridor or the BNSF corridor. If the UP corridor is selected, then the Truxtun Station would be an off-line two track station and no additional right of way would be required aside from air rights over the BNSF Yard. If the BNSF line is selected, then the Truxtun Station would become a four track main line station mandating an elevated station.

Connections to other modal uses would be simplest at the Truxtun Station. Amtrak and Greyhound connections have existing facilities at or nearby the station site while Golden Empire Transit service presently serves the Downtown Transit Center via Truxtun and Q Streets. This proximity would facilitate passenger transfer connections, sharing of the Amtrak feeder bus terminal and possibly even the sharing of an expanded station.

For the Bakersfield HSR Terminal Analysis, three illustrative site concept plans were prepared for this site.

Concept A demonstrates the station north of the BNSF line if the Crosstown Centennial Freeway is constructed parallel to the BNSF alignment. This concept would require

access improvements by realigning the proposed freeway access ramps to a more north/south alignment and providing station driveways to/from the freeway frontage road. This will allow parking to be provided under the freeway structure. The north side of the station would provide the best pedestrian and transit access to the Downtown. Due to the Crosstown Centennial Freeway's location immediately south of the HSR alignment, most of the economic stimulus benefits associated with HSR would likely be oriented north of Truxtun Avenue.

Concept B shows the station if a Crosstown Centennial Freeway is not constructed in the BNSF corridor. There are existing plans that detail the construction of the Crosstown Centennial Freeway, but implementation is contingent on the environmental review, which could change the design or alignment. Without the elevated Centennial Freeway the area south of the elevated HSR tracks would have greater potential for HSR related redevelopment and economic benefit. The station depot and parking would be located on the south side of the BNSF tracks.

Concept C illustrates a station development plan if the Truxtun Station is an off-line station along the UP corridor and Amtrak San Joaquin service is discontinued. This would run HSR trains at-grade through the existing station and possibly coordinate with BNSF to expand their freight yard in return for additional right of way. A three-level parking structure would need to be constructed along the south side of the tracks along with a pedestrian overpass connecting it to the station depot.

The Truxtun site is very accessible from the Downtown. Completion of the Crosstown Centennial Freeway can further increase regional accessibility by highway to the station vicinity. The adjoining land uses hold the best economic potential around this station site with redevelopment projects and activities currently underway. There is minimal displacement of businesses and relatively simple right of way acquisition. This site offers the best opportunities for the station to serve as a catalyst for new economic downtown development.

## **RECOMMENDATION**

While all three station site vicinities appear capable of supporting high speed rail service, the Truxtun site is recommended as the most attractive site for the Bakersfield Region. All three of the identified station site vicinities appear to be physically developable into a station to serve future high speed rail patrons.

### **Unknowns and Challenges Related to 7<sup>th</sup> Standard Road Site**

The 7<sup>th</sup> Standard Road site vicinity is primarily favored by the Department of Airports. A high speed rail station is seen as an important element towards supporting the development of Meadows Field into a Los Angeles regional airport. Airport staff envisions 11 to 19 million annual air passengers potentially choosing Meadows Field in the future.

The Southern California Association of Governments is currently in the process of updating the regional airport plan with consideration for an expanded role for Meadows Field as well as for Palmdale and other airports. It is unknown if the SCAG study will

support a major role for Meadows Field and it is also unknown if the single main runway configuration at Meadows Field could be improved to support vastly more flights. Lastly, it is unknown if the airport's surrounding residents will favor a dramatic increase in air traffic.

It is clear that for a high speed rail connection to the airport to be successful transfers of passengers and baggage will need to be seamlessly convenient (perceived as a single terminal). The new airport passenger terminal that is about to be built is located on the opposite side of the airfield (east) from the HSR corridor (west). While it is true that an automated peplemover system could be used to bridge the distance, it would unlikely be perceived as providing a seamless transfer and a redundant system would need to be available for baggage and passengers when the peplemover system was out of order. Relocating the airport passenger terminal to the west side of the airfield could help minimize these connection weaknesses.

It is also clear that the 30,000 plus daily passengers envisioned for the future Meadows Field exceeds the total ridership that is forecast for the High Speed Rail system (10 million annual passengers). Thus, the airport's demand on HSR system capacity would be very substantial warranting an overlay of its own airporter trains between LA and Bakersfield and perhaps warranting a second Bakersfield station.

#### **Downtown Station Sites**

Both Downtown station sites are located along transportation corridors where new freeways are planned. Potential opportunities associated with addition of freeways to UP and BNSF transportation corridors include: masking of HSR noise and visual impacts; and coordination of right of way acquisition. Challenges for HSR associated with the new freeway projects include: limitation of station access; barrier effects on development and cross corridor mobility and vertical and horizontal physical conflicts between rail and highway systems. The planned Golden State freeway is understood to be on the south side of the UP tracks, separating the HSR corridor from the downtown core. The Centennial Freeway project is understood to be planned on the south side of the BNSF tracks near the Amtrak Station. As such, the Centennial Freeway would increase the cross corridor mobility barrier to the south of HSR, but would not separate HSR from the downtown core.

**Patronage** – Patronage studies for the high speed rail service do not differentiate between the downtown station sites. Because both downtown sites have roughly equal regional access, patronage by Bakersfield area residents should be roughly the same for intercity travel and even for commuter travel should it prove viable. The Truxtun site being close to governmental offices and the convention center would likely attract more non residents traveling to Bakersfield. While most patrons to the Bakersfield HSR station would be local residents, the Truxtun station site would likely attract slightly more patrons than the Golden State station site.

**Economic and Land Use Benefits** – Most of the economic benefits associated with HSR would accrue to the region, with station site location primarily affecting the distribution

of growth within the region. In essence, HSR would increase regional accessibility and thereby stimulate residential and business growth. The location of the station would attract regional commercial growth around the station site and away from less accessible locations. The extent of the distributional influences on growth would be partially determined by the amount of under utilized land around the station area. It is also true that the proximity of new freeways in the Golden State and Truxtun corridors would also influence economic development near the station sites.

The proximity of governmental offices and the convention center to the Truxtun site could provide synergy to a HSR station development and provide an undetermined boost to area economic development. The Truxtun site also appears less impacted by planned freeway development. Conversely, the development of an elevated freeway between Golden State Avenue and the UP tracks would leave little attractive area in the corridor for HSR station economic benefits, except north of the tracks. This site influence area would not be perceived as downtown by many residents and visitors.

**Intermodal Connectivity** – Golden Empire Transit could effectively service either downtown site, depending on the details of freeway plans. If Amtrak San Joaquin service remains, the Truxtun site would be the easiest to serve. Both downtown sites would need a linkage to the airport. With the planned new freeways, travel times to the airport would be slightly faster from the Golden State site, but costs would be about the same.

**Implementation** – Construction of HSR is planned in the next 7 to 16 years. Construction of the Centennial Freeway is further advanced than the Golden State Freeway and might possibly facilitate coordinated right of way acquisition with HSR in the BNSF/Truxtun corridor.

If an off line station is found to be needed at Truxtun and if early funding for CHSRA proves limiting, one HSR development strategy would be to defer the mainline section through Bakersfield and only build the off-line station trackage. All HSR trains would be required to stop at Bakersfield until funding for the mainline track could be obtained. Having all HSR trains stop at Bakersfield would add some travel time to express trains.

Recognizing that access is critically important to any public transport system, an off line station in Bakersfield should be considered to be an integral element of the CHSRA base system and therefore should be included in the overall funding for the base system.

# Chapter 1

## INTRODUCTION

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### BACKGROUND

The California High Speed Rail Authority (CHSRA) is one year into their EIR/EIS for the HSR system. The EIR/EIS process is not site specific in terms of station locations. In April of 2001 the Kern Transportation Foundation completed a screening and assessment of station sites in the metropolitan Bakersfield area. Three station site vicinities (one mile diameter circular areas) were identified as offering the most promise:

- A site at Truxtun Avenue and S Street/Union Avenue;
- A site at Golden State/M Street; and
- A site at 7<sup>th</sup> Standard Road West and SR 99.

### PURPOSE, SCOPE AND PLANNING CONTEXT

Kern COG wants to make a recommendation to the CHSRA regarding its locally preferred station site for integration in the HSR system plan. The purpose of this study is therefore to help reach a locally preferred consensus station site to be forwarded to the CHSRA. To accomplish this objective, this Metropolitan Bakersfield High Speed Rail Terminal Impact Analysis Study (the "Bakersfield HSR Terminal Analysis") will provide a better understanding of potential traffic, air quality, environmental and cost impacts associated with the three station vicinities and build consensus regarding the preferred station site. One critical input to costs and implementation viability will be the operational implications on HSR service. The locally preferred station site needs to be presented to the CHSRA by August 2003 in order for it to be best reflected in the EIR/EIS. The Bakersfield HSR Terminal Analysis is not focused on determining the role of Meadows Field within the regional airport system. The Southern California Association of Governments has embarked on a regional airport system study, including Meadows Fields' role.

The Bakersfield HSR Terminal Analysis is also not intended to identify the best alignment for HSR. It just considers station site issues. Lastly, the Bakersfield HSR Terminal Analysis does not develop HSR alignment cost estimates, but it rather reports available estimates.

The three most promising station sites for Bakersfield were identified by an analysis of station options by the Kern Transportation Foundation in 2001. Seven sites were evaluated:

1. Comanche Drive/State Route 58;
2. Rosedale Highway/Allen Road;
3. Meadows Field Airport;
4. 7<sup>th</sup> Standard Road-West of State Route 99;
5. Golden State Avenue/M Street;

6. Truxtun Avenue/S Street; and
7. Truxtun/Union Avenue.

The Kern Transportation Foundation concluded that three site areas offered the greatest promise for a station site and merited further consideration – Airport Area, Golden State/M Street and Truxtun Avenue/S Street. The Kern Transportation Foundation merely identified station site areas using a one mile diameter circle to describe the site area for potential stations.

## **STATION ISSUES IDENTIFIED BY STAKEHOLDERS**

The following station site-related issues were identified through extensive interviews with stakeholders including the members of the study review team (Kern Council of Governments, City of Bakersfield, the County of Kern, Golden Empire Transit and the Downtown Business Association) and participants in a series of meetings or telephone interviews with community/interest groups as follows:

- Greater Bakersfield Chamber of Commerce
- Hispanic Chamber of Commerce
- Smart Growth Coalition
- Kern Transportation Foundation
- Golden Empire Transit
- Project Clean Air
- Kern Regional Transit
- Golden Empire Division of American Institute of Architecture

## **Mobility, Access and Intermodal Connectivity**

Impacts on existing transportation facilities, infrastructure and operations were deemed critical by all stakeholders. While the local and regional transit providers committed to providing service to whatever site was ultimately chosen, stakeholders recognized that there were differences with the costs to provide service to the various station sites. This study will provide guidance on these impacts.

Existing possibilities for intermodal connections, especially pedestrian access, are highest at the Truxtun Avenue site. Advocates of other sites point out that such connectivity can (relatively easily) be established as part of project design and development for any of the sites. However, although the Truxtun Avenue site wins points from advocates for being central to the downtown area, detractors would claim that this centrality is precisely what creates access problems and complicates the mobility picture. North/south access for transit was mentioned by the service providers as an issue in accessing the two downtown stations. Generally, however, stakeholders recognized that the 16-year HSR planning horizon was sufficient to provide time to develop adequate transit service to minimize auto trips in and out of terminal locations.

## **Cost**

Cost is impacted by availability of critical infrastructure and/or the cost of providing utilities to the site. As with the mobility issues that can affect the site variously, those charged with utility

infrastructure and service provision are committed to serving any site ultimately chosen; however, they are concerned about the construction and ongoing operations and maintenance cost impacts of the decision. Several stakeholders cited site-specific redevelopment requirements and potentials, and the ability to defray costs through revenue sources such as redevelopment tax-increment financing as key in distinguishing sites from each other in a cost comparison. Impacts on property taxes were mentioned as a factor that should be considered.

In addition, costs for station amenities or track improvements above and beyond the (minimal) stations included in the CHSRA plan might need to be paid for locally. To the extent that different station sites may trigger the need for such additional expenditures, cost factors must be identified prior to decision-making. Stakeholders recognize that these costs depend on CHSRA decisions regarding alignment choice through the Bakersfield area.

### **Convenience for High Speed Rail Users**

Stakeholders assume that the station site chosen will meet the design criteria established by the California High Speed Rail Authority. Here, again, multimodalism plays a role. Whether or not future passengers (both pass-through and locally originating) would prefer access to downtown amenities and land uses vs. a (minimally) quicker transfer to Meadows Field air service was a matter of long conjecture and strong contention among the stakeholders.

### **Impact on the Built Environment**

Related to the overall vision for the future of Metropolitan Bakersfield, are the perceptions regarding how different sites will be affected by construction of a HSR terminal. Under this topic, the issues of land use compatibility and redevelopment potential pose competing benefits for the Golden State vs. Truxtun site, according to the most ardent stakeholders. That is, the argument for a northern locus of strong economic activity to replace and redevelop existing lower-value land uses at the Golden State site competes with the notion of “playing to existing strengths” by furthering development at the Truxtun Avenue site, where density and past and future redevelopment plans would seem to be most coherent with a HSR terminal. Cost plays a factor here, because to construct a station environment that adds rather than detracts to the existing built environment will require more funding than to simply provide for basic needs. However, some have pointed out that aesthetic and long-term vision-related design and construction costs will add similar cost factors to any site selected.

Potentially long-term project construction impacts should also be considered, but generally these were felt to be manageable, and perhaps even welcome as evidence of healthy economic activity.

### **Air Quality**

Air quality concerns stem from the immediate emissions impacts related to travel to and from the terminal site, as well as to long-term growth-inducing impacts of the project. These are deemed to be factual considerations that must be evaluated based on the outcome of this study, or other impact-specific analyses.

## **Economic Development**

Stakeholders generally agree that job generation and impacts on the local economy should be investigated, and should play a role in station site choice. Generally, the overall economic benefits of high speed rail access would flow from the project regardless of the station site selected. Site-specific benefits of economic redevelopment of the Golden State site competed with agglomeration economy advantages and jobs potential for those in low-income residential areas adjacent to the Truxtun Avenue site. However, the separate issue of the maintenance facility was seen as the primary generator of high-quality jobs.

## **Environmental Impacts**

Noise and vibration were mentioned most frequently as the critical environmental impacts of the station operation; impacts were predicted by most stakeholders to be greater at the Truxtun Avenue site, due to nearby sensitive receptors, and less severe at the 7<sup>th</sup> Standard and Golden State sites. However, it was also noted that high speed rail service now runs into the heart of urbanized areas in Japan and Europe, with no apparent ill consequence.

Growth-inducement was a potential for all HSR development. However, costs (financial and urban-form related) of sprawl and impacts to agricultural land were most strongly identified with the 7<sup>th</sup> Standard site by most stakeholders. A minority of stakeholders pointed to the Centers concept, and the inevitability of development in the area of the 7<sup>th</sup> Standard site, thus downplaying such probable impacts associated with that site. Because of surrounding land uses, the Golden State site offers potential advantages of Brownfields redevelopment.

## **STATION SITE EVALUATION FRAMEWORK**

Adopted by the Bakersfield City Council and Kern County Board of Supervisors in September 2002, the following criteria were employed by this Study in evaluating each of the three potential high speed rail terminal sites in Metropolitan Bakersfield for the *Metropolitan Bakersfield High Speed Rail Terminal Impact Analysis*:

- ✓ Station design characteristics (station functions, platform and track way requirements, station amenities, handicapped accessibility, vehicular and pedestrian circulation; fare collection and site design);
- ✓ Right of way needs;
- ✓ Operational constraints (noise, lighting, etc.);
- ✓ Track alignment considerations;
- ✓ Technology and service requirements;
- ✓ Availability of adequate utilities at the site;
- ✓ Site support of patronage and revenue (supporting food services and other retail services);

- ✓ Site geology and engineering;
- ✓ Feasibility of site acquisition (amount of available land and government-held land);
- ✓ Ridership profiles and revenue forecasts;
- ✓ Physical constraints to station area development (existing topography, canals, buildings, etc.);
- ✓ Compatibility with adjacent land uses;
- ✓ Growth considerations (population / development);
- ✓ Inter-connectivity with other transportation modes (pedestrians, autos, public transportation, passenger trains and passenger airports);
- ✓ Impacts on existing transportation facilities (autos, public transportation, passenger trains and planes);
- ✓ Consistency with existing plans and policies;
- ✓ Job generation potential;
- ✓ Property tax impacts;
- ✓ Potential cost differential between California High Speed Rail Authority funding and local community funding and the early identification of funding mechanisms to be used to fund the local share of the project;
- ✓ Surface street transportation impacts;
- ✓ Redevelopment potential and property tax increments as they relate to redevelopment areas as compared to new development areas;
- ✓ Availability of FAA funding programs to connect a high speed rail station to an airport via rail without intermediate stops; and
- ✓ Use of the Vision 2020 Plan in reviewing urban sprawl implications.

These criteria can generally be organized into issues of concern to:

- HSR patrons;
- Transportation service providers;
- The community at-large; and

- Implementing agencies.

On-going engineering and environmental analysis being performed for the CHSRA will provide significantly more information on costs, which will be important to Bakersfield's station siting decision. This cost information will be incorporated in this station study as it becomes available. As the focus of the station siting analysis was not envisioned to be a comprehensive economic study, economic assessments were based on previously published material.

## **REPORT ORGANIZATION**

This report is organized into five chapters following this introductory chapter:

- Chapter 2 – Key Features of the High Speed Rail Plan;
- Chapter 3 – Seventh Standard Airport Station Site;
- Chapter 4 – Golden State Station Site;
- Chapter 5 – Truxtun Station Site; and
- Chapter 6 – Summary.

The appendices to this report describes outreach effort findings with respect to key stakeholders and the community.

## **SUMMARY**

- Three potential HSR station site vicinities (one-mile diameter circles) previously identified are the focus of this Study's assessment.
- The HSR Terminal Analysis Study evaluates these three station vicinities as to their station siting difficulties and promise. The Study is not intended to describe final station design concepts or to assess broader regional airport system issues.
- Assessment of the station siting merits is based on input from multiple interest groups.

## **Chapter 2**

# **THE CALIFORNIA HIGH SPEED RAIL PLAN**

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Features of the High Speed Rail Plan are of obvious importance to the determination of the best station site in the Bakersfield Metropolitan area. Many features of the California High Speed Rail Plan, however, have yet to be defined. The formal description of the Plan is provided in the June 2000 Final Business Plan of the California High Speed Rail Authority (CHSRA) and additional information on the Plan is being developed as part of the ongoing Environmental Impact Study (EIS). This Bakersfield HSR Terminal Analysis is intended to provide input to the EIS in defining the locally preferred station site. It is important to understand that this plan will likely be modified during implementation of the Plan, but also that it will evolve over time after implementation to meet manifesting market demands. Features of the CHSRA Plan are described in this section of the report in order to provide general background for identifying the best station site in Metropolitan Bakersfield.

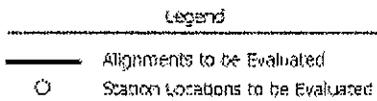
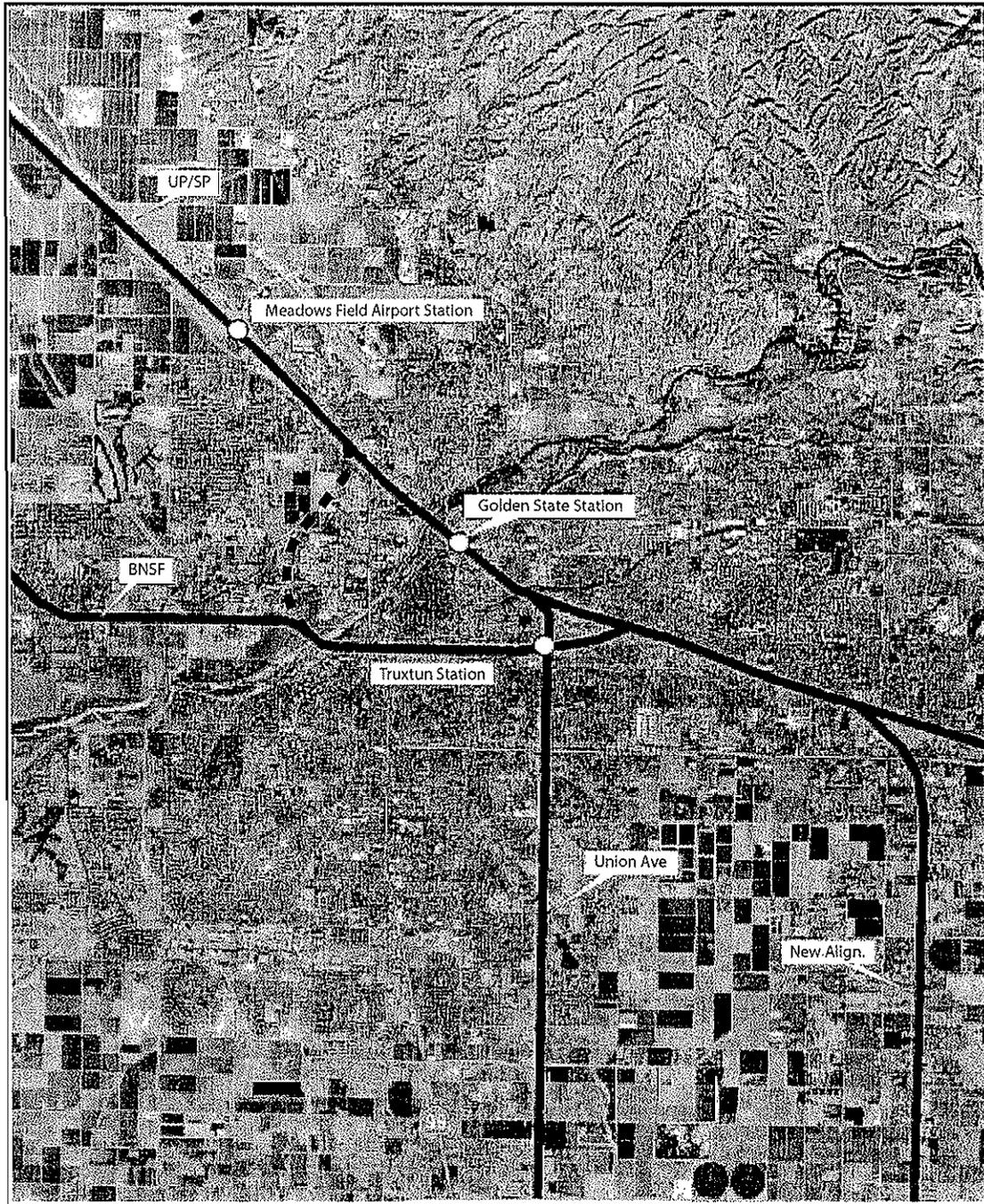
### **SYSTEM PLAN**

Key features of the HSR system plan include:

- Service Routes;
- Station Stops;
- Relationship to San Joaquin Amtrak Service;
- Travel Times;
- Fare Schedule; and
- Schedule for System Development.

### **Service Routes**

Three service routes are proposed by CHSRA. The Bakersfield Station would be served by two of these routes – San Diego to San Francisco and San Diego to Sacramento. The third route would link Sacramento to San Francisco via Merced. The EIS is investigating which of two rail corridors in the Valley (Union Pacific or Burlington Northern Santa Fe) would be the most viable to locate the high speed passenger rail service. It is also investigating whether it would be best to link Bakersfield to Los Angeles via the Grapevine or via Tehachapi. These alignment issues have important implications for the Bakersfield station decision. Figure 2-1 describes the potential approach/departure paths for HSR trains to/from the north and south. The alignment south along Union Avenue is understood to look the most problematic. According to the CHSRA any of these alignments could support the three sites being studied for Bakersfield.



## Station Stops

Figure 2-2 describes the three statewide HSR rail lines and the proposed station locations. The nearest stations to Bakersfield would be in Tulare County (Visalia/Hanford) and in Santa Clarita. The only airport stations envisioned along the line are the San Francisco International Airport and the Ontario Airport.

## Relationship to Amtrak San Joaquin Service

The CHSRA Plan assumes that the current San Joaquin Amtrak service will continue and will serve as a feeder to the high speed rail service. Some questions, however, arise about the viability of the San Joaquin service south of Stockton after HSR service has been established. More frequent and faster rail service would be provided by HSR at only a slightly higher fare than that provided by the San Joaquin's service. Depending on the alignment selected for HSR only the Wasco, Corcoran, Hanford and Madera San Joaquin stations would be not be served by HSR. These market areas by themselves might not support continuation of San Joaquin rail service. If the San Joaquin service were to be retained, a seamless connection between it and the HSR service would be required in order to allow the San Joaquin trains to effectively serve as feeders to the HSR. The seamless connection could only be effectively achieved by having both types of service stop at the same station (bus bridge would not work). If San Joaquin service were to be phased out, it would need to be coordinated with the phasing in of HSR service.

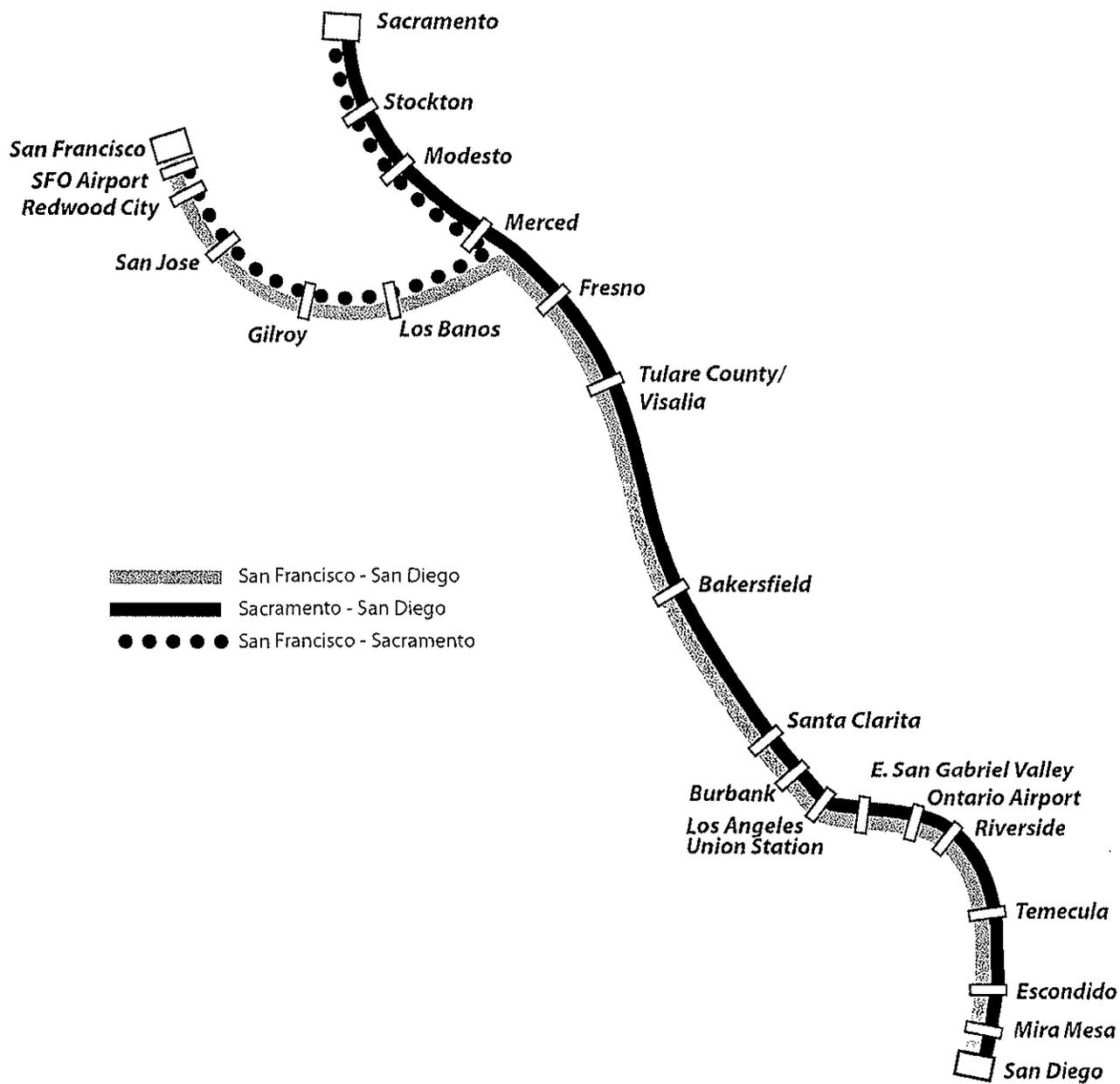
## Travel Times

The CHSRA Plan envisions travel times from Bakersfield as shown below:

Destination	Current Amtrak Times	Estimated HSR times
San Francisco	405 minutes	117 minutes
Sacramento	315 minutes	103 minutes
Fresno	125 minutes	37 minutes
Downtown Los Angeles	140 minutes	50 minutes
San Diego	355 minutes	111 minutes

## Fare Schedule

The 2000 Business Plan for CHSRA included proposed fares (1999 dollars) for the purposes of estimating revenues and patronage. Three types of fares were described – full fare, advance purchase and commuter. The commuter fares did not cover service to Bakersfield. Full fares from Bakersfield were as follows: \$36 to San Diego, \$32 to Ontario Airport, \$31 to Downtown Los Angeles, \$29 to Fresno, \$37 to SFO, \$38 to San Francisco and \$37 to Sacramento. Advance purchase prices were slightly more than half the full fare prices. It is possible that commuter fares might ultimately be offered for Bakersfield trips, as the travel times are definitely within acceptable commute distances. Provision of Bakersfield commute fares would significantly increase station patronage and station parking needs.



## Schedule for System Development

The CHSRA Plan proposes a 16 year development period for HSR, with service beginning sometime around 2020. No phasing plan is provided, but it is likely that some parts of the system will come on line before others. Specifically, the ballot funding proposal for HSR builds the San Francisco to Los Angeles route first. This would mean that San Joaquin trains would continue to provide connections to Sacramento from Bakersfield.

## OPERATIONS PLAN

Key features of the operations plan include:

- Strategy for Shared Use of Track;
- Express Trains and Local Service; and
- Physical Plan.

## Strategy for Shared Use of Tracks

CHSRA has assumed that their trains will operate over exclusive trackage and therefore will not need to meet Federal Railroad Administration (FRA) crash impact standards. At present any rail equipment that shares tracks with conventional freight or Amtrak trains must meet FRA crash impact standards. The FRA might in the future modify its crash impact standards regarding high speed rail with improvements in traffic management technology. It is even possible that high speed train-sets might be developed in the future that meet FRA crash impact standards.

CHSRA's current plan is based on exclusive trackage for its operations. The exception is in the Bay Area and Southern California where high speed rail may share trackage with Caltrain and Metrolink, respectively.

## Express Trains and Local Service

Five types of service are envisioned by the CHSRA Plan.

1. Express – stopping at one station between end of line termini
2. Semi-express – stopping at a limited number of stations
3. Local – stopping at every station
4. Suburban Express – stopping frequently within the major metropolitan regions, but running as an express train between major metropolitan areas
5. Regional – local trains that begin or end in the Central Valley (these mostly operate during commute hours)

The CHSRA Plan proposes that Bakersfield be served by Local, Semi-express and Suburban trains on both the San Diego to San Francisco route and the San Diego to Sacramento route. Virtually all southbound trains terminate in San Diego and virtually all northbound trains originate in San Diego. One Regional roundtrip train is proposed for both HSR lines serving Bakersfield. The operating plan for trains serving the Bakersfield Station is shown below:

**Table 2-2  
PROPOSED HSR TRAIN ARRIVALS AT BAKERSFIELD STATION**

Northbound			Southbound		
Arrival	Destination	Class	Arrival	Origin	Class
6:08 am	San Francisco	Local	5:00 am	San Francisco	Regional
6:58 am	San Francisco	Suburb	6:00 am	Sacramento	Regional
7:19 am	San Francisco	Semi-X	7:31 am	San Francisco	Local
7:34 am	Sacramento	Semi-X	8:17 am	Sacramento	Suburb
8:13 am	Sacramento	Local	8:36 am	San Francisco	Semi-X
8:53 am	Sacramento	Suburb	8:56 am	San Francisco	Suburb
9:13 am	San Francisco	Local	9:05 am	Sacramento	Local
9:42 am	San Francisco	Semi-X	9:38 am	Sacramento	Semi-X
10:08 am	San Francisco	Local	9:56 am	San Francisco	Local
10:24 am	Sacramento	Semi-X	10:16 am	San Francisco	Semi-X
10:43 am	San Francisco	Suburb	10:56 am	San Francisco	Suburb
11:08 am	Sacramento	Local	11:13 am	Sacramento	Semi-X
11:59 am	San Francisco	Semi-X	11:31 am	San Francisco	Local
12:28 pm	Sacramento	Suburb	11:46 am	San Francisco	Suburb
1:18 pm	San Francisco	Local	12:05 pm	Sacramento	Local
1:29 pm	San Francisco	Semi-X	12:16 pm	San Francisco	Suburb
1:48 pm	San Francisco	Suburb	12:56 pm	San Francisco	Semi-X
2:09 pm	San Francisco	Semi-X	1:18 pm	Sacramento	Suburb
2:28 pm	Sacramento	Suburb	1:51 pm	San Francisco	Local
2:38 pm	San Francisco	Suburb	2:06 pm	San Francisco	Semi-X
3:08 pm	San Francisco	Local	2:56 pm	San Francisco	Suburb
3:59 pm	San Francisco	Semi-X	3:16 pm	San Francisco	Suburb
4:31 pm	Sacramento	Local	3:28 pm	Sacramento	Suburb
5:14 pm	San Francisco	Semi-X	3:46 pm	San Francisco	Local
5:34 pm	Sacramento	Semi-X	4:11 pm	San Francisco	Semi-X
6:23 pm	San Francisco	Regional	5:21 pm	San Francisco	Semi-X
6:34 pm	Sacramento	Semi-X	6:05 pm	Sacramento	Local
6:48 pm	San Francisco	Local	6:33 pm	Sacramento	Semi-X
7:08 pm	San Francisco	Local	7:08 pm	Sacramento	Semi-X
7:28 pm	Sacramento	Regional	7:21 pm	San Francisco	Local
8:02 pm	San Francisco	Semi-X	7:46 pm	San Francisco	Suburb
9:38 pm	San Francisco	Local	8:01 pm	San Francisco	Semi-X
10:08 pm	Sacramento	Local	8:51 pm	San Francisco	Local
			9:26 pm	San Francisco	Semi-X
			10:55 pm	Sacramento	Local
			11:06 pm	San Francisco	Local

In total, 69 of the 132 daily trains on the San Francisco and Sacramento services would stop at Bakersfield. Four trains would be regional services, 24 would be local services, 24 trains would be Semi-express services and 17 trains would be Suburban services. While this service plan provides a range of options for passengers, it also means that trains would not run on uniform headways (e.g. hourly). Coordinated schedules with GET bus service therefore would be

difficult. All trains stopping at Bakersfield would also stop at the San Francisco Airport and at the Ontario Airport.

### **Physical Plan**

Elements of the HSR physical plan are being refined as part of the EIS process. Critical features regarding station planning include: track cross sections, station cross sections and transition track requirements between the mainline tracks and the station tracks.

Figure 2-3 describes the proposed cross section requirements for HSR tracks. A minimum 50 foot cross section is proposed for HSR corridor. When HSR parallels UP or BNSF tracks, a minimum total 100 foot cross section is generally required (50 feet for HSR and 50 feet for freight railroad). Minimum distance between HSR track centerlines is 15.4 feet.

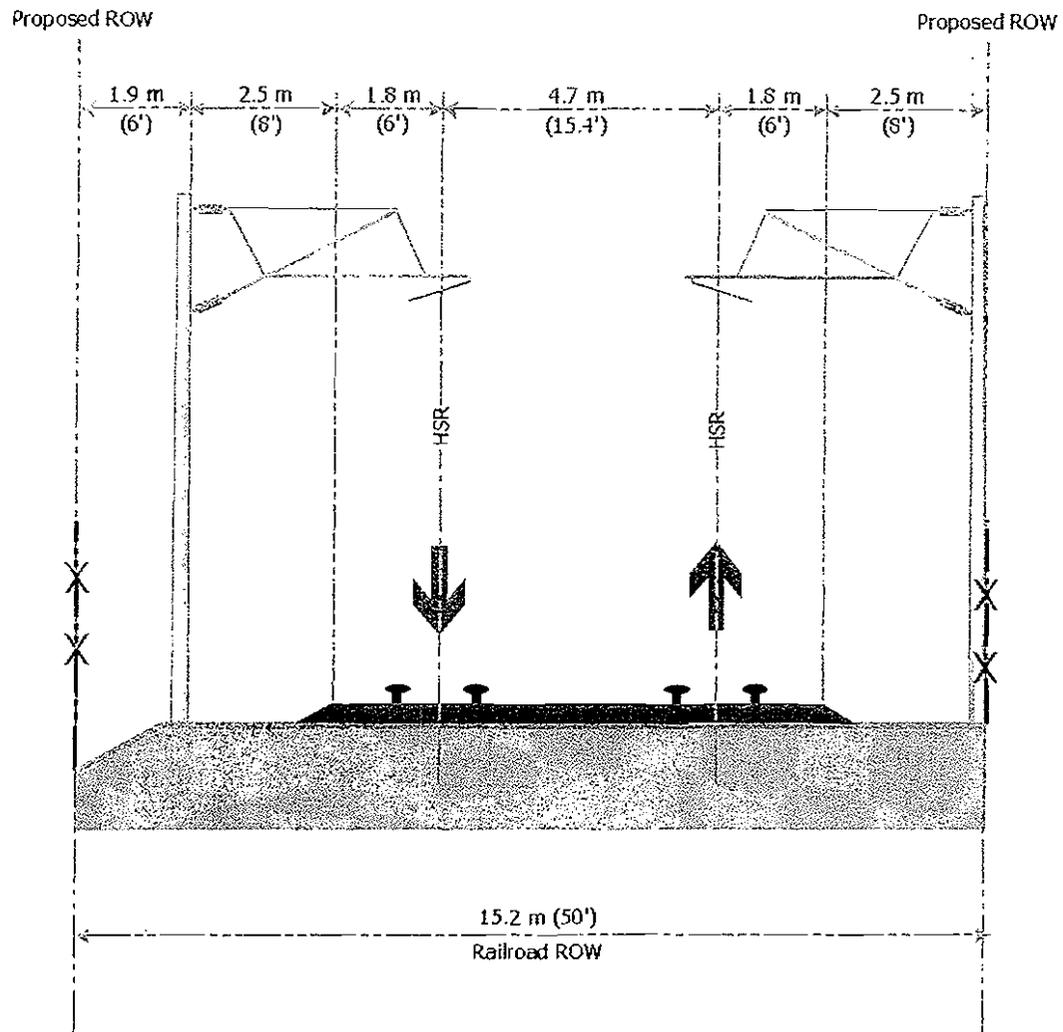
The CHSRA concept plans for the Bakersfield Station show at-grade ground level stations for both the Airport site (7<sup>th</sup> Standard Road) and for the Golden State Station site. An elevated station concept is proposed for the BNSF Truxtun Station site and a UP underpass level station concept is shown for the UP Union Avenue/Truxtun station site.

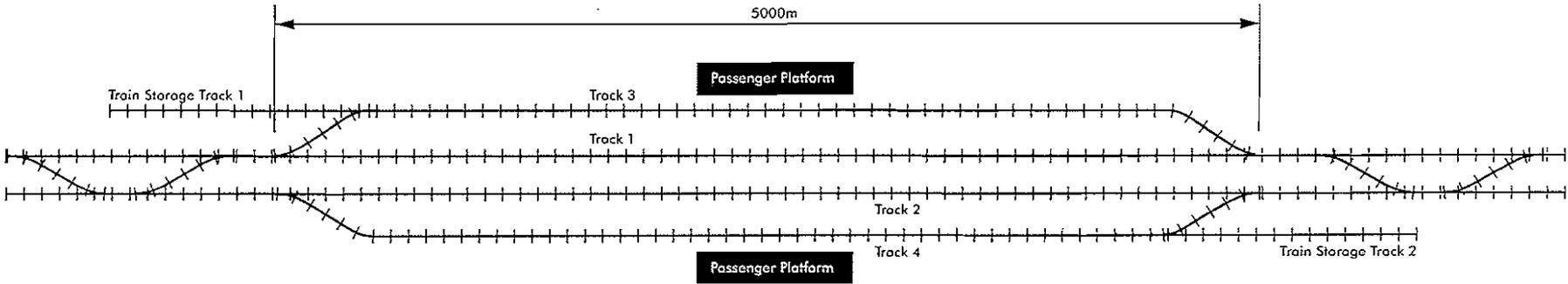
Cross section right of way requirements would vary by station site. As envisioned for the EIS, the Airport and the Golden State station site concepts would consist of a four track cross section, with the two mainline tracks serving express trains located in the center. The two outside tracks would serve trains stopping at the Bakersfield station. A 141 foot cross section is envisioned to accommodate HSR's four tracks and passenger platform. Station facilities would be in addition to this cross section. The BNSF Truxtun station might be either an off-line station (if UP alignment is used for main HSR service) or a combination station if the BNSF is used for HSR service. If this site is used as an off-line station stop, the elevated section would only need to accommodate two tracks and platforms. It is also possible that the Golden State station site could be an off-line station, if the BNSF tracks are used for the mainline HSR service.

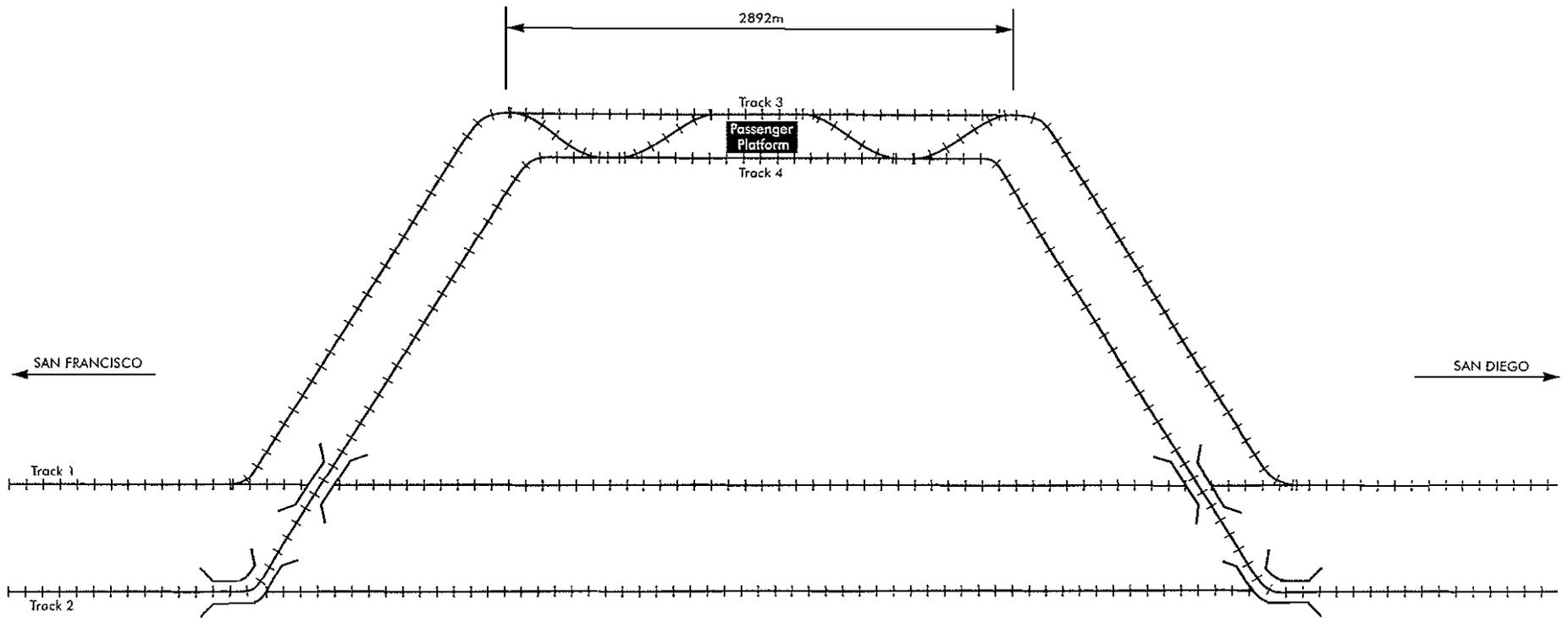
Station platforms are envisioned to be 1,300 feet in length and 30 feet in width each. High speed transitions from the mainline to the station tracks will be required for train deceleration and acceleration. These transition tracks are suggested to be 7,500 feet long extending from each end of the platform. Thus, the total four track station will be three miles in length. Figures 2-4 and 2-5 show the concepts for station track transitions for mainline stations and for off-line stations.

### **PATRONAGE FORECASTS**

The numbers of passengers boarding and alighting at the Bakersfield station are important to programming the amount of required parking and also for understanding the station access capacity needs. The principal forecasts for patronage were prepared by Charles River Associates and published in January 2000. These forecasts were based on pre 9/11 airport security and dotcom era airfares and air service levels. The forecasts also did not consider potential commuter patronage from Bakersfield. Lastly, the potential patronage associated with development of Meadows Field into a satellite airport serving the Los Angeles area was not considered. Information regarding trip purpose and residential location of travelers were not specifically described in the forecast report. Residential location of passengers (Bakersfield versus other station-sheds) is important in sizing station parking requirements.







The Charles Rivers Associates patronage forecasts did not attempt to distinguish potential patronage differences associated with different station locations in Bakersfield. The primary market for HSR service is envisioned to be intercity travel rather than commuter or airport access travel. The intercity travel market includes travel by residents of the Bakersfield Region as well as travel by non-residents to attractions in the Bakersfield Region. Most of the Charles Rivers Associates patronage for the Bakersfield station is believed to be attributable to Bakersfield residents. Patronage by local residents for HSR intercity travel would not vary much by station location. Non-resident HSR travel to Bakersfield would likely be greatest to the Truxtun Station site, which is located conveniently to a number of intercity travel attractions. Neither the Golden State nor airport station sites are within walking distance of any current intercity travel attractions. The two downtown sites would better serve the potential commute market to Los Angeles should it materialize. The airport station site location is farther out of direction of travel to commute destinations, which are predominantly located to the south of Bakersfield. The airport site is the only station site that might effectively capture Los Angeles Region access travel to Meadows Field. The viability of the Meadows Field becoming a satellite airport to the Los Angeles Region has yet to be determined.

As part of the EIS process, the Charles Rivers Associates forecasts have been refined. The refined forecasts show an estimated 2,674 daily passenger boardings at the Bakersfield station along with an equal number of alightings. The peak hour forecast is for 388 boardings/alightings (7.2 % of total daily) at the Bakersfield Station. With 69 daily trains stopping at the Bakersfield Station, each train on average would serve 39 boarding and 39 alighting passengers. The current daily San Joaquin train departures average about 80 boardings per train, or about twice the average forecasts for each HSR train.

### **Parking and Traffic**

The refined forecast estimate that 35% of the passengers would be driving and parking at the station and another 30% would be dropped off at the station. The remainder would come from transit, taxi or other modes. It was estimated that 1.9 passengers would arrive together and that the average duration of stay would be 1.5 days for the purposes of estimating parking. Application of these estimated relationships to the estimate of boarding passengers yielded an estimate of 739 long term passenger parking spaces (2,674 boardings at 35% parking divided by 1.9 passengers per car and staying 1.5 days) and 8 short term parking spaces. Fees for parking were assumed sufficient to cover cost of providing it. The EIS analysis indicates a slightly higher parking demand for the Airport station site (850 spaces).

The refined forecasts estimate a total of 492 cars arriving during the peak traffic hour. This is roughly equivalent to the traffic that might be generated by 500 single family homes. If a northbound and southbound train both arrived at the same time during the peak hour, approximately 250 vehicle trips might be generated in a 15 minute period.

### **Station Building**

The HSR EIS analysis of station building needs suggested a need for an 18,900 square foot building to process passengers. This space allowance is estimated to be sufficient to accommodate passenger waiting, concourse connection to platforms, passenger ticketing,

baggage handling, restrooms and support facilities (e.g. food vendors telephones, mechanical and electrical, etc.). This space does not include accommodation for intercity bus passengers nor for rental car counters. The current Amtrak station reportedly is about 12,000 square feet in size.

## **BUSINESS PLAN**

Many details of the HSR Business Plan need to be worked out. Of key interest to Bakersfield is any cost/revenue sharing strategy. The 2000 Business Plan clearly states that station parking facilities will be provided by the private sector, rather than by the Authority. The parking facilities would be constructed, operated and funded by private operators under agreements with CHSRA. No CHSRA profits are shown in the Business Plan for parking revenues. The Business Plan also states:

“The financial plan shall presume that the state will fund the base system fully and that no local funding participation shall be assumed in the base system. The authority shall consider entering into intergovernmental agreements with local agencies, should local agencies desire or request location, design and other station amenities over and above the design standards of the base system. The costs of location, design and other amenities over and above the base system shall be the responsibility of requesting local agencies.”

The Business Plan is unclear what constitutes the “base system”. Specifically, the Business Plan does not say if the net increase cost associated with off-line stations is or is not included in the base system cost. If the UP line is selected for the HSR approach into Bakersfield from the north, the net increase in costs (including right of way) for an off-line station at Truxtun could be easily calculated. If the BNSF line is selected for the northern approach into Bakersfield, the calculations for off-line stations at the Airport or at Golden State is more difficult to determine, particularly for the airport site. This is because a long new track link would need to be developed connecting the BNSF to the UP corridor. This new track connection costs might be offset by reduced costs associated with not building some track along the BNSF corridor close in to Bakersfield. Until the HSR EIS report is released defining the “base system” and its cost (including right of way assumptions), it will not be possible to segregate added local costs related to station location. It is possible likely that off-line station costs will not be included in the Base System costs, as the ballot measure \$9.95 billion funding package will be very tightly stretched.

At this time the differential cost to provide an off-line station can only be approximated using very crude order of magnitude cost relationships identified in prior CHSRA planning studies.. Some insight into capital costs is provided in the Draft High Speed Rail Corridor Evaluation Report - December 30, 1999. A three mile aerial structure through downtown Bakersfield was estimated to cost \$209 million, excluding \$55 million for the station. This track development cost translates into \$70 million per mile for a double track aerial alignment. At-grade double track segments were reported to cost around \$22 million per mile near Bakersfield.

## **SUMMARY**

- All three Bakersfield station site candidates reportedly could be served by HSR.
- Stations would have 1,300 foot passenger platforms, about 18,900 square feet of building area, and 750 parking spaces. Mainline stations would have a 141 foot wide platform

area cross section and would have 1.5 mile acceleration/deceleration transition station tracks on both approach and departure sides of the station. Off-line stations would not require station area transition tracks and would have a cross section of 80 feet.

- A number of very important unknowns remain regarding the planned HSR system including: approach and departure corridors for Bakersfield; its potential Bakersfield commuter market; the long term relationship with Amtrak San Joaquin train service; and the inclusion of off-line stations along with their funding responsibility. The on going EIS and preliminary engineering studies will answer most of these key questions
- Costs associated with off-line stations have yet to be publicly defined, but would appear to be in excess of \$25 million per mile for double track HSR facilities.

## Chapter 3

# **AIRPORT STATION SITE – SEVENTH STANDARD RD.**

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The primary vision underlying the location of the HSR rail station at 7<sup>th</sup> Standard Road near the airport is understood to be the development of Meadows Field Airport into a satellite airport serving the Los Angeles Region. In addition to its proximity to the airport, secondary strengths of this site are that it is located in a relatively open area that could cost effectively accommodate the projected parking demands for the HSR station and a location where station development would not require difficult and disruptive land acquisitions.

### **STATION LOCATION**

The Kern Transportation Foundation (KTF) Study identified the potential site for a station at this location to be along the west side of the UP main line railroad tracks, just south of 7<sup>th</sup> Standard Road. The KTF Study did not identify a specific site, but rather identified a one mile diameter circular area centered at a point one mile west and a quarter mile south of the 7<sup>th</sup> Standard Road interchange. Trains would approach the station from the north via either the UP corridor or a new rail connection east to the BNSF corridor (perhaps right of way acquisition coordinated with development of a proposed freeway). The HSR tracks would be at-grade and thus 7<sup>th</sup> Standard Road would pass over the HSR tracks, the UP freight tracks and SR-99. The Golden State Avenue Frontage Road, which is located between SR-99 and the UP tracks, probably would need to be connected somehow to meet 7<sup>th</sup> Standard Road.

The on-going HSR EIS identifies the station site to be on the east side of SR-99, just south of 7<sup>th</sup> Standard Road. This HSR station would be at-grade with 7<sup>th</sup> Standard Road passing over it, necessitating reconstruction of the northbound SR-99 freeway ramps. The station site is shown to be just south of the 7<sup>th</sup> Standard Road overpass adjacent to SR-99.

Both of these potential station sites were assessed, understanding that the east side site is now the most favored by CHSRA.

### **West of UP Station Site**

As outlined in Chapter 2 for the west of UP station site, a 141 foot wide right-of-way would be purchased adjacent to the UP tracks for a four-track station. Right-of-way needs for approaches to the station would reduce to 100 feet. The four-track cross section would run from about Snow Road on the south to a point 1.5 miles to the north of 7<sup>th</sup> Standard Road. The industrial uses at the SR-99 and 7<sup>th</sup> Standard Road interchange might be fully or partially displaced by this HSR right-of-way need.

The area west of the UP tracks and south of 7<sup>th</sup> Standard Road is bounded on the west by the Beardsley Canal and on the south by Snow Road. Snow Road has an at-grade crossing of the UP tracks. It is not clear how Snow Lane would cross the HSR right-of-way. One possibility would be for it to overpass the HSR and UP tracks and connect with Pegasus Drive east of SR-99. UP also has a short freight siding just north of Snow Lane. The east-west depth of the site is approximately 1,200 feet and the north-south distance between 7<sup>th</sup> Standard Road and Snow

Lane is about 6,500 feet. As such ample space would be available for station development and for adjacent development on the 180 acre site.

Access to the west of UP HSR station site would be primarily from SR-99 at the 7<sup>th</sup> Standard Road interchange. Most HSR passengers would be arriving from the south, where almost all of Bakersfield's metropolitan area population and businesses are located. Very little of the Bakersfield HSR market-shed is located north, east or west of the Airport Road station site.

The current SR-99 interchange is not built to modern Caltrans standards. Since the 7<sup>th</sup> Standard Road overpass of SR-99 probably will need to be rebuilt to span the HSR tracks, it is assumed that the southbound half of the interchange would be upgraded and possibly the northbound half. Traffic approaching the station from the south would exit at the 7<sup>th</sup> Standard Road ramp and turn left onto 7<sup>th</sup> Standard Road. The interchange intersection would need to be signalized in order to accommodate significantly more left turns from the off ramp. Traffic exiting the HSR station destined south would use a new ramp onto SR-99. As part of the interchange redesign, the Golden State Frontage Road north of 7<sup>th</sup> Standard Road would likely be eliminated and the section south of 7<sup>th</sup> Standard Road possibly cul-de-saced.

### **East of SR-99 Station Site**

The area east of SR-99 and south of 7<sup>th</sup> Standard Road is relatively undeveloped. SR-65, which borders the site area along the east, appears to be access controlled, with no site driveways envisioned. The HSR station envelope for this site would need to accommodate a four-track mainline station, which needs 141 feet of right-of-way depth. A 1,300 foot passenger platform would be required.

Most patrons arriving by car will be arriving from the south on SR-99. Therefore, easy access to SR-99 south is required for this site.

The SR-65 access ramps to SR-99 provide an opportunity for high capacity and simple site access, if Caltrans would be willing to permit a station driveway along SR-65.

## **STATION PROGRAM**

The amount of facilities, types of uses and spatial inter-relationships help to define the planning program for stations. The program for the Airport Station site would very much depend on its viability as an airport access portal.

### **Airport Access HSR Portal Station**

HSR is proposed to connect with the San Francisco International Airport and to Ontario Airport. The viability of Meadows Field growing into a satellite airport serving Southern California somewhat hinges on the corridor chosen to link Bakersfield to Los Angeles – Grapevine or Tehachapi. Connection to a possible new airport in Palmdale has been discussed, if the HSR alignment between Bakersfield and Los Angeles is via the Tehachapi rather than by the Grapevine route. If HSR is constructed via the Tehachapi alignment it is very unlikely that Meadows Field could be developed into an effective satellite airport for the Los Angeles area. If HSR is constructed via the Grapevine alignment, the viability of Meadows Field as a satellite airport improves. Key questions then become the quality of the connection between the HSR

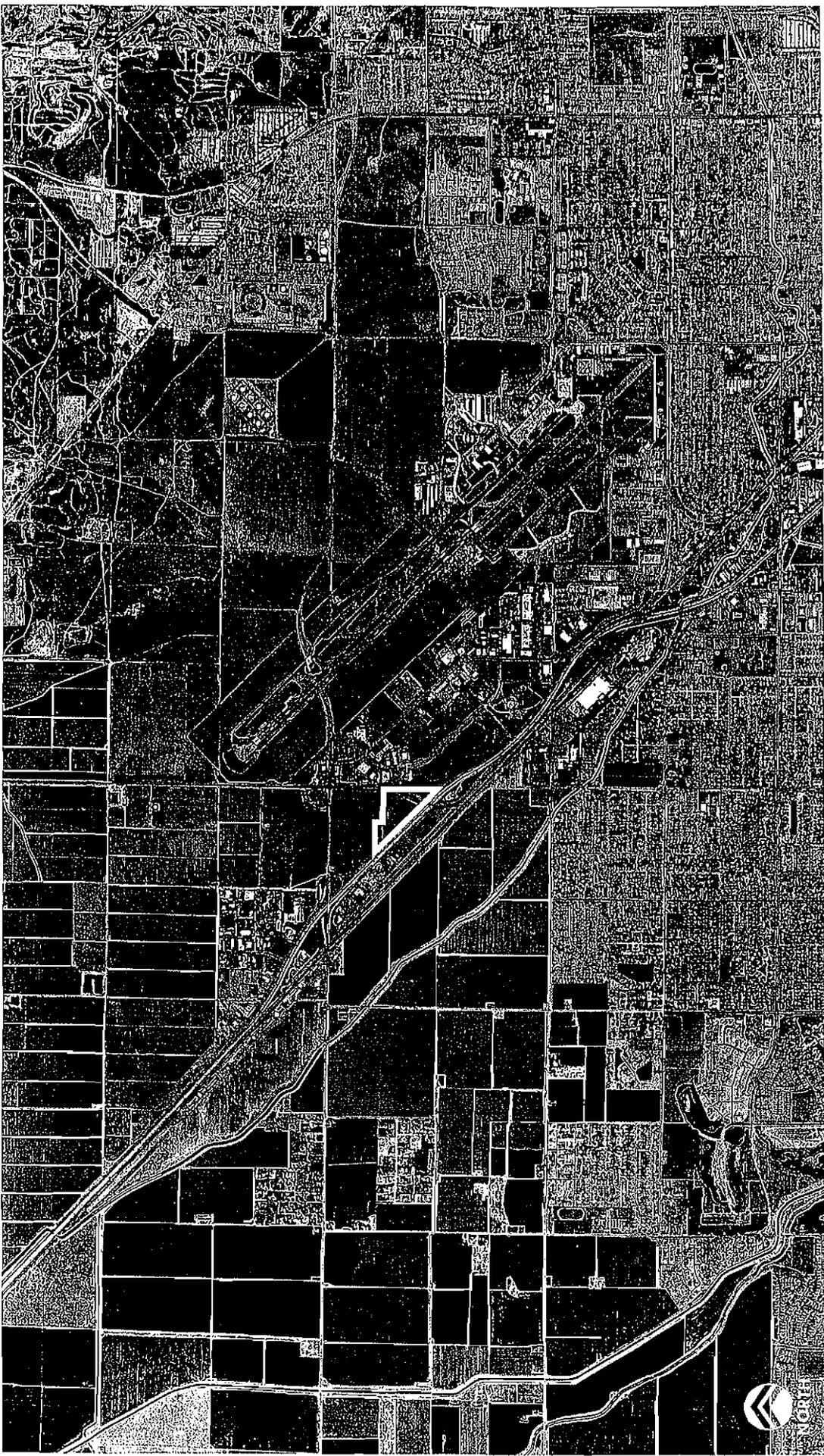


Figure 3-1  
AIRPORT STATION SITE LOCATION



station and the airport passenger terminal and also the aviation/environmental capabilities of Meadows Field to grow to meet increased demands. The passenger connection strategy would also need to accommodate passenger baggage. Post 9/11 interlined baggage to/from off airport facilities has become a greater concern. With HSR serving short haul travel markets, the airport would primarily be catering to long distance trips, whose passengers tend to have more baggage.

The Southern California Association of Governments (SCAG) is understood to be embarking on a regional airport system study that would consider Meadows Field as a potential satellite airport for the Los Angeles Region. The viability of Meadows Field as a satellite airport is outside the scope of this station site feasibility study. Potential for development into a Central American gateway airport serving the San Joaquin Valley particularly appears to offer promise. The single runway configuration of Meadows Field would limit its attractiveness as a major hub. The SCAG Study will address this and other issues.

The residential development around the airport brings into question the acceptability of greatly increased commercial air traffic from the airport's neighbors. The most recent master plan for Meadows Field dates back to 1987. If Meadows Field can be developed into a major airport, substantial economic benefits would accrue to the City and the Region.

Location of the HSR station on the west side of the UP tracks would place it more than four miles from the current Meadows Field passenger terminal. It would be about a 10 to 15 minute shuttle bus trip between these two terminals. Since the passenger terminal is on the east side of the airport it would not be easy to directly connect the passenger terminal with the HSR station. In summary, it is doubtful that passengers would perceive the connection to be an easy and seamless transfer, particularly for a HSR station site located west of SR-99. Meadows Field plans currently propose development of a new passenger terminal building north of the present terminal, but still on the east side of the runways. This location would be slightly closer to the airport HSR station, but would not provide nearly the convenient connection that could be afforded by a new passenger terminal located on the west side of the runways.

Location of the HSR station on the east side of SR-99 would place it closer to the Meadows Field passenger terminal. Recognizing that the passenger terminal would need to be upgraded with jetways to support needs of large aircraft likely to use a satellite regional airport, the question opens to develop the upgraded terminal on the west side of the airport nearer to the HSR station.

Successful development of Meadows Field into a satellite airport serving the Los Angeles Region and the use of HSR as the primary means of access, would necessitate greater service capacity (trains) on the segment between Los Angeles and Bakersfield. Review of HSR base patronage forecasts indicate that passenger loads are about equal north and south of Bakersfield. Service capacity is designed based on these balanced loads. If Meadows Field role were increased to serve 10 million annual air passengers, this translates into 27,400 daily passengers. With a 2020 total systemwide forecast for about 23 million annual passengers using HSR between LA and Bakersfield (63,000 daily passengers), the airport demand clearly could not be accommodated with the base HSR service and would require an overlay of airporter train service.

## **Parking and Traffic**

The EIS for the HSR project differentiates between the station sites serving Bakersfield. The program is to provide approximately 850 parking spaces for the Airport station site and 750 spaces for the other two station sites. With few constraints on space, surface parking is indicated. Approximately eight acres of land would be required to park 850 cars. Rental car parking would most likely remain at the Meadows Field Passenger Terminal complex. Should HSR allow Meadows Field to grow into a regional satellite airport, most of the new HSR passengers would be transferring from the train and thus the station parking needs should remain unchanged.

## **Bus Bays**

The HSR EIS is envisioning one bus loading bay for the Airport station site. Recognizing that the current Amtrak Station has 15 bus bays and Greyhound's terminal has eight bays suggests consideration of providing more than one bus bay. Four bays are proposed for regional feeder bus service – Santa Barbara, Las Vegas, Victorville and Wasco/Corcoran. Two bus loading bays are also suggested for connection shuttles to Meadows Field's passenger terminal.

## **ILLUSTRATIVE STATION CONCEPTS**

Illustrative station site concept plans were developed for both the West and the East station sites serving the Airport. It should be stressed, that the concepts are not the final site design concepts, but rather merely are intended to show how a station could be developed for these site candidates. The illustrative concept plan for the site located west of the UP tracks is discussed first, followed by the illustrative site concept plan for the site located east of SR-99.

### **Illustrative Site Plan - West Station**

Figure 3-2 describes the HSR cross section envisioned by the EIS and Figure 3-3 presents an illustrative vicinity concept plan prepared by WSA. Figure 3-4 provides a more detailed concept for the station development itself. The key challenge in defining an illustrative site plan concept for the Airport Road site is anticipating how the SR-99 interchange will be configured.

### **West Station Access Plan**

Presently, the Golden State Frontage Road intersects 7<sup>th</sup> Standard Road in between SR-99 and the UP tracks. Relatively little development along the frontage road depends solely upon the 7<sup>th</sup> Standard Road connection. The frontage road complicates provision of a high capacity and safety improved southbound interchange access to SR-99. This frontage road connection, however, is certainly desired by the properties along the frontage road.

Since 7<sup>th</sup> Standard Road will need to overpass the HSR tracks, is located about 1,000 feet to the west, it makes sense to reconstruct the entire overpass of SR-99. This overpass will eliminate the frontage road connection to 7<sup>th</sup> Standard Road. As shown in Figure 3-2, the primary access to the station site would be from a new signalized intersection located about 2,300 feet west of SR-99. The SR-99 southbound ramps would be reconfigured and linked to the extension of the current overpass of SR-99. Its intersection with 7<sup>th</sup> Standard Road would be located about midway between the current northbound ramp intersection and the proposed station site access

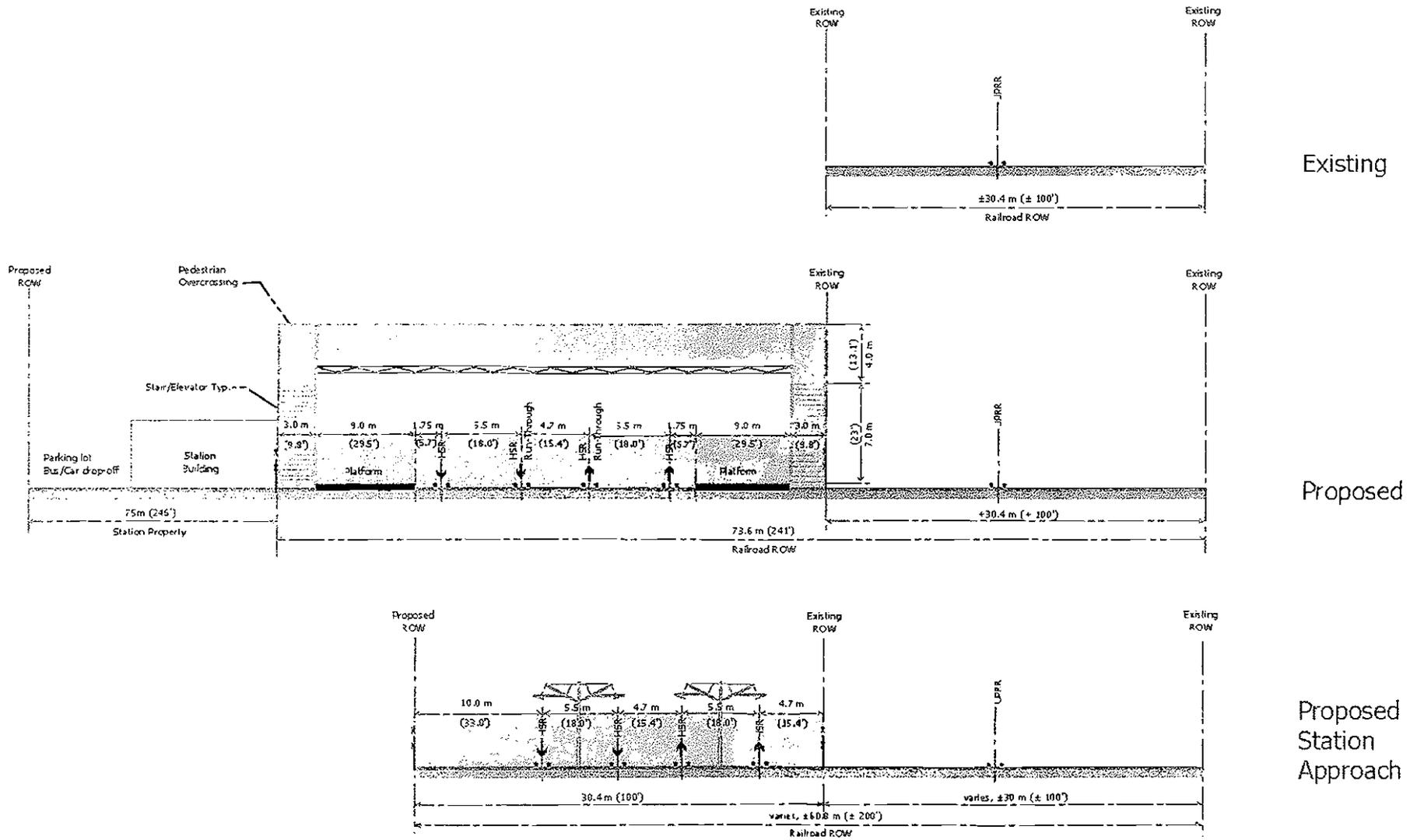


Figure 3-2  
**BAKERSFIELD 4-TRACK AT-GRADE AIRPORT STATION  
 UPRR ALIGNMENT**

386110\FIGURE 3-2 - 3/5/03

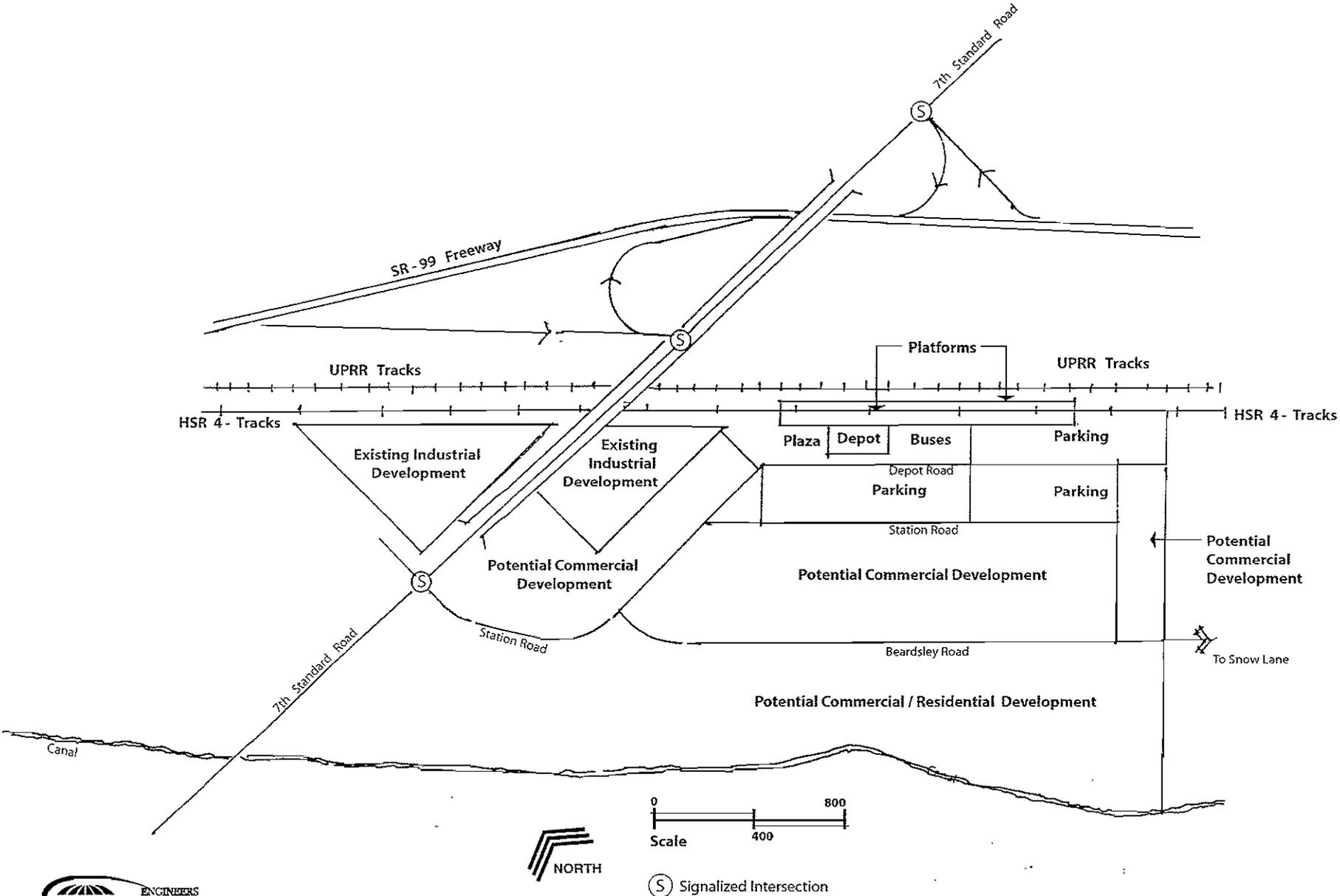
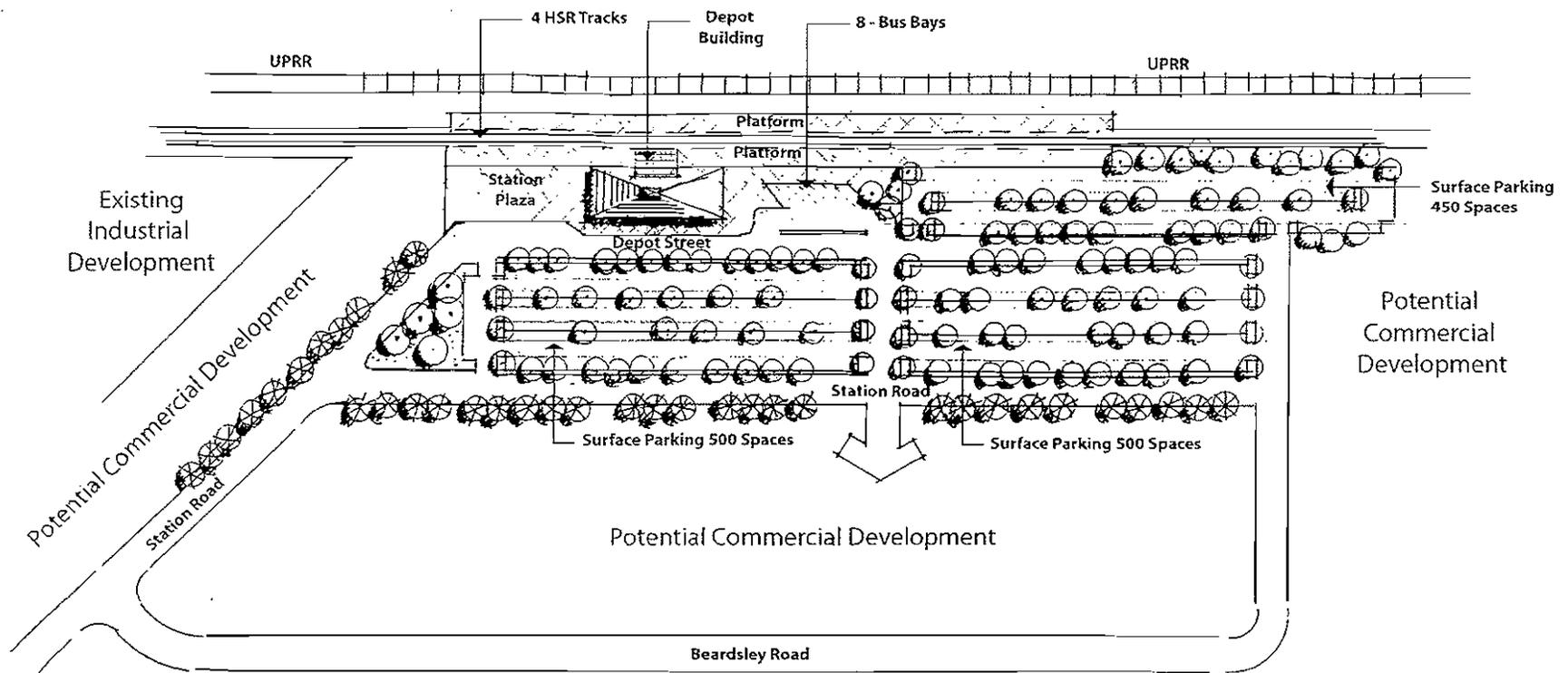
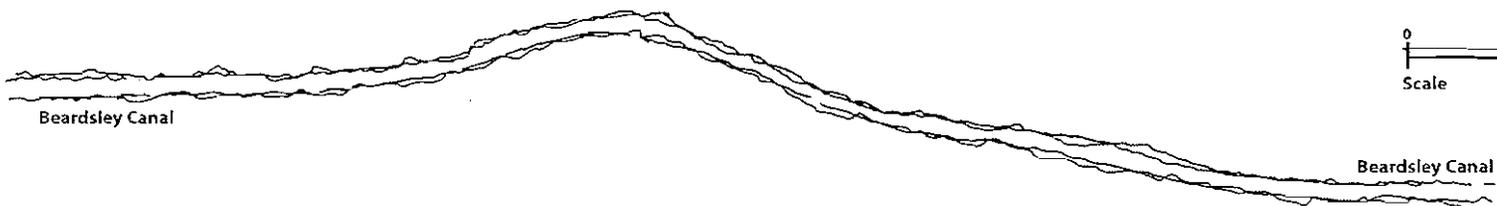
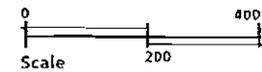


Figure 3-3  
**AIRPORT STATION SITE VICINITY MAP**



Potential Commercial / Residential Development



road. The uniform spacing of traffic signals approximately 1,400 feet apart would facilitate traffic progression signal timing.

The location of the station access road also avoids potential issues with respect to current industrial development. The station entry road would bend towards the station depot in order to simplify access. A second road (referenced as Beardsley Road) would branch away from the station access road to serve potential commercial development sites. This road would link with Snow Lane to the south in order to provide secondary access and emergency vehicle access.

### **West Station Trackside Features**

The four track cross section is shown in Figure 3-2. Regardless of whether HSR operates in the UP or BNSF tracks in the Valley, the Airport Station would be a four-track facility with express trains using the center two tracks.

### **West Station Stationside Features**

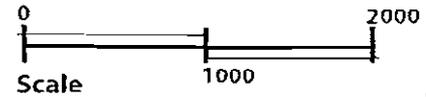
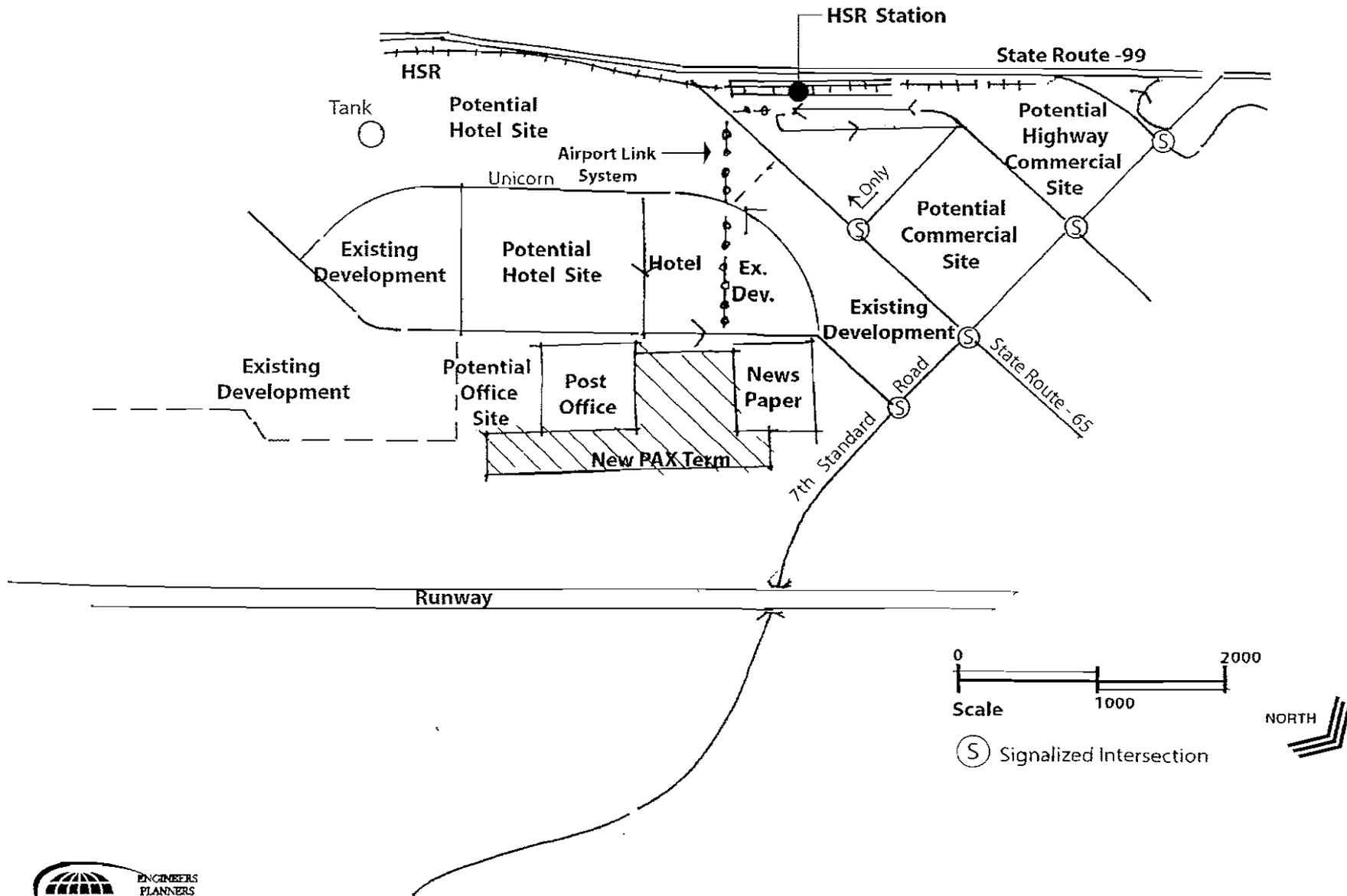
The station side concept plan proposes to locate the station depot building a little to the north of the platform center. This location near the end of the access road is intended to increase its visibility. Buses would be located immediately south of the station building. Three bays of parking would be provided just west of the depot building accommodating 1,000 surface parking spaces. Another 450 surface spaces would be provided south of the station depot building. Commercial development opportunities would be offered north, south and west of the station complex.

### **Illustrative Site Plan – East Station**

Figure 3-5 describes how access might be reconfigured to serve a HSR station located on the east side of SR-99 and Figure 3-6 presents an illustrative concept plan showing how a station could be developed. The 7<sup>th</sup> Standard Road overcrossing of SR-99 would need to be extended to pass over the HSR tracks. The passenger terminal for Meadows Field would be relocated to the west side of the runway to provide a more “seamless” connection for HSR passengers accessing the airport. As noted previously, substantial upgrades would be required to the terminal in order to expand the airport’s role in the region and accommodate large commercial aircraft. A linkage system could be constructed to link the remaining 2,000 feet separating the two terminals. This linkage system could be an automated peplemover as found at many airports, a light rail system or less expensive funicular system horizontal elevator. Passengers would be able to make the connection in less than two minutes. The new Meadows Field passenger terminal might be constructed between the current US Postal Building and the Bakersfield Californian Newspaper building.

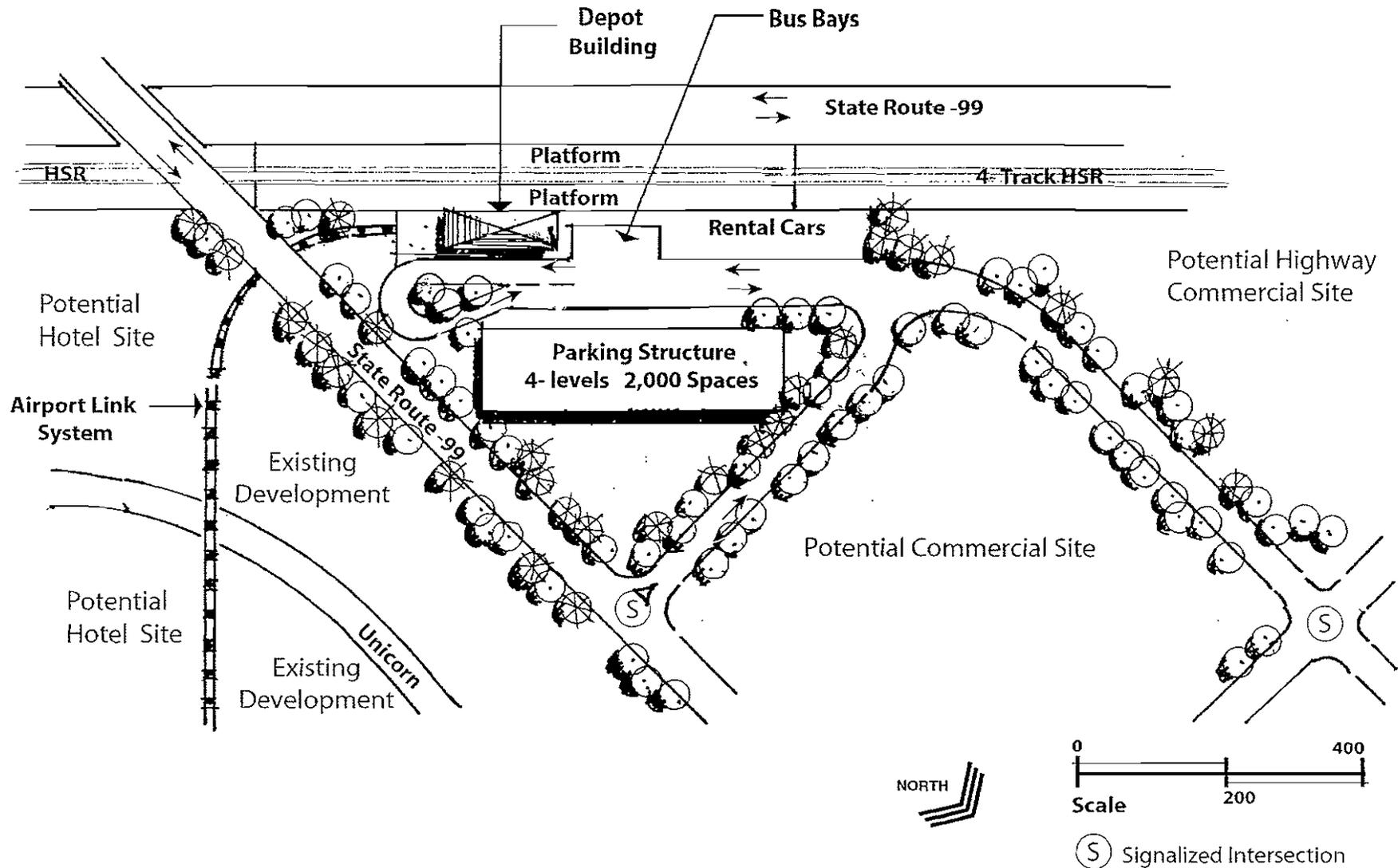
### **East Station Access Plan**

Access to the HSR Station would be primarily from the south on SR-99. The SR-65 interchange would provide direct, simple and convenient access to the HSR station and to the new Meadows Field passenger terminal, as well. Traffic from the north would use the 7<sup>th</sup> Standard Road interchange and traffic from the east and west would access the HSR station from 7<sup>th</sup> Standard Road. The heavy exit movement from the station onto SR-99 southbound possibly might be designed as a right-turn only traffic movement.



Ⓢ Signalized Intersection





### **East Station Trackside Features**

The HSR station would be a four-track facility with a pedestrian over-crossing connection between platforms. A 141 foot right of way would be required for the station tracks.

### **East Station Stationside Features**

As shown in Figure 3-6, the station building (depot) would near the southern end of the HSR platform. Bays for feeder buses would be located just to the north, with rental car parking provided north of it. A four level 2,000 space parking garage would be constructed opposite from the depot building. Alternatively some of the land shown for commercial development could be used for less expensive surface parking. It should be noted that air travelers as well as HSR passengers would use this parking and it would be priced accordingly. The market rate for daily parking at Meadows Field is about \$5.

### **MARKET PERSPECTIVE**

Station accessibility, security and ease of parking are all important issues for potential HSR riders.

#### **Station Access**

A station located on the east side of SR-99 accessible from SR-65 would have very good access, whereas a station located on the west side of the UP tracks would be less direct. If direct access from SR-65 cannot be provided to the HSR station, the east side site location would a little less direct.

#### **Security**

Until commercial development occurs at these sites, they would be rather isolated. Neighboring activity provides passive security for stations and park and ride sites. Passive security is a term used to describe watchful eyes of concerned citizens/businesses around a site. They tend to report suspicious behavior to police and deter problematic loitering. Nearby businesses can also offer safe refuge to worried passengers. When the station area successfully develops, security should become good.

#### **Ease of Parking**

The Airport station site has ample area to provide parking needs for HSR patrons. The projected parking needs could be met with surface parking and should needs far outstrip manifesting demands, some surface spaces could be intensified into parking structures. The site west of the UP tracks offers less attraction to commercial developers than the east of SR-99 site, and therefore parking would most likely be provided by surface lots. Ample space also exists on the east side of SR-99, however, if the airport connection proves viable more intense utilization of site acreage might prove desirable. Typically, real estate needs to be worth a million dollars per acre before structured parking becomes economically attractive.

### **SERVICE PROVIDERS**

Golden Empire Transit (GET), Amtrak, Greyhound and the freight railroads all have a key interest in the location of the HSR station site.

### **Golden Empire Transit**

GET currently does not provide public transit service to the area. Route 1 serves the Olive Drive area west of SR-99 and Route 3 serves the airport terminal. Should the HSR station develop on the Airport site or should development extend to the station site area, GET would serve the market. If a new route is not established, extension of Route 3 would prove the most effective, as it is a radial route connecting HSR to the airport and to Downtown. Route 1 is a cross-town bus route. The headways on Route 3, however, are only hourly and more frequent service would also need to be provided. The running time for an express shuttle between the current Amtrak Station and the Airport HSR Station is estimated to be 20 minutes. It would take two shuttle buses to operate 20 minute headways on this service, costing about \$500,000 annually.

### **Amtrak San Joaquin Service**

It would not be possible for the Amtrak San Joaquin trains to serve the Airport station site and the current Downtown San Joaquin station site. The San Joaquin trains would likely continue to serve the Downtown station, leaving a gap for those that wish to transfer between train services. If the San Joaquin train service proves not to be viable after HSR service is implemented, this problem becomes moot.

### **Greyhound Intercity Bus Service**

Proximity to the SR-99 freeway ramps would be attractive to Greyhound. Greyhound, however, also seeks to be located in Downtown areas with good pedestrian, transit and taxi services.

### **UP and BNSF Operations**

Neither railroad is understood to want the HSR service complicating their operations and would rather it be on the other rail operator's corridor. HSR in the UP corridor serving the Airport station site, however, would eliminate two at-grade traffic crossings for UP (7<sup>th</sup> Standard Road and Snow Lane) if the site were located west of the UP tracks. The site location east of SR-99 would not require grade separation of the UP tracks.

### **GOOD NEIGHBOR PERSPECTIVE**

It is important for rail stations to fit well into their surrounding neighborhoods. As the Airport Station has few current neighbors, its parking and traffic needs can easily be designed to minimize any potential future problems with neighbors. Best land uses for this station site would be office and hotel. If a commuter market were to prove viable for HSR, multi-family housing would be a good adjacent station land use.

### **Station Location**

The 7<sup>th</sup> Standard Road/West of State Route 99 Station is located west of the Union Pacific tracks and just south of the 7<sup>th</sup> Standard Road. The station site located east of SR-99 is located within an area being developed into light industrial and office park uses. These two sites are west of the County owned Meadows Field Airport. Additional intermodal connections to and from the airport area may be necessary through new transit routes and airport shuttles. Access to Metropolitan Bakersfield from the station site can be provided by State Route 99 or surrounding

streets. The area around the station site is either vacant or has plans for redevelopment. New facilities are in the process of initial planning.

## **Compatibility with Land Use**

### **Existing**

The Airport/7<sup>th</sup> Standard Station site is part of Kern County's jurisdiction. The current zoning designation for the station site is medium industrial (M-2) with specific conditional uses that may be subject to special development standards. Just south of the site is designated Exclusively Agricultural which limits the use to primarily agricultural and other activities compatible with agricultural uses. This site is located in a primarily undeveloped area and may need conditional use permits if the station is developed.

### **Proposed**

The proposed land use surrounding the Airport/7<sup>th</sup> Station site is Service Industrial as described in Metropolitan Bakersfield's 2010 General Plan. There are also areas of Suburban Residential (less than 4 D.U. per net acre) just south of the Beardsley Canal. East of the site is a Public Transportation Corridor which proposes an expansion of Meadows Field Airport. Approximately one mile to the west and southwest of the station site are planned areas of Rural Residential as well as Intensive Agriculture land uses.

Land use opportunities for this station would occur primarily to the northeast where a connection can be made to the airport. Areas adjacent to the station site can be developed as commercial office uses with supportive residential uses to the south.

## **Redevelopment Potential**

The Airport/7<sup>th</sup> Standard station site is located within the County of Kern's jurisdiction and is not included under the City of Bakersfield's redevelopment areas. The site does share similar land development plans as detailed in the Meadows Field Master Plan Update (1987).

The Meadows Field Master Plan Update identifies and recommends the highest and best use of Airport property including expanding future airport development, building new terminals, and implementing new commercial and industrial uses. The updated report notes that future land use and zoning changes should serve as a tool for both reserving specific lands for future development and avoid committing land areas to long-term uses inconsistent with the long-range requirements identified on the Master and Land Use Plan.

As part of the Master Plan, an economic land use study was performed. The study recommends Airport commercial/industrial areas should be competitive by using real estate marketing techniques for an aggressive, organized, and formal promotional program. The study also notes that areas should not be subdivided until prospective tenants are identified in a marketing program. New development concepts identified in the study include opportunities in commercial and industrial uses, airline maintenance, corporate hangars and offices, light manufacturing, recreational facilities, and other aviation support functions. The development goals set forth by the Master Plan Update can supplement and support an adjoining high speed rail station.

### **Consistency with Existing Plans and Policies**

This station site is consistent with the Meadows Field Master Plan Update developed for Kern County as well as the Greater Bakersfield's 2020 Vision Plan, City and County General Plans. The airport site would support the long-term plan for airport infrastructure and the community support for a new international gateway. Some of the related strategies described in the various agency plans include:

- Support an international gateway with a modern airport to connect Bakersfield to major cities in California through a high-speed rail system.
- Create additional revenue sources to increase priority for state and federal transportation funding.
- Encourage joint metropolitan transit policies/goal consensus between the City, County and the public.
- Provide a long-term plan for airport infrastructure.
- Educate communities on topics such as cargo opportunities, international gateways and flight availability.
- Encourage large businesses and corporations to invest in Bakersfield's Airport.
- Expand telecommunications and other infrastructures to support new and existing industries.
- Research and development partnership with industry and universities, and
- To the extent practical, ensure that operations conducted at the County airports be compatible with the Community's environment.

### **Traffic and Parking**

If the HSR station develops as an isolated facility, traffic and parking impacts would not occur. However, if the HSR station develops as an integrated land use parking abuses might occur on adjacent free parking sites. This abuse should be relatively easy to control. Remote parking for the airport at the HSR site could be controlled by charging similar parking fees.

### **Operational Constraints**

At present there are no "sensitive receptors" like schools, and residential uses near the Airport Station site. Thus, noise and glare impacts associated with HSR and the station would be minimal and would not therefore impose any constraints on the operation of the station or HSR. Indirect noise impacts associated with expanded airport operations, however, could become a problem limiting expanded airport operations.

### **Growth Inducements**

The Airport 7<sup>th</sup> Standard site is in a more remote area than the other alternative stations, but does encourage concentrated uses. The site is located on medium industrial and has potential commercial uses associated with the Meadows Field Airport. Urban sprawl issues may be controlled, if development is restricted through conditional use requirements.

## **Job Generation Potential**

The job potentials at this station site would be associated with the expansion of the Meadows Field Airport. The existing airport is served by two major commuter airlines with departures and arrivals to three of the West Coast's largest hubs including San Francisco, Phoenix, and Los Angeles. A HSR station linked with Meadows Field Airport would encourage future aviation demand and stimulate local employment potentials. HSR and airline passengers will be attracted by the connection to major cities in California as well as potential international transfers. Having a connecting HSR station and airport would not only promote intra-regional business growth, but it can also create a new employment pool for existing businesses. A report by the Great American Station Foundation estimated that between 200 and 1,000 new jobs typically are created as a result of establishing a conventional train station.

## **Property Tax Impacts**

A study of economic impacts relating to conventional rail stations prepared by the Great American Station Foundation concluded that development of a rail station would lead to an increase in property values of between \$15 and \$150 million.

Obviously establishment of Meadows Field as a major gateway airport would significantly increase property values in the vicinity and region. The degree of success as a gateway airport will largely determine the increased level of property values and associated tax revenue increases.

## **DEVELOPMENT AND OPERATIONS PERSPECTIVE**

### **Parcels, Ownership and Size**

The assessor's parcel number (APN), ownership and parcel sizes for both the West Station and the East Station sites are identified in Table 3-1. The parcels are indicated on the map in Figure 3-7.

### **Displacements**

If HSR is constructed on the west side of the UP tracks several industrial uses will be displaced. Reconfiguration of the Golden State Frontage Road and its connections to 7<sup>th</sup> Standard Road could also disadvantage several property owners. Development of HSR along the east side of SR-99 would displace several businesses and could conflict with the property owners plans for a business park.

### **Development Constraints**

West of SR-99 development of a station would be influenced by the presence of the Beardsley Canal also overhead electric power utility line. Development of a station on the east side of SR-99 would be influenced by possible access limitations to SR-65, and the presence of overhead electric utility lines.

### **Funding**

Funding for the airport improvements (new terminal, etc.) would likely come from Airport Improvement Program (AIP) funds or airport revenues. The same is true of the access linkage

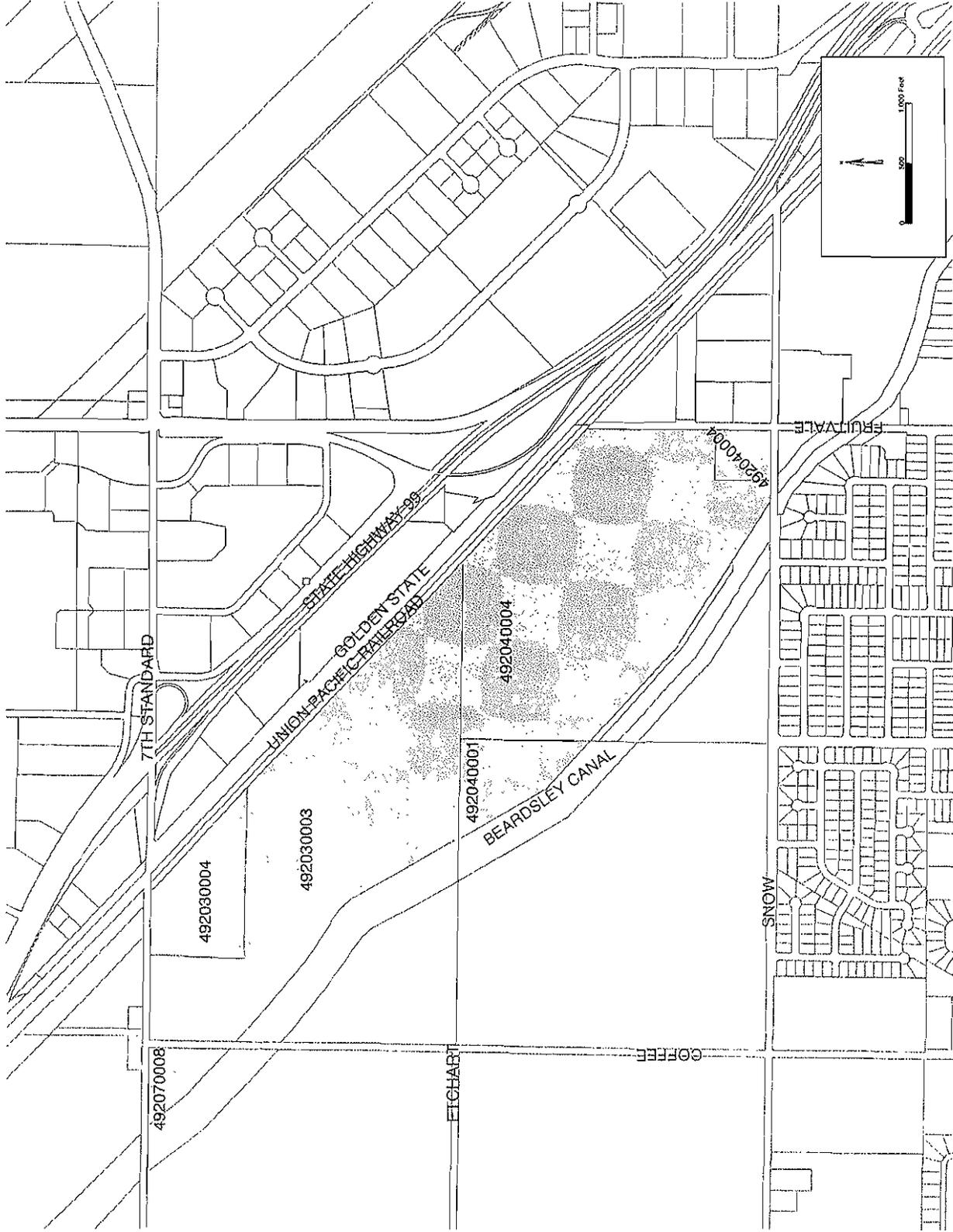


Figure 3-7  
PARCEL MAP - 7TH STANDARD SITE  
386110.PASTEUP1 - 3/27/03

improvement. The latter might be fundable using air passenger surcharge fees. AIP funds would only cover capital cost, not operating costs.

## **Geology**

The Alquist-Priolo Earthquake Fault Zoning Maps for the City and County of Bakersfield show that the Airport site is not located on an area that is considered a potentially active fault. The entire Bakersfield area is considered seismically active and could experience severe ground shaking and surface readjustment in the event of a maximum magnitude earthquake. Implementation of General Plan policies, the Uniform Building Code and Safety Element policies would mitigate potential significant impacts to people and structures to a level of less than significant. (City of Bakersfield. General Plan Update DEIR SCH #1989070302. 2002. PP. 4.6-8-19.)

## **Utilities**

The area west of SR-99 is presently being developed and has utility services. For the Airport West Site, utility information is as follows:

- Sewer – no existing sewer capacity, but there is a 30-inch line at the intersection of Snow and Coffee Road. This is the closest connection point to the site.
- Gas – existing gas service capacity is approximately 86,000 scfh, with a maximum capacity of 86,000 scfh.
- Electricity – there are two circuits available to provide service to the site.
- No details available at present for telephone, water or cable service.

For the Airport East Site, at the present details are not available for sewer, gas, electric, telephone, water or cable service.

## **Railroad**

If the UP corridor is selected for HSR service, the Airport Station site would be along the mainline and no additional station access trackage would need to be provided. If the BNSF corridor were selected for HSR service, it could be connected to the UP corridor just to the north of 7<sup>th</sup> Standard Road with the same amount of net HSR track as if the UP corridor were selected. A HSR station located at the Airport site would involve little if any extra station access track cost.

## **SUMMARY**

- Development of a HSR station at the airport site is envisioned to facilitate Meadows Field becoming an international gateway airport.
- The airport HSR station would be a four track mainline station.
- HSR stations might possibly be developed on either side of SR-99. Location of the station on the east side would offer greater promise for seamless connection to Meadows Field.
- Many unknowns are associated with the viability of Meadows Field becoming a more active airport including the Southern California Association of Governments regional

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airport plans relating to Meadows Field and to Palmdale. If HSR is constructed on the Tehachapi route it would pass by Palmdale on its way to Bakersfield.

- Expansion of HSR's role to include primary access to a significantly sized satellite airport would necessitate more service capacity (trains) on the segment between Bakersfield and Los Angeles.

**Table 3-1  
AIRPORT SITE  
ASSESSOR PARCEL NUMBER, OWNERSHIP, VALUE**

West Station Site							
APN	Area (Sq. Ft.)	Perimeter (Ft.)	Name Asse.	Address	Land Val	Impr Val	Net Val
492030003	4210523.03	11236.92	BIDART BROS	34741 7TH STANDARD RD BAKERSFIELD CA 93312-9435	\$167,500.00	\$16,510.00	\$184,000.00
492030004	796726.88	3980.50	BIDART JOHN A TRUSTEE	34741 7TH STANDARD RD BAKERSFIELD CA 93312-9435	\$ 63,100.00	\$425,800.00	\$488,900.00
492040001	537960.91	3364.51	BIDART BROS	34741 7TH STANDARD RD BAKERSFIELD CA 93312-9435	\$264,200.00	\$158,500.00	\$422,600.00
492040003	195133.18	1768.98	PACIFIC GAS & ELECTRIC CO	P O BOX 770000 SAN FRANCISCO CA 94177	\$ -	\$ -	\$ -
492040004	4652101.16	8816.46	BIDART BROS	34741 7TH STANDARD RD BAKERSFIELD CA 93312-9435	\$203,300.00	\$214,200.00	\$417,500.00
492070008	241623.90	2302.59	BIDART BROS	34741 7TH STANDARD RD BAKERSFIELD CA 93312-9435	\$302,600.00	\$205,000.00	\$507,600.00
492030003	4210523.03	11236.92	BIDART BROS	34741 7TH STANDARD RD BAKERSFIELD CA 93312-9435	\$167,500.00	\$ 16,510.00	\$184,000.00
East Station Site							
APN	Area (Sq. Ft.)	Perimeter (Ft.)	Name Asse.	Address	Land Val	Impr Val	Net Val
0	191300	2888			0.00	0.00	0.00
482130006	99255	1275	K R M FINANCIAL CORP	17011 BEACH BL STE 520HUNTINGTON BCH CA 92647	3757.00	0.00	3757.00
482140001	283552	2155	K R M FINANCIAL CORP	17011 BEACH BL STE 520HUNTINGTON BCH CA 92647	10460.00	0.00	10460.00

# Chapter 4

## GOLDEN STATE STATION SITE

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The HSR Station site for this station vicinity was defined by the Kern Transportation Foundation to be along Golden State Avenue near M Street. The vicinity area defined for this station extended roughly from H Street to Q Street. The overall area along Golden State Avenue between the Kern Canal and Q Street is currently fully developed and has few major destinations for HSR passengers. Plans have been discussed to construct a new elevated freeway parallel to Golden State Avenue between the railroad tracks and Golden State Avenue. While details of the freeway project have yet to be defined, the project will likely affect access and impact site development opportunities. Road crossings of the UP mainline tracks in this area are located at Chester Avenue (underpass), at 30<sup>th</sup> Street (at-grade) and at Q Street (at-grade). The HSR tracks would be located on the south side of the UP tracks.

### STATION LOCATION

A site located south of the UP tracks between the Kern Canal and Chester Street has been subsequently identified by the HSR EIS as the most promising. As part of this station planning effort for Kern COG, WSA reviewed the EIS suggestion regarding the best site location for the Golden State Avenue Corridor. We concur with the EIS finding that the most promising station site in the vicinity of M Street is the location identified by the EIS (Figure 4-1). Further definition of plans for the new freeway, however, might suggest another site for station development in the Golden State Avenue Corridor. Transportation factors critical to the location of this station include:

- Railroad right of way needs,
- Developable site depth for station, and
- Site access issues.

### HSR Right of Way Envelope

This station most likely would be located along the mainline HSR service and thus would be a four track station (two mainline tracks and two station tracks). The cross section for the HSR corridor would require acquisition of 100 feet of right of way through this area (141 feet near the station itself to include platforms) in order to provide the four HSR tracks, if UP would not share its current right of way. If the station were located adjacent to the Canal, the required three mile deceleration/acceleration tracks would run from just south of Olive Drive to just west of Union Avenue. If the station were located between M and Q Streets, the four track cross section would run between just north of the Canal to just west of Haley Street. The simplest segment to add four tracks would appear to be the northern station site vicinity nearest to the Kern Canal. This is the location identified by the HSR EIS.

If the mainline HSR service uses the BNSF corridor, an off-line station could be developed on this site, requiring only about half the HSR right of way needed for the four track station. Off-line trains would transition over to the UP tracks along the track connection corridor existing west of town. It is also possible that the HSR corridor transition from BNSF to UP corridor

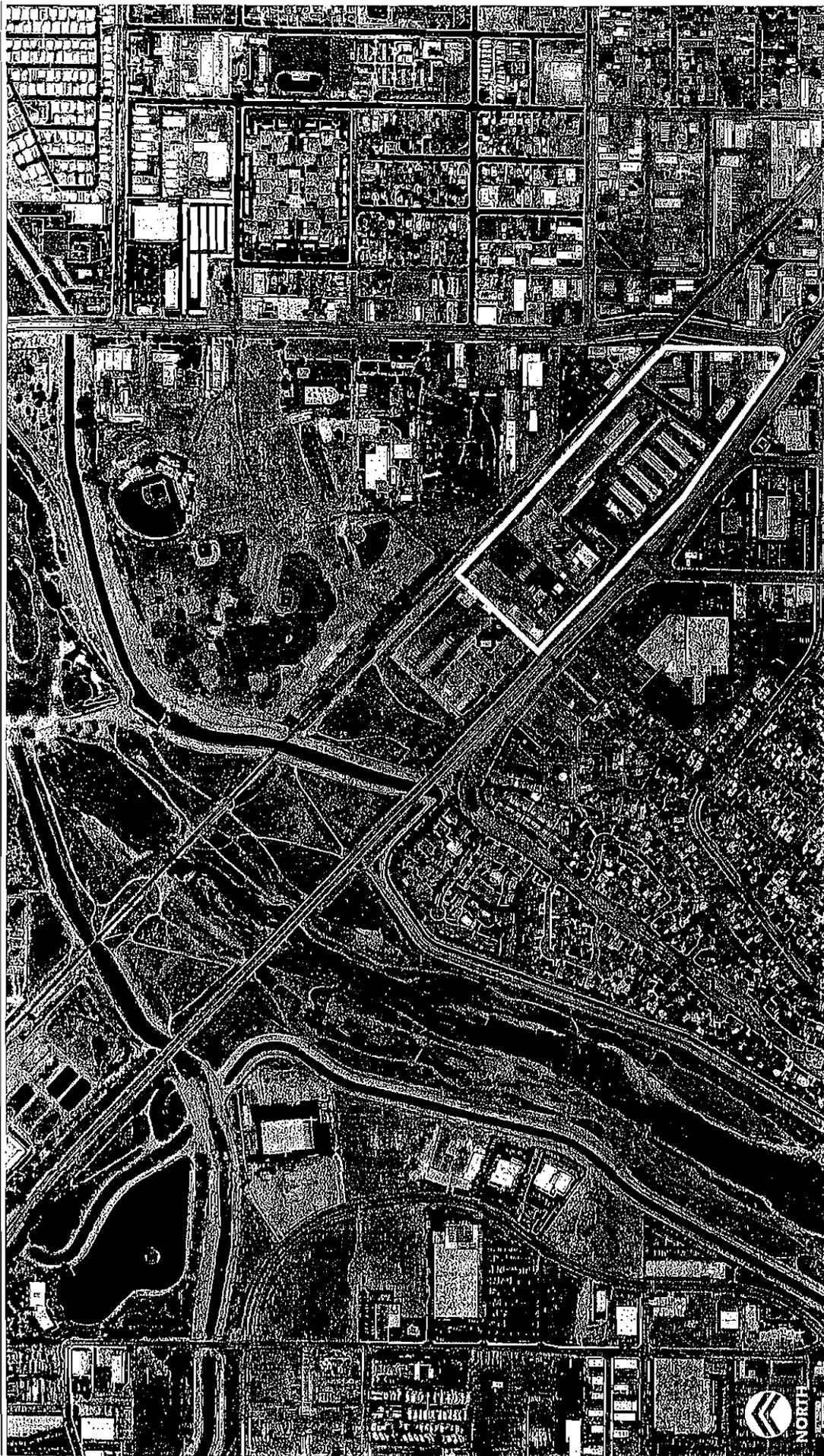


Figure 4-1  
GOLDEN STATE STATION SITE LOCATION  
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could occur north of 7<sup>th</sup> Standard Road, and a four track mainline station would be required at the Golden State station site.

### **Development Site Depth**

The northern site vicinity has the greatest width for station development (600 feet) between Golden State Avenue and the UP tracks. East of Chester Avenue the right of way between Golden State Avenue and UP tracks narrows to about 450 feet. As noted above, 141 feet of the right of way between the UP tracks and Golden State Avenue would be consumed by the HSR right of way needs. The UP might be willing to share some of its right of way, but HSR would need more than half the UP right of way. For planning purposes a worse case right of way scenario was employed with the HSR needing to provide for its full cross section right of way needs.

### **Site Access**

Access to a station at the EIS station location is less than desired. The F Street intersection to Golden State Avenue provides only limited capacity. Garces Circle at Chester Avenue also appears to have limited reserve capacity for station access. Access to a station site located on or south of M Street, however, also would be difficult due to the Niles Street high speed entry on to Golden State Avenue. With construction of the proposed freeway, any site south of the UP tracks would be under the freeway and would need to be integrated with access ramps for the freeway.

These issues all suggest that the best site for a station for this vicinity would be to locate it near the Kern Canal as identified by the EIS. Location of a station on this site would require the relocation of the Pensinger's RV, Restoration Village and other current uses. It might be possible to retain the GET bus facility by shifting bus parking north of the current GET site. The four track right of way requirements for this station vicinity probably would take all the other properties even if the station were located closer to M Street. A station located at the northern end of F Street has promise to economically strengthen the F Street corridor between Golden State Avenue and Truxtun Avenue.

### **Other Sites Considered**

Two other sites were reviewed and found to be less promising than the F Street site. One option had the station centered on Chester Street, while the second option had the station site centered on M Street.

The Chester Street site option would have concentrated too much traffic immediately in front of the depot building. The development depth between the UP and Golden State Avenue is about 500 feet. With HSR requiring 141 feet for its four tracks and platforms and about 350 feet needed for transitioning vertical grades in order to pass Chester Street beneath the railroad tracks, scant space remained for the station and its circulation.

The Downtown Business Association is understood to be interested in a station at M Street. The M Street site proves problematic due to the limited site depth, and the high speed Niles on ramp. M Street itself would need to be truncated at the railroad in order to avoid costly grade separation. The site development depth at M Street is only about 450 feet between Golden State

Avenue and the UP. The HSR tracks and platforms would consume 141 feet with the station building (including curb loading sidewalk) consuming another 100 feet. This leaves only 200 feet for circulation roadways and station driveway approach throat to Golden State Avenue. It is possible that the Niles Street high speed ramp could be signalized and the station access could then be developed off of M and O Streets. M Street, however, is not a major transportation spine for the downtown and thus locating the station at the northern end of M Street would not be as accessible as at Chester or Q Street locations. Appendix D of this report provides a description of how a HSR station could be developed at M Street and Golden State Avenue

While the HSR tracks are planned to be located on the south side of the UP, it might be possible to locate the HSR station on the north side of UP. This approach would require all passengers to change elevations to cross over/under the UP tracks to reach the HSR platforms.

### **STATION PROGRAM**

The definition of a viable site plan for this station site begins with determination of how many parking spaces will be required, the number of bus bays, the depot building size and overall circulation pattern.

#### **Parking**

The EIS suggests that 747 parking spaces should be provided to serve the forecasted 2,674 daily boardings. Without more detailed information on the development of this estimate it would seem to be a valid planning number. If a market were to develop for commuter travel from Bakersfield, the parking needs could be substantially higher, depending on the pricing for parking. Parking costs tend to be considered more important by commuter patrons than by occasional patrons. For planning purposes 800 to 1,000 spaces are proposed for this station site. If rental cars are accommodated on-site an additional 200 spaces are suggested for their needs. As the CHSRA Business Plan states that provision of parking and any associated revenues would be local responsibilities, provision of more than the base estimate would not increase cost to local jurisdictions.

#### **Bus Bays**

The present Amtrak Station currently has 15 bus bays for loading passengers. These include buses to LA and San Diego that would not be required with initiation of HSR service. For planning purposes bays for four intercity feeder buses are suggested, along with six shuttle bus bays, and perhaps as many as eight Greyhound bus bays. The need for the latter should be confirmed in later planning efforts. The Business Plan appears to provide for only one bus bay and thus, provision of more than one bay might add to local station costs.

#### **Station Access**

Analysis of the EIS patronage forecasts show:

1. Only 15% of its patrons are estimated to arrive by bus and another 10 % by shuttle. This would seem to be a low percentage for bus arrival as the new HSR station would be served by buses to Santa Barbara, Las Vegas and Victorville and possibly Wasco/Corcoran. Shuttle bus connections to CSUB, Truxtun Avenue government offices, key off-site park and ride sites, and hotels seems inevitable.

2. 10% use of taxis, which seems high.
3. 388 of the daily 5,348 station daily boardings and alightings (7.2%) would occur during the peak hour of station activity. Again the EIS estimates do not assume significant amount of commute use of HSR services.
4. Peak hour traffic generation of 492 vehicle trips arriving at the station. Applying the EIS estimates of mode of access profiles to the 388 peak hour passenger trips yields a much lower traffic generation number – 155 arriving vehicle trips. The EIS figure of about 500 peak hour arriving trips is suggested as a conservative planning number.

Access to the station is proposed from the Golden State Avenue F Street signalized intersection. With displacement of other uses by the HSR station, current traffic related to GET, Renovation Village and other uses would be eliminated and the EIS projected 500 peak hour vehicle trips related to the station should become viable for this intersection with minor operational changes.

While the average number of passenger boardings for HSR trains at Bakersfield will be about half the current San Joaquin train average, a much higher percent of the HSR patrons will be local (not arriving by feeder buses). As such, the traffic generated by a HSR train arrival will be higher than for current San Joaquin trains. There is also a greater possibility that two trains will arrive at the same time, due to the more frequent schedule of trains.

### **ILLUSTRATIVE SITE CONCEPT**

Figure 4-2 describes the station cross section envisioned by the HSR EIS and Figure 4-3 presents an illustrative concept plan prepared by WSA for the site. It should be stressed that this site concept plan is merely intended to show how the site might be developed for a station and the concept is not intended to describe the final site plan. Further discussion is indicated to determine the best station site location along the Golden State Corridor, particularly considering coordinating the station siting with the planning for the new freeway.

### **Trackside Features**

The HSR station profile shows the HSR four track station is to be located immediately along the south side of the UP right of way. The HSR cross section includes a 9.8 foot buffer area between rail rights of way, a 29.5 foot wide HSR northbound platform, 62.8 envelop for the four tracks, a 29.5 foot southbound HSR platform and a 9.8 foot buffer area connecting to the station building. The total width for the 1,300 foot platforms and track area would be 241 feet. The station building would be in addition to this platform area cross section.

If HSR main line service operates on the BNSF corridor, only the station tracks might be required at the Golden State site. The site concept that is shown in Figure 4-3 would function as an off-line station as well as for a mainline station, with the exception being a slightly narrower HSR right of way.

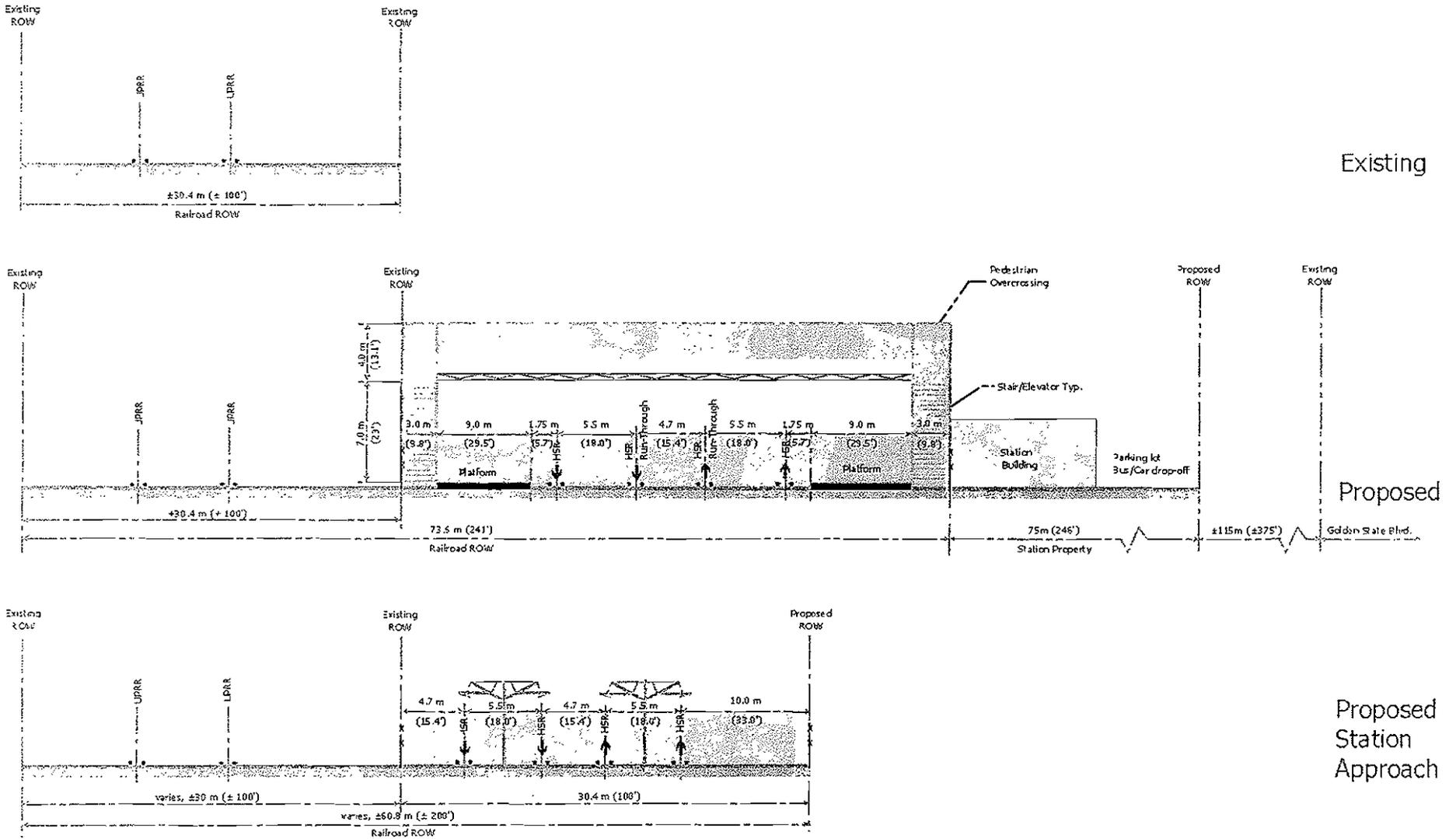
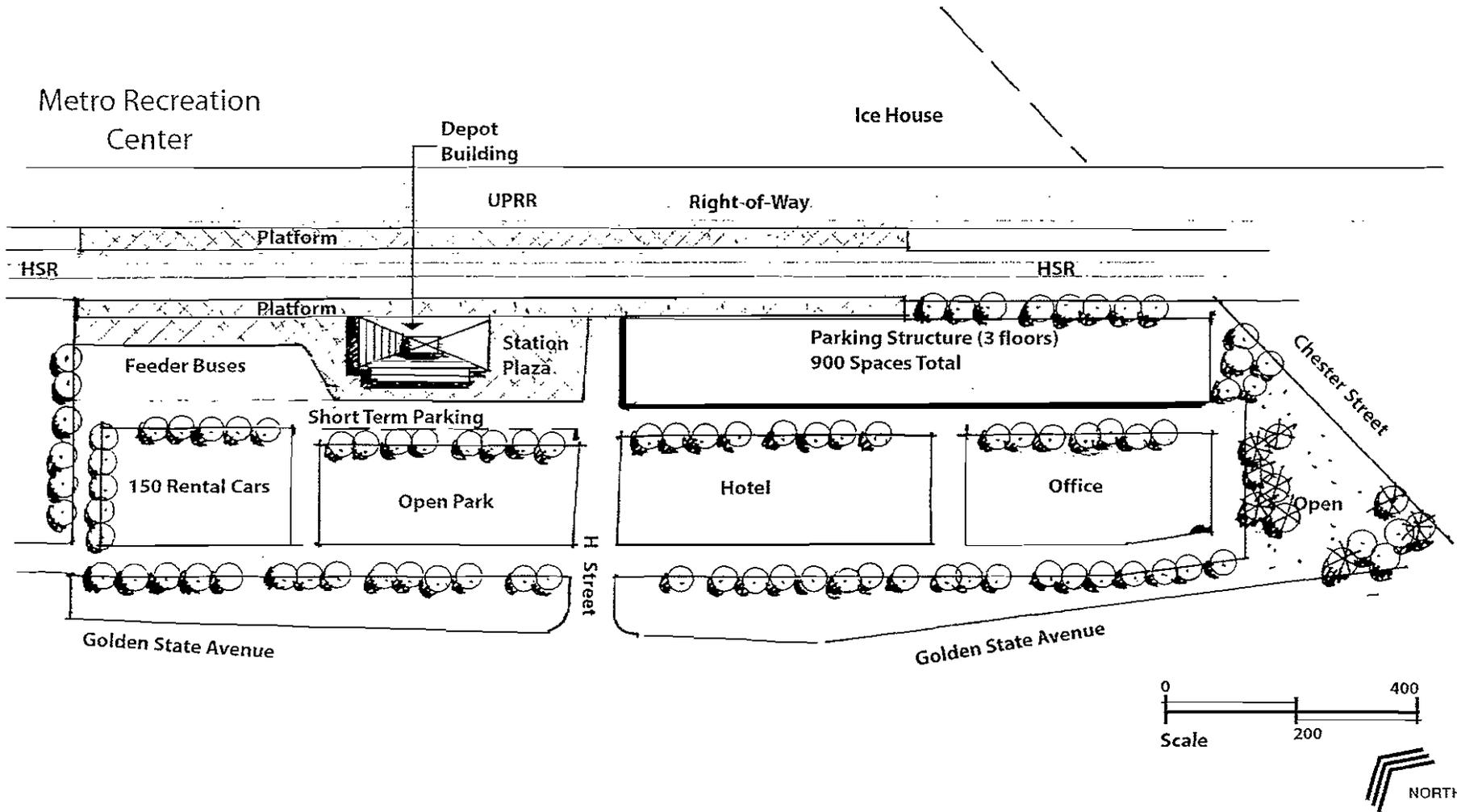


Figure 4-2  
**4-TRACK AT-GRADE STATION - GOLDEN GATE STATION  
 UPRR ALIGNMENT**



## Stationside Features

The illustrative station concept for this site utilizes the area south of the GET facility for the station. The right of way “take” adjacent to the GET facility would be about 130 feet and would necessitate relocation of some bus parking to the area between the current facility and the Canal. The platform would extend from a point just south of the GET site 1,300 feet to approximately where H Street intercepts the UP right of way. The station building (depot) would be located approximately 600 feet south of the GET site, slightly off the midpoint of the platforms. A two bay parking garage would be developed on the eastern portion of the site, adjacent to the platform. The garage would be three levels high and would accommodate 900 cars. A pedestrian bridge could connect over to the Ice House development and to 34<sup>th</sup> Street. Buses would enter the site and circulate counterclockwise past the depot and parkers would be segregated towards the south side of the site. The area between the depot and the Golden State Frontage Road access driveway to GET could be left open for a public park. This would enhance the station’s visibility. The area between the parking garage and Golden State Avenue would be open to hotel or other commercial development. This commercial site would be buffered from the HSR noise by the parking garage.

## MARKET PERSPECTIVE

Station accessibility, security, and ease of parking are all important issues for potential HSR riders.

## Station Access

As mentioned above, access to the station would probably be limited to the F Street intersection at Golden State Avenue. Most Bakersfield area residents would approach the station from Golden State Avenue. Traffic from the SR-99 South Corridor would not have very direct access to the station at this site, nor would traffic from SR-58 Corridor. Access from the north would be precluded by the Metro Recreation Area Park and by the Canal. Pedestrian access would also depend on access via this intersection. Walking distance (1.1 miles) to government offices located on Truxtun Avenue would not be considered reasonable by most pedestrians. A simple shuttle operating along F Street, however, could prove effective.

The HSR EIS projects a peak hour peak direction volume of about 500 vehicles per hour (vph) to be generated by the station. If the distribution were 40 percent to/from the northeast, 50 percent from the southwest and ten percent from F Street, this would translate into 200 left turns into the site from the northeast, 250 right turns into the site from the south west and 50 inbound cars coming straight across Golden State Avenue on F Street. The inbound left turn movement and the outbound left turn movement at F Street would become critical capacity movements, even netting out the current traffic being generated by uses on the station parcels. One potential access enhancement strategy would be to delete the F Street to Golden State Avenue eastbound on ramp and route left turn inbound traffic into the station via an indirect left turn via right turn onto Eye Street, then right turn onto 30th Street and right turn onto F Street. Left turns from both directions off of Golden State Avenue onto F/H Streets would be prohibited.

## **Security**

The single entry/exit into the station site might facilitate enhanced security for the station area and its parking facilities.

## **Parking Accommodation**

Depending on the extent of the property acquisition it would be possible to provide the projected 800 to 1,000 parking spaces at-grade in a surface lot. Approximately, 320,000 to 400,000 square feet would be required for this surface parking. The site provides more than 700,000 square feet of development area, even without displacement of the GET facility. A three story parking garage is proposed for this site, rather than surface parking in order to maximize joint site development and economic benefits. Bottomline is that patrons should be able to find ample parking at a station developed on this site. It should be noted that parking fees would not provide as much profit for structured parking as it would for surface parking.

## **SERVICE PROVIDERS PERSPECTIVE**

Golden Empire Transit, Amtrak and Greyhound are the major service providers in the region. The UP and BNSF positions would also be very important.

### **Golden Empire Transit Service**

The adjacency of the Golden Empire Transit (GET) administrative/maintenance/storage facility to the station site would indicate that GET could conveniently service a HSR station at this site. Only GET's Route 12 currently serves the site. Route 12 functions as a shuttle connecting the station site area with GET's Downtown Transit Center, Greyhound's Terminal and then operates out to the Veteran's Clinic via 21<sup>st</sup> and 24<sup>th</sup> Streets. It operates on 30 minute headways Monday through Saturday. A shuttle connection to Meadows Field would cost approximately \$500,000 annually to provide.

### **Amtrak San Joaquin Service**

Amtrak operates the State sponsored passenger rail service (San Joaquin) and its associated system of feeder buses. Six roundtrips daily are provided to/from Bakersfield's station at Truxtun and S Street. Trains serve the station from BNSF's tracks passing through its busy freight yard. Approximately 1,000 daily passengers board and alight at Bakersfield (500 of each). An estimated 75% are connecting to Amtrak feeder buses, with the remaining 25% having an origin or destination in Bakersfield. Scenarios for Amtrak include: running a "bus bridge" between the new HSR station and its Truxtun station; rerouting trains via the track connection east of town to the Golden State HSR station on UP's mainline tracks or discontinuing service to Bakersfield – ceding the market to HSR. It is very unlikely the bus bridge would be successful. Those passengers traveling from Wasco and Corcoran, probably would prefer to board a bus in those communities rather than ride a train to board a bus. Rerouting trains onto the UP tracks would be physically feasible, but would require permission to use the UP tracks and the development of platforms and train storage tailtracks. Additional right of way would be required to provide these new Amtrak rail station facilities. Most likely Amtrak's San Joaquin service would atrophy and ultimately be discontinued.

### **Greyhound Intercity Bus Service**

The Greyhound Bus Line terminal is located on 18<sup>th</sup> between F Street and H Street. If a low cost terminal facility were offered to them at the HSR station site, they might be willing to relocate. Otherwise the current terminal is more centrally located and they would likely stay. The Business Plan for HSR does not provide funding to incorporate Greyhound into the new station. It only provides for a base level station. Greyhound serves many of the same destinations as HSR, but at lower fare and therefore would not compete directly with HSR.

### **UP and BNSF Operations**

Both the UP and BNSF view their facilities as business assets. Their core business is hauling freight and they tolerate passenger rail service only to the extent that it will not detract from their freight rail operations. Where public monies can be obtained to improve their freight operations, the railroads are very interested. In addition to freight operations, these railroads also tend to seek safety improvements. At-grade traffic crossings of their tracks are a major problem and the railroads want to grade separate or close as many as possible.

With respect to the Golden State HSR station site, the railroads will want elimination of the 30<sup>th</sup> Street/M Street crossing and also the Q Street at-grade crossing as part of the HSR grade separations.

### **GOOD NEIGHBOR PERSPECTIVE**

A HSR station at the Golden State location could be developed with minimal adverse traffic and parking impacts on neighboring properties. Office, hotel and perhaps multi-family housing would be good adjacent land uses. Single family residences generally are not good land uses near stations, and multi-family housing is most successful when it is located away from the tracks.

### **Station Location**

The Golden State Avenue site is designated in an M-1 Light Manufacturing Zone. It is south of the Metro Recreation Center and includes the Kern County Museum, Pioneer Village, and Sam Lynn Ballpark. It is also just south of the Kern Canal and south of the Union Pacific tracks. It has good access to Metropolitan Bakersfield and is in close proximity to the urban core. This site is also adjacent to the existing headquarters of GET with public assistance housing further south along Golden State Avenue.

### **Compatibility with Land Use**

#### **Existing**

The City of Bakersfield land use plan shows the proposed Golden State Ave Station is located in a Light Manufacturing Zone (M-1). Just north of the station site is a large recreation area that includes the Metro Recreation Center and historic baseball fields. There are small areas zoned for commercial uses further east of the park. This area is currently used for office space. To the south and east are areas of General Manufacturing that parallels the SR 99 and the Union Pacific line. Commercial uses are immediately south of the station site with retail stores such as Smart & Final and Dollar Tree as well as office spaces. Just southwest of the station site is zoned for Limited Multiple Family Dwelling with Single Unit Family Dwelling to the west.

**Proposed**

The City's General 2010 Plan does not show any significant land use changes near the station site. The plan does indicate one change to the light industrial area just east of the Metro Recreation Center to General Commercial uses.

**Redevelopment Potential**

The Golden State Avenue station site is within the Old Town Kern Redevelopment area. This area has recently received a Sustainable Communities Grant which will include demographic and marketing assessment and analysis, a community visioning charette, as well as developing a strategic action plan. The City anticipates that this approach will set a good framework for revitalization, renewed community interest and sustainable development in this historic area of Bakersfield.

The Old Town Kern Redevelopment area has some large vacant spaces such as the Montgomery Wards building at Golden State and F Street. It is made up of a variety of small businesses. To the north of this building are a recently opened Smart & Final and a Dollar Tree. Directly to the east is a three-story office building that serves various office users and north of this building is the Department of Motor Vehicles (DMV).

North of existing Union Pacific line is the Metro Recreation Center. This center is adjacent to the Kern River and includes a County Museum and children's museum. There is an existing campaign to develop a cultural museum master plan that will incorporate the museums, a new performing arts center and Metro Park.

**Consistency with Existing Plans and Policies**

The Golden State Ave Station has similar land use characteristics as the Downtown station alternative and therefore has the same consistencies with existing plans and policies. Although commercial and residential densities are not as concentrated as the Downtown station alternative, this station site is within a key transportation corridor between the existing Union Pacific line and State Highway 204. This station site would support the following strategies:

- Encourage completion of Route 58;
- Recognize the link between land use and transportation;
- Provide for more compact developments, less sprawl and higher density developments;
- Develop incentives for higher density development around transportation areas;
- Develop a cultural/museum master plan incorporating museums, new performing arts center, and Metro Park;
- Attract new types of businesses consistent with the 2020 Vision Plan;
- Attract investment capital in particular sectors; and
- Build on existing economic base.

## **Traffic and Parking**

Charging for parking at the station will encourage parkers to find free nearby parking. The Golden State site is relatively contained and abuse of adjacent free parking resources should be minimal and easily managed. Similarly, station traffic would not adversely impact residential areas, as the station site is isolated from residential areas.

## **Operational Constraints**

Noise and glare associated with HSR and the station itself should not pose any problems for properties located on the north side of the UP tracks. The UP freight operations already impact these properties and HSR impacts would be masked by the UP impacts. Similarly, properties located south of Golden State Avenue would not be substantially impacted by HSR, as the traffic noise from Golden State Avenue would mask HSR impacts. Restoration Village and the nearby motel are the only "sensitive receptors" located near HSR that would be adversely impacted if they remained at their present locations.

## **Growth Inducements**

The Golden State Station also has high potential to encourage infill development. With the Metropolitan Bakersfield central business district just south of the station site, this is a promising area for concentrated residential and commercial uses. The station site also has natural boundaries and existing infrastructures that prevent new development from impeding onto exclusive agricultural land. Growth inducing impacts would not be as significant as those associated with the Airport Station Site.

## **Job Generation Potential**

The job potentials at this station site would be similar to the Downtown station alternative. A high speed rail station can promote private sector jobs for Metropolitan Bakersfield by connecting affordable commercial redevelopment and new development opportunities to large companies. The HSR network promotes intra-regional business growth and provides new and equitable opportunities for existing communities. Most of the economic development and job stimulus impacts would be oriented towards the south, because the UP tracks and the Park are located to the north. The extent of the beneficial impacts will be determined by the HSR patronage and by the details of plans to upgrade Golden State Avenue into a freeway/expressway facility. Most of the beneficial impacts would accrue to the area closest to the station, but benefits could extend southward along both Chester and F Street into central Bakersfield.

## **Property Tax Impacts**

A 1995 study of the economic impacts associated with a Truxtun station site for HSR concluded that within the following 20 years of construction that about \$23.5 to \$27.4 million of new development linked to HSR would occur. Adjusting for inflation this added value would amount to \$35 million in 2003 dollars.

## DEVELOPMENT AND OPERATIONS PERSPECTIVE

### Parcels, Ownership and Size

The assessor's parcel number (APN), ownership and parcel sizes are identified in Table 4-1. The parcels are shown on the map on Figure 4-4.

### Displacements

Acquisition of the parcels identified on Figure 4-4 would require displacement of private and public owned business. Discussions regarding relocation would be required. Displacement related to Restoration Village would be the most difficult. It should be noted, however, that Restoration Village is not likely a compatible use adjacent to HSR and might need to be relocated regardless of station site selection. If the HSR station were located closer to M Street on the north side of the rail tracks significant good neighbor conflicts (traffic and parking) would occur with the established residential area. Development of the Golden State Freeway through this corridor would likely require similar displacements.

### Development Constraints

The station site is constrained by a number of development barriers. These include: the UP main line tracks and the adjacent Metro Center Recreation public park; the Kern Canal, Golden State Avenue/Freeway; and the important Chester Avenue railroad underpass. The proposed elevated Golden State Freeway would also need to be coordinated with the HSR station.

### Geology

The Alquist-Priolo Earthquake Fault Zoning Maps for the City and County of Bakersfield show that the Golden State Station site is not located on an area that is considered a potentially active fault. The entire Bakersfield area is considered seismically active and could experience severe ground shaking and surface readjustment in the event of a maximum magnitude earthquake. Implementation of General Plan policies, the Uniform Building Code and Safety Element policies would mitigate potential significant impacts to people and structures to a level of less than significant. (City of Bakersfield. General Plan Update DEIR SCH #1989070302. 2002. PP. 4.6-8 - 19.)

### Utilities

The site is presently developed and is served by utilities. Utility information is as follows:

- Sewer - several 12-inch lines throughout the various parcels.
- Electricity – one circuit is available to provide service to the site.
- No details available at present for telephone, gas, water or cable service.

### Railroad

If the UP corridor is selected for HSR service, the Golden State station site would be along the HSR main line and no access trackage would need to be constructed, other than the station sidings. However, if the BNSF corridor is selected for HSR main line service, an off-line access connection would need to be constructed. Rather than the two three-mile mainline station sidings needed for the UP corridor (total of six track miles), approximately 20 track miles of off-line track would need to be provided for the BNSF corridor HSR service. Thus, approximately

# Chapter 5

## TRUXTUN STATION SITE

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The Truxtun station site was defined by the Kern Transportation Foundation to be located within a half-mile of the current Amtrak station (from just east of Union Avenue to Chester Avenue on the BNSF corridor). The CHSRA EIS has subsequently identified a site between S Street and Sonora Street as the most promising station site (Figure 5-1). The EIS also mentions a possible north-south station orientation for a potential HSR alignment running along Union Avenue. This north-south Union Avenue alignment is not perceived to be very attractive. The railroad right of way narrows to only 84 feet through the Truxtun station site vicinity and crosses Union Avenue on a double track over-crossing. BNSF has its large freight yard located west of the station site between F Street and the Kern River. Only two at-grade crossings of the BNSF railroad are located between the Kern River and Union Avenue – at N Street and L Street. East of Union Avenue there are numerous at-grade crossing of the railroad tracks. The Truxtun station site is located within walking distance of two hotels, the convention center and many government office buildings. The area south of the railroad tracks presents an opportunity for new downtown oriented development. An elevated freeway is planned for the BNSF corridor through Downtown.

### STATION LOCATION

The factors that have the strongest influence on the location for a HSR station for this area include:

- Selected Valley corridor for HSR (UP or BNSF);
- Development of the Crosstown Centennial Freeway;
- Post HSR operations of the Amtrak San Joaquin service; and
- Availability of property.

### HSR Route Decisions

The barrier effect of the HSR alignment would be much greater with high speed through trains than it would with lower speed trains, all of which stop at the Bakersfield station. If the mainline route for HSR through the Valley is along the UP corridor, the Truxtun Station will be an off-line two track station. No additional right of way would be required aside from air rights over the BNSF Yard. If the BNSF corridor is selected, than the Truxtun Station becomes a four track main line station mandating an elevated four track station. Not only would the station cross section be narrower for the off-line station, but the noise and other impacts would be reduced.

### Crosstown Centennial Freeway

Construction of the Crosstown Centennial Freeway paralleling the HSR alignment would improve regional access to the station and to Downtown, but it would also accentuate the barrier impact of the elevated HSR track separating Downtown from the area immediately to its south. HSR oriented land uses. The location of the Crosstown Centennial Freeway ramps would tend to concentrate local access onto Q Street. Figures 5-2 and 5-3 respectively show a preliminary

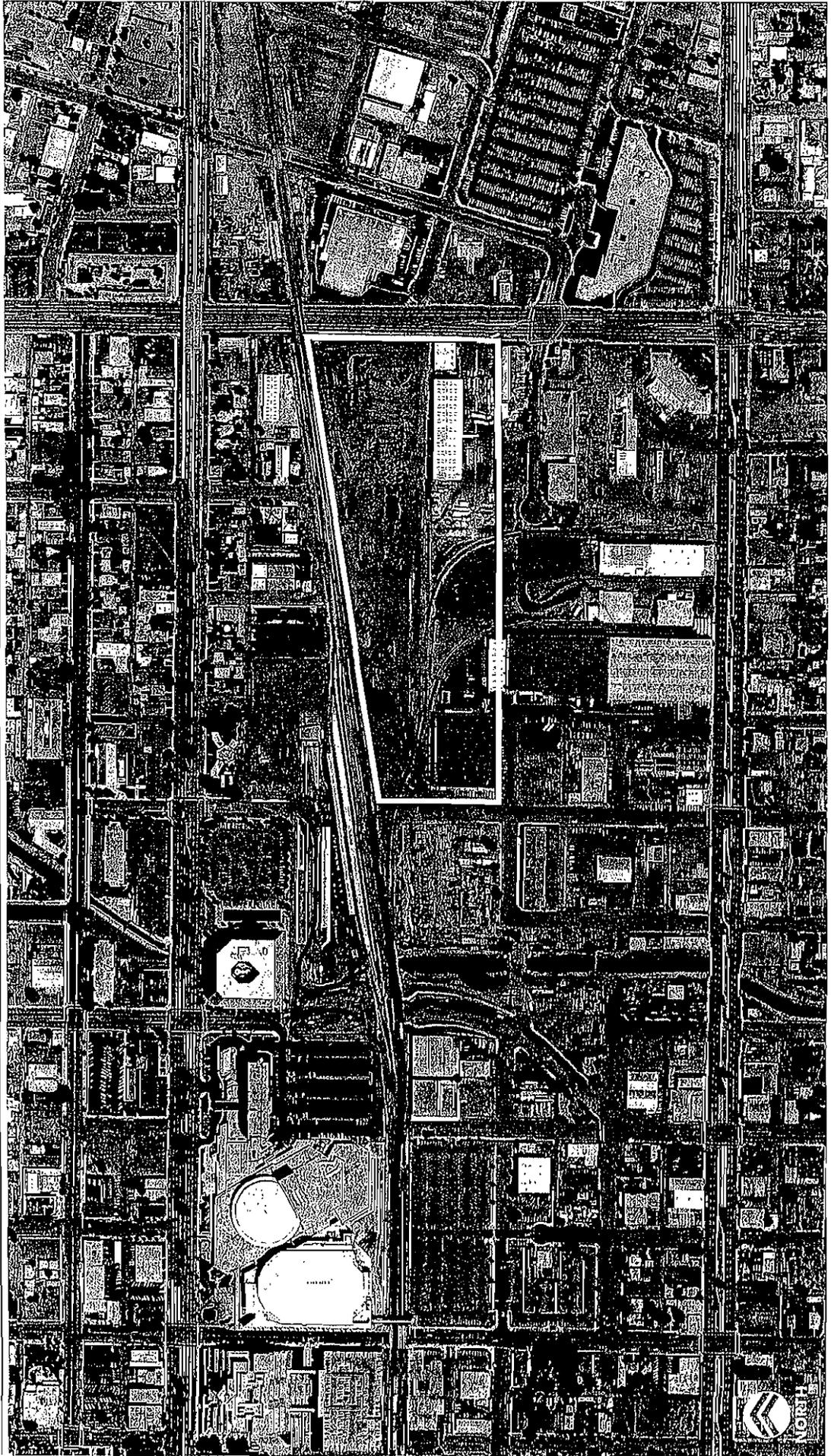
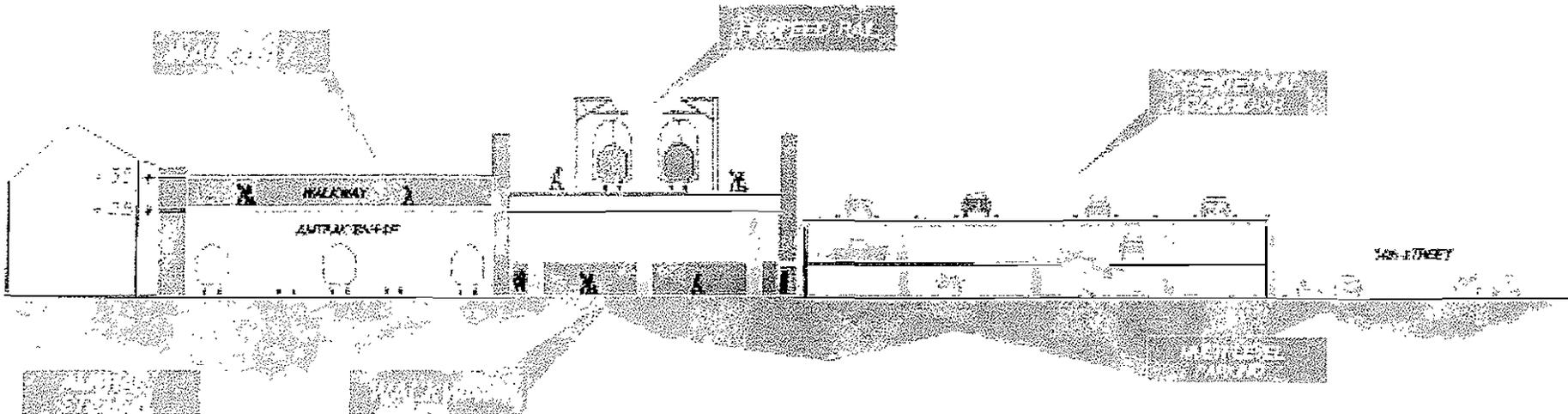


Figure 5-1  
TRUXTON STATION SITE LOCATION

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alignment for the new Crosstown Centennial Freeway and a cross section for the freeway relative to rail facilities. West of Bakersfield High School the Freeway would be located along the north side of BNSF's tracks. Just to the east of the High School the Freeway would cross over to the south side of BNSF tracks and then cross back to the north side east of Amtrak's Station. A two direction freeway access roadway would be constructed along 14<sup>th</sup> Street with signalized intersections at Chester Avenue and at Q Street. The elevated freeway would have approximately a 150 foot wide cross section. Two freeway elevations have been defined, one at 30 feet above ground and the second at 53 feet above ground. The freeway is anticipated to serve up to 160,000 daily vehicle trips (as a point for comparison the State Route 99 Freeway near California Avenue presently carries about 120,000 daily vehicle trips).

HSR and the Crosstown Centennial Freeway will need to be constructed at different elevations, as the freeway snakes across the BNSF and HSR alignment. If HSR serves the Truxtun Station site on an elevated structure, the freeway desirably should be the higher elevation, with HSR running between it and the BNSF Yard. Access ramp plans for Chester Avenue and for Q Street would need to be modified to avoid elevation conflicts with HSR. The need for four vertically separated transportation facilities in the corridor (BNSF, HSR, Freeway, and Access Ramps) probably would push the height of the freeway up to 75 feet above ground level, with the ramps located at an elevation between the freeway and HSR. Location of HSR 75 feet above ground level would further complicate vertical circulation for passengers and their baggage to platform levels. These freeway/rail alignment conflicts requiring higher level construction would increase construction costs.

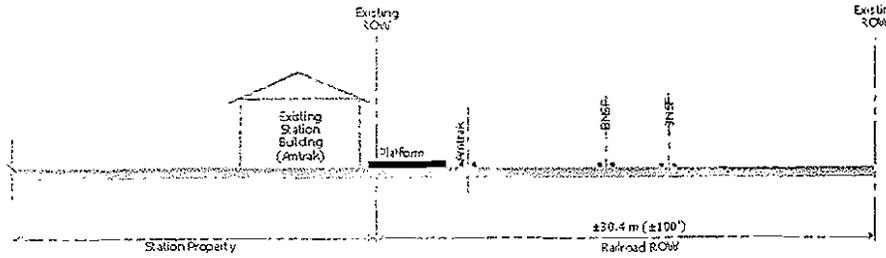
### **San Joaquin Service**

A principal benefit of this site is its proximity to the San Joaquin Amtrak station. This proximity would facilitate passenger transfer connections, sharing of the Amtrak feeder bus terminal and possibly even the sharing of an expanded station. These are all important strengths. If the San Joaquin service becomes infeasible after HSR begins, most of these potential benefits disappear. Discontinuance of San Joaquin service south of Fresno, however, offers the opportunity to utilize the BNSF Yard's north side track approach for HSR operating at-grade into the current Amtrak station. BNSF would need to be reimbursed with expanded yard and approach track capacity. This might be less expensive than provision of a totally elevated HSR system. The at-grade option would not be viable, if 200 mph through trains operated on the BNSF tracks.

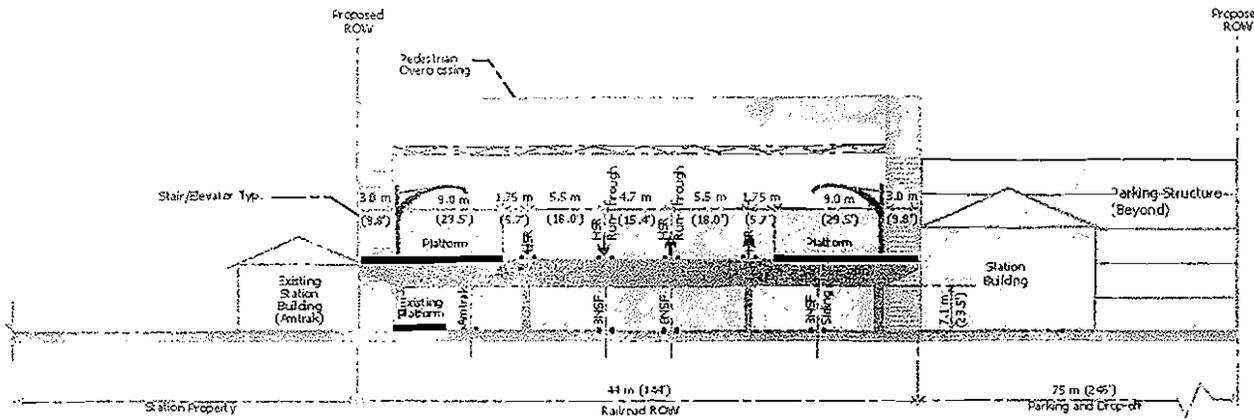
### **Available Property**

A significant amount of property exists south of the railroad tracks for redevelopment. This potential could be increased further by right of way acquisitions for the Crosstown Centennial Freeway or as part of a partnering arrangement with the BNSF. One could in fact envision property acquired for the Crosstown Centennial Freeway, being used to expand BNSF's railyard and facilitation of the HSR construction.

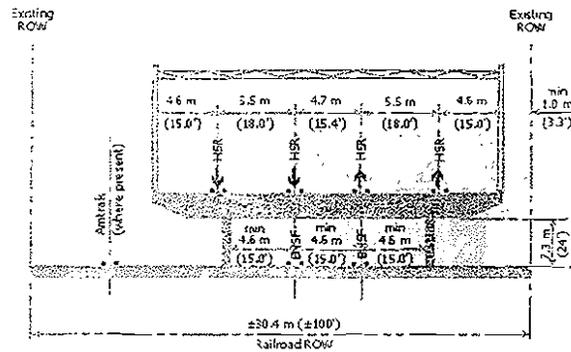
Figure 5-4 describes the station cross section envisioned by the EIS for the BNSF corridor. Its four track HSR cross section would be reduced to a two track cross section if the Truxtun station were an off-line station. It is important to note that the elevated cross section for the station (144 feet) is wider than the current 84 foot BNSF right of way. Figure 5-5 shows the envisioned cross



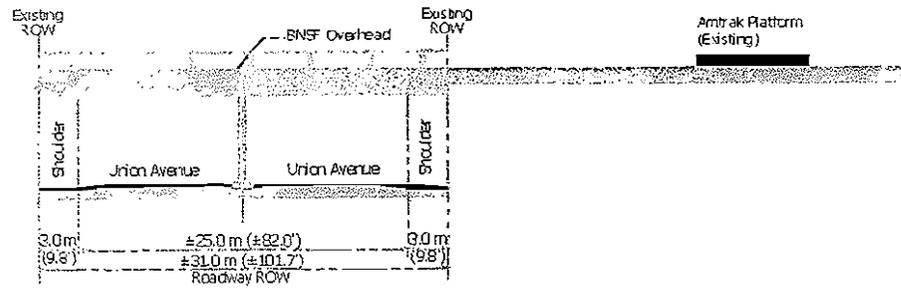
Existing



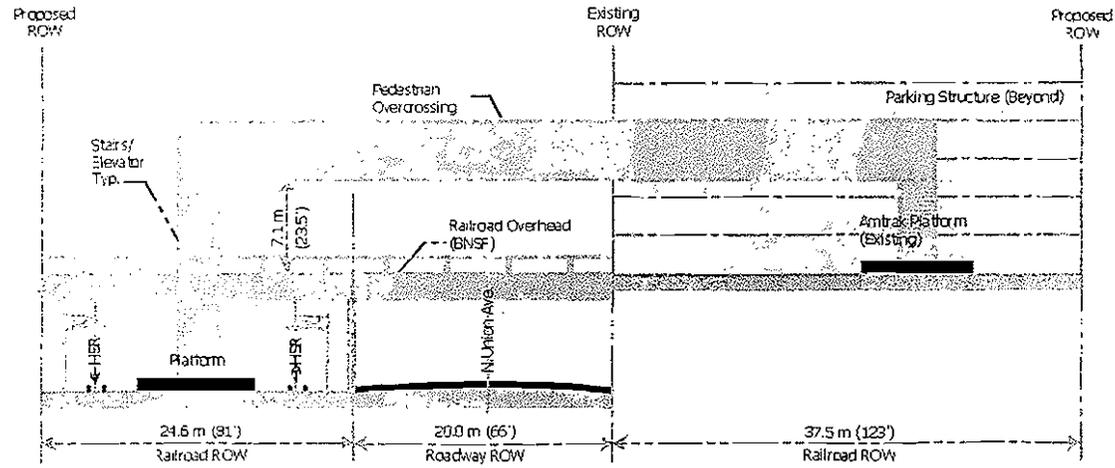
Proposed



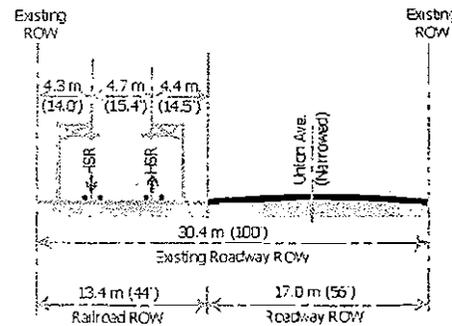
Proposed  
Station  
Approach



Existing



Proposed



Proposed  
Station  
Approach

section for a north-south Union Avenue station. As mentioned, the Union Avenue alignment is not understood to be very promising for HSR.

## **STATION PROGRAM**

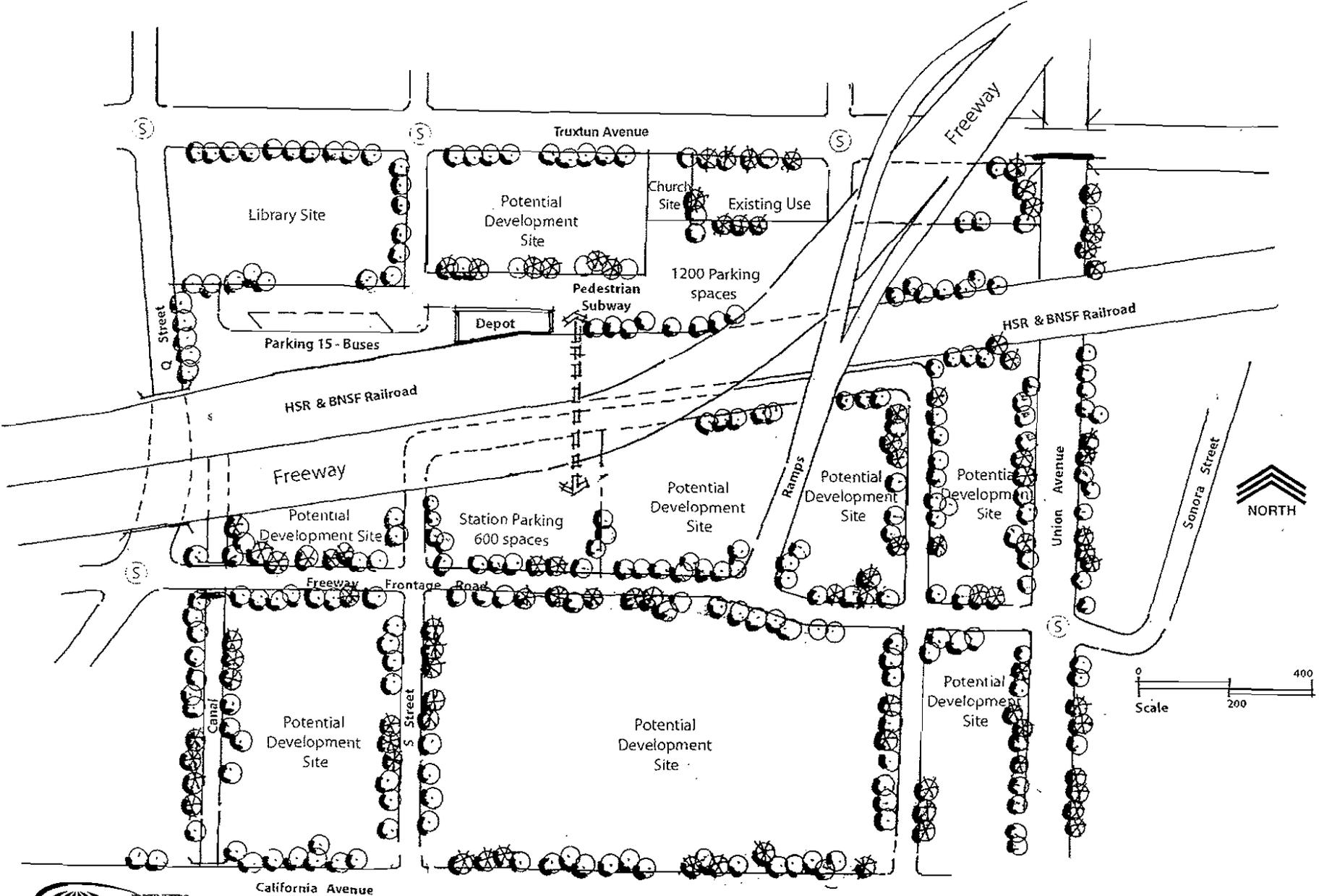
As reported earlier, the program for this station site is the same as was described for the Golden State station site. The EIS is proposing 750 parking spaces and one bus bay. Patronage forecast for Bakersfield's station do not include any consideration for commuter use. Nor does the parking forecast include consideration of rental car operations at the HSR station. Plans for HSR stations assume that parking and other uses similar to rental car facilities would be the responsibility of local jurisdictions, not of the HSR system. For planning purposes, 800 to 1,000 parking spaces are suggested along with 200 spaces for rental cars. This is a similar figure to that proposed for the Golden State station site. Consolidation of Greyhound into this terminal is proposed in order to fully utilize available bus bays and provide a consolidated public transport terminal for Bakersfield.

## **ILLUSTRATIVE SITE CONCEPT**

Three illustrative site concept plans were prepared for this site. As noted previously, the illustrative site plans are merely intended to show how a site might be develop, and is not intended as the final site plan. Concept A illustrates how the station might look if the Crosstown Centennial Freeway is constructed parallel to the BNSF alignment. Concept B shows how a station might be developed if the Crosstown Centennial Freeway is not constructed in the BNSF corridor. Concept C illustrates a station development plan, if the Truxtun Station is developed as an off-line station and Amtrak San Joaquin service is discontinued. This concept would run HSR trains at-grade through the station and would coordinate with BNSF expansion of track right of way. Either Concepts A or B would also function, if the Truxtun Station were an off-line two track HSR station. In summary, Concepts A and B are both elevated HSR stations either as a four track mainline station or two track off-line stations and Concept C is a two track off-line at-grade station.

### **Concept A – Crosstown Centennial Freeway Station**

With the construction of the Crosstown Centennial Freeway as shown in Figure 5-2, its Q Street access ramps would severely limit access to the area south of the Amtrak station. Station access to Q Street between the freeway frontage road and the railroad tracks is unlikely. Thus, the area south of the Amtrak Station would not have access from the west (Q Street), from the north (BNSF), from the south and most of the east (freeway ramps). Station area access could be improved by realigning the freeway access ramps to a more north/south alignment (Figure 5-6) and providing station driveways to/from the freeway frontage road. Details of the elevations need to be coordinated with the freeway planning efforts. A station then could be developed for this area and parking could be provided under the freeway structure. The passenger station could be placed under the freeway, but would probably be better located at the site of the present Amtrak Station Depot. This north side location would provide the best pedestrian and transit access to Downtown. Concept A, however, would provide little economic benefit to the area between the freeway and California Avenue. The station itself would be separated from the potential southern development area by the 141 foot elevated HSR facilities and the 150 foot wide elevated freeway. Together these elevated transportation facilities would divide the north and south of tracks development downtown by an uninviting area almost a football field length.



**Figure 5-6  
ILLUSTRATIVE TRUXTUN STATION - CONCEPT A**

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Most probably the area between the freeway and California Avenue would develop as a freeway oriented use, rather than a HSR oriented use.

### **Concept B – No Crosstown Freeway Station**

If the Crosstown Centennial Freeway were not to be constructed parallel to the BNSF alignment, the area south of the elevated HSR tracks would have greater potential for HSR related redevelopment and economic benefit. Figure 5-7 describes how this station might be developed with a stronger south side emphasis. Station parking would be located in a structure south of the HSR tracks and the HSR station depot would be located on the south side of the tracks. A pedestrian underpass would connect the HSR station with the current Amtrak station and its feeder bus terminal. The three level parking structure would help to buffer the railroad corridor from commercial and residential developments south of the tracks. Access to the HSR station would be from California Avenue via S Street and U Street.

### **Concept C – UP Mainline with Off-line Station at Truxtun**

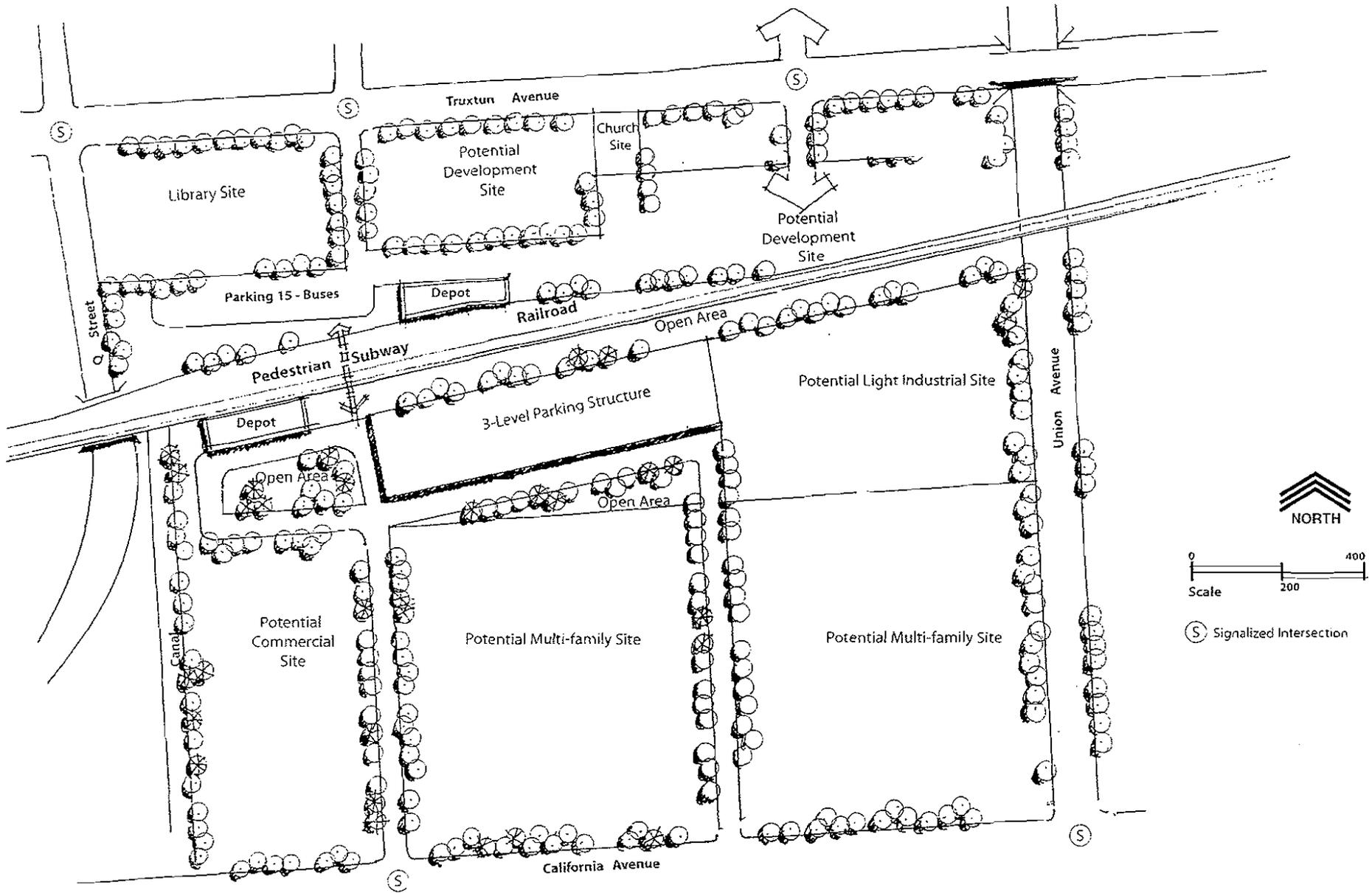
If the mainline HSR service operates along the UP corridor and the Truxtun Station were developed solely as an off-line station, it might be possible to develop it as an at-grade HSR station. This would depend on the fate of the San Joaquin service. If the San Joaquin service was discontinued south of Fresno and replaced by HSR service, the station area BNSF right of way currently used by San Joaquin trains could be developed for at grade HSR service to this off-line station. High speeds would not be required for the off-line station area tracks. Some additional right of way would be required in order to eliminate the need to share track with BNSF trains. This might be accomplished in partnership with BNSF, if they have an interest in expanding their freight yard. Observations indicate that the BNSF Yard is very busy. Figure 5-8 illustrates how an at-grade station might be developed. Obviously, the success of joint development south of the tracks would depend on decisions to construct the Crosstown Centennial Freeway parallel to HSR. A three-level parking structure would be constructed on the south side of the tracks along with commercial and residential development. A pedestrian overpass would be constructed over the HSR and BNSF tracks connecting to the Depot Building located on the north side of the tracks. The Depot building would be an expansion of the current Amtrak Station. The current Amtrak feeder bus terminal would be reused as shown in Figure 5-8. This scheme could involve no elevated transportation structures (railroad or freeway) through downtown. It is also possible that this at-grade HSR station concept could be developed with an elevated Crosstown Centennial Freeway.

## **MARKET PERSPECTIVE**

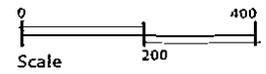
Station accessibility, security and ease of parking are all important issues for potential HSR patrons.

### **Station Access**

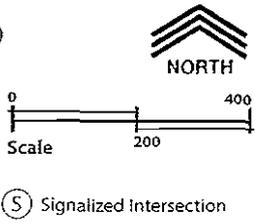
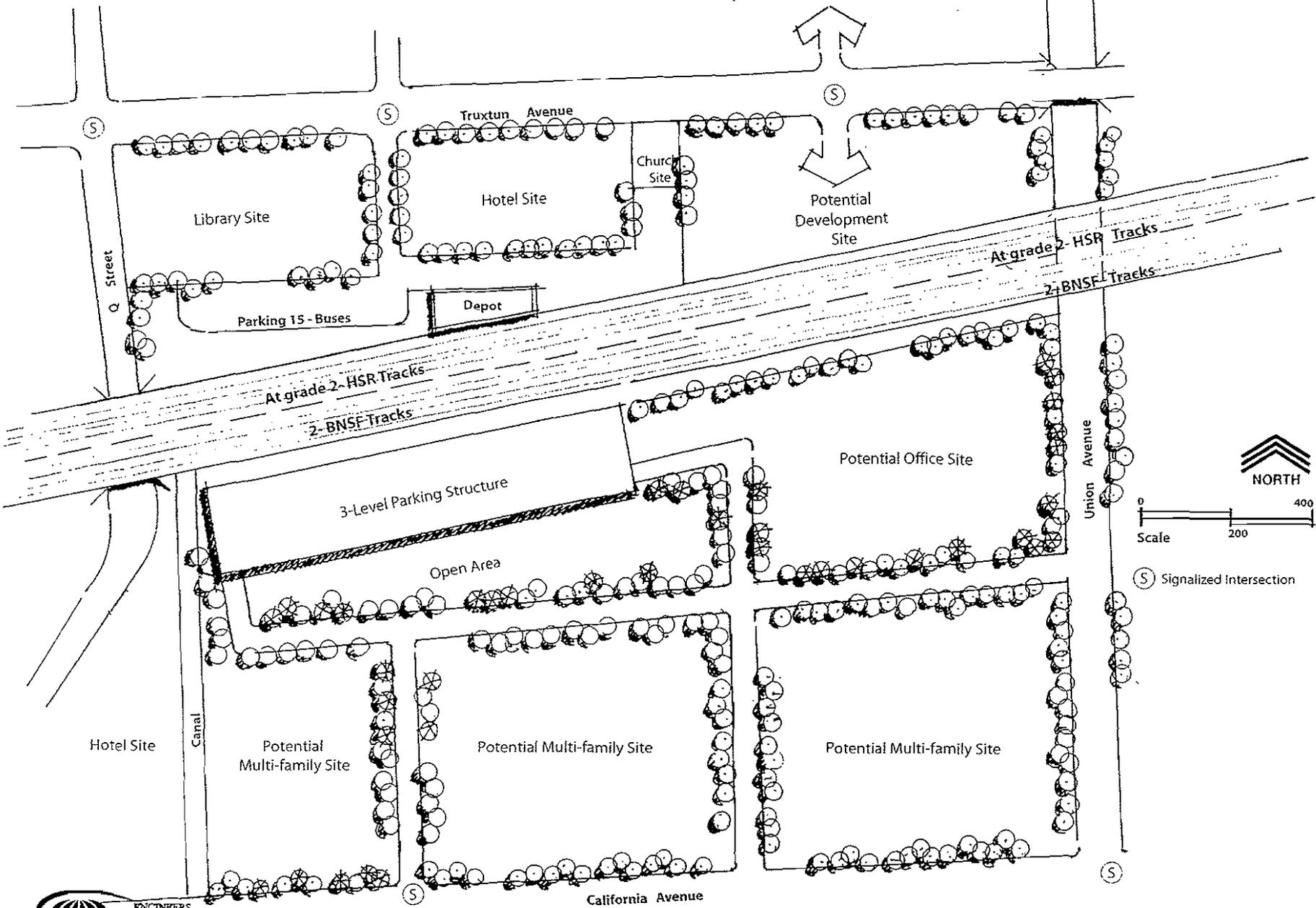
The Truxtun station site is very accessible from the Downtown and benefits from a regional transportation system that is focused on the Downtown. Completion of the Crosstown Centennial Freeway would further increase regional accessibility by highway to the station vicinity. Crosstown Centennial Freeway plans show downtown access via a two-way frontage road aligned roughly along 14<sup>th</sup> Street. Freeway access ramps would be at Chester and at Q



NORTH



(S) Signalized Intersection



Street. Without the Crosstown Centennial Freeway, traffic access to the southern HSR parking would be to/from California Street. Pedestrian and bus access is excellent to Downtown. With the exception of the Crosstown Centennial Freeway Concept A, the Truxtun station site concepts have two access points to California Street, which should be adequate. Concept A has the Crosstown Centennial Freeway to augment its two access points to California Street.

### **Security**

The security issues would include the pedestrian crossings of the railroad and the security of the parking area. Concepts A and B, which are both elevated HSR concepts, employ a pedestrian underpass for the connection. Pedestrian underpasses are generally preferred by pedestrians (only 12 to 15 foot elevation change versus 50 to 55 foot elevation change for overpasses), but they can prove to be a security problem. Careful design is needed to minimize crime and vandalism. All three station concept plans provide compact parking structures.

### **Ease of Parking**

To patrons, ease of parking also means cost of parking. All three concepts provide the required number of patron parking spaces. Concept A would provide these on a surface lot that would probably have a lower parking fee than the parking structures. Concept A could also provide parking to support parking demands Downtown. Concept A proposes to provide 1,800 surface parking spaces compared to 1,250 structured spaces for concept B and 1,500 structured spaces for Concept C. Breakeven parking fees for surface lots are about \$2 per day per space versus \$5 for structured parking. Obviously, the lower fees for surface parking would be more attractive than the fees needed to cover cost for parking structures. Viewed from another perspective, the City or parking provider could make more profit from the surface lot than from a parking structure.

### **SERVICE PROVIDER PERSPECTIVE**

Golden Empire Transit (GET), Greyhound, Amtrak and the railroads would have differing perspectives on the development of a station on the Truxtun site.

### **Golden Empire Transit**

Being located in the downtown area, the Truxtun Avenue HSR station site would be easy to serve. Route 9 at present directly links the site to the Downtown Transit Center via Truxtun and Q Streets. Route 9 operates every 30 minutes on Saturdays and weekdays. A direct connection is missing, however, to the airport and a new shuttle link would need to be established in order to make this connection. It should be noted that bringing Route 9 into stations with bus terminals south of the tracks would be more difficult than serving the station bus terminal on the north side of the tracks. All three station concept plans retain the feeder bus terminal on the north side of the railroad tracks.

### **Amtrak San Joaquin Service**

Concepts A and B both retain the San Joaquin connection on the lower level, while Concept C is predicated on the curtailment of San Joaquin service south of Fresno. Concepts B and C expand the current Amtrak station building, while Concept A proposes a separate HSR Depot Building on the south side of the tracks. The most seamless connection and most efficient station operating scenario would be for HSR and Amtrak to share the same station building. The

elevated HSR concepts (A and B) and the at-grade Concept C would all involve very disruptive construction period impacts on Amtrak operations.

### **Greyhound Intercity Bus Service**

The direct HSR connection to Los Angeles will eliminate the need for some of the current feeder bus loading bays at the Amtrak Station. The proximity to downtown and the potential availability of bus bays, might interest Greyhound to relocate into the HSR station complex. Relocation of the Greyhound operations to the Truxtun Station would not be very difficult, as it is very near their current terminal (18<sup>th</sup> Street and F Street).

### **UP and BNSF Operations**

It is difficult to predict UP's view of this station site, if HSR is selected to operate along the UP corridor through the Valley. Neither the UP north BNSF would likely want their corridor selected for the Valley HSR operation. UP would want grade separation of their tracks through Bakersfield. The BNSF would not likely want HSR operating over or adjacent to their important Bakersfield Yard. If the BNSF has a strong interest in expanding its yard, it might be interested in working with the CHSRA and the City. If the at-grade Concept C is selected, BNSF would want current at-grade crossings eliminated.

## **GOOD NEIGHBOR PERSPECTIVE**

### **Station Location**

The Downtown Truxtun/ S Street Station site is southeast of the existing Amtrak station and between S Street and Union Avenue. A few blocks to the east are the Convention Center and Holiday Inn Select Hotel. Farther east includes the Downtown area with City and County offices, additional hotels, restaurants, shopping and other community facilities. Access to and from this station alternative is ideal since it is immediately adjacent to the existing Amtrak station and rail corridors.

### **Compatibility with Land Use**

#### **Existing**

The City of Bakersfield's zoning designations (2002) identifies numerous land uses within 1.5 miles of the Downtown/Truxtun and S Street Station as shown in Figure 5-9. The existing land uses surrounding the site are a mix of industrial, commercial and single family residential. The station site is located in a general manufacturing industrial zone (M-2) with light manufacturing facilities directly to the south and east. Commercial uses are both north and west of the station site which includes hotels, retail, office space and civic center uses. Farther south of the station site are three blocks of single-family homes leading to a limited multiple family dwelling zone. This station site has the most diversified land uses with several redevelopment areas planned for future growth.

#### **Proposed**

The City's General Plan (2010) does not show any significant land use changes near the station site. The General Plan shows a concentration of mixed-use/major office commercial use immediately north and west of the project site. Further west beyond the mixed-use area is designated office commercial which leads to high then low residential densities.

The land use opportunities for this station would occur adjacent to the west where mixed-use options may be appropriate. This area would add to the intensification of uses to insure transit supportive capabilities. The sites identified near the station would be predominately commercial, civic/cultural, and office uses, with residential areas being supportive as secondary uses. This station should experience higher ridership as the land use intensifies and mixed-use project increase.

### **Redevelopment Potential**

The station site is located in the City's designated Old Town Kern Redevelopment Area with the Downtown Redevelopment area in close proximity to the west and the Southeast Bakersfield Redevelopment area directly north. The station has access to many proposed and existing facilities including apartments, hotels, restaurants, and shopping areas.

The Downtown Redevelopment project encompasses 16 square blocks in the central business district. The station site is less than 1.5 miles from the Civic Center, City Hall, major county administration buildings, the public library, Convention Center, and Holiday Inn Select. A few miles to the west there is a major employment center with two major shopping malls (Valley Plaza Shopping Center 3 miles south; East Hills Mall 3 miles northeast).

Some of the more recent redevelopment projects involve mixed-use developments. The Padre Hotel is being restored and enhanced with new retail uses throughout the ground floor and 100 apartment units on the above floors. The streetscape design along Wall Street Alley has recently been completed where the street is closed for special events. Chester Avenue Streetscape has been expanded and includes more than 150 large trees, new cast-iron tree grates, decorative street lights, corner bollards and new trash receptacles.

This station site has the greatest potential for redevelopment activities with all three of the City designated redevelopment areas within a few miles. New offices are being constructed on vacant parcels just bordering the Amtrak station and there are historical buildings that offer prospective low cost restoration opportunities. The greatest opportunities appear to be north of Truxtun Avenue, since the area between Truxtun and the BNSF tracks is already well developed and the area south of the BNSF tracks will be largely screened by the Crosstown Centennial Freeway.

### **Consistency with Existing Plans and Policies**

The Downtown station site emphasizes the mixed-use development policies of the various agencies. A new Downtown HSR station can act as an economic stimulus by increasing demand for infill development. Factors such as restoring existing facilities by offering lower construction costs and subsidized costs through transit-oriented developments can support growth around a downtown station. This station site would also encourage new downtown businesses and promote mixed-use after-work activities.

Some of the General plan and community strategies that support a Downtown station include:

- Expand the downtown street light design and streetscape design, and incorporate benches, garbage cans, tables and chairs.

- Develop River Street to become a center for community activities and outdoor activities.
- Encourage the use of trees and flowers, lighting, street furniture, art signage, and flags. Use surface material that enriches the paving options on streets, sidewalks, and curbing.
- Recognize historic buildings, sites and neighborhoods. Provide history of historic building/sites to be placed in a visible area.
- Develop historic walking and trolley tours.
- Redevelop individual city blocks by using mixed-use to get funding for housing. Use transit villages to obtain additional funds. Place them near Amtrak or GET stations and they will qualify as “transit oriented developments.”
- Develop land use policies that encourage in-fill development while discouraging urban sprawl and leapfrog development into prime agricultural lands.
- Encourage and provide business development and entrepreneurial opportunities. By identifying needs of small business and existing family business development and entrepreneurial opportunities. Create business development initiatives centered around industry cluster groups.

### **Growth Inducements**

This station site has high potential to stimulate infill developments. With recent concentrations of redevelopment near the site, there are plans to build more intensified development with a mixture of housing, retail and commercial uses. Within the Downtown district, there are historic buildings sites as well as potential areas of mix use that will qualify as transit oriented developments. This will create demand for infill development to connect existing facilities with greenbelts and publicizing lower costs through existing infrastructure. Growth inducing impacts would not be as significant as those associated with the Airport Station Site.

### **Job Generation Potential**

A high speed rail hub in the downtown area would have the equivalent economic impact of a medium-sized airport located in the heart of a central business district. The high speed rail will bring more people and private sector jobs to downtown Bakersfield in almost every industry from restaurants to wholesale trades. A high speed rail terminal can become the focal points for commercial redevelopment and promote substantial new development in surrounding areas. A high speed rail network pulls together the regional economy and promotes intra-regional business growth. The development of improved rail service can provide a significant boost to travel and tourism by encouraging weekend leisure trips by families from smaller towns to the major cities and vice versa.

### **Parking and Traffic**

All three station site concept plans provide for station access from the south (California Avenue or the new Crosstown Centennial Freeway). Traffic intrusion into established neighborhoods would not be a potential source of complaints, as there are no housing units presently located in this area. Some potential for parking abuse, however, would be associated with any of the three concepts. HSR patrons would seek to park free in adjacent downtown parking facilities, rather than pay \$3 to \$5 daily for parking in the HSR parking structure. A parking management plan

and enforcement program would be needed to address this potential problem.

### **Property Tax Impacts**

The 1996 Economic Impact and Benefit/Cost of High Speed Rail for California found the following based on an analysis of the Truxtun site:

- A HSR station at the downtown site would add to the synergy created by the convention center and the new Amtrak Station;
- New office development could possibly shift from the southwest quadrant to the downtown as businesses desire to have convenient access to a variety of transportation modes;
- Demand for lodging facilities may also result, along with hospitality related uses, such as retail and dining establishments; and
- Between 2000 and 2020, approximately 30 to 35 percent of the projected value of new development within one-half mile of a proposed downtown Bakersfield HSR station is estimated to be attributed to high speed rail. This amounts to about \$23.5 to \$27.4 million (1995 dollars).

Recognizing that a substantial amount of the current development along Truxtun Avenue is public and does not pay property taxes, increased value of these public buildings would not add to property tax revenues.

## **DEVELOPMENT AND OPERATIONS PERSPECTIVE**

### **Parcels, Ownership and Size**

The assessor's parcel number (APN), ownership and parcel sizes are identified in Tables 5-1 and 5-2. The parcels are show on the map in Figures 5-9 and 5-10.

### **Displacements**

Development of a HSR station on this site would involve acquisition of the industrial parcels south of the tracks and perhaps some acquisitions along the BNSF right of way needed to widen the corridor and facilitate construction. Right of way acquisitions possibly could be partnered with the Crosstown Centennial Freeway project or with the BNSF.

### **Development Constraints**

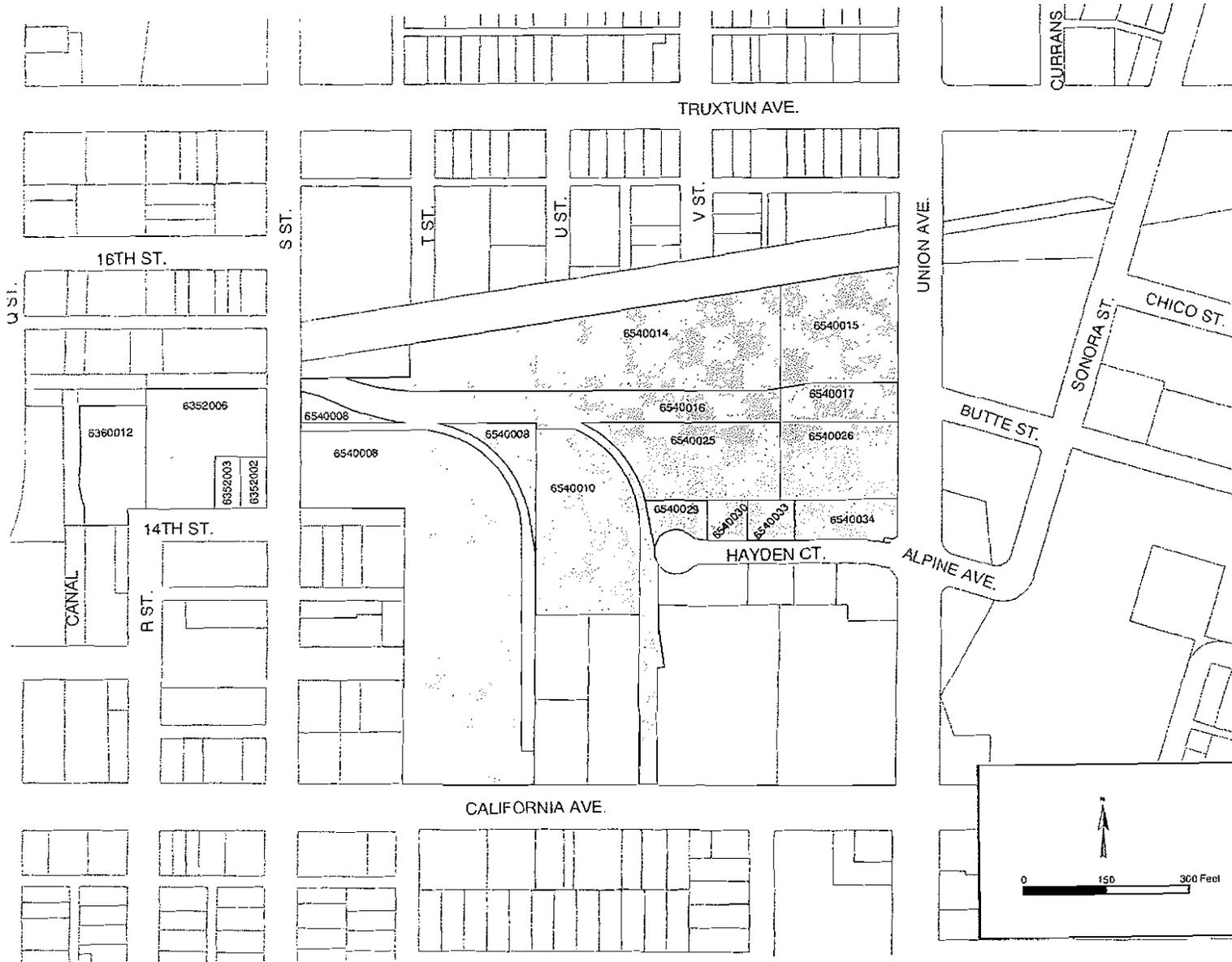
The key physical constraints affecting development of a HSR station at this site are the BNSF tracks and in the future will likely include the Crosstown Centennial Freeway.

### **Geology**

The Alquist-Priolo Earthquake Fault Zoning Maps for the City and County of Bakersfield show that the Truxtun site is not located on an area that is considered a potentially active fault. The entire Bakersfield area is considered seismically active and could experience severe ground shaking and surface readjustment in the event of a maximum magnitude earthquake.



Figure 5-9  
PARCEL MAP - EAST OF AMTRAK STATION  
386110/PASTE/PT - 3/27/03



Implementation of General Plan policies, the Uniform Building Code and Safety Element policies would mitigate potential significant impacts to people and structures to a level of less than significant. (City of Bakersfield. General Plan Update DEIR SCH #1989070302. 2002. PP. 4.6-8 - 19.)

### **Utilities**

The site is presently developed and is served by utilities. Utility information is as follows:

- Sewer – a 14-inch line runs parallel to Union Avenue and an 8-inch line that runs just south of Truxton Avenue.
- Electricity – there are two circuits available to provide service to the site.
- No details available at present for telephone, gas, water or cable service.

### **Railroad**

If the UP corridor is selected for HSR service, the Truxtun site would function as a two track off-line station. However, if the BNSF line is selected for HSR service, the Truxtun site would function as a mainline four track station. Neither railroad would likely want their mainline corridor selected for HSR, unless sizeable compensation was provided. With Truxtun developed as a four track mainline station (BNSF HSR), about six miles of station siding track would need to be constructed (three miles of track in each direction). Station tracks would extend from just east of Oak Street to the junction with UP mainline tracks near Haley Street on the west. With Truxtun developed as a two track off-line station, about 20 miles of station access tracks would need to be constructed (ten miles in each direction). With the Truxtun site developed as a double tracked at-grade off-line station, 20 miles of track would need to be constructed – mostly at-grade.

The BNSF will likely push for yard improvements and the elimination of at-grade traffic crossings for any station concept at Truxtun.

### **SUMMARY**

- Several ways are possible to develop a HSR station on this site.
- A HSR station at this site would facilitate coordination with Amtrak San Joaquin service and with Greyhound Bus services.
- Right of way acquisition appears relatively simple and displacement of businesses would be minimal.
- Proximity to Downtown offers the greatest pedestrian and transit access opportunities of any of the sites.
- Opportunities for HSR station to serve as a catalyst for economic development downtown is probably greatest at this site.

**Table 5-1  
AMTRAK TRUXTUN SITE  
ASSESSOR PARCEL NUMBER, OWNERSHIP, VALUE**

APN	Area (Sq. Ft.)	Perimeter (Ft.)	Land Val	Impr Val	PERPROP Val	EXMPT Val	Net Val
6352002	8589.23	393.12	TBD	TBD	TBD	TBD	TBD
6352003	8566.33	393.00	TBD	TBD	TBD	TBD	TBD
6352006	75316.61	1216.63	TBD	TBD	TBD	TBD	TBD
6360012	48473.09	934.35	TBD	TBD	TBD	TBD	TBD
6540008	9692.77	629.44	TBD	TBD	TBD	TBD	TBD
6540008	21154.42	1037.48	TBD	TBD	TBD	TBD	TBD
6540008	307583.31	2866.77	TBD	TBD	TBD	TBD	TBD
6540010	111158.36	1363.73	TBD	TBD	TBD	TBD	TBD
6540014	183691.09	2563.52	TBD	TBD	TBD	TBD	TBD
6540015	80462.85	1148.66	TBD	TBD	TBD	TBD	TBD
6540016	165877.20	7017.45	TBD	TBD	TBD	TBD	TBD
6540017	28719.88	779.24	TBD	TBD	TBD	TBD	TBD
6540025	78643.79	1302.77	TBD	TBD	TBD	TBD	TBD
6540026	58644.88	988.73	TBD	TBD	TBD	TBD	TBD
6540029	13183.34	546.78	TBD	TBD	TBD	TBD	TBD
6540030	10158.38	403.16	TBD	TBD	TBD	TBD	TBD
6540033	11983.84	439.41	TBD	TBD	TBD	TBD	TBD
6540034	26448.82	729.72	TBD	TBD	TBD	TBD	TBD
6352002	8589.23	393.12	TBD	TBD	TBD	TBD	TBD
6352003	8566.33	393.00	TBD	TBD	TBD	TBD	TBD
6352006	75316.61	1216.63	TBD	TBD	TBD	TBD	TBD

**Table 5-2**  
**TRUXTUN EAST OF AMTRAK SITE**  
**ASSESSOR PARCEL NUMBER, OWNERSHIP, VALUE**

APN	Area (Sq. Ft.)	Perimeter (Ft.)	Name Asse	Address	Land Val	Impr Val	PERPRO Val	EXMPT Val	Net Val
16150007	28501.54	659.45	SEVEN-UP/RC BOTTLING CO	3220 E 26TH ST VERNON CA 90058	\$ 102,800.00	\$ 242,500.00	\$ -	\$ -	\$ 345,300.00
16150008	27025.26	688.44	DE ALBA ALFONSO	324 OAK ST # R BAKERSFIELD CA 93304	\$ 98,840.00	\$ 100,200.00	\$ -	\$ -	\$ 199,100.00
16150012	29984.82	792.52	SEVEN-UP/RC BOTTLING CO	3220 E 26TH ST VERNON CA 90058	\$ 100,900.00	\$ 16,940.00	\$ -	\$ -	\$ 117,800.00
16150013	1805.48	489.49	RUDOLPH BERTRAM F JR	P O BOX 2302 CARMEL CA 93921	\$ 64.00	\$ -	\$ -	\$ -	\$ 64.00
16150014	43352.00	927.31	FRANCHISE REALTY INTRST CORP	4600 MING AV BAKERSFIELD CA 93309	\$ 203,200.00	\$ 457,600.00	\$ -	\$ -	\$ 660,800.00
16150016	33973.34	777.40	DE ALBA ALFONSO	324 OAK ST # R BAKERSFIELD CA 93304	\$ 124,800.00	\$ -	\$ -	\$ -	\$ 124,800.00
16150017	50775.07	1006.32	OROZ MANUEL A & RACHEL J	131 E 19TH ST BAKERSFIELD CA 93305	\$ 163,500.00	\$ 157,500.00	\$ -	\$ -	\$ 321,000.00
16260002	16002.43	520.53	SCHIMNOWSKI DON & CAROLYN	127 E 18TH ST BAKERSFIELD CA 93305	\$ 25,250.00	\$ -	\$ -	\$ -	\$ 25,250.00
16260003	12123.74	467.79	SCHIMNOWSKI DONALD J & CAROLYN	205 E 18TH ST BAKERSFIELD CA 93305	\$ 23,250.00	\$ 164,300.00	\$ -	\$ -	\$ 187,500.00
16260004	2245.75	291.29			\$ -	\$ -	\$ -	\$ -	\$ -
16260005	1902.17	195.10			\$ -	\$ -	\$ -	\$ -	\$ -
16260006	1985.62	207.76			\$ -	\$ -	\$ -	\$ -	\$ -
16260007	4550.34	283.07			\$ -	\$ -	\$ -	\$ -	\$ -
16260008	5257.91	312.67			\$ -	\$ -	\$ -	\$ -	\$ -
16260009	6070.72	344.22			\$ -	\$ -	\$ -	\$ -	\$ -
16260011	3918.68	254.94	FIRST CHURCH RELIGIOUS SCIENCE	222 EUREKA ST BAKERSFIELD CA 93305-5622	\$ 9,320.00	\$ 43,960.00	\$ -	\$ 53,280.00	\$ -
16260012	11348.91	450.42	FIRST CHURCH RELIGIOUS SCIENCE	222 EUREKA BAKERSFIELD CA 93305	\$ 13,250.00	\$ 78,780.00	\$ -	\$ 92,040.00	\$ -
16260013	18744.91	549.60	HUTH FAMILY TRUST C	P O BOX 692 BAKERSFIELD CA 93240	\$ 12,440.00	\$ 158,200.00	\$ -	\$ -	\$ 170,600.00
16260014	7457.05	397.87	SCHIMNOWSKI DONALD J & CAROLYN	127 E 18TH ST BAKERSFIELD CA 93305	\$ 14,390.00	\$ 3,873.00	\$ -	\$ -	\$ 18,270.00
16260015	3449.75	343.93	SCHIMNOWSKI DONALD J & CAROLYN	127 E 18TH ST BAKERSFIELD CA 93305	\$ 7,307.00	\$ 2,102.00	\$ -	\$ -	\$ 9,409.00
16260016	5769.19	342.58	SCHIMNOWSKI DONALD J & CAROLYN	127 E 18TH ST BAKERSFIELD CA 93305	\$ 10,850.00	\$ 1,327.00	\$ -	\$ -	\$ 12,180.00
16260017	1667.78	253.26	CITY OF BAKERSFIELD	UNKNOWN CA	\$ -	\$ -	\$ -	\$ -	\$ -
16260018	5153.49	291.04			\$ -	\$ -	\$ -	\$ -	\$ -

**Table 5-2  
TRUXTUN EAST OF AMTRAK SITE  
ASSESSOR PARCEL NUMBER, OWNERSHIP, VALUE**

APN	Area (Sq. Ft.)	Perimeter (Ft.)	Name Asse	Address	Land Val	Impr Val	PERPRO Val	EXMPT Val	Net Val
16260019	1553.15	192.60	FIRST CHURCH RELIGIOUS SCIENCE	222 EUREKA ST BAKERSFIELD CA 93305-5622	\$ 2,689.00	\$ -	\$ -	\$ 2,689.00	\$ -
16260020	20668.47	576.82	MUNOZ REVOCABLE LIVING TR	4600 PANORAMA DR BAKERSFIELD CA 93306-1352	\$ 172,800.00	\$ 115,200.00	\$ -	\$ -	\$ 288,000.00
16260021	9524.64	437.08	BALTAZAR RIGOBERTO N & ESMERALDA	123 E 18TH ST BAKERSFIELD CA 93301-2913	\$ 51,000.00	\$ 99,960.00	\$ 32,500.00	\$ -	\$ 183,500.00
16270001	90579.67	1207.63	PATEL BHARAT P & SHOBHANA	1622 UNION AV BAKERSFIELD CA 93301	\$ 150,000.00	\$ 104,000.00	\$ 14,010.00	\$ -	\$ 268,000.00
16270002	8872.98	418.26	BISHOP ISAIAH & HAZEL M	3211 WEST 78TH PL LOS ANGELES CA 90043	\$ 18,070.00	\$ 36,140.00	\$ -	\$ -	\$ 54,220.00
16270003	10958.46	429.88	SHORT KAY F ET AL	9501 MEADOWLEAF CT BAKERSFIELD CA 93311	\$ 7,398.00	\$ 11,490.00	\$ -	\$ -	\$ 18,890.00
16270004	8508.57	378.07	HALBROOK ELWOOD R & LINDA L	219 EUREKA ST BAKERSFIELD CA 93305-5621	\$ 6,299.00	\$ 13,180.00	\$ -	\$ 7,000.00	\$ 12,480.00
16270005	5612.00	327.90	HEISEY FAMILY TR	223 EUREKA ST BAKERSFIELD CA 93305-5621	\$ 4,804.00	\$ 14,330.00	\$ -	\$ 7,000.00	\$ 12,130.00
16270006	6274.24	349.90	SALGADO CHARLES L & ARLETTE	4520 JOANNE AV BAKERSFIELD CA 93309	\$ 14,180.00	\$ 63,830.00	\$ -	\$ -	\$ 78,010.00
16270007	7202.67	382.53	LOPEZ KENNETH F	222 E TRUXTUN AV BAKERSFIELD CA 93305	\$ 25,000.00	\$ 15,000.00	\$ 5,450.00	\$ -	\$ 45,450.00
16270008	18187.40	540.96	SALGADO CHARLES L & ARLETTE	P O BOX 1527 BAKERSFIELD CA 93385	\$ 5,947.00	\$ 2,123.00	\$ -	\$ -	\$ 8,070.00
16360001	88323.02	1342.22			\$ -	\$ -	\$ -	\$ -	\$ -
16360005	122164.47	1416.31	4M INVESTMENTS	P O BOX 3289 BAKERSFIELD CA 93385	\$ 209,000.00	\$ 789,000.00	\$ -	\$ -	\$ 998,000.00
16360006	13680.73	914.80			\$ -	\$ -	\$ -	\$ -	\$ -
16360008	39486.64	1029.28	ATCHISON TOPEKA & SANTA FE RR	5200 E SHEILA ST LOS ANGELES CA 90040	\$ -	\$ -	\$ -	\$ -	\$ -
16460003	50673.65	1052.72	CARPENTER DAVID & BOBBYE TRS	2801 EL BERRENDO AV BAKERSFIELD CA 93304	\$ 43,160.00	\$ 52,520.00	\$ -	\$ -	\$ 95,680.00
16460004	18197.07	554.01	COMMENCO CORPORATION	9111 E DOUGLAS ST BOX 970 WICHITA KS 67201-0970	\$ 122,300.00	\$ 352,600.00	\$ -	\$ -	\$ 474,800.00
16150007	26501.54	659.45	SEVEN-UP/RC BOTTLING CO	3220 E 26TH ST VERNON CA 90058	\$ 102,800.00	\$ 242,500.00	\$ -	\$ -	\$ 345,300.00
16150008	27025.26	688.44	DE ALBA ALFONSO	324 OAK ST # R BAKERSFIELD CA 93304	\$ 98,840.00	\$ 100,200.00	\$ -	\$ -	\$ 199,100.00

- Numerous unknowns would influence the development of a HSR station at this location including: future of Amtrak San Joaquin train service, construction of Crosstown Centennial Freeway and BNSF visions for the future of its downtown freight yard.
- If the UP corridor is selected for HSR service, an expensive off-line station access track system might be required to connect this station.

# Chapter 6

## SUMMARY

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### KEY ISSUES/UNKNOWNNS

A number of unknowns will have important bearing on selection of the best HSR station site for Bakersfield.

- Alignment (BNSF versus UP north of Bakersfield and Grapevine versus Tehachapi south of Bakersfield) selected for HSR service in the Valley;
- The post-HSR future for the Amtrak San Joaquin service;
- CHSRA’s definition of the “Base System” – will it include off-line station access track costs?
- Willingness of UP and BNSF to share their rights of way as well as other rail upgrade investment coordination;
- Decisions regarding the Crosstown Centennial and the Golden State freeways;
- The Southern California Association of Government’s feasibility finding regarding Meadows Field’s role as a satellite regional airport serving the Los Angeles Region;
- The difficulty and cost of property acquisition and relocation efforts as well as how these relate to freeway development efforts; and
- Findings from the systemwide HSR EIS.

### HSR PATRON ATTRACTIVENESS

There are three major potential markets for HSR in Bakersfield: commuter, airport access and intercity rail travel. Only one of these markets has been analyzed and that was for market and airline service conditions prior to 9/11. Intercity rail travelers who are residents of the region will seek a station with low cost parking. Residents of other areas visiting Bakersfield most probably would prefer a center city location within walking distance of their destinations. Most commuters would prefer a station site located towards Los Angeles and with free or very low cost parking. Airport access patrons will be seeking a seamless transfer link between the HSR station and the airport passenger terminal.

### SERVICE PROVIDERS

The on-going HSR EIS and engineering studies will identify preferences for the system. This EIS is scheduled to be complete in August and completion date for the engineering studies is undefined. Golden Empire Transit could serve any of the three sites. Provision of a new airport shuttle service connecting to the HSR would be least expensive for the site nearest the airport. The annual cost for one GET bus operating 365 days a year 16 hours a day is about \$300,000. It

is likely that Greyhound would prefer the Truxtun station site, as it might be able to relocate to this facility. Both the UP and the BNSF will not want HSR and they will have an important influence on the total and local cost for HSR.

### **STATION SITE CONCLUSIONS**

- All three of the station site vicinities could be developed into a HSR station;
- According to CHSRA all three of the station sites could be served by HSR trains.

### **Airport Station**

- Feasibility of Meadows Field becoming a satellite regional airport will not be determined until SCAG completes its upcoming regional airport feasibility study update;
- Selection of the Tehachapi route for HSR between Los Angeles and Bakersfield would appear to complicate the vision of Meadows Field becoming a satellite regional airport, since this route would pass by Palmdale before reaching Meadows Field;
- Successful development of Meadows Field into a satellite regional airport will require a seamless connection between HSR and the airport passenger terminal;
- The environmental impacts for this site would primarily related to expansion of the airport (noise etc);
- The cost of right of way would depend on coordination with airport expansion efforts and with plans to upgrade state highways in the site area;
- This HSR station site would probably involve the least land acquisition difficulties; and
- The airport site would be out of direction for commuters should this prove to be a viable HSR market.

### **Golden State Station**

- Best site for a station near Golden State Avenue and M Street appears to be near F Street;
- Proposed elevated freeway might limit station driveway access and could impact the attractiveness for waiting passengers and station area development;
- Probably the least cost station, if the UP corridor is selected for HSR service;
- The environmental impacts for this site would depend substantially on the plans for the Golden State Freeway. The freeway potentially could mask impacts associated with HSR and a station at this location. If the station's orientation is towards the north, then adverse impacts could occur to the residential neighborhood located north of the tracks;

- The cost of right of way would depend on cost sharing with the proposed elevated freeway project as well as needs associated with HSR main line right of way and environmental impact mitigation needs;
- If the BNSF corridor is selected for HSR service, this site would be less attractive; and
- Property acquisition would be difficult and would involve significant relocation costs.

### **Truxtun Station**

- A HSR station could be developed for this area in a number of ways depending on decisions regarding the Crosstown Centennial Freeway, on the post-HSR future of Amtrak's San Joaquin service and BNSF's interest improving its freight yard;
- Property acquisition appears to be easier for this site than for Golden State, but more difficult than for the airport site. Right of way acquisition related to planned freeway developments in all three station site corridors would significantly impacts costs and efforts for the HSR station project (probably mutually beneficial);
- Amtrak and Greyhound connections to HSR would be simplest;
- Due to the Crosstown Centennial Freeway's location immediately south of the HSR alignment, most of the economic stimulus benefits associated with HSR would likely be oriented north of Truxtun Avenue;
- The environmental impacts for this site would be largely mask by the planned freeway.
- Right of way costs would depend on cost sharing agreements with the Centennial Freeway project;
- Probably the most convenient location for business people traveling to Bakersfield; and
- If the UP alignment is selected for HSR, the Truxtun site would be an off-line station and might possibly require local funding participation for the added costs.

### **EVALUATION ASSESSMENT**

As noted in Chapter 1 of this report, a set of evaluation criteria were adopted by the Bakersfield City Council and the Kern County Board of Supervisors to help judge the best site for a HSR station in the Bakersfield Region. Table 6-1 summarizes the study findings in terms of these criteria. Due to a number of important variables and unknowns, simple assessments were not possible for many of the criteria. For example, plans to construct freeways in all three station site corridors complicated assessment of land use and environmental impacts as well as understanding of alignment and site development envelopes available for station development.

**Table 6-1  
STATION EVALUATION SUMMARY**

Station Evaluation Criteria	STATION SITE ALTERNATIVES		
	Airport Station	Golden Station	Truxtun Station
Station design characteristics	Accommodates Desired Program	Accommodates Desired Program	Accommodates Desired Program
Right of way needs	Related to freeway improvement efforts	Related to freeway coordination	Related to freeway coordination
Operational constraints	None	None	None
Track alignment considerations	4 track mainline station	4 track mainline station	Possible 4 track mainline station , but could be 2 track off-line station
Technology and service requirements	none	none	none
Availability of adequate utilities at the site	Site utilities being developed for Ind. Park	Site is presently served by utilities	Site is presently served by utilities
Site support of patronage and revenue objectives	Good if airport expands	Good, except as might be limited by elevated freeway	Good, except as might be limited by freeway
Site geology and engineering	Not on active fault	Not on active fault	Not on active fault
Feasibility of site acquisition	Appears simple	Coordinated with Freeway R/W Needs	Coordinated with Freeway R/W Needs
Ridership profiles and revenue forecasts	Potential for airport access patronage to be determined	Good for resident intercity and commuter markets	Good for resident and non-resident intercity and for commuter markets
Physical constraints to station area development	Improvements to SR-99 Freeway	Coordination with elevated freeway	Coordination with elevated freeway
Compatibility with adjacent land uses	Consistent	Consistent	Consistent

<b>Table 6-1 STATION EVALUATION SUMMARY</b>			
<b>Station Evaluation Criteria</b>	<b>STATION SITE ALTERNATIVES</b>		
	<b>Airport Station</b>	<b>Golden Station</b>	<b>Truxtun Station</b>
Growth considerations	Related to airport expansion	Potential limited by elevated freeway	Potential directed north due to freeway
Inter-connectivity with other transportation modes	Good for the airport, difficult for Amtrak San Joaquin Service should it remain. Pedestrian access poor.	Difficult for Amtrak San Joaquin Service should it remain. Good for others except pedestrians	Good for all modes
Impacts on existing transportation facilities	Major Implications for Airport Interface	Needs link to airport	Needs link to airport
Consistency with existing plans and policies	Good except for unknowns associated with airport expansion	Good	Good
Job generation potential	Related to airport expansion potential	Good	High
Property tax impacts/Local Project Costs	Tax impact difficult to predict, local cost risk would be low	Tax impact difficult to predict, local cost risk would be low	Tax impact difficult to predict, some risk for local cost related to off line station
Surface street transportation impacts	Minimal	Minimal	Minimal
Redevelopment potential and property tax increments	Not in established redevelopment area	In a redevelopment area, except for the residential neighborhood north of tracks	Covered by several redevelopment areas
Availability of FAA funding programs to connect HSR station to an airport	Possible, but likely provided by passenger fees	None	None
Use of the Vision	Consistent with	Consistent with	Consistent with TOD

**Table 6-1  
STATION EVALUATION SUMMARY**

<b>Station Evaluation Criteria</b>	<b>STATION SITE ALTERNATIVES</b>		
	<b>Airport Station</b>	<b>Golden Station</b>	<b>Truxtun Station</b>
2020 Plan for urban sprawl implications	airport growth policies	downtown development policies	land use and pedestrian promotion policies

# **APPENDICES**

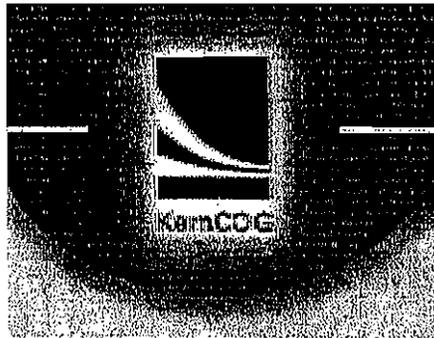
# Appendix A

## STAKEHOLDER INTERVIEW SUMMARY

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# Metropolitan Bakersfield HIGH SPEED RAIL TERMINAL IMPACT ANALYSIS

Stakeholder Interview Summary  
*January 2003*



*Prepared for Kern COG by:*

**Deborah Hart Redman, Redman Consulting**  
*Project Consensus & Outreach Subconsultant to Wilbur Smith Associates*

## I. Introduction

In November 2002, the Kern County of Governments (Kern COG) initiated this study to evaluate three potential sites for a future High Speed Rail (HSR) terminal in the Greater Metropolitan Bakersfield area. A critical goal of the study is to build a local consensus on a final recommendation to the California High Speed Rail Authority (CHSRA) by spring of 2003, in advance of a potential CHSRA decision on the site. Consensus building is a major element of the study because each of the three sites is moderately or strongly supported by one of three major local stakeholders: the City of Bakersfield, the County of Kern (including the Department of Airports) and the Downtown Business Association. The three sites under consideration are:

- Truxtun Avenue and S/Union Street (near the Amtrak station)
- Golden State/M Street (may be at Golden State from M to F Street)
- 7<sup>th</sup> Standard Road West (2 miles from Meadows Field Airport)

As a first step toward building consensus, the consultant team interviewed members of each of those agencies or organizations, in an effort to understand the history of developments to this point, and each group's current views and issues of most importance. This initial subtask was designed primarily as a listening exercise, and is presented in a straightforward manner in this report, with minimal additional material.

Note that community groups (as distinct from stakeholders) have also begun to be interviewed. Contacts will be made with the following organizations, and to the extent possible, interviews will be conducted with key representatives of each organization, either in person, via telephone or a combination of telephone contact and email. The groups currently listed are as follows:

Greater Bakersfield Chamber of Commerce  
 Hispanic Chamber of Commerce  
 Smart Growth Coalition  
 Kern Transportation Foundation  
 Golden Empire Transit (completed 12/10/02)  
 Project Clean Air (completed 12/10/02)  
 Kern Regional Transit (completed 12/18/02)  
 Sierra Club  
 Golden Empire Division of American Institute of Architecture  
 American Public Works Association  
 Potential Additional Organizations Suggested by Stakeholders:  
 Kern County and nearby Economic Development Corporations

## II. Methodology for Conducting Interviews

On November 26, 2002, the Kern COG project manager and Executive Director approved the following set of questions to be used as a guide for stakeholder discussions:

### Group Discussion Guide Topics

- What is your vision of how Metropolitan Bakersfield should develop?
- How have you come to see [name of site] as the most appropriate HSR terminal for the City of Bakersfield?
- What are the most important criteria for evaluating a terminal site?

- What potential environmental impacts do you see as important with respect to your currently preferred site? Do you see any mitigations (if applicable)?
- What do you see as the strengths as weaknesses of your perspective with respect to the terminal site?
- In what ways is your perspective flexible?
- In your view, what multiple goals should be achieved in siting the HSR terminal?
- How do you see the different needs of the CHSRA, potential rail passengers (both local and pass-through) and the community in which the terminal is ultimately located?
- How do you see the integration of rail and other transportation modes in the greater Bakersfield area?
- Which portions of the Kern Transportation Foundation evaluation do you agree with/disagree with, and why? (Facilitator will bring copy of summary matrix for discussion)
- What would you like to let us know that we haven't asked?
- Who do we absolutely need to talk to (either in addition, or in more depth)?
- What would you like to know from the groups we will be interviewing next (Facilitator will bring list of community groups)?

The stakeholder meetings took place mid-December 2002, in an informal interview format as indicated below:

- Deborah Redman, interviewer
- Approximately 4-6 people per group
- Site determined by respective contact for each group
- 1.5-2.0 hours per group

Interviews with the three stakeholder groups were held as follows (listed chronologically):

**1. Downtown Business Association**

Meeting Held at UC Merced Building  
December 10, 2002 5-7 PM

Attendees at Downtown Business Association (DBA) Stakeholder Interview

<b>Name</b>	<b>Title/Position</b>
Herman Ruddell	DBA Board (Kern COG Project TAC)
Art Carlock	Chairman, Highway 99
Fred Prince	DBA
Cathy Butler	DBA

**2. Kern County**

Meeting Held at 2700 M Street  
December 11, 2002 10 AM- Noon

Attendees at Kern County Stakeholder Interview

<b>Name</b>	<b>Title/Position</b>
David Price, III	Director, Kern County Resource Management Agency
Barry Zoeller	Executive Director, Kern County Board of Trade
Craig Pope	Kern County Roads Director
Bill Wilbanks	Assistant County Administrative Officer
Ted James	County Planning
Chuck Lackey	Engineering and Survey Services
Ray Bishop (separately via email/phone communications)	Director, Department of Airports
Guy Greenlee (separate telephone interview)	Director, Kern County Community and Economic Development Department

### 3. City of Bakersfield

Meeting Held at 1501 Truxtun Avenue

December 11, 2002 3-5 PM

#### Attendees at City of Bakersfield Stakeholder Interview

<b>Name</b>	<b>Title/Position</b>
Hon. Harvey Hall	Mayor, City of Bakersfield
Alan Tandy	City Manager
Raul Rojas	Director of Public Works
Arnold Ramming	Civil Engineer II (Kern COG Project TAC)
Jack Hardisty	Development Services Director

### III. Summary of Stakeholder Responses

The following three tables represent a compilation of the three stakeholder groups interviewed (Downtown Business Association, Kern County and City of Bakersfield). The first table illustrates stakeholders views on the composition of high speed rail ridership they believe is most probable, which bears upon the purpose and need for specific terminal amenities and transportation support. The second table summarizes responses to questions posed to each group; the third table summarizes pros and cons for each potential site, from the perspective of each stakeholder group. The Department of Airports is presented separately from the remainder of Kern County stakeholders because of the distinct agency mission-dependent position strongly advocated by the Director of Airports.

**Table 1: Who will be riding the High Speed Rail system? What will the ridership profile look like? Who will be using the Bakersfield Terminal?**

Agency	Perspective on HSR Ridership and Terminal Utilization
City	<ul style="list-style-type: none"> <li>• A large mix of pass-through travelers from points north and south of Bakersfield (primarily San Francisco and Los Angeles)</li> <li>• The 30-50% of those stopping at Bakersfield will either have business in Bakersfield or consist of Bakersfield residents commuting outbound</li> <li>• Folks from surrounding towns who get to Bakersfield to get on the grid, traveling by Amtrak, bus or car to Bakersfield to get on HSR or an airplane</li> <li>• Those traveling from a town on the HSR alignment to get to an airport or regional/national transit</li> <li>• Travelers destined for cultural events (traveling both to and from Bakersfield)</li> <li>• Very improbable that a even a small percentage percentage of train passengers will come to Bakersfield to take air transportation to other destinations</li> <li>• Amtrak will serve as a regional feeder to the HSR train</li> </ul>
DBA	<p>We expect the major percentage of ridership for Bakersfield will be directly related to business and commerce, and to leisure travel.</p> <ul style="list-style-type: none"> <li>• <u>Business travel to distant cities outside California</u> (typically by air) will begin in BFL via HSR. At about 1.5 hours to SFO with a proposed direct airport connection, and less to LAX, there will be little reason to fly. Indeed, with HSR fares in the \$35 range and air fare several times that, and travel time about the same considering a one hour advance airport arrival, most business travelers utilizing SFO or LAX will take the train. And this doesn't consider the ability to walk about the train, get coffee or a snack, and most importantly, being able use your phone and computer throughout the trip with little chance of weather delay. And it doesn't consider the limited options from BFL if there is a flight delay.</li> <li>• <u>Business travel to California cities</u> by HSR will be significant. Business owners and managers will make significant use of the system, and access to consultants and related business purposes will no longer drive to sales meetings, buying trips, training classes conferences and so forth. The ability to work while on the train will be discovered as a significant benefit. See Note 1.  Similarly, business travelers from other California cities will come to Bakersfield by HSR to attend meetings, conferences and training. However, competition will dictate that many of these destinations will not always be adjacent to the HSR facility, and will be even more attractive if there is convenient economical and timely inter-modal interconnectivity. See Note 1.</li> <li>• <u>Leisure travels to distant cities outside California</u> (typically by air) will make similar use of the train as Business travelers traveling to cities outside California. Families groups however, may still use the car when the cost of multiple HSR tickets exceeds the cost of driving plus parking, and an intangible hassle factor.</li> <li>• <u>Leisure travel to California cities</u> will have a similar pattern as Business travelers. Marketing for such venues as Disneyland, Six Flags, Sea World and others will surely offer direct connections from HSR stations to their venues to attract business. The same may be true for professional and college sports games of significance, such as playoffs or</li> </ul>

	<p>championships. Tour groups and cruise ships operators will market and advertise connections to their venues from HSR. See Note 1.</p> <ul style="list-style-type: none"> <li>• <u>Commuting</u> to cities by HSR from Bakersfield will not be significant percentage of total patronage however, niche commuting by workers such as nurses, doctors, policemen, firemen and others who have or can arrange short workweeks, may be important. While commuter fares from Bakersfield (the HSRA presently does not include such a fare in its business plan) will be costly; the real problems will be getting to and from each HSR station. Bakersfield does not have and is not planning a system of fast convenient transit to connect homes and residential communities to its proposed HSR terminal, and the cost and convenience of travel to and from one's work site at a distant HSR station is at best an unknown.</li> <li>• <u>Travel to Bakersfield from California and more distant cities</u> presents similar concerns in the reverse of those noted above. Will travelers coming to Bakersfield find convenient economical local transit options? See Note 1 and 2</li> </ul> <p><b>NOTE: 1,</b> The choice to use HSR by many business, leisure and commuting travelers will be directly related to the cost and convenience of inter-modal inter-connectivity, i.e., can one get off the HSR and board local transit to their destination easily, timely, and economically, and return, at <b>BOTH</b> ends of the trip? Can one rent or hire a "clean-air-friendly" vehicle for local use economically? For arriving travelers, will timely connecting service to and from outlying communities, i.e. Buttonwillow, Taft, Wasco, Shafter, Delano, McFarland, Lamont, Arvin, Tehachapi, Lake Isabella and Frazier Park) be available from KRT, or others? Will the traveler know which HSR trains will make such connections if all do not? And will a local traveler going to a distant HSR station have similar interconnectivity to their final destination?</p> <p><u>Will Amtrak service continue?</u> Some believe Amtrak, as it presently operates, will continue providing service to those communities not scheduled to receive HSR service. With only Wasco and Corcoran in this category, we do not see Amtrak surviving. Service for Wasco to Bakersfield (and Corcoran to either Fresno or Hanford/Visalia by bus), and a host of other southern San Joaquin communities, could be provided by KRT transit bus more conveniently and economically. Hopefully KRT service to communities along both the UP and BNSF railroads could one day be upgraded to service by rail with light or commuter rail type "clean-air-friendly" vehicles. Growing KRT transit into service by rail will become increasingly more desirous as congestion on local streets and highways increases.</p> <p><b>NOTE: 2,</b> While Bakersfield's Centennial Garden and Convention Center offer facilities and events that may attract travel from distant cities by HSR, past experience shows such destination travel solely for day entertainment will not be a significant percentage of HSR patronage. With regard to a Truxtun station site being convenient to such venues as the Beale Library, our courts and city and county offices, it appears that the majority use of these facilities is by local people. Out of area users of these services that would travel by HSR do not appear to constitute a significant percentage of HSR patronage.</p>
<p><b>County</b></p>	<ul style="list-style-type: none"> <li>• Need to know more about the ridership demographic that is most probably going to emerge</li> <li>• Airport and ground transportation transfers will predominate in the ridership mix</li> <li>• Some percentage of HSR users will be commuters (mostly to So. Cal) who are attracted by lower housing costs (up to 40% of some metro Bakersfield subdivisions are reported purchased by people from Southern California)</li> <li>• Bakersfield HSR stop will serve the southern half of the San Joaquin Valley</li> </ul>

<b>Airports</b>	<ul style="list-style-type: none"><li>• Travelers who want to avoid the Grapevine (congestion and fog)</li><li>• Ridership profile will be influenced by a context of capacity limitations at LAX, Ontario, Burbank, Long Beach and John Wayne airports, pushing air passengers toward Bakersfield. This “reverse leakage” potential could be significant.</li><li>• Ridership will continue to grow based on current origins and destinations (Phoenix, SF, LA, Dallas, Houston, Seattle, Chicago, Denver, Las Vegas and Portland, etc.)</li><li>• New ridership to 7<sup>th</sup> Standard Station may reflect BFL markets that include travelers destined for Guadalajara, Mexico City, Seattle, Leon-Guanajuato, Chicago, Dallas, New York, San Salvador, Honolulu and Morelia, <i>who now use other means of reaching their destinations</i></li><li>• Will pull ridership off Airport Bus of Bakersfield, passenger vehicles</li></ul>
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Table 2: Bakersfield HSR Summary Matrix: Stakeholder Response to Questions (December 2002 Interviews)

Issue	City	DBA	County	Dept. of Airports
<p>Vision for Metro Bakersfield</p>	<p>Development should be planned. Expansion growth must be balanced with redevelopment of the central city and in-fill development.</p> <p>Current boom in housing; City is moving beyond its current "stand-alone" character. Bakersfield will become in part a bedroom community for Southern California, due to relatively lower housing costs and access to Southland jobs promised by HSR connection.</p> <p>Expected doubling to tripling amount of downtown redevelopment in coming years.</p>	<p>Metropolitan plan calls for "centers" development. Centers should be connected with center-to-center express transit (e.g., GET express service from Valley Plaza to CBD and BC) with local transit focused on the center's hub. Each center should connect to HSR terminal. All this could develop into a light rail system with supporting P&amp;R lots and employment concentrations. While proposed in both current and newly updated General Plans, the Centers concept is not well defined. As a community, we need to do more with the concept.</p> <p><i>While the city should and hopefully will develop a number of centers, Downtown will serve as the center for the whole metropolitan area. In the foreseeable future we expect to see significant re-development and new development activity downtown. Such development should occur such that parcels are more fully developed. Downtown has a history of significantly under-developing sites compared to development potential allowed or permitted by code and zone.</i></p> <p>Kern Regional Transit presently serves distant centers, located along rail corridors, i.e., Wasco, Shafter, Delano, McFarland, Arvin, Lamont. KRT bus service could grow into a regional rail connection to HSR terminal</p> <p>City should expand its green corridors beyond just Kern River trail system, and should include Class 1 bike trails.</p> <p>Vision for the Golden State terminal site includes a direct connection to the airport, and connections to downtown parking facilities and most major downtown business,</p>	<p>Though Bakersfield will continue to grow, it will be important to maintain its current small town charm and uniqueness. We are looking for quality big city services, with the friendliness and charm of a rural town.</p> <p>Bakersfield will be an area of multiple centers—not characterized by a sole central business district.</p> <p>Questions reality-basis of City's vision for CBD high-density clustered housing supporting transit, etc.</p> <p>Need for Bakersfield to attract higher-paying jobs. Skepticism about ability of City to change its current character to take advantage of downtown site.</p>	<p>All Kern County residents and all cities have a vital interest in the success of Meadows Field.</p> <p>Envisions a world-class airport that is customer-oriented, complements the Kern County Economy, and is safe and efficient.</p> <p>Preparing for the future by having infrastructure in place.</p>

Issue	City	DBA	County	Dept. of Airports
		<p>arts, governmental and retail facilities. Also includes a parking authority and business improvement district, both of which can help fund the HSR station facilities and amenities. Site is intended to anchor downtown development and reverse tendency to sprawl.</p> <p>A direct airport connection could be simply a Bus Rapid Transit service from the HSR terminal operating preferably on and within its own ROW alongside the UP or HSR alignment on an easement, continuing into the airport terminal.</p>		
<p>Most important evaluation criteria</p>	<ul style="list-style-type: none"> <li>• Inter-connectivity with other transportation modes</li> <li>• Impacts on existing transportation facilities</li> <li>• Redevelopment potential and property tax increment</li> <li>• Potential cost differential between CHSRA funding and local share + identification of funding to fill gap</li> <li>• Vision2020 and sprawl implications</li> <li>• Land use compatibility</li> <li>• Growth considerations</li> <li>• Track alignment (will be determined by CHSRA)</li> <li>• Cost</li> </ul>	<ul style="list-style-type: none"> <li>• Must meet CHSRA design criteria</li> <li>• Must be fully intermodal, for roads, freeways, and bus, future rail and light rail regional systems, remote park and ride lot locations and a dedicated airport connection</li> <li>• Must maximize potential for new development or re-development, thus creating the greatest potential for increased and new tax base (to pay for the station) and</li> <li>• Availability of utilities at the site, or cost to extend them (DBA does not see utility availability as an issue)</li> <li>• Growth considerations</li> <li>• Job Generation</li> <li>• Cost</li> </ul>	<ul style="list-style-type: none"> <li>• Look at infrastructure impacts, without regard for "preference"</li> <li>• Ridership</li> <li>• Growth considerations</li> <li>• Interconnectivity</li> <li>• Traffic circulation (impacts on existing transportation facilities)</li> <li>• Job generation/economic development</li> <li>• Property tax impacts</li> <li>• Accessibility (circulation and parking availability)</li> <li>• Cost</li> </ul>	<p>The airport sees' the migration of air travelers to the Bakersfield catchment area as vehicle to bring high quality aviation services jobs to the community. Equally important, the increase in air service will mean our local travelers will have more choices for direct service and more choices for price competitiveness.</p>
<p>Potential environmental issues</p>	<ul style="list-style-type: none"> <li>• Vehicular access to/from HSR terminal; offset by immediately adjacent (programmed) Centennial Corridor</li> <li>• Sprawl (land use and agricultural impacts)</li> <li>• Congestion</li> </ul>	<ul style="list-style-type: none"> <li>• Air quality <i>With good inter-modal planning, a HSR facility can have significant positive impacts on our severe air quality problem</i></li> <li>• Noise – The UP alignment and the Golden State site have only very minimal noise sensitive receptors compared to the Truxtun/BNSF with many.</li> <li>• Congestion – The Golden State site is served by an already established (including new roads with identified firm funding sources) road network. Site is easily</li> </ul>	<ul style="list-style-type: none"> <li>• Congestion/transportation impacts</li> <li>• Air quality</li> <li>• Noise</li> <li>• Vibration</li> <li>• Sprawl (local land use and cumulative agricultural impacts; need to reserve buffer space around terminal)</li> </ul>	<p>There is a limit to wanted aviation growth. The current runway configuration will become saturated at approximately 12 Million passengers per year. Up to that point growth would be welcomed. We estimate 200 jobs generated for every additional one million travelers.</p>

Issue	City	DBA	County	Dept. of Airports
		<p>reached via SR 178, Niles/Montorey, SR 204, West Side Parkway via an improved 24<sup>th</sup> St, SR 99 via an improved 24<sup>m</sup> St., and SR 58 and Union Avenue. This site does not depend on new roadways that have no identified funding and which may be at risk not being funded or built as envisioned.</p> <ul style="list-style-type: none"> <li>• Sprawl – A downtown station will influence a re-focusing of development and should result in more intense development in downtown and significant infill within developed areas.</li> </ul>		
Flexibility on perspective taken	Per policy board action, there is strong support for Truxtun Ave. as the number one candidate site; if that proves unacceptable to CHSRA, then number two would be the Golden State site.	Although DBA prefers the Golden State site, if the CHSRA chooses to use the BNSF line through town, the Truxtun Ave. site would may be satisfactory however, other sites along the BNSF should also be examined, such as between Chester, California and H Street based on 1, the high number of GET routes passing this location 2, because Chester and California connect directly to SR 58 and SR 99, and 3, the ease of pedestrian access to the downtown core DBA wants a downtown site that performs well against local and statewide criteria.	Very flexible, as long as there is demonstrated ability for County to be able to serve the site; that the site is cost effective, and makes sense from a ridership standpoint. Mild preference for Golden State over Truxtun, but willing to look at facts for all three sites.	Strong advocate for 7 <sup>th</sup> Standard site, as most accessible to Airport.. Other options would have a tremendous impact on the community and the traveler. The additional mileage for people movers and transit systems to the airport would saturate the downtown street system
Multiple Goals to Consider in HSR Siting	<ul style="list-style-type: none"> <li>• Must be truly multi-modal</li> <li>• Must provide easy access to all citizens of Greater Metro Bakersfield</li> <li>• Maintain a downtown as a central focal point for civic growth and development, as well as civic pride</li> <li>• Convenient connectivity between HSR and ground transportation <ul style="list-style-type: none"> <li>• Place terminal near lower-income housing to enhance jobs/housing balance</li> <li>• CHSRA needs a functionally efficient system, but also one that will entice travelers to get out of their cars and use the HSR system</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• See responses to evaluation criteria, above</li> </ul>	<ul style="list-style-type: none"> <li>• See responses to evaluation criteria, above.</li> <li>• Meet required HSRA design criteria/needs.</li> <li>• Maximize potential for new and re-development to create tax increment for financing local improvements.</li> <li>• Avoid over reliance on new roads and freeways that do not have a firm fully identified funding sources.</li> <li>• Strengthen downtown as the urban metropolitan “center”.</li> </ul>	The advent of the HSR require we think outside of the conventional box, and look at likely scenarios that could bring tens of millions of passengers to Bakersfield. All of which are changing modes of transportation from rail to plane.
Views of KTF study	General agreement with KTF	A number of troubling	KTF was a generalized first cut at	Current study has no provision for

Issue	City	DBA	County	Dept. of Airports
	<p>criteria, and decision to limit discussion to three sites.</p> <p>KTF was not meant to provide specific detailed information on which to base final decision. The WSA study should provide this information for decisions in spring of 2003.</p>	<p>discrepancies exist in the KTF document; also, DBA was never asked to provide information about or present its proposed site.</p>	<p>reducing a larger set of alternative sites to three. At this stage, the study should be disregarded.</p>	<p>the Los Angeles conundrum of growing air service demands, but limits on the airports growth capability.</p>
What haven't we asked you?			<ul style="list-style-type: none"> <li>Will the HSR system be implemented? Given huge budget shortfalls and deficits, can California really afford this?</li> </ul>	
Who else should we talk to?		(No additional organizations or individuals identified)	<ul style="list-style-type: none"> <li>Elected officials</li> <li>Economic Development Corps. In Kern County and Central Valley</li> </ul>	
What would you like to know from the community groups on the interview list?	<ul style="list-style-type: none"> <li>How do other groups plan to contribute to the net local cost differentials associated with different terminal sites? (How will groups support the financing?)</li> </ul>		<ul style="list-style-type: none"> <li>What do the groups think the terminal site impacts will be?</li> </ul>	
What do we need to know more about to make this decision?	<p>City does not believe a market study is needed—due to large uncertainties inherent to California economy, and market research inadequacy, it would not add significantly to the decision making process.</p>	<p>What is Bakersfield going to get out of this? (What benefits does a HSR terminal offer to the community that bears the burden?)</p>	<p>What will the ridership profile for HSR actually look like? This will determine their need for roads and other transportation facilities. (County would like to see a ridership study as part of this part of the process.)</p> <p>How will the Truxtun Avenue site support the traffic volumes and parking needs associated with the HSR station?</p>	
Other Issues	<p>Costs—what entity other than the City will help pay?</p>	<ul style="list-style-type: none"> <li>DBA would like the opportunity to rebut some of the assertions in the proposals for the other two sites and to clarify any misconceptions other groups may have of DBA's vision for the Golden State site. <ul style="list-style-type: none"> <li>Note results of charette where community chose a HSR station near the DBA site at Golden State/M Street. The charette site is Golden State at V St.</li> <li>Need to consider what's best for Bakersfield as a whole.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Costs—local population does not support new taxes in any guise.</li> <li>Redevelopment, and associated tax increment funding assistance, is likely to be more modest than projected by City</li> </ul>	<p>We are working on, and we need to ensure that the HSR selects the grapevine route, versus the Palmdale corridor. Otherwise we will lose the opportunity for thousands of jobs and the opportunity for significant increases in air service and affordability.</p>

Table 3: Summary of Pros and Cons for Potential Bakersfield High Speed Rail Terminal Sites

Site	City	DBA	County	Airports
<b>Truxtun Avenue</b>				
<i>Pros</i>	<ul style="list-style-type: none"> <li>• “True” downtown site—functional and geographical centroid for Metropolitan Bakersfield</li> <li>• Offers greatest possibilities for intermodal connections (Amtrak, bus, car, shuttle, pedestrian, bicycle)</li> <li>• Is the only site that supports a pedestrian environment</li> <li>• Supports prior and planned redevelopment work in and near urban core</li> <li>• Supports City and Vision2020 commitment to theme of bigger, better downtown Bakersfield</li> <li>• Italian Plan makes this work</li> </ul>	<ul style="list-style-type: none"> <li>• If CHSRA chooses the BNSF alignment, then this site has possibilities. However, other locations along the BNSF might perform better.</li> <li>• If UP alignment is chosen, there are no pros for this site.</li> </ul>	<ul style="list-style-type: none"> <li>• If people are interested in Bakersfield as destination, this is best site (pedestrian accessibility to sports, convention and hotels)</li> <li>• Could offer County Admin building very convenient access to HSR and Sacramento</li> <li>• Supports infill development</li> <li>• Supports cultural/downtown core users of HSR system</li> <li>• Potential for City to continue investment in CBD and create vibrant, exciting environment for HSR users, with walking-distance destinations—erodes concern about circulation</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Cons</i>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• Added costs associated with “Italian Plan” (CHSRA will not pay increment beyond trunk line)</li> <li>• Site is physically constrained; may be difficult to provide required grade separation and fencing for HSR</li> <li>• Site would require HSR to be elevated, thereby increasing costs</li> <li>• Not likely to be fully intermodal; served by only one bus route and from the adjacent street. Site does not appear adequate to incorporate major GET terminal.</li> <li>• Lacks a desired high-speed profile</li> <li>• Offers lower potential for new development and increased AV.</li> <li>• Site is accessed by only one major road; proposed Centennial Corridor is not certain to be built, and will be built post 2010. The only access to the station is via Truxtun Avenue. If the Centennial Freeway is built, it is proposed to be elevated south of the BNSF. Look at the proposed configurations for on/off ramps to the Q street underpass to Truxtun to the Amtrak station’s S St. Entrance. These have changed with every proposed development so far along the California Avenue/BNSF corridor, and for ease of access, the route is at best convoluted. A facility of this magnitude should have multiple access points.</li> <li>• Many potential noise impacts to local land uses, such as churches, schools, places of public assembly, court rooms, council chambers, library, hotel and BHS; potential costly mitigations</li> </ul>	<ul style="list-style-type: none"> <li>• Physical space constraints may exist at this site</li> <li>• Incompatibility of 120 MPH trains through downtown, adjacent to residential</li> <li>• Potentially higher cost of linking ground transportation to airport (higher ROW costs)</li> <li>• Concern about ability of downtown streets to handle influx of new traffic to/from terminal</li> <li>• Unnecessarily requires commuter traffic to be routed through downtown along with existing and growing downtown-destination traffic</li> <li>• Appropriateness of site depends on a future with high-density living/working in downtown</li> </ul>	<ul style="list-style-type: none"> <li>• An illogical choice with the consideration of millions of air travelers coming to Bakersfield for transfer to air travel. 7+ miles of people mover/Transit systems, all of which are downtown.</li> </ul>

Site	City	DBA	County	Airports
<b>Golden State</b> (at M St. to F St.)				
<i>Pros</i>	<ul style="list-style-type: none"> <li>Better than 7<sup>th</sup> Standard Road with respect to support of downtown redevelopment</li> </ul>	<ul style="list-style-type: none"> <li>Proximity to Old Town (reached via Sumner and 21<sup>st</sup> and Niles and Montgomery)</li> <li>Better surface transportation access to SR-99 and better arterial access than Truxtun Ave.</li> <li>Elevation of alignment not required; can be constructed at grade</li> <li>Supports station site anywhere from F Street to Old Town</li> <li>Will have positive air quality impact at Golden State site with proposed integration with local/regional transit and remote parking/shuttle connections)</li> <li>Minimal noise impacts due to industrial character or older commercial adjacent uses</li> <li>More potential for redevelopment than Truxtun site</li> </ul>	<ul style="list-style-type: none"> <li>Better intermodal connectivity than Truxtun (99/airport access)</li> <li>Closer to downtown than 7<sup>th</sup> Standard site</li> <li>This site can handle the scale of the project (more than just an "overgrown Amtrak station")</li> <li>Fewer noise/vibration impacts due to industrial character of adjacent land use</li> <li>Suggestion to look at F intersection, where site acquisition might be easier (old Montgomery Ward site)—possible circulation benefits over the Golden State and M site</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
<i>Cons</i>	<ul style="list-style-type: none"> <li>Doesn't support pedestrian environment</li> <li>Lacks central access to probable origin/destination points that Truxtun Ave. site offers</li> </ul>	<ul style="list-style-type: none"> <li>Perception that the site is "not in downtown" Bakersfield</li> </ul>	<ul style="list-style-type: none"> <li>Potentially higher cost of linking ground transportation to airport (higher ROW costs)</li> <li>Lack of planned transportation corridor to get people in and out, unless Alternative 15 is built</li> </ul>	<ul style="list-style-type: none"> <li>Again, a better choice than downtown, but still 4+ miles of transit to the airport with millions of travelers, sure to muck the traffic flow and create air problems</li> </ul>

Site	City	DBA	County	Airports
7 <sup>th</sup> Standard Road				
<i>Pros</i>	<ul style="list-style-type: none"> <li>None identified</li> </ul>	<ul style="list-style-type: none"> <li>Any pros for this site depend on BFL becoming a major facility with perhaps as many as a hundred or more daily flights with full size aircraft, and DBA does not see this as likely. A more probable future would be for BFL to develop regional jet service to several hubs with perhaps 4-5 flights per hub daily, perhaps 25-30 daily flights.</li> </ul>	<ul style="list-style-type: none"> <li>Proximity to existing track alignments</li> <li>Easy access to Central Valley</li> <li>No disruption of established areas downtown to get people to major freeways.</li> <li>This site can handle the scale of the project (more than just an "overgrown Amtrak station")</li> <li>Is in the center of existing/planned investment, and thus not sprawl-inducing (conforms to Centers Concept)</li> <li>Better intermodal connectivity than Truxtun (99/airport)</li> <li>New surface transportation investment is ongoing</li> <li>New airport and convenient HSR terminal could remove one major obstacle to local economic development; help attract higher-paying jobs</li> <li>Improves the "Gateway" to the community</li> </ul>	<ul style="list-style-type: none"> <li>April 2005 date for completion of \$88 M worth of infrastructure improvements are being implemented (new terminal and runway; 7<sup>th</sup> Standard Road Interchange, Roadway improvements, Pactive)</li> <li>Improves business environment for Kern County and Bakersfield</li> <li>Voila—the smart choice. Serves the airport and allows unimpeded growth around the HSR terminal. Plan for the future.</li> </ul>
<i>Cons</i>	<ul style="list-style-type: none"> <li>Airport demand and carrier interest and commitment is too uncertain</li> <li>Airport is limited to one runway and frequent fog closures</li> <li>Sprawl inducing</li> <li>Lacks supporting commercial and service development</li> <li>Doesn't support a walking environment</li> </ul>	<ul style="list-style-type: none"> <li>Airport demand and carrier interest is too uncertain</li> <li>Though it is compliant with the Centers concept, it will tend to induce sprawl and discontinuous development</li> <li>Depends on major new freeway construction, i.e., beltway and SR-58 extension, for which no funding has been identified, and which may not be completed even within a 20 year horizon.</li> </ul>	<ul style="list-style-type: none"> <li>Centers notwithstanding, the site is "out in the middle of nowhere" and will induce growth.</li> <li>Lack of supporting commercial and service development</li> <li>Airport is limited to one working runway</li> <li>How will higher use of airport and HSR terminal benefit Bakersfield?</li> <li>Shuttle service will still be necessary from the HSR terminal to the airport</li> <li>Nothing to attract someone to the site, other than as a transportation hub</li> <li>Denies downtown Bakersfield the "Gateway" opportunity</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

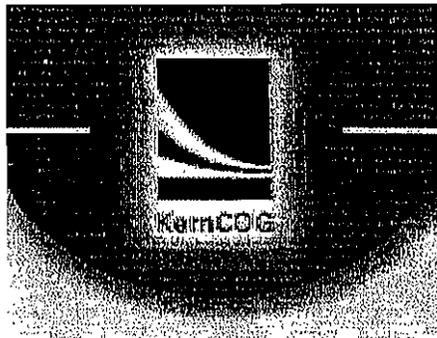
**Appendix B**  
**COMMUNITY/INTEREST GROUP INTERVIEW**  
**SUMMARY**

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# Metropolitan Bakersfield HIGH SPEED RAIL TERMINAL IMPACT ANALYSIS

December 2002-February 2003  
Community/Interest Group Interview Summary

*March 11, 2003*



*Prepared for Kern COG by:*

**Deborah Hart Redman, Redman Consulting**  
*Project Consensus & Outreach Subconsultant to Wilbur Smith Associates*

## I. Introduction

This document summarizes the comments of representatives from eight Bakersfield area community groups, who were asked for their thoughts and concerns with respect to the three potential sites for the future Bakersfield High Speed Rail Terminal. Those sites are located at the Truxtun Avenue Amtrak Station, Golden State between F and M, and 7<sup>th</sup> Standard Road.

As part of the "listening" component in the overall effort to develop consensus for a High Speed Rail terminal site in the Bakersfield area, this task followed the initial public consensus task, which was to conduct in-depth interviews with the three primary stakeholders (the City of Bakersfield, County of Kern and Downtown Business Association). The community groups (identified by the study Technical Advisory Committee) were interviewed in late 2002 to early 2003 and included those in the table below.

**Table 1: Community and Interest Group Participants in HSR Terminal Siting Consensus Efforts**

<b>Group</b>	<b>Attendees</b>	<b>Date</b>	<b>Location</b>
Greater Bakersfield Chamber of Commerce	Chris Frank	February 19, 2003	Telephone Interview
Golden Empire Transit	Chester Moland Cheryl Scott Emery Rendes	December 10, 2003	GET offices, Bakersfield
Golden Empire Division of American Institute of Architecture	Larry Wiggins Arin Resnicke Mary Bogacki Joe Covington Jeffrey Krausse Dave Cross Graham Kaye-Eddie David Milazzo Tim Stromont	February 18, 2003	Kern COG Conference Room
Hispanic Chamber of Commerce	Lou Gomez	January 23, 2004	Telephone Interview
Kern Regional Transit	Linda Wilbanks Pat Ebel	December 18, 2002	Telephone Interview
Kern Transportation Foundation	Gary Blackburn, President	February 20, 2003	Telephone Interview
Project Clean Air	Herman Ruddell Linda Wilbanks Craig Huff Linda Urata	December 10, 2002	Kern County Offices, Chester Ave., Bakersfield
Smart Growth Coalition	Paula Larwood	February 19, 2003	Telephone Interview

Groups were questioned about their members views on the overall vision for Metropolitan Bakersfield, any preferences or concerns with respect to any of the three potential HSR terminal sites, and asked to provide insight into their group-specific goals and objectives that would provide insight into those preferences. Questioning varied from group to group, based on the interest, knowledge and specific area of expertise of group members present.

The Smart Growth Coalition, Hispanic Chamber of Commerce and Greater Bakersfield Chamber of Commerce offered to use an "email blast" to alert their members to the public open house(s) that will complete the public consensus effort in March/April 2003.

## II. Summary Matrix of Community Group Responses

Group	Vision for Metro Bakersfield	Main Concerns and General Observations	Truxtun Avenue Site (Pros/Cons/Observations)	Golden State Site (Pros/Cons/Observations)	7 <sup>th</sup> Standard Road Site (Pros/Cons/Observations)
Greater Bakersfield Chamber of Commerce	<ul style="list-style-type: none"> <li>Support for continued development within the heart of the community (downtown).</li> </ul>	<ul style="list-style-type: none"> <li>Most members would be concerned about cost.</li> <li>Everyone needs to be flexible to ensure Bakersfield gets best project.</li> </ul>	<ul style="list-style-type: none"> <li>No official position at this time; their membership is studying the issue separately, and has not made a determination.</li> <li>Basically, the HSR should come into the populated area; into the heart of the community; strong coalition around that idea.</li> </ul>	<ul style="list-style-type: none"> <li>No official position at this time; their membership is studying the issue separately, and have not made determination</li> </ul>	<ul style="list-style-type: none"> <li>No official position at this time; their membership is studying the issue separately, and have not made determination</li> </ul>
Hispanic Chamber of Commerce	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>Members focused on business-related issues of immediate concern; group has not tracked this issue</li> </ul>	<ul style="list-style-type: none"> <li>Some preference for the Amtrak site, because it is centrally located with ample parking.</li> </ul>	<ul style="list-style-type: none"> <li>No opinion expressed on this site.</li> </ul>	<ul style="list-style-type: none"> <li>Believes the 7th standard site is out.</li> </ul>
Golden Empire Division of American Institute of Architecture	<ul style="list-style-type: none"> <li>The location of the HSR terminal will, itself, determine the future of Bakersfield ("if they build it they will come")</li> <li>Bakersfield <i>needs an update to its vision plan for downtown</i></li> <li>"Do we want to make it easier for people to get <i>into</i> town or <i>out of</i> town?"</li> <li>Fresno was similar to Bakersfield 20 years ago, but had higher growth—represents potential future scenario.</li> <li>One proponent for a "Visalia" downtown—get Centennial Fwy and high-tech rail out of downtown area; go for total pedestrian environment w/tree canopy</li> <li>Make Bakersfield great for residents, and financed by non-residents</li> </ul>	<ul style="list-style-type: none"> <li>To ensure survival of Bakersfield vs. Oildale</li> <li>To grow the entertainment, convention and hospital industry in downtown</li> <li>Most attention should be on needs of passengers who are actually visiting Bakersfield, not just passing through</li> <li>2020 Plan includes large investment for east/west freeways to both Golden State and Truxtun</li> <li>There is no significant downtown congestion or parking shortage currently; more problems stem from sprawl than density</li> <li>Commute traffic will present a problem no matter which site is chosen; however tourist trade traffic can be minimized with downtown site</li> <li>City has become east/west community; used to be north/south (Chester-driven)</li> <li>Concern about NIMBY reactions from residents at any site (vibration impacts)</li> </ul>	<ul style="list-style-type: none"> <li>Majority straw vote support/strong support for Truxtun site (7 of 9). Support grew after the discussion among members.</li> <li>Truxtun is highest/best use, has best infrastructure—outfall trunk line; 30 in. sewer line, four best water wells in town, largest hotel, Convention Center, sports/entertainment development underway</li> <li>Some concern about how much land was available to further develop hotel/convention uses near Amtrak station; others saw no problem with that</li> <li>Truxtun has access to Amtrak and Union Ave, and then to fyws.</li> <li>One strong opponent of Truxtun Ave site as unrealistic due to major modification of infrastructure required;</li> <li>Parking structure would not be major visual impact</li> <li>Truxtun Ave can take advantage of three redevelopment project areas' tax increment financing</li> <li>Construction impacts could be endured and would likely be seen as sign of healthy economic growth—actually welcomed by area residents/workers</li> <li>Truxtun Ave area landowners are NOT NIMBY—they want it</li> <li>Bringing people into downtown area will allow Bakersfield image to change</li> <li>Makes sense from Greenfields-Brownfields perspective</li> <li>Visual impact no greater than elevated freeway</li> </ul>	<ul style="list-style-type: none"> <li>Golden State is not considered part of "downtown" but represents best compromise site</li> <li>Golden State needs redevelopment; utilizes Golden State Hwy and direct access to fyws</li> <li>To determine "true" downtown, use market or sale price value of square foot; this would exclude Golden State; however that means land is affordable to construct HSR terminal</li> <li>Golden State site could be developed with interesting pedestrian environment directed toward entertainment core of city, like Hanford</li> </ul>	<ul style="list-style-type: none"> <li>7<sup>th</sup> Standard road has high impact on valuable farmland</li> <li>Difficult to see logical connection between potential air traffic and HSR site</li> <li>No difference between a two mile and 4 mile trip from HSR to airport</li> <li>7<sup>th</sup> Standard road site is surrounded by folks with large houses who do say "not in my back yard"</li> <li>Locating HSR terminal here will promote Pumpkin Center and Oildale image of Bakersfield</li> <li>"Devil's Advocate" support for 7<sup>th</sup> Standard with people-mover connection to airport, noting, however, the farmland impact</li> </ul>

Group	Vision for Metro Bakersfield	Main Concerns and General Observations	Truxtun Avenue Site (Pros/Cons/Observations)	Golden State Site (Pros/Cons/Observations)	7 <sup>th</sup> Standard Road Site (Pros/Cons/Observations)
Golden Empire Transit	<ul style="list-style-type: none"> <li>▪ More compact, dense development, more infill; more acceptable, transit-friendly development</li> <li>▪ Smart Growth</li> <li>▪ Fewer walled-in cul-de sacs</li> <li>▪ More turnouts</li> <li>▪ Continuous development (no leap-frogging)</li> <li>▪ Less sprawl</li> </ul>	<ul style="list-style-type: none"> <li>▪ GET would like a site that minimizes impacts on current routes, infrastructure</li> <li>▪ KTF study was conducted at a very general level; should not be relied upon at this point</li> <li>▪ Smart Growth means a lot of different things to different people</li> <li>▪ Perception that sprawl is "what the consumer wants"</li> <li>▪ Given fare structures, HSR might not lead to growth inducement</li> <li>▪ Need for details on ridership study for HSR</li> <li>▪ Need for transit/multi-modal interconnectivity</li> <li>▪ HSR will be key generator</li> </ul> <p>Choose site that maximizes high-quality jobs, economic development</p> <ul style="list-style-type: none"> <li>▪ Needs to have sufficient space for all different modes</li> <li>▪ Consider baggage handling needs</li> </ul>	<ul style="list-style-type: none"> <li>▪ No strong feeling on difference between this site and Golden State (both are "downtown")</li> <li>▪ General (soft) preference for centrally located site because of existing routes</li> <li>▪ GET will serve any route selected with appropriate level of service (take GET service out of the decision)</li> </ul>	<ul style="list-style-type: none"> <li>▪ No strong feeling on difference between this site and Truxtun (both are "downtown")</li> <li>▪ GET will serve any route selected (take GET service out of the decision)</li> </ul>	<ul style="list-style-type: none"> <li>▪ There would have to be high level of connectivity with this site to downtown core</li> <li>▪ What are ridership profiles of HSR? Is Bakersfield a feeder airport, or destination?</li> <li>▪ GET will serve any route selected (take GET service out of the decision)</li> <li>▪ If HSR rail goes in at airport, GET would have to provide service, or watch another entity provide that service</li> <li>▪ There are 40-50,000 houses already planned for this area, so it will be within the city limits by time the HSR is built</li> </ul>
Kern Regional Transit	<ul style="list-style-type: none"> <li>▪ KRT's focus is to get people from outlying areas in the county into Bakersfield</li> <li>▪ No specific "vision" for the metro area; however they are part of the County govt. structure</li> </ul>	<ul style="list-style-type: none"> <li>▪ Physical constraints of site are primary concern. KRT likes to serve sites with easy access. Drivers struggle where it's hard to get in and out of stops safely.</li> <li>▪ Dedicated bus lane at either site would work to accomplish safe ingress/egress.</li> <li>▪ Easy Access and Safety of buses getting into terminal site and moving back into roadway; site distance for cars (to avoid conflicts with slow-moving buses)</li> <li>▪ Most KRT buses go to the downtown transit stop already (GET) on Chester. Many go to Amtrak station (scheduled or on request).</li> <li>▪ KRT is looking for the study to guide Bakersfield to best decision.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Really no preference. KRT would provide transit to support whatever site needs support.</li> <li>▪ It's crowded downtown already. There are issues of north/south movement constraints through downtown.</li> <li>▪ Current stop is on Chester (N/S) and that is problematic.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Will work to make any choice operate well.</li> <li>▪ Slight preference for 7th Standard or Golden State site, due to N/S circulation issues. If downtown can be shown to work, then that preference is moot.</li> <li>▪ Golden State has less development around it; maybe easier to access.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Will work to make any choice operate well</li> <li>▪ Slight preference for 7th Standard or Golden State site, due to N/S circulation issues. If downtown can be shown to work, then that preference is moot</li> </ul>
Kern Transportation Foundation	<ul style="list-style-type: none"> <li>▪ Economic vitality of area</li> <li>▪ Livability</li> <li>▪ Protection of agricultural uses</li> </ul>	<ul style="list-style-type: none"> <li>▪ Costs</li> <li>▪ Traffic impacts</li> <li>▪ Convenience to users and community</li> </ul>	<p>No strong preference (KTF did not identify one over another of the sites selected for final review)</p>	<ul style="list-style-type: none"> <li>▪ No strong preference</li> <li>▪ (KTF did not identify one over another of the sites selected for final review)</li> </ul>	<ul style="list-style-type: none"> <li>▪ No strong preference (KTF did not identify one over another of the sites selected for final review)</li> </ul>

Group	Vision for Metro Bakersfield	Main Concerns and General Observations	Truxtun Avenue Site (Pros/Cons/Observations)	Golden State Site (Pros/Cons/Observations)	7 <sup>th</sup> Standard Road Site (Pros/Cons/Observations)
Project Clean Air	<ul style="list-style-type: none"> <li>▪ Motto "See the Mountains"</li> <li>▪ Wants more neighborhoods with trees, parks, ped and transit access</li> <li>▪ Clean air, walkable cities, transit and bike-friendly</li> <li>▪ Cost effective service and infrastructure to communities</li> <li>▪ Concern about sprawl</li> <li>▪ Design for intermodal transportation and clean communities</li> </ul>	<ul style="list-style-type: none"> <li>▪ How to leverage HSR to maximize gain in local air quality</li> <li>▪ Must address alt fuels and how people are accessing stations</li> <li>▪ Rail must be convenient to people</li> <li>▪ Need park and ride facilities to support terminal traffic</li> <li>▪ System should at least consider freight and increased goods movements needs</li> <li>▪ Bring system into town where it can travel at 150 mph, not just 70 or 80</li> <li>▪ Station must be fully intermodal, including future light rail</li> <li>▪ Cost considerations are important</li> <li>▪ Siting must consider different HSR user categories and their needs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Participants were unclear how community pool work would be compatible with adjacent HSR station</li> <li>▪ Truxtun is more constrained for new development</li> <li>▪ Be prepared for CHSRA decision by having contingency for both Golden State and Truxtun</li> <li>▪ Need to address shortfalls of Truxtun Ave relative to CHSRA criteria (potential of reduced speed requirements due to geometrics on the BNSF alignment)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Has most potential for new development, increased assessed valuation and tax increment funding</li> <li>▪ Be prepared for CHSRA decision by having contingency for both Golden State and Truxtun</li> <li>▪ Potential to relocate Old Town Kern railroad station to Golden State site, and incorporate as new station; alternatively, the station site itself could slide toward the old station</li> </ul>	<ul style="list-style-type: none"> <li>▪ After Sept 11, Bakersfield lost 48% of air service; now American Eagle is gone; United filed for bankruptcy. Flux in air service makes future air scenarios problematic.</li> <li>▪ It might make more sense to get on HSR in Bakersfield and access airports in Fresno or Visalia, or even SFO or LAX</li> <li>▪ There's a good argument for <i>connecting</i> the HSR to the airport, but not locating it there</li> <li>▪ One commenter originally favored Airport site because of Free Trade Zone, but may not be relevant if HSR doesn't carry goods</li> </ul>
Smart Growth Coalition of Kern County	<ul style="list-style-type: none"> <li>▪ Clean air</li> <li>▪ Save the farmland</li> <li>▪ More efficient land use, healthy and vibrant downtown</li> <li>▪ Avoid fleeing to outskirts of town</li> </ul>	<ul style="list-style-type: none"> <li>▪ Area is getting too much sprawl; not conducive to transit</li> <li>▪ City and County need to coordinate land use planning and control the juxtaposition of incompatible uses</li> </ul>	<ul style="list-style-type: none"> <li>▪ Downtown site works best to avoid widening the footprint of the city</li> <li>▪ No strong opinion, however</li> </ul>	<ul style="list-style-type: none"> <li>▪ No strong opinion</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sprawl is more of a problem with this site, as promotes leapfrog development</li> </ul>

# **Appendix C**

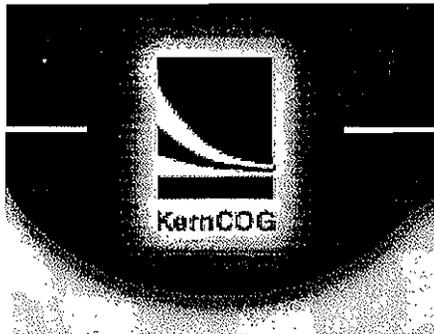
## **COMMUNITY OPEN HOUSE - PUBLIC COMMENTS**

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# Metropolitan Bakersfield HIGH SPEED RAIL TERMINAL EVALUATION AND ANALYSIS

April 2003 Community Open House  
Summary of Public Comments

*Review Draft  
April 29, 2003*



*Prepared for Kern COG by:*

**Deborah Hart Redman, Redman Consulting**  
*Project Consensus & Outreach Subconsultant to Wilbur Smith Associates*

# I. Introduction

This report summarizes comments received by the public resulting from the April 22, 2003 Community Open House, held at the Bakersfield Convention Center (Truxtun Room) from 3 pm to 7:30 pm. There were two primary goals of the event. First, the Open House was intended to inform the public about the results of a technical evaluation of the pros and cons of three locations under consideration as potential sites for the future California High Speed Rail terminal in Bakersfield, connecting Bakersfield to Los Angeles, San Diego, San Francisco and Sacramento via a statewide high speed rail network

Second, the event sought public input—community issues, concerns and priorities—in order to develop a community and stakeholder consensus for choosing one of the three sites identified below:

- Truxtun Avenue and S/Union Street (near the Amtrak Station)
- Golden State and M Street (evaluation considered Golden at M through F Street)
- 7th Standard Road West (2 miles from Meadows Field Airport)

Notice of the Open House, was provided through a press release and flyer (attached at the end of this report). The press release was sent to approximately 61 media contacts throughout Kern County on April 15, 2003. The workshop flier was distributed to the Kern COG Quarterly mailing list on April 15, 2003, which includes approximately 1000 individuals. A display ad was also purchased and featured in the Bakersfield Californian on April 20, 2003.

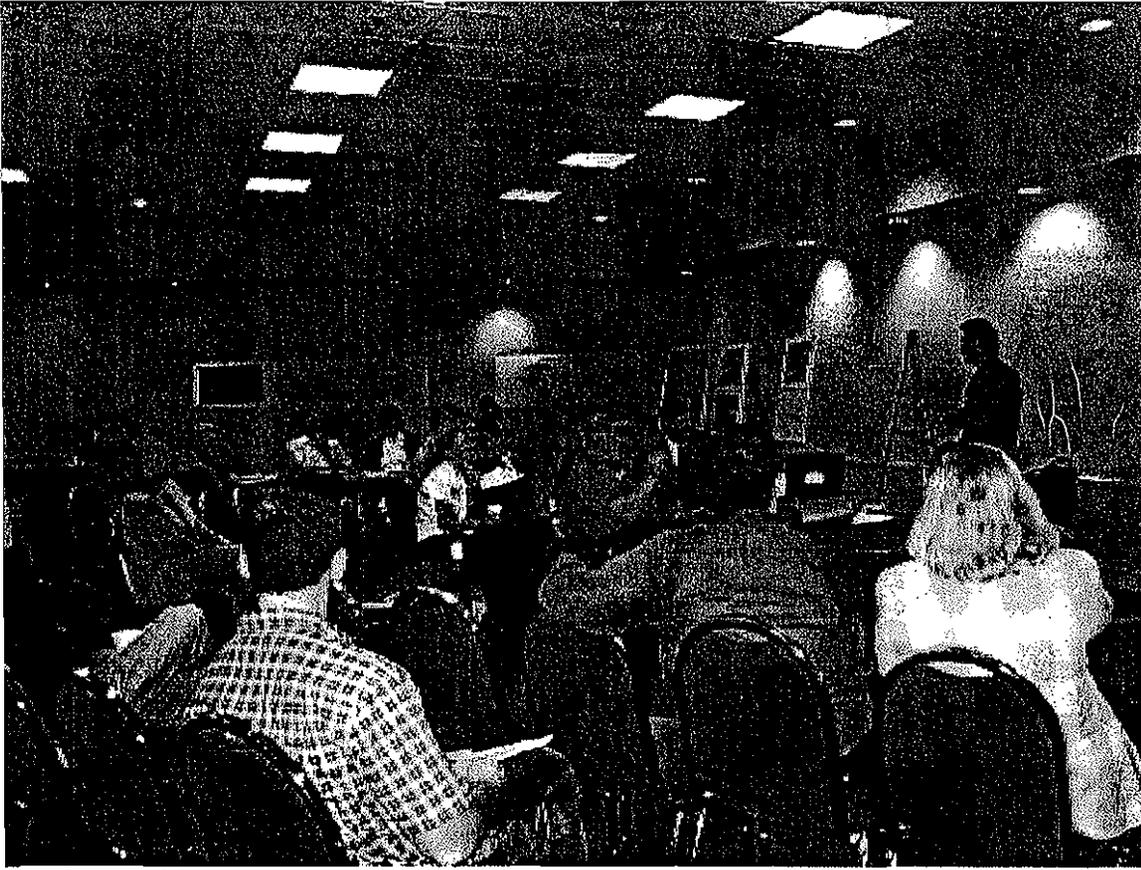
Additionally, Kern COG Executive Director Ronald Brummett spoke with KERN radio 1410 on April 15, 2003, regarding the draft high-speed rail station terminal location analysis, shortly after staff distributed the press release announcing draft study results and the April 22 public outreach event. Mr. Brummett was interviewed on the subjects of the study as well as the Open House by several local television stations, including Channel 29 and Channel 23. City of Bakersfield Vice-Mayor and Kern COG Board Member David Couch were also interviewed by Channel 17 prior to the Kern COG Board Meeting on April 17, 2003.

To supplement formal means of publicizing the event, the press release was provided to interested community organizations (Bakersfield Chamber of Commerce, Hispanic Chamber of Commerce, the Smart Growth Coalition and Kern Transportation Foundation) to inform their respective membership.

Approximately 33 people attended the Open House. In addition to members of the interested public, a number of project stakeholders were also present, including those from the City of Bakersfield, the County of Kern (Kern Regional Transit), the Department of Airports, the Downtown Business Association and the California High Speed Rail Authority.

A dozen copies of the draft Metropolitan Bakersfield High Speed Rail Terminal Impact Analysis were available at tables for review by the public. Additionally, Kern Council of Governments (Kern COG) staff committed to providing the document on the Kern COG website for further study by interested community members. Spanish translation was available, through Kern COG bi-lingual technical staff present, though it was not utilized during the event.

Site diagrams and alternative scenarios were posted on the walls to depict possible site plans at the three candidate locations, as were three summary sheets bullet-pointing the primary pros and cons for each of the respective site, so far revealed by the study. Kern COG and consultant staff was available to provide additional explanation and to answer questions about the project as well as the process of review and selection of a locally preferred alternative.



Kern Council of Governments staff responds to audience questions at the April 22, 2003 Open House.

At 4 pm, the technical consultant presented a 15 minute slide review of issues related to the three sites, identified for reference, below: Following the presentation, the consultant team and Kern Council of Governments (Kern COG) staff took audience questions. Discussion among those present continued for approximately 45 minutes. Among topics of concern to those present were the accuracy and completeness of estimates of future passenger demand at Meadows Field, the uncertainties regarding the high speed rail route departing south from Bakersfield (Tehachapi vs. Grapevine) and the associated uncertainties with respect to the rail line itself (UP vs. BNSF) and concomitant cost implications. A number of those present resonated to an observation that, given these uncertainties, requiring a community consensus on one site was “putting the cart before the horse.” Others pointed out that there is always a set of unknowns, and that Bakersfield should assess the situation as best it can, and select what’s best for the city, its residents and the operation of the high speed rail system itself.



Members of the public review copies of the draft Metropolitan Bakersfield High Speed Rail Terminal Impact Analysis, and provide written comments. (April 22, 2003)

In reviewing the 45 written comments below, it is important to remember that this group of respondents is self-selected, and does not necessarily represent the average demographic for the general public or the voting public within Metropolitan Bakersfield. However, review of the comments can provide insight into the reasons for the variety of views likely to be held by larger groups of people working, living and traveling in Bakersfield. That is, though the comments cannot be used to predict the strength of public support for any given strategy, they can provide an understanding into the factors that would likely garner such support. It should also be noted that among the comments received were approximately 27 from Taft, which appear to be the result of an organized effort to provide public input, as many of the specific comments provided are identical, or nearly so. Nonetheless, these responses, all favoring the 7<sup>th</sup> Standard Road site, are part of public input—they should neither be over- nor undervalued.

Themes that threaded through many respondents' written summaries (including those with differing site preferences) were pride in Bakersfield, the potential of the terminal to serve as a gateway, the need for economic revitalization, the desire to avoid sprawl and preserve farmland, and the need to minimize traffic congestion and conflicts with non-HSR traffic patterns near the terminal. Written responses also echoed the concern of oral comments on April 22, expressing concern about a lack of sufficient information (cost, route, airport demand among other unknowns) to provide a sound basis for site selection.

**Table 1: Summary Matrix of Written Responses Received from Members of the Public Concerning Proposed Bakersfield High Speed Rail Terminal Sites Now Under Study**

Respondent Name Residence/Work Location Commute Mode	How do you see the Future of Metropolitan Bakersfield	Favor Truxtun	Favor Golden State	Favor 7 <sup>th</sup> Standard												
Bogacki/ Bakersfield Car	I think Truxtun is a better site. Downtown Bakersfield is re-establishing itself. We should offer people a means to have direct access to events cultural and otherwise that Bakersfield is creating.	This would facilitate a revitalization to the downtown area. I believe having the terminal downtown where activities occur makes sense. If it is placed at 7 <sup>th</sup> Standard, bus and car continuation to the areas of downtown would be necessary														
Anon Taft/Taft Car	Growing. Continued Growth															
Penny? Brewton Taft/Taft Car	Promising and exciting. The population is growing and the cultural opportunities have increased. We need to support rapid transit and airport expansion			X (No additional comment)												
Pat Ebel	<p>Comment: I would like to see a chart indicating the estimated costs to construct "off-line" track to each station site. Also, FYI, the County has projects (in design and the funding stream identified) to construct a new over crossing over SR 99 at 7<sup>th</sup> Standard Road; a grade separation at UPRR tracks and widening of the existing roadway to 4 lanes from Santa Fe Way to the new Meadows Field terminal. The estimated cost of these upgrades to 7<sup>th</sup> Standard Road is \$37 M.</p> <p>Table (drawn) "Offline Costs"</p> <table border="1"> <thead> <tr> <th></th> <th>UP</th> <th>SF</th> </tr> </thead> <tbody> <tr> <td>Truxtun</td> <td>\$</td> <td>\$</td> </tr> <tr> <td>Golden State</td> <td>\$</td> <td>\$</td> </tr> <tr> <td>7<sup>th</sup> Standard</td> <td>\$</td> <td>\$</td> </tr> </tbody> </table>		UP	SF	Truxtun	\$	\$	Golden State	\$	\$	7 <sup>th</sup> Standard	\$	\$	N/A	N/A	N/A
	UP	SF														
Truxtun	\$	\$														
Golden State	\$	\$														
7 <sup>th</sup> Standard	\$	\$														
Jeff & Lynn Krause Bakersfield/Bakersfield College Car/Walk	I see the revitalization of downtown as the most important issue for the future reduction of sprawl. Increase in density	Downtown station is a gateway to downtown Bakersfield, entry destination is most important (cultural activities, conventions, restaurant, etc.) exiting Bakersfield by residents is not as important as arriving visitors to Bakersfield.														
Anon Bakersfield/Bakersfield Car	There is a positive view for the future of Bakersfield. It is time for a structured plan in the Northwest Area.			Airport area allows for strategic plan to help grow the project and will also stimulate businesses surrounding the area. It also allows for more parking, easier commutes with less traffic and a larger area for growth.												

Respondent Name Residence/Work Location Commute Mode	How do you see the Future of Metropolitan Bakersfield	Favor Truxtun	Favor Golden State	Favor 7 <sup>th</sup> Standard
Miguel Castellanos Bakersfield/Bakersfield Car	I hope to see a more dynamic environment, more pedestrian friendly circulation, more (and efficient) public transportation, and less intrusion of vehicular transit	I would like to see a more vibrant and active downtown. I believe that bringing the station to the Downtown area would benefit surroundings economically as well as socially, with the interaction of more people and the creation of appropriate public spaces.		
Ed Hewitt Bakersfield Car	Downtown parking to be revised for station		Golden State is most favorable to me because in my opinion it should be centered and convenience to freeways is important.	
Joseph W. Covington Bakersfield/Bakersfield Car	Planned growth would be nice. Major arterials developed before development. Downtown redevelopment. East side growth—less as land destroyed.) LA Bedroom community with development of HSR.	[depends on design of terminal/line; more information needed]	[depends on design of terminal/line; more information needed]	[depends on design of terminal/line; more information needed]
John Cohrs Bakersfield Car	Retaining the “small town” character will developing an exciting and vibrant downtown and core; establishing methods to reduce poor air quality and sprawl.	I favor Truxtun Ave. site as most acceptable because of the current land use compatibility, and because of the potential for ancillary development. The Truxtun Ave. site would be a boost in reducing environmental concerns (Air quality from increased traffic, farmland reduction, sprawl, etc.)		
Warren Minner Bakersfield Car	Growth and more growth. Will become the best first class city in California.	Truxtun Ave—Central location.		
Ray Bishop /Meadows Field	Note the contract (I wrote) from City County specifically required examination of the impacts of Los Angeles Reverse Leakage. Page 1-1 assumes away this responsibility and gives it to SCAG transportation study. (I sit on this group as well.) But study want to ready for several years—the contract requires an examination and excursion of Los Angeles Air Services Impacts.			
Bob Campbell Bakersfield Metrolink or car	Hope we can reduce vehicular pollution so people can have healthy existence—spend money on better traffic management rather than Centennial Plaza enlargement for swim pool, ice rink, etc. We have pcorest air in nation and blame others.			

Respondent Name Residence/Work Location Commute Mode	How do you see the Future of Metropolitan Bakersfield	Favor Truxtun	Favor Golden State	Favor 7 <sup>th</sup> Standard
Marvin Davisson Bakersfield Car	Clearly cost is least and Golden state meets primary standards. Golden State provides easy access from Hwy. 99 to the west and for traffic from the east as well as bus traffic from Greyhound, Airport Best? Of Bakersfield and Trailways. The area is ripe for hotel/motel development and [illegible] housing is [illegible] nearby.		Golden State—I see no advantage to airport location and distance from population center is problematic. The downtown location may interfere with planned recreation and retail development, creating congestion and traffic problems.	
Brian Landis Bakersfield/100110 <sup>th</sup> St. Car	With its vine-like expansion outward, especially to the east and west, it's very important to keep the root of it all, downtown, healthy, vital and in touch with the needs of the entire city. A downtown location, I feel, would best serve the entire city.	I believe a downtown location using existing hotels, roads, etc. will boost Bakersfield's economy and improve the downtown's vitality. To stick [it] out by 7 <sup>th</sup> Standard is to have a destination to nowhere. The Amtrak Truxtun or Golden State sites will best serve our city overall. Perhaps the Golden State site can be the center of a revitalization a la downtown?	(close second)	
Paul Gable Tehachapi/Retired Car				7 <sup>th</sup> Standard Road—Potential for future development is the best
Anon Bakersfield/Downtown Car	Larger		X (No additional comment provided.)	
Anon	Need to address uncertainty factor in airports [no preferred site identified by respondent]			
Susie L Mears Taft Car	The future of Metropolitan Bakersfield is bright; however we should plan so that it won't be congested			
Anon Taft/Bakersfield Car	I see less gridlock and congestion happening if we look at the high speed rail being developed in the Northwest area, not downtown			Plenty of space for development and allow growth of new businesses. Airport access and highway access of utmost importance. Don't add congestion to the downtown area.
Anon Bakersfield/Rosedale Car	Make use of outlying space vs. creating gridlock downtown. 7 <sup>th</sup> Standard Road provides greatest opportunity			7 <sup>th</sup> Standard Rd.—Access and development of new airport terminal ease downtown congestion. Master Plan 7 <sup>th</sup> Standard Rd. area.
Anon Bakersfield/Rosedale Car	Thinking "big" in looking for more land to develop and not jam the downtown area.			Input to develop out near airport. Parking essential, good develop (sic) Develop businesses around airport

Respondent Name Residence/Work Location Commute Mode	How do you see the Future of Metropolitan Bakersfield	Favor Truxtun	Favor Golden State	Favor 7 <sup>th</sup> Standard
Mary Beth Rynan NorthWest/Rosedale Car	Looking for areas of expansion where there is land available—The congestion in the Golden State and Truxtun are would only advance the problem now there.			The expansion of our Airport should tie in with the High Speed Rail in order to improve the overall congestion and success of our transportation system. The less populated area will allow the expansion of the freeway system. Gridlock in the Golden State and Truxtun area could be a problem. Use of the land around the 7 <sup>th</sup> Standard Rd. could work with a Masterplan to build on.
N.G. Sawyer Bakersfield/Bakersfield Car	Great growth opportunities. We just need proper planning.			7 <sup>th</sup> Standard offers best chance to manage the project's impacts, including traffic and business infill. Also, 7 <sup>th</sup> Standard has easy I-5 access and would allow ample parking.
Anon Taft/Bakersfield Car	Large growth, other counties in the area will grow also.			
Anon Taft/Bakersfield Car	Bright—But we have to think large right now to allow for growth not to negatively affect our projects success.			Synergy with New Airport Terminal Open—think big, parking access to Interstate. New Area to develop well the first time. Room to grow and take LAX overflow. Also allows Industry to grow around the Airport. No congestion on side streets as it will be master planned off of 7 <sup>th</sup> Standard & 99.
Lee Smith	Very positive—good growth. As usual with any city with fast growth—come traffic problems.			X (No additional comment)
John J. Miller Taft/Bakersfield Car	Very good			X (No additional comment)
Lawrence (illegible) Bakersfield Car	Needs room to grow to west on 7 <sup>th</sup> Std. Road			X (No additional comment)
Dave Leffer Taft/Taft Car	More growth and jobs. We need rapid transit.			X (No additional comment)
R.D. Andrews Taft/Taft Car				X (No additional comment)
Pam Jones Taft/WCC Car	Bakersfield is finally catching up w/ metro cities to the North and South. I wouldlike to see the expansion of the BFL airport to better serve our growing airport			X (No additional comment)

Respondent Name Residence/Work Location Commute Mode	How do you see the Future of Metropolitan Bakersfield	Favor Truxtun	Favor Golden State	Favor 7 <sup>th</sup> Standard
Roe Darnell Taft/Taft Car	Growing and moving west			X (No additional comment)
Anon Taft/Taft Car	Good			X (No additional comment)
Anon Taft/Taft				\ X (No additional comment)
Anon Taft/Taft				X (No additional comment)
Anon Taft/College Car				X This allows no congestion vs. inside downtown.
Louise Hudgens Taft/Taft Car	Downtown area already congested. Why would you want to add more? 7 <sup>th</sup> standard Rd. area less congested and more room to expand.			X (No additional comment)
Mary Garner Taft/Taft Car	What—We have to think big enough now to accommodate the future.			New Airport Terminal makes most sense for growth
Randy Miller Taft/Taft Car	Good—Quality of life, home affordability, weather, traffic, services			X (No additional comment)
Anon Bakersfield/Taft	I would like to (sic) High Speed Rail by the airport with connections to the airport and into town. Something like the cablecar/SD. Red Line ideas. Something different that can be an area icon means of transportation			X (No additional comment)
Anon Taft/Bakersfield Car	Looking Good!!!! Make sure we plan ahead for our future.			X (No additional comment)
Anon Taft/Taft Car				X (No additional comment)
Isaac George Taft/taft Car	We need to limit the extent of growth. Need to coordinate a place of growth involving other cities in Kern County. Tax sharing/revenue sharing could work.			X (No additional comment)
Roland Maier Taft/Jefferson School Car	The metropolitan area will continue to grow outward very quickly to east and west! There is a "huge" need for a 58 freeway to I-5 to help alleviate the congestion in the northwest.			The 7 <sup>th</sup> Standard would meet the needs of the transportation availability from I-5 the best without [illegible] to replace homes and not have to have the freeway way above the ground. I feel that will be a central area for transportation hubs and growth where the other locations are very inflexible!

April 15, 2003

## **KERN COUNCIL OF GOVERNMENTS SEEKS PUBLIC PARTICIPATION IN HIGH-SPEED RAIL TERMINAL DECISION**

For more information,  
please contact  
Ron Brummett or  
Jason Hade at  
(661) 861-2191

### **FOR IMMEDIATE RELEASE**

**Organization:** Kern Council of Governments (Kern COG)  
**What:** High-Speed Rail Study Workshop  
**When:** 3-7:30 p.m. Tuesday, April 22, 2003  
**Where:** Truxtun Room, Bakersfield Convention Center, 1001 Truxtun Avenue, Bakersfield, CA 93301

Kern Council of Governments will host a public workshop Tuesday to unveil the results of a technical evaluation of three potential sites for a high-speed rail terminal in metropolitan Bakersfield.

The workshop, from 3-7:30 p.m. Tuesday, April 22 at the Bakersfield Convention Center, will give area residents the opportunity to compare the merits of each site and offer comments on where the terminal should be located.

**Study sites include:** Truxtun Avenue and “S”/Union Street (near the Amtrak Station); Golden State and “M” Street; and 7<sup>th</sup> Standard Road West of State Route 99 (two miles from Meadows Field Airport). Kern COG is sponsoring the workshop to foster community consensus for one the three sites, which will then be forwarded to the California High-Speed Rail Authority for consideration.

This workshop is part of a larger technical examination of the benefits and impacts associated with locating a high-speed rail terminal in Bakersfield. The Kern COG-led study, which began in November 2002, included input from representatives of the city and county, the Bakersfield Downtown Business Association, and Golden Empire Transit District on its advisory committee. Previous public outreach efforts, from December

2002 through February 2003, have focused on stakeholder agencies and community organizations, and have involved one-on-one interviews and small group discussions. Summaries of these activities are included in the draft report that will be available at the April 22 event.

Public participation is strongly encouraged so that Bakersfield may determine the best high-speed rail terminal alternative based on a variety of factors, including technical, political and financial performance indicators, as well as issues pertaining to urban form and community values.

A final report is scheduled to go to the Kern COG Board of Directors on May 15, 2003. The final report may also be reviewed by local decision-makers at an upcoming joint meeting between the Kern County Board of Supervisors and Bakersfield City Council. Additional public comment can be provided at that time. Final high-speed rail terminal site recommendations for Metropolitan Bakersfield will then be forwarded to the California High-Speed Rail Authority for inclusion in the statewide draft program EIR/EIS and further consideration.

KERN COUNCIL OF GOVERNMENTS WORKSHOP

# High-Speed Rail Terminal Location

Truxtun Avenue & S/Union (Amtrak Station)

or

Golden State Avenue and M Street

or

7<sup>th</sup> Standard Road near Meadows Field

Tuesday, April 22, 2003

3 to 7:30 p.m.

at the Bakersfield Convention Center, Truxtun Room  
1001 Truxtun Avenue in Bakersfield

This workshop is being hosted to unveil the results of a technical evaluation that studied three potential sites for a high-speed rail terminal in metropolitan Bakersfield.

The workshop will cover the following areas:

*Benefits and impacts of each site*

*Study purpose and scope*

*Public Comment/Questions*

*Next Steps*

# **Appendix D**

## **M STREET STATION SITE ANALYSIS**

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# **Appendix D**

## **M STREET STATION SITE ANALYSIS**

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During the review and discussion of the sites studied and presented in the report, continued interest regarding the attractiveness of a Golden State Corridor site located at M Street suggested the need to address its promise aside from the Golden State Avenue F Street station site. This addendum site plan analysis describes how a HSR station might be developed at M Street between the UP tracks and Golden State Avenue. As this analysis was performed after the primary station site analysis, it is not included in the

### **STATION LOCATION**

Figure D-1 outlines the site boundaries for the illustrative HSR station concept plan for this site. It is bounded by the UPRR and HSR tracks on the north, Q Street on the east, Golden Gate Avenue on the south and 30<sup>th</sup> Street on the west. No station access could be provided from either Q or 30<sup>th</sup> Streets, which both “ramp” down to traffic undercrossings of the railroad tracks. The site boundary on the north might possibly be moved 20 to 50 feet farther north if the UP is willing to cede HSR some of its current right of way. The southern station boundary might possibly be impacted by the proposed elevated freeway, which is planned to parallel Golden State Avenue in this corridor. An alternative eastern boundary would be the park boundary. As the high speed rail right of way will consume a portion of the park and the planned elevated freeway would render the park virtually useless, the illustrative site plan shows Q Street as the eastern station boundary.

### **STATION PROGRAM**

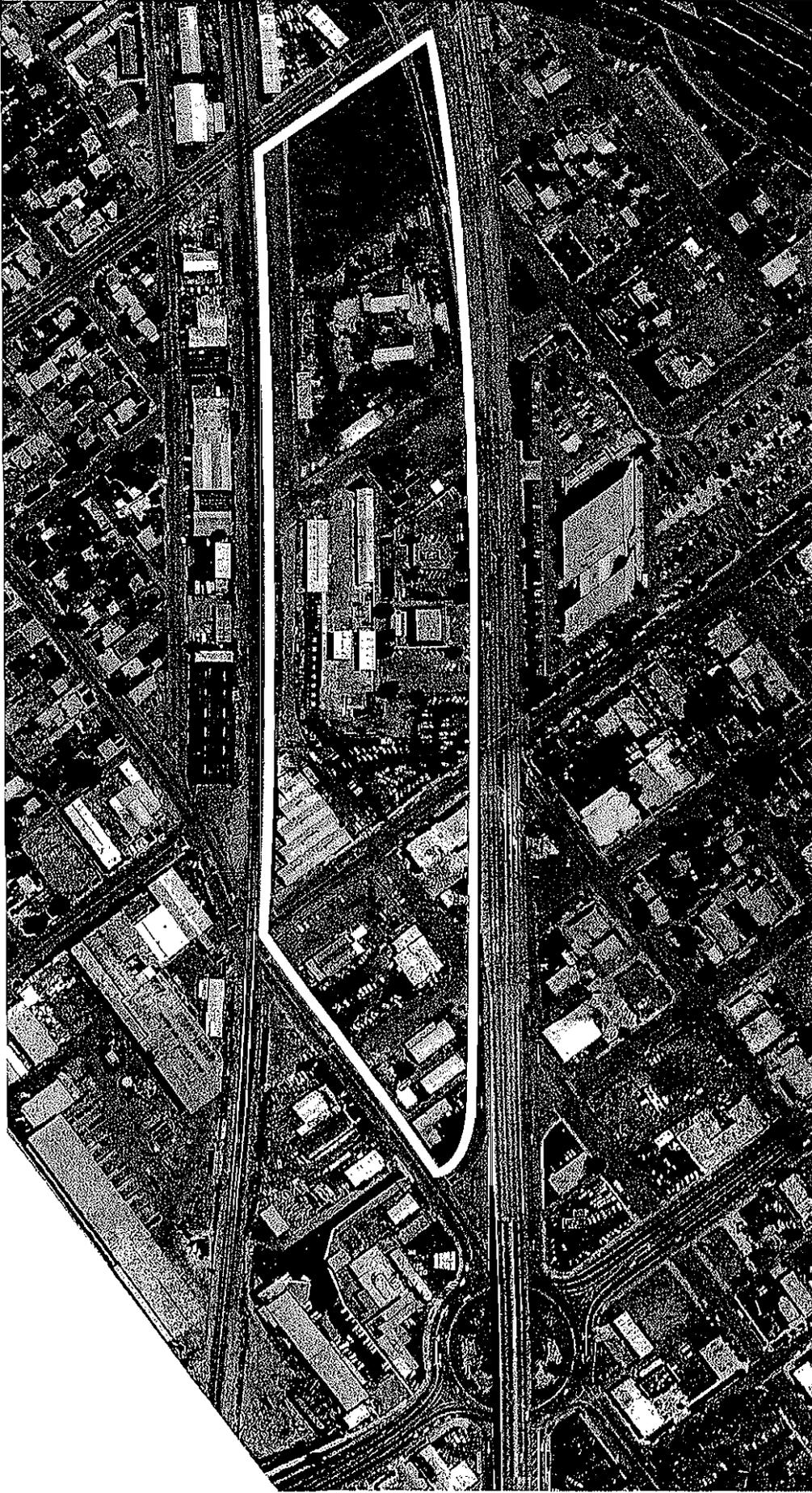
This site would have the same program as described for the F Street station site in Chapter 4. Approximately 750 parking spaces, 15 bus bays, and a 20,000 gsf station depot building.

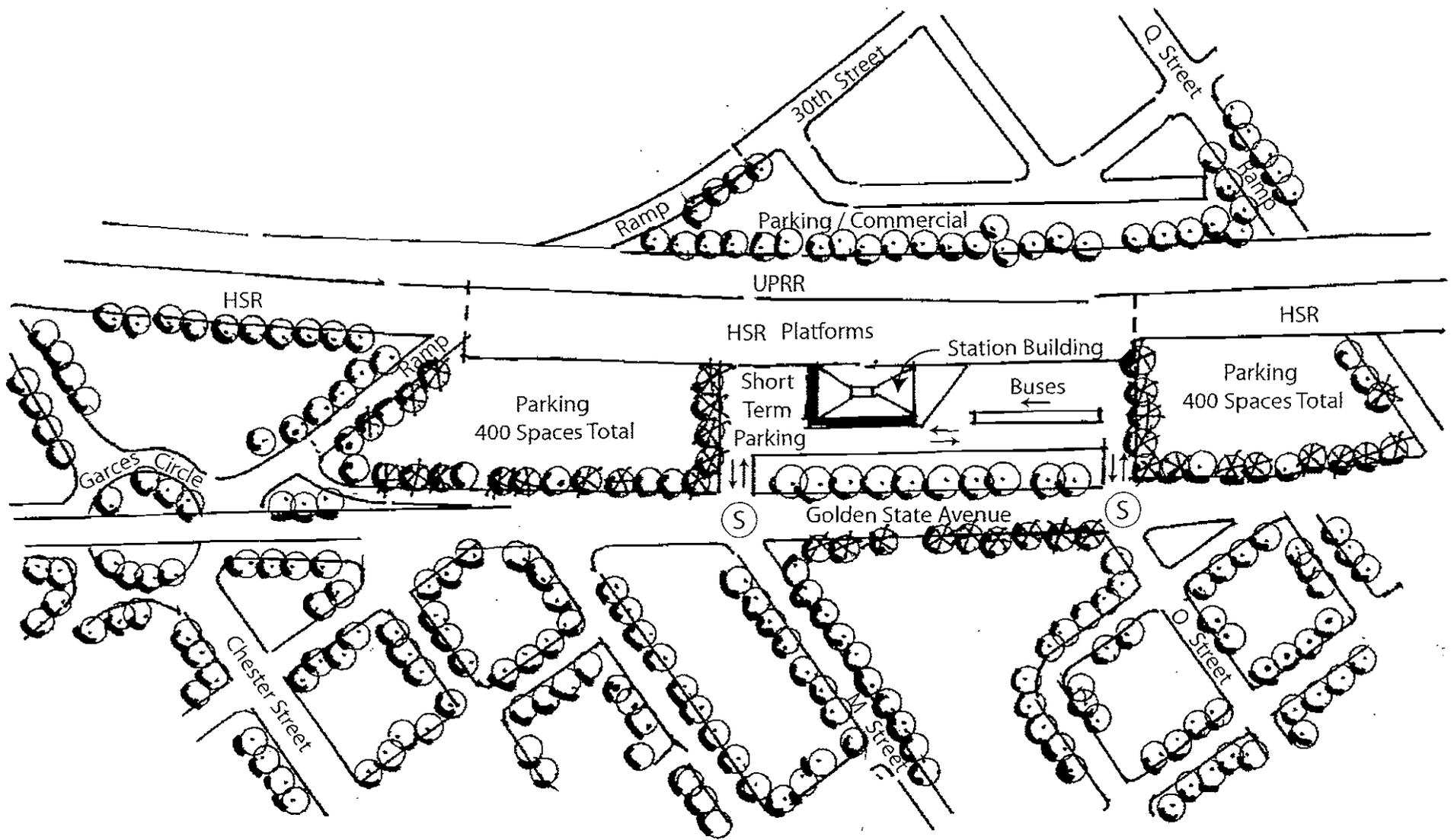
The station is anticipated to be a four track main line HSR station with a 141 foot wide cross section in the platform area. The HSR tracks are envisioned to be located along the south side of the UP right of way. Platforms would be provided on both sides of the tracks with lengths of 1,300 feet.

### **ILLUSTRATIVE SITE CONCEPT**

Figure D-2 describes the illustrative concept plan prepared by WSA for this site. The station site concept plan would allow for future construction of the elevated freeway over Golden State Avenue. The new freeway would likely be 100 feet wider than the current arterial street and therefore might extend over the HSR station site southern boundary, covering some of its surface parking facilities.

Traffic access would be from the current signalized M Street intersection and at a newly signalized intersection of O Street. Buses would access the station from the O Street driveway and exit from the M Street Driveway. GET buses could stop at the curb along Golden Gate Avenue in the westbound direction. Approximately 400 parking spaces would be provided in each of two surface parking lots, for a total of 800 spaces. Additional short term parking would be provided by a small lot located just to the west of the station building and also along the





(S) Signalized Intersection

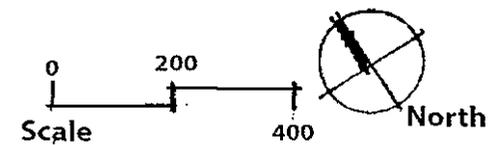


Figure D-2  
M Street and Golden State Avenue Station Site

southern curb along the station driveway between M and O Streets. Combined these areas would provide 60 short term parking spaces.

A grade separated pedestrian link (bridge or tunnel) would be provided between the station building and the northbound passenger platform. The designs for the two traffic undercrossings (30<sup>th</sup> Street and Q Street) should also be designed with pedestrian facilities, particularly if station oriented redevelopment is desired on the north side of the railroad tracks.

### **MARKET PERSPECTIVE**

The M Street station site has convenient regional access, which is important for Bakersfield area residents traveling to other cities. The site is also convenient for commuter use to the Los Angeles area should that market prove viable for HSR. The site is not as convenient as the Truxtun site to key destinations for non residents of the region traveling to Bakersfield. If the elevated freeway is constructed in the corridor it would likely be located between the station and downtown or possibly even over the station itself. Location between the station and downtown would require pedestrians to walk under the freeway in order to reach downtown, something pedestrians do not like to do. Location of the freeway over the station site would negatively impact the environmental setting for passengers to wait for a train. It would also result in a very unattractive gateway for HSR patrons to enter the city.

### **SERVICE PROVIDERS PERSPECTIVE**

This site would have similar implications for Amtrak, UP and GET as were described for the Golden State Avenue F Street site. Essentially, GET could service the site, Amtrak would need to reconcile the future of the San Joaquin trains, and the freight railroads would insist that their track crossings of traffic be grade separated.

### **GOOD NEIGHBOR PERSPECTIVE**

Land use compatibility, traffic and parking implications, and the potential for redevelopment of surrounding properties are all important issues for rail stations.

The site is currently developed with industrial, institutional and commercial uses along with a public park. Surrounding uses are similar. Residential development exists on the north side of the railroad tracks north of Espee Street. Development of a HSR station on this site would displace current uses, which include an automobile dealership. Station development extending to Q Street would impact the public park and therefore would involve rigorous environmental clearance efforts.

The station site plan provides adequate parking to accommodate forecast needs on site. The traffic system capacity to accommodate projected access needs very much depends on the details of the proposed freeway project. If the elevated freeway is not built in this corridor, Golden State Avenue should be able to accommodate the station access demands themselves, but probably not the projected regional through travel demands. The F Street station site has these same issues.

Economic development potential for the surrounding properties and on the station site itself will be very much influenced by decisions regarding the proposed elevated freeway. If the elevated

freeway is built over Golden State Avenue, it would severely limited station related redevelopment opportunities south of Golden State Avenue. The freeway would virtually eliminate adjacency benefits of the station, by creating a barrier between the station and properties south of Golden State Avenue. If the freeway were built over the station site itself obviously it limited potential use of the station site parcel to parking uses. The Union Pacific railroad tracks will limit potential development opportunities north of their tracks. The tracks themselves create a pedestrian barrier effect and the noise and vibration related to freight train movements are nuisance impacts.

### **DEVELOPMENT AND OPERATIONS PERSPECTIVE**

The current uses of the site including the car dealership, the public park, the Veterans building, the recycling center and several industrial uses would all be displaced. No residential uses would be displaced. The development of a freeway in the corridor, however, could help coordinate property acquisitions.

### **SUMMARY**

Development of a HSR station on this site would have similar strengths, weaknesses and issues as are described for the F Street site.

- Development of a HSR station appears physically possible at the M Street station site and would need to be coordinated with the planning of the proposed freeway.
- A HSR station at this site most likely would be a four track at-grade mainline station.
- It might be possible for HSR to share some UP right of way, but not enough to provide fully for its cross section needs
- Some displacement and relocation efforts would be associated with a station developed at this location.
- Station access and potential station related economic benefits to surrounding area would be critically influenced by details of the freeway for the Golden State Avenue corridor.
- A HSR station at this location would have marginal strength to revitalize the surrounding area and even these potentials could be lost depending of plans for the elevated freeway.