Table 1-10 Metro Bus Ridership, Fiscal Year 2007				
Line	Direction	Average Daily Boardings within PSA	Average Daily Alightings within PSA	Line Ridership
2/302	East	335	1825	25440
	West	1779	609	
4/304	East	238	1402	35170
	West	1220	361	
10	East	786	1624	15659
	West	1736	979	
14/37	North	909	882	20370
	South	791	874	
16/316	East	359	4594	30561
	West	4302	333	
18	East	2506	4847	27163
	West	4001	2603	
20	East	586	1627	20897
	West	1630	323	
26/51/52/352	East	3214	3177	29036
	West	2314	2818	
28/328	North	2148	2075	31916
	South	1263	1721	
30/31/330	East	2548	2514	28238
	West	2435	1915	
33/333	East	268	1072	26199
	West	1051	290	
38/71	East	532	527	10510
	West	546	734	
40	North	511	1790	20645
	South	2033	465	
42/42A	North	296	819	4982
	South	807	223	
45/46	North	1394	2041	21558
	South	2537	1377	
53/350	North	763	2503	14668
	South	2590	684	
55/355	North	69	821	12571
	South	919	88	
60	North	2678	5526	30509
	South	5985	2913	
62	East	732	168	4354
	West	298	875	
66/366	East	2221	2692	27336
	West	2450	2374	
68/368	North	1512	1121	23393
	South	1293	1393	
70/370	East	1200	169	15569
	West	130	1081	

Table 1-10 Metro Bus Ridership, Fiscal Year 2007				
Line	Direction	Average Daily Boardings within PSA	Average Daily Alightings within PSA	Line Ridership
76/376	East	1011	139	11106
	West	97	877	
78/79/378	East	1277	153	11868
	West	128	1254	
81/381	North	1763	1037	20006
	South	1379	2387	
90	North	1035	124	7387
	South	69	1009	
92	North	897	127	8864
	South	79	955	
94/394	North	1910	250	13287
	South	127	1571	
96	North	288	55	3407
	South	55	342	
439	North	15	112	946
	South	126	20	
442	North	2	59	249
	South	54	7	
444	North	22	295	3132
	South	263	79	
445	North	13	230	1243
	South	197	38	
446/447	North	19	242	4373
	South	270	55	
450X	Clockwise	166	168	619
460	East	445	27	3630
	West	11	437	
484	East	1375	45	8914
	West	18	1290	
485	North	423	17	3683
	South	8	572	
487	East	392	25	2985
	West	18	394	
489	North	114	5	584
	South	8	245	
490	East	625	16	5568
	West	6	763	
714	East	5	163	1860
	West	156	15	
720	East	2020	2896	46351
	West	3360	2388	
740	North	104	1040	9182
	South	1227	130	

Table 1-10 Metro Bus Ridership, Fiscal Year 2007				
Line	Direction	Average Daily Boardings within PSA	Average Daily Alightings within PSA	Line Ridership
745	North	210	2135	8632
	South	2121	239	
	TOTAL	**91823**	**93276**	**654620**
		TOTAL BOARDINGS AND ALIGHTINGS IN PSA	**185099**	

Source: Los Angeles County Metropolitan Transportation Authority, 2007

Table 1-11 Metro Bus Ridership on Lines Passing Within One Block of Both Union Station and 7th St./Metro Center Station, Fiscal Year 2007			
Line	Average Daily Boardings within PSA	Average Daily Boardings for Entire Line	Route Description
78/79/378	1405	11868	Arcadia via Huntington Dr. and Las Tunas Dr.
484	1393	8914	Pomona via El Monte Busway and Valley Blvd.
70/370	1330	15569	El Monte via Garvey Ave.
76/376	1108	11106	Arcadia via Valley Blvd., Huntington Dr. and Las Tunas Dr.
490	631	5568	Pomona via El Monte Busway and Ramona Blvd.
485	431	3683	Altadena via El Monte Busway, Oak Knoll Ave., and Lake Ave.
487	410	2985	Sierra Madre Villa Gold Line via El Monte Busway
446/447	289	4373	San Pedro via Harbor Transitway, Avalon Blvd., and Pacific Ave.
444	285	3132	Rancho Palos Verdes via Harbor Transitway and Hawthorne Blvd.
445	210	1243	San Pedro via Harbor Transitway, 1st St., and Pacific Ave.
439	141	946	Aviation Green Line via Culver City
489	122	584	Temple City via El Monte Busway and Rosemead Blvd.
442	56	249	Hawthorne via Harbor Transitway, Manchester Blvd., and La Brea Ave.
TOTAL	7811		

Source: Los Angeles County Metropolitan Transportation Authority, 2007

Most of the other busy Metro bus stops in the PSA are located in the Financial Core and Civic Center areas, both of which will be served by the Regional Connector. Additionally, other transit operators have bus stops within the PSA, although their ridership data were not available for this AA.

Table 1-12 Average Daily Boardings and Alightings at Metro Bus Stops Within the Project Study Area, Fiscal Year 2007			
East/West Street	North/South Street	Average Daily Boardings	Average Daily Alightings
6TH	BROADWAY	6,523	7,438
7TH	BROADWAY	7,187	5,493
5TH	BROADWAY	6,172	4,516
7TH	HILL	3,804	4,425
5TH	HILL	3,891	3,586
9TH	BROADWAY	2,657	3,875
1ST	HILL	2,242	3,078
5TH	SPRING	2,801	2,275
5TH	GRAND	2,028	2,574
6TH	HILL	1,192	3,315
7TH	FLOWER	3,075	1,244
7TH	SPRING	2,101	2,117
6TH	HOPE	1,613	2,502
1ST	BROADWAY	1,973	2,141
8TH	BROADWAY	2,365	1,623
7TH	MAIN	1,932	2,038
8TH	HILL	1,949	1,834
3RD	BROADWAY	2,158	1,456
7TH	OLIVE	2,175	1,138
4TH	BROADWAY	1,420	1,311
5TH	OLIVE	1,897	507
7TH	SAN PEDRO	1,134	1,085
3RD	HILL	885	1,311
TEMPLE	BROADWAY	1,171	1,024
5TH	LOS ANGELES	1,270	910
TEMPLE	HILL	904	1,136
7TH	GRAND	949	1,074
8TH	HILL	853	1,170
TEMPLE	SPRING	925	1,027
8TH	SPRING	963	904
9TH	MAIN	812	1,047
6TH	MAIN	612	1,047
7TH	HOPE	338	1,303
7TH	ALAMEDA	740	853
1ST	SPRING	808	769
6TH	SPRING	773	736
6TH	CENTRAL	786	703
7TH	MAPLE	768	718
7TH	FIGUEROA	335	1,104
7TH	CENTRAL	690	713
6TH	LOS ANGELES	480	822
5TH	FLOWER	915	288
4TH	HILL	643	434
5TH	WALL	798	255
4TH	SPRING	360	641

Table 1-12 Average Daily Boardings and Alightings at Metro Bus Stops Within the Project Study Area, Fiscal Year 2007			
East/West Street	North/South Street	Average Daily Boardings	Average Daily Alightings
9TH	HILL	341	615
7TH	LOS ANGELES	521	413
8TH	OLIVE	599	299
6TH	GRAND	184	708
6TH	SAN PEDRO	273	539
9TH	OLIVE	319	479
6TH	WALL	253	528
3RD	GRAND	173	603
WILSHIRE	FLOWER	381	361
9TH	GRAND	293	396
6TH	ALAMEDA	344	339
5TH	SAN PEDRO	492	188
TEMPLE	GRAND	107	522
GENERAL THADDEUS	OLIVE	395	224
8TH	FLOWER	361	256
1ST	HOPE	344	265
8TH	GRAND	335	272
1ST	MAIN	248	356
3RD	SPRING	291	298
WILSHIRE	FIGUEROA	251	284
6TH	GLADYS	112	361
8TH	MAIN	141	306
1ST	CENTRAL	199	234
7TH	TOWNE	157	208
7TH	CERES	58	292
1ST	JUDGE JOHN AISO	190	148
9TH	HOPE	136	198
7TH	GLADYS	258	66
5TH	CENTRAL	198	121
1ST	OLIVE	269	39
8TH	FIGUEROA	151	122
5TH	TOWNE	212	60
1ST	LOS ANGELES	85	167
9TH	FIGUEROA	111	134
TEMPLE	FIGUEROA	79	160
7TH	FRANCISCO	99	129
ALISO	SPRING	200	20
6TH	TOWNE	57	152
ALISO	LOS ANGELES	143	62
6TH	KOHLER	69	134
5TH	FIGUEROA	34	160
TEMPLE	LOS ANGELES	77	108
1ST	GRAND	10	160
6TH	FLOWER	105	57
3RD	MAIN	76	81
WINSTON	MAIN	63	70

Table 1-12 Average Daily Boardings and Alightings at Metro Bus Stops Within the Project Study Area, Fiscal Year 2007			
East/West Street	North/South Street	Average Daily Boardings	Average Daily Alightings
3RD	CENTRAL	116	6
3RD	LOS ANGELES	115	5
DIVISION 1 LAYOVER		68	52
TEMPLE	JUDGE JOHN AISO	60	57
4TH	FLOWER	82	34
1ST	SAN PEDRO	60	55
2ND	SPRING	32	80
TEMPLE	MAIN	27	67
WILSHIRE	HOPE	4	89
5TH	MAIN	18	65
4TH	TOWNE	4	76
2ND	GRAND	12	59
4TH	WALL	6	56
4TH	LOS ANGELES	9	51
4TH	SAN PEDRO	3	56
DIAMOND	FIGUEROA	2	51
JAMES M WOOD	FRANCISCO	28	25
TEMPLE	HOPE	45	7
3RD	FLOWER	24	25
3RD	FIGUEROA	5	41
4TH	MAIN	15	29
2ND	OLIVE	21	22
3RD	SAN PEDRO	39	2
2ND	MAIN	19	21
4TH	FIGUEROA	37	3
2ND	FIGUEROA	5	28
6TH	MAPLE	13	9
4TH	ALAMEDA	8	2
1ST	ALAMEDA	4	4
9TH	FLOWER	5	3
2ND	HILL	2	5
8TH	FRANCISCO	4	3
1ST	FIGUEROA	0	3
MAPLE LOT		1	1

Source: Los Angeles County Metropolitan Transportation Authority, 2007

1.6.3 Regional Objectives

SCAG is responsible for regional transportation planning for six counties within Southern California: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. In 2004, SCAG released "Destination 2030, the Regional Transportation Plan (RTP)." In May 2008, it released an update entitled "Making the Connections." The documents provide a basic policy and program framework to improve the transportation system and integrate it with the population growth patterns for the region through 2030.

Destination 2030 is a performance-based plan with the following goals:

- maximize mobility and accessibility,
- ensure safety and reliability,
- preserve our transportation system,
- maximize productivity of our system,
- protect the environment, and
- encourage land-use and growth patterns that complement our transportation system.

SCAG developed performance indicators and measures to quantify the goals and evaluate progress towards achieving the goals. Table 1-13 lists the performance indicators, associated measures, and final projected outcomes. The outcomes are estimated for the Plan as a whole for 2030, and not for individual projects.

If no action is taken, performance in the region will worsen. SCAG projects that between Base Year 2000 and 2030:

- Daily vehicle miles traveled in the region will increase by 35 percent from 361.5 million to 488.8 million.
- Average travel speed will reduce by 11 percent from 35.9 miles per hour (mph) to 31.9 mph.
- Daily person-hours of delay will increase by 250 percent from 2.2 million hours to 5.4 million hours.
- Average daily delay per person will increase by 78 percent from 8.0 minutes to 14.2 minutes.
- The percentage of peak period evening work trips completed within 45 minutes for autos will decrease from 88 percent to 82 percent; for public transit, it will decrease from 33 percent to 29 percent.
- Home to work average travel times will increase by 25 percent from 21.6 minutes to 25.9 minutes.

The Regional Connector would contribute to alleviating the mobility problem in the region and to achieving the Destination 2030 goals. It would do this by:

- extending the reach and connectivity of all but one of Metro's operational and under-construction LRTs;

- broadening the range of downtown destinations reachable with one transfer from the Metro Red and Metro Purple Lines;
- alleviating congestion on the downtown bus network; and
- increasing the availability of direct service to multiple destinations in Los Angeles County for passengers arriving on intercity services at Union Station.

The Regional Connector offers a public transit connection that would improve mobility and accessibility in the region and provide commuters with a simplified and reliable transportation option.

The area from which Regional Connector ridership is expected to be drawn includes several freeways and major intersections that have significant traffic congestion and long delays. The improved convenience of the Regional Connector would encourage use of a public transit alternative that would reduce daily vehicle trips, miles traveled, and congestion on the region's roadways.

The Regional Connector would augment public transportation service originating in areas with high population densities and households dependent on public transit. This would increase potential ridership, thereby increasing the project benefits and making it more cost-effective. In addition, the Regional Connector's service area covers the County's most highly-concentrated employment area and a major cultural, entertainment, and tourist destination.

1.7 Project Purpose

The purpose of this project is to improve the region's public transit service and mobility by linking the Metro Rail services of the Metro Gold Line, Metro Gold Line Eastside Extension, Metro Blue Line, and Metro Expo Line, thereby providing direct access to one of the region's major employment centers.

Since the completion of studies on the Metro Blue Line to Pasadena performed in 1993 and 1994, the Metro Rail system has grown substantially, with rail lines in operation or under construction extending over 70 track-miles within Los Angeles County. Currently, the Metro Red and Metro Purple subway lines serve as an interim connection between the Metro Blue Line at 7th St./Metro Center and the Metro Gold Line at Union Station, but the transfers involved are time-consuming, contribute to crowding on the subway platforms and trains, and may dissuade passengers from riding.

Table 1-13 Performance Indicators, Measures, and Outcomes of Destination 2030 Goals					
Performance Indicator	Performance Measure		Plan 2030	Base Year 2000	Baseline 2030
Mobility	Average Daily Speed (Miles per Hour)		35.2	35.9	31.9
	Average Daily Delay (Daily Person Hours in millions)		3.2	2.2	5.4
Accessibility	Percent PM peak period work trips within 45 minutes of home	Autos Transit	90% 37%	88% 33%	82% 29%
Reliability	Percent variation in travel time	6AM-7AM 7AM-8AM 8AM-9AM 3PM-4PM 4PM-5PM 5PM-6PM 6PM-7PM	10% 13% 13% 19% 18% 17% 20%	11% 15% 15% 21% 20% 19% 22%	N/A
Safety	Daily accident rates per million persons	Fatalities	0.27	0.28	0.28
		Injuries	10.7	11.0	11.0
		Property Damage	17.5	18.2	18.2
Productivity	Roadway capacity – vehicles per hour/lane (Lost Lane Miles)	AM peak PM peak	377 302	332 266	N/A
Sustainability	Total cost per capita to sustain current system performance		Plan 2030 estimates an additional cost of $20 per capita per year over base year		
Preservation	Maintenance cost per capita to preserve system at base year conditions (base year 2002, constant 2002 dollars)		~$80	~$63 (2002)	N/A
Environmental	Emissions generated by travel (over Baseline 2030)	CO PM10 Exhaust PM10	Plan 2030 estimates: 6-8% reduction 6-8% reduction 8-11% reduction		
Environmental Justice	Benefit vs. Burden by quintiles – Auto Percentage of Tax Paid and Time Savings (Quintile 1=lowest income, Quintile 5=highest income)	1 2 3 4 5	Plan 2030 estimates: Expenditure 9% 13% 18% 24% 37%	Time Savings 6% 14% 21% 29% 30%	
	Benefit vs. Burden by quintiles – Local Transit Percentage of Tax Paid and Time Savings (Quintile 1=lowest income, Quintile 5=highest income)	1 2 3 4 5	Plan 2030 estimates: Expenditure 9% 13% 18% 24% 37%	Time Savings 23% 30% 23% 16% 8%	

Source: SCAG Destination 2030, 2004

The Regional Connector will improve service for communities locally and across the region, allowing greater mobility and accessibility while supporting the revitalization of downtown. New stations will provide greater coverage of the downtown area, thus enhancing the convenience of the existing rail and bus system.

1.8 Major Themes Supporting Transit Needs in the Project Study Area

In evaluating the mobility problem and travel conditions within the PSA, several themes emerge which reinforce the need for transportation improvements. These themes are listed below, while subsequent sections address each theme in greater detail.

- Need for Transit Improvements Based on Current and Future Transit Conditions
- Transit Usage within the PSA
- Significant Transit Dependent Populations
- Regional Population and Employment Growth
- Population and Employment Densities
- Travel Demand Justifies Need for Transit Services
- Local Land Use Policies and Guidelines that Support Transit

1.8.1 Need for Transit Improvements Based on Current and Future Transit Conditions

According to Metro's 2004 Metro Rail Onboard Survey, 42 percent of Metro Gold Line riders indicated that they rode two trains on their one-way trips, and seven percent rode three trains. Additionally, Sierra Madre Villa Station to 7th St./Metro Center Station and Lake Station to 7th St./Metro Center Station were among the most popular station pairs on the Metro Rail system. Since Union Station is the only current rail-to-rail transfer point on the Metro Gold Line, these results suggest that a large portion of Metro Gold Line riders are transferring to the Metro Red Line to complete their trips. See Table 1-14 for a summary of survey results.

Table 1-14 Train/Bus Use per Trip

	All Lines	Blue	Red	Green	Gold
1 Train	53%	47%	60%	56%	49%
2 Trains	38%	44%	34%	31%	42%
3 Trains	7%	8%	4%	10%	7%
4 Trains	2%	1%	2%	2%	1%
1 Bus/Train	22%	16%	26%	20%	24%
2 Bus/Train	34%	34%	41%	26%	38%
3 Bus/Train	25%	28%	21%	29%	21%
4+ Bus/Train	19%	21%	13%	24%	17%

Source: 2004 Metro Rail Onboard Survey

Upon completion of the Metro Gold Line Eastside Extension, passengers bound for the PSA will generate many additional Metro Red and Purple Line transfers at Union Station, as well as new bus and Metrolink transfers. Metro Red and Purple Line trains typically layover at Union Station with their doors open for several minutes before departing, so patrons may be able to board waiting trains immediately upon entering the station, thereby potentially reducing platform crowding issues. However, the extent to which the opening of the Eastside Extension will affect platform crowding at Union Station remains to be seen.

Crowding in the passageways and rail platforms may, however, become a significant issue at 7th St./Metro Center Station. Once in operation, Metro Expo Line trains from Culver City will share the existing Metro Blue Line terminal platforms, where trains already operate on five-minute headways during peak hours. This could create rail congestion and rush hour delays at locations where existing facilities to reverse light rail trains consist of scissor crossovers at either end of the station. Scissor crossovers are diamond-shaped crossovers that allow trains to switch from one track to the other, but block all other train movements.

The Metro Blue Line boarding area consists of two side platforms, but typically only one of the platforms is used, and this currently contributes to passenger crowding at the station. Metro Red and Purple Line passengers wishing to use the Flower St. escalators must also share the crowded passageways leading to the Metro Blue Line platform. Metro Expo Line passengers would add to the crowds on the existing Metro Blue Line platform, as transfers to the Metro Red and Purple Lines also contribute to crowding on the lower platform. In such crowded conditions, the ability to quickly evacuate the station in an emergency could be compromised.

The proposed Regional Connector LRT services are shown in Figure 1-15.

The Regional Connector would eliminate many transfers and alleviate crowding at 7th St./Metro Center Station. In addition, it will reduce the number of transfers from the Metro Gold Line to the Metro Red and Purple Lines at Union Station by providing new single-vehicle LRT service through the downtown area. This will shorten walking distances and trip times for all rail passengers bound for the Bunker Hill area.

The Regional Connector would also eliminate many transfers at Union Station, as many of the passengers traveling to the Financial District from East Los Angeles or Pasadena would likely stay on the Metro Gold Line trains and continue along the Regional Connector instead of transferring to the Metro Red Line. Metro's 2004 Metro Rail Onboard Survey indicates that relatively few Metro Gold Line riders currently continue beyond 7th St./Metro Center Station toward Long Beach on the Metro Blue Line. This could indicate a lack of travel demand between Pasadena and Long Beach.

Downtown-bound Metro Blue Line and Metro Expo Line trains will merge onto a single set of tracks at Washington Blvd. and Flower St. and travel along the existing Flower St. right-of-way to 7th St./Metro Center Station. Trains would then continue along the Regional Connector to Little Tokyo where the lines would again split, with Metro Blue Line trains

continuing to Union Station and Pasadena, and Metro Expo Line trains traveling to East Los Angeles. If Long Beach-Pasadena service and East Los Angeles-Culver City service each operate with 5-minute peak hour headways, the Regional Connector tracks would see trains every 2 ½ minutes in each direction. This means that any at-grade intersections would see trains approximately every 75 seconds, or one to two trains per signal cycle.

The Regional Connector would allow for more efficient train maintenance, as it would link the Metro Gold Line and Metro Blue Line maintenance facilities via new LRT track. Because the Metro Gold Line has only a light-duty maintenance yard, trains must currently be loaded onto trucks and driven to the Metro Blue Line yard in Long Beach when they require major services. The Regional Connector would allow Metro Gold Line trains to simply deadhead to Long Beach along the service tracks, eliminating the need for costly trucking and expediting their arrival to the yard.

In addition, connecting the LRT lines as a single network enables vehicles to be stored and operated on multiple lines. Currently, storage surplus on one LRT network is not available to the other network. The Regional Connector would make centralized vehicle maintenance and storage facility serving the entire network possible.

1.8.2 Transit Usage

As the largest employment center in Los Angeles County, there are unique opportunities in the PSA for residents to live near their jobs in an area with dense transit service. While the Regional Connector would not extend rail transit service into previously un-served regions of the County, it will broaden coverage within downtown Los Angeles and speed rail trips through the area by eliminating transfers. Both of these improvements would result in time savings; new stations mean shorter walking distances for many current passengers and fewer transfers mean less time spent waiting for trains and buses.

The ridership benefits of increasing trip speeds have been demonstrated in Los Angeles by the Metro Rapid program. The 2002 Demonstration Program Final Report noted that the implementation of the rapid bus service led to 23-29 percent improvement in trip speeds, an increase from 9mph to 12mph. While this difference may seem small, ridership on the Wilshire/Whittier corridor increased by 42 percent as a result. The other demonstration corridor, Ventura Blvd., experienced a ridership increase of 27 percent.

The Regional Connector is expected to result in similar increases in ridership among Metro Blue Line and Gold Line passengers. The transfer between the Red/Purple and Blue Lines at 7th St./Metro Center can currently take one to five minutes during peak hours, three to ten minutes during off-peak hours, and five to eight minutes on weekends. The transfer between the Metro Red or Purple Line and Gold Lines at Union Station takes three to eight minutes during peak hours, five minutes during off-peak hours, and five minutes on weekends.

By eliminating these transfers, assuming speeds similar to the Metro Red Line, the Regional Connector could reduce travel times by:

- five to 13 minutes during peak times,
- eight minutes during off-peak times, and
- eight minutes on weekends.

1.8.3 Regional Population and Employment Growth

Much of the greater Los Angeles metropolitan area consists of fairly dense populations which are expected to grow by the year 2030. Figures 1-16 and 1-17 show the regional population densities in 2005 and the 2030 projection, respectively. In 2005, areas of highest population density were found in Central Los Angeles, Hollywood, Southgate, East Los Angeles, and the Westside.

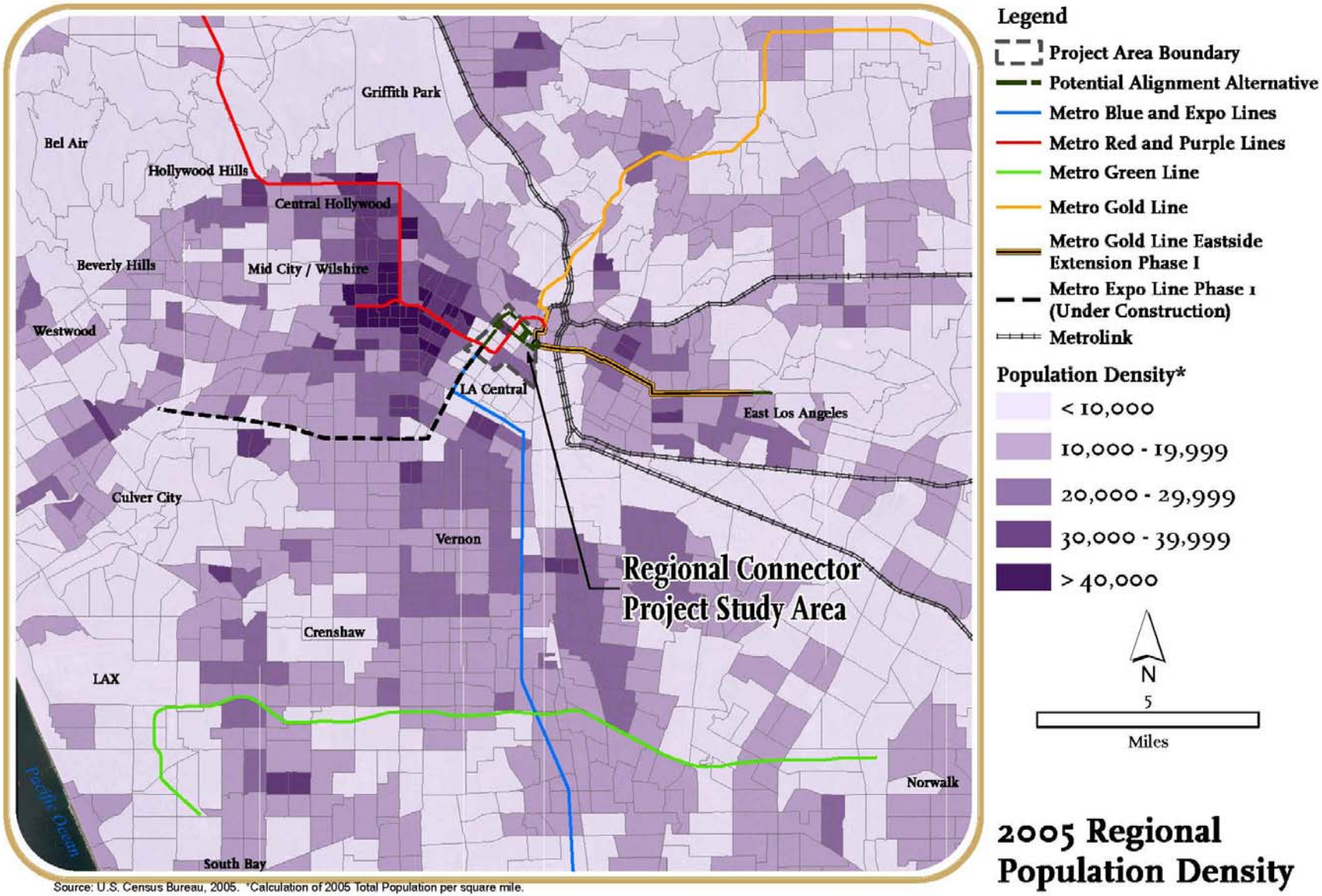
Population densities will increase throughout the region, particularly in those with already-high density. Significant increases in density will develop in the South Bay and the Eastside, particularly along the I-10 corridor.

Areas of high population density tend to have workers who need to travel to employment centers throughout the region. Figures 1-18 and 1-19 show the regional employment densities in 2005 and projected in 2030, respectively.

In 2005, the highest employment densities overlapped the PSA in Central Los Angeles. Areas of moderate employment density included Westwood, Santa Monica, Hollywood, Culver City, Pasadena, the South Bay and East Los Angeles. Employment densities are expected to increase in census tracks around these employment centers. The improvement of transit services in downtown will help bring workers from areas of higher population density and lower employment density to the PSA, where the highest concentration of employment opportunities is located. The Regional Connector will also improve access to areas of moderate employment density by eliminating transfers and reducing travel time for commuters.

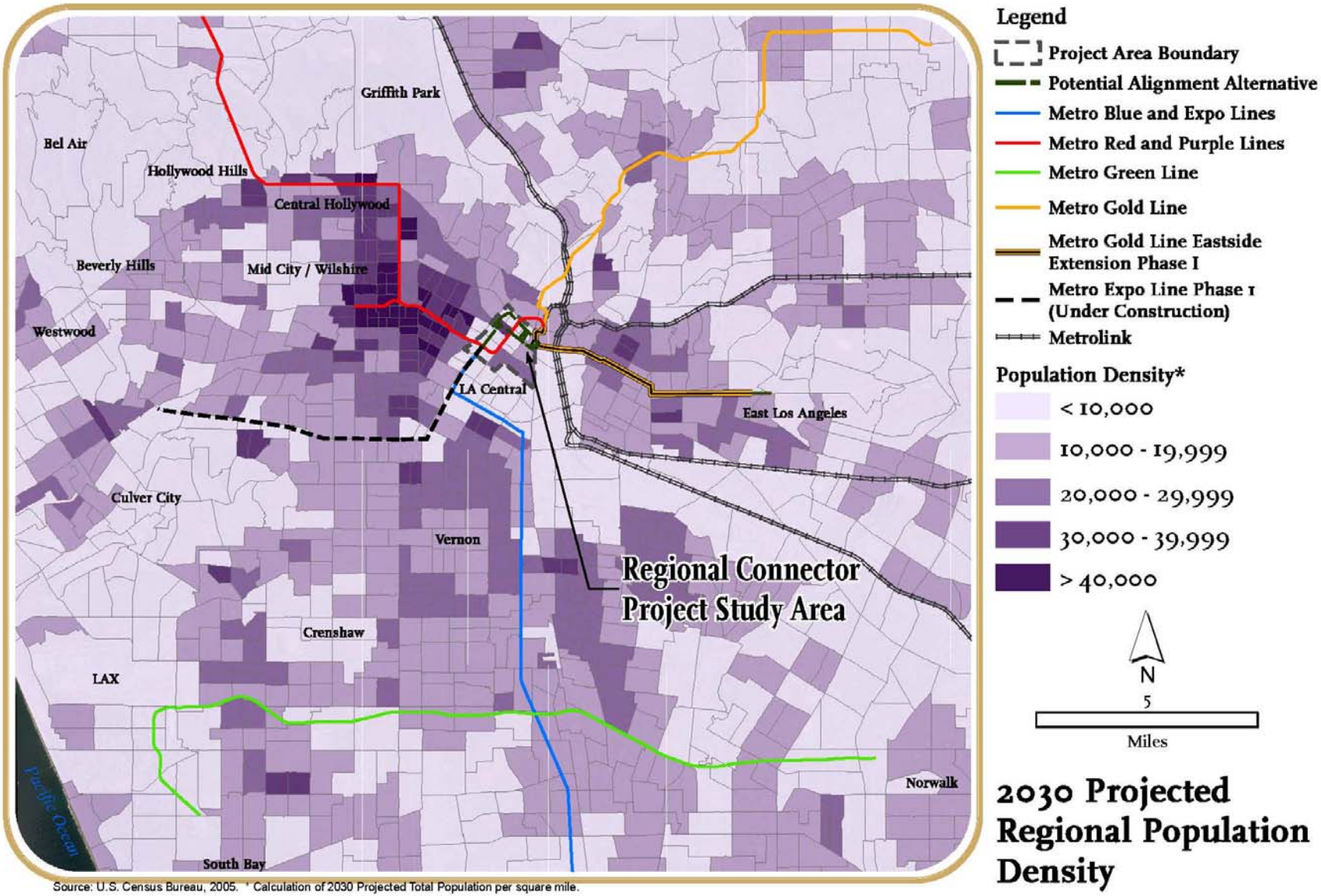
Current transit usage in the region is the highest in Central Los Angeles, with additional areas of moderate transit usage in the Westside, Hollywood, Pasadena, the South Bay, and Pasadena, as shown in Figure 1-20. Transit usage is projected to increase in these areas by 2030, as shown in Figure 1-21. The highest transit usage areas are found along the existing Metro Red Line and Metro Purple Line corridors. There is also high transit usage in the Westside area where there are many students who are reliant on public transportation.

Additional transit opportunities created by the Regional Connector for commuters on the Metro Blue and Gold lines are expected to increase the number of trips along the corridors of both. The Regional Connector will alleviate congestion on the already heavily-used Metro Red and Purple Lines by eliminating the need for Metro Blue and Gold line commuters to transfer through them.



Source: U.S. Census Bureau, 2005. *Calculation of 2005 Total Population per square mile.

Figure 1-15 2005 Regional Population Density



Source: U.S. Census Bureau, 2005. * Calculation of 2030 Projected Total Population per square mile.

Figure 1-16 2030 Regional Population Density

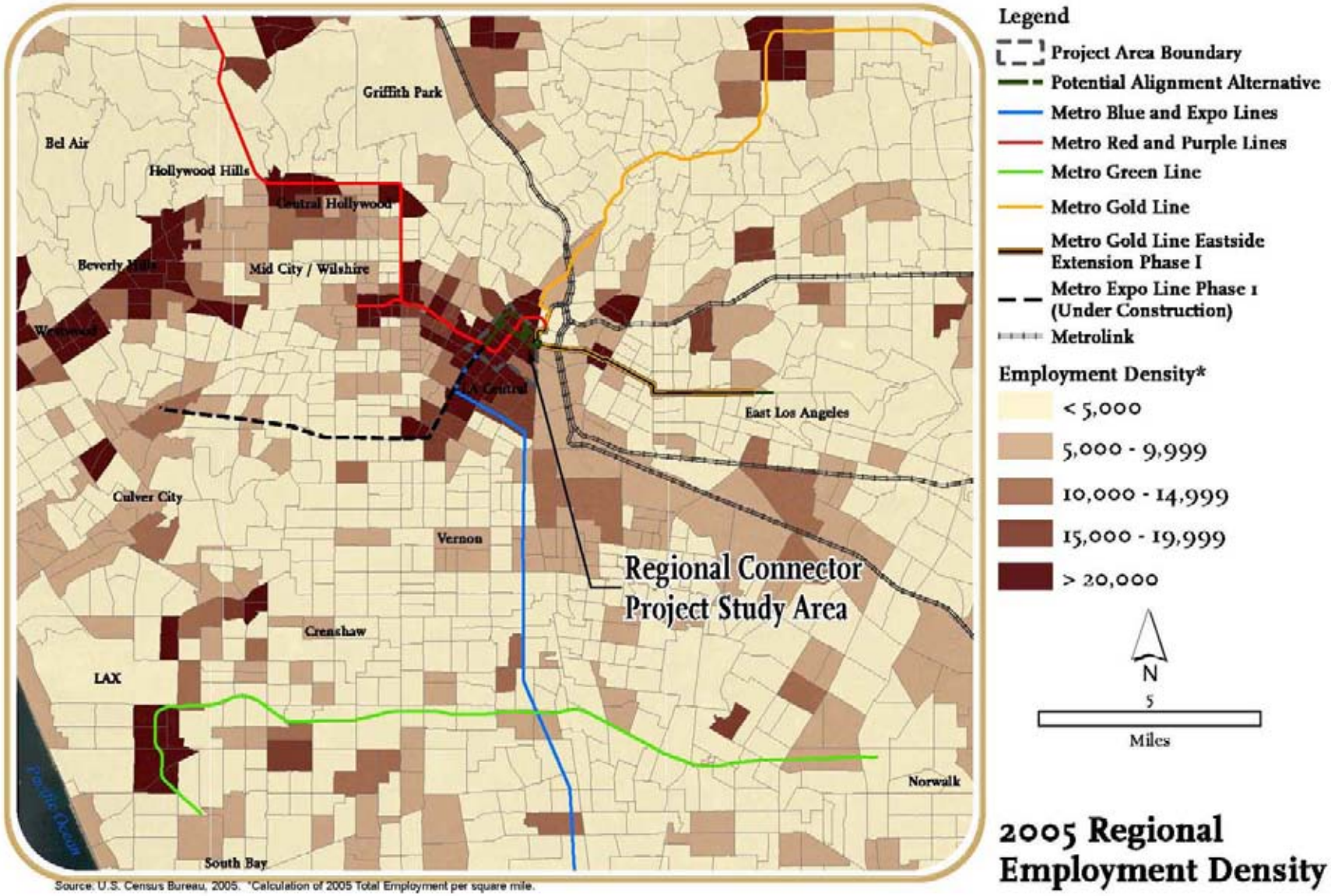
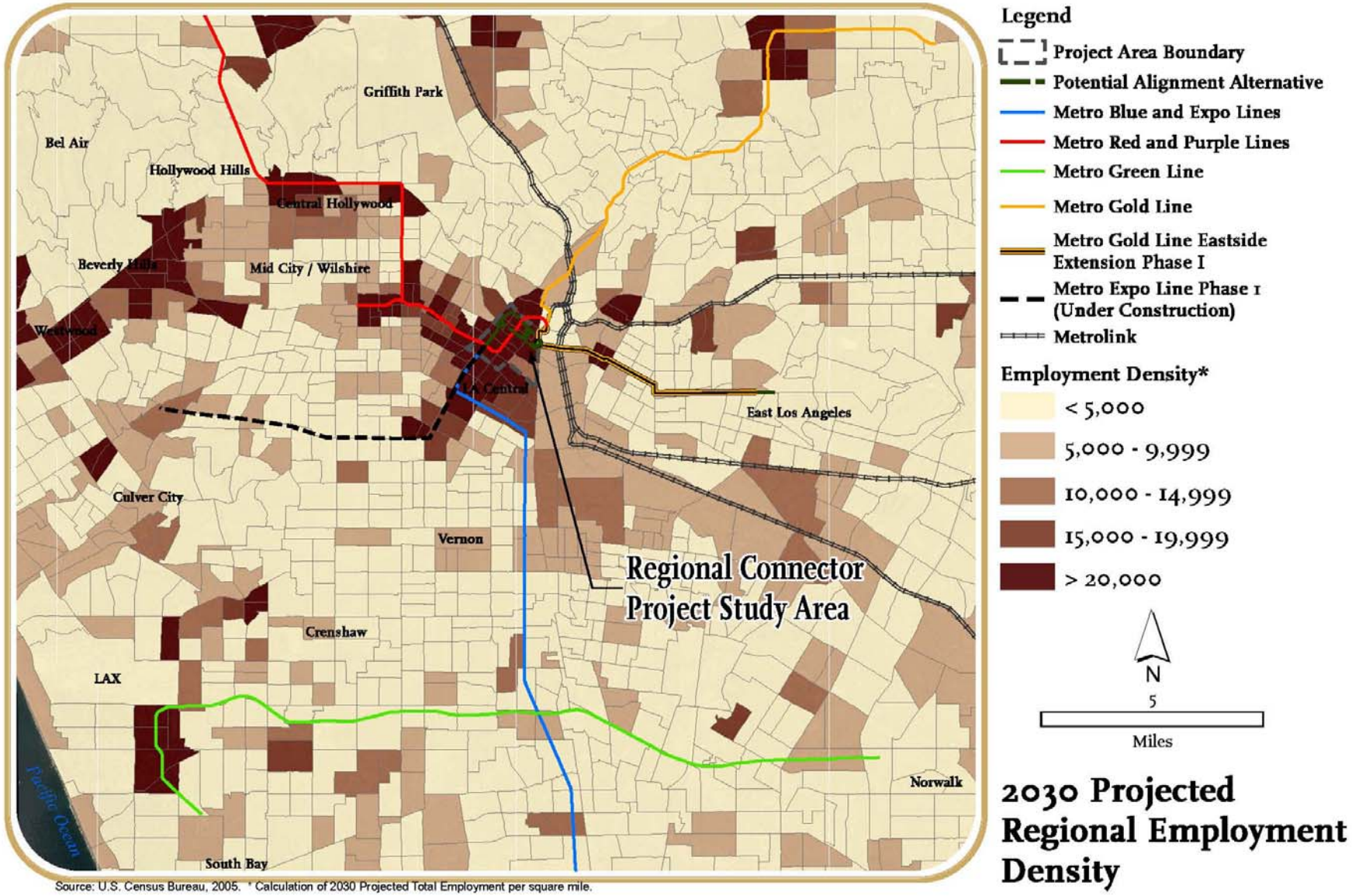
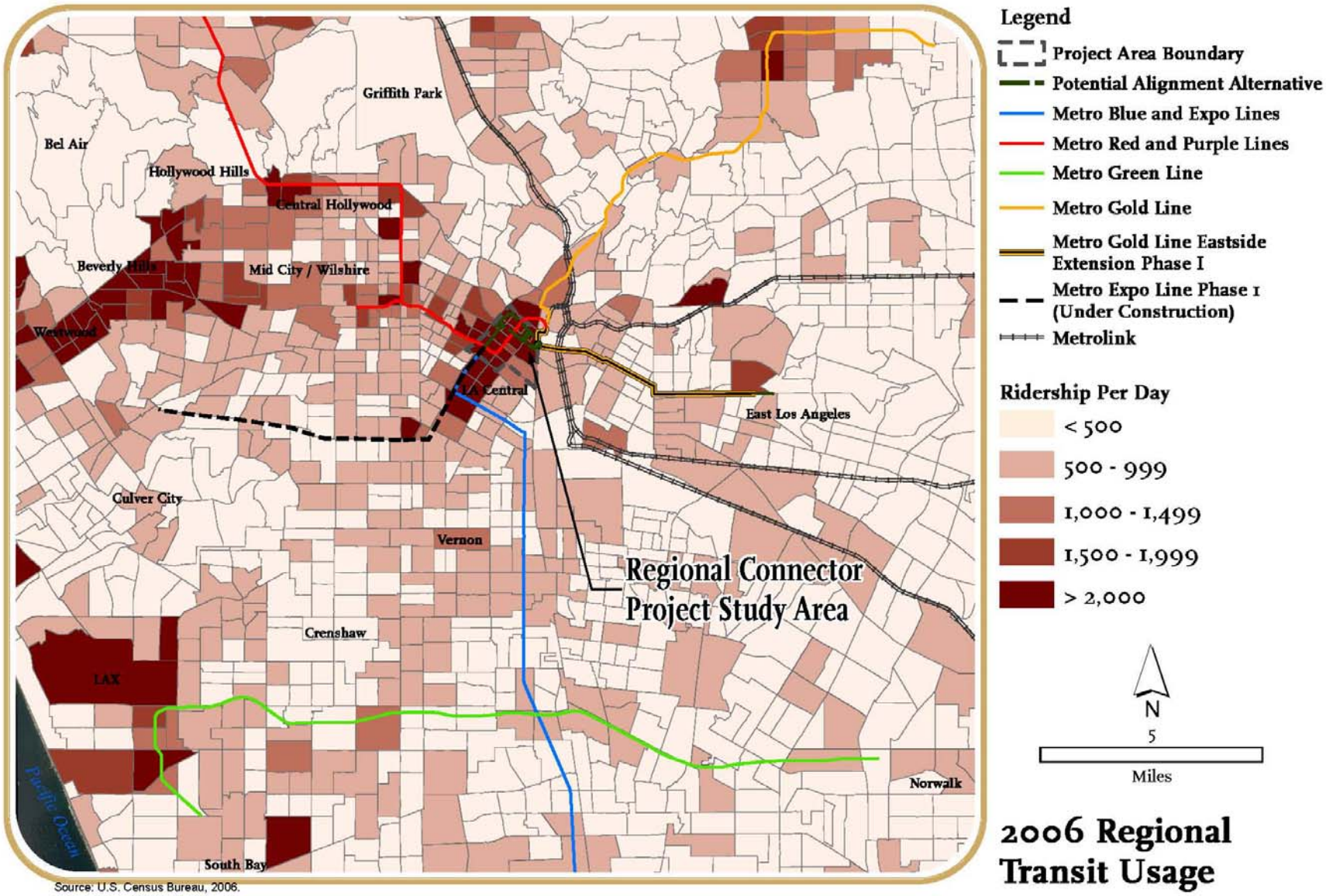


Figure 1-17 2005 Regional Employment Density



Source: U.S. Census Bureau, 2005. * Calculation of 2030 Projected Total Employment per square mile.

Figure 1-18 2030 Regional Employment Density



Source: U.S. Census Bureau, 2006.

Figure 1-19 2006 Regional Transit Usage

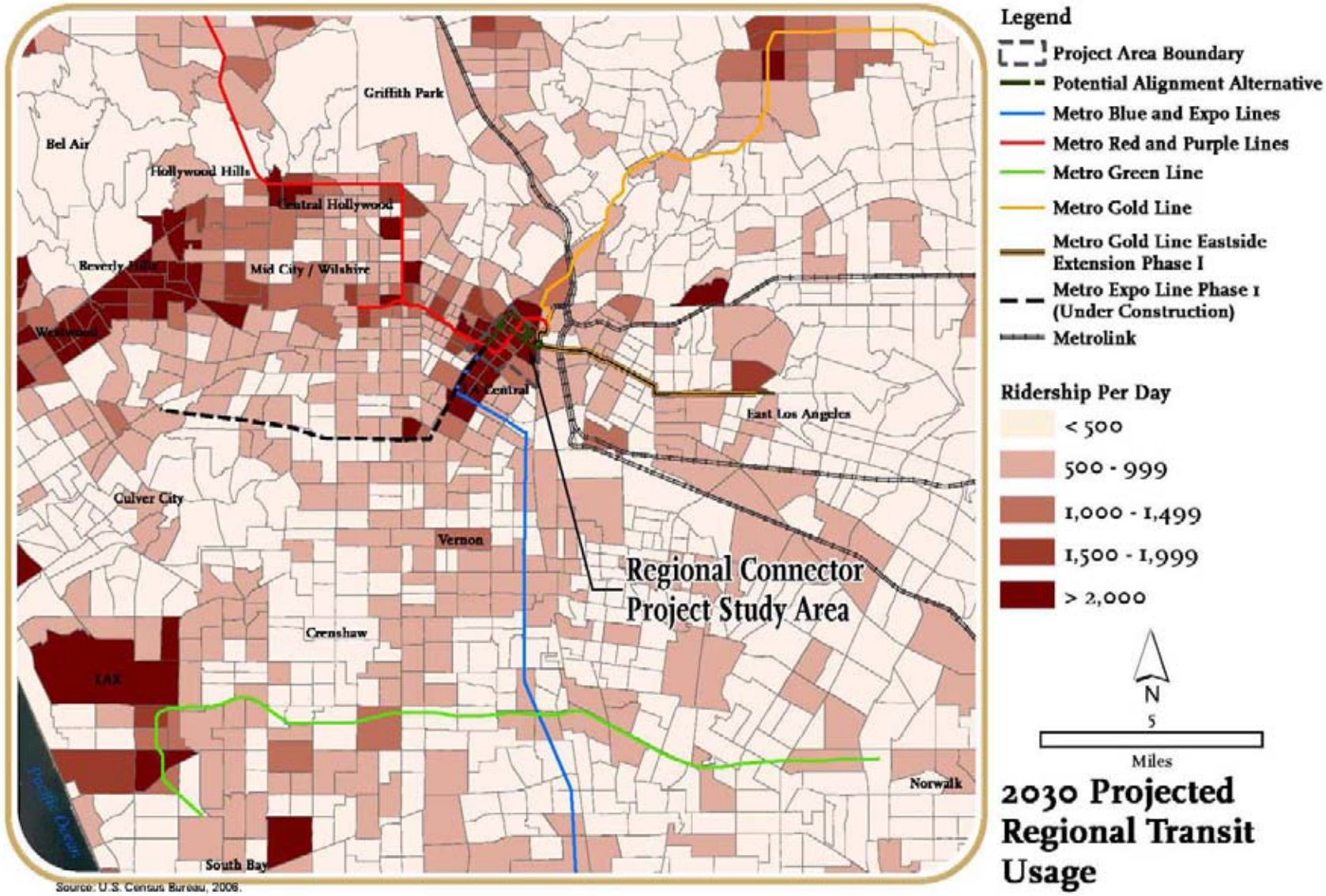


Figure 1-20 2030 Regional Transit Usage

1.8.4 Significant Transit-Dependent Populations in the Project Study Area

The PSA can be characterized as more transit-dependent than the County as a whole because of its dense population, proportionately low income levels, number of households with zero vehicles, and public transportation users. A significant portion of the County's transit riders live and/or work within the PSA; this is projected to increase through 2030. Improvements in transit service would help to mitigate impacts associated with the increased concentration of transit-dependent communities in and around the Regional Connector PSA.

Population, Households, and Employment

Census tracts with the largest populations (greater than 2000 people) are found within the PSA east of Main St. between 1st St. and 7th St. and east of San Pedro St. between Temple St. and 1st St. According to SCAG projections, in 2030, slightly less growth is expected in the PSA compared to the whole County. The population in the PSA is expected to grow by about 18 percent from about 18,000 in 2005 to 21,000 people in 2030.

The largest growth in the PSA is projected in two locations:

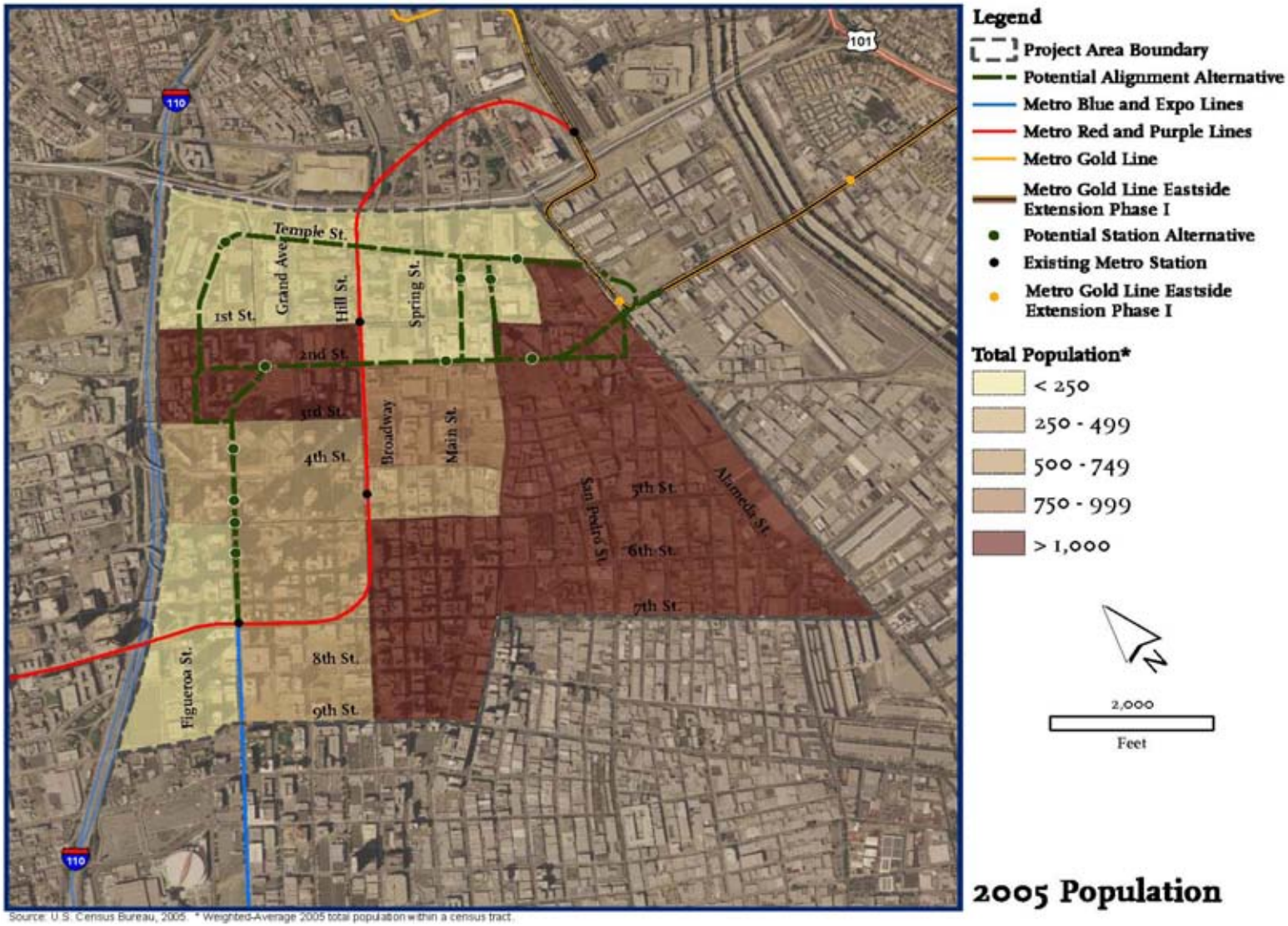
- the area bounded by SR-110, Hill St., 1st St., and 3rd St., which will increase from between 1,500 to 1,999 people to over 2,000 people; and
- the area bounded by Hill St., Main St., 7th St., and 9th St., which will increase from 1,000 to 1,499 people to 1,500 to 1,999 people.

Projected population is based on fairly conservative estimates made by SCAG in 2005. Figures 1-22 and 1-23 show the distribution of existing and projected total population within the PSA.

Several planned high-rise residential projects in the PSA contribute to the high level of expected growth. These include the Park Fifth condominium project at 5th and Hill Streets, the Block 8 condominium and rental project under construction between 2nd, 3rd, San Pedro, and Los Angeles Streets, and the 8th & Grand condominium and retail project at 8th St. and Grand Ave.

The total number of households are also projected to increase 27 percent from about 9,600 in 2005 to 12,200 in 2030, which is higher than the 25 percent projected for the County.

The employment base is projected to increase by about 12 percent from over 168,000 individuals in 2005 to over 188,000 in 2030. Current and projected employment within the PSA are both between three and four percent of total County employment.



Source: U.S. Census Bureau, 2005. * Weighted-Average 2005 total population within a census tract.

Figure 1-21 2005 Population in PSA

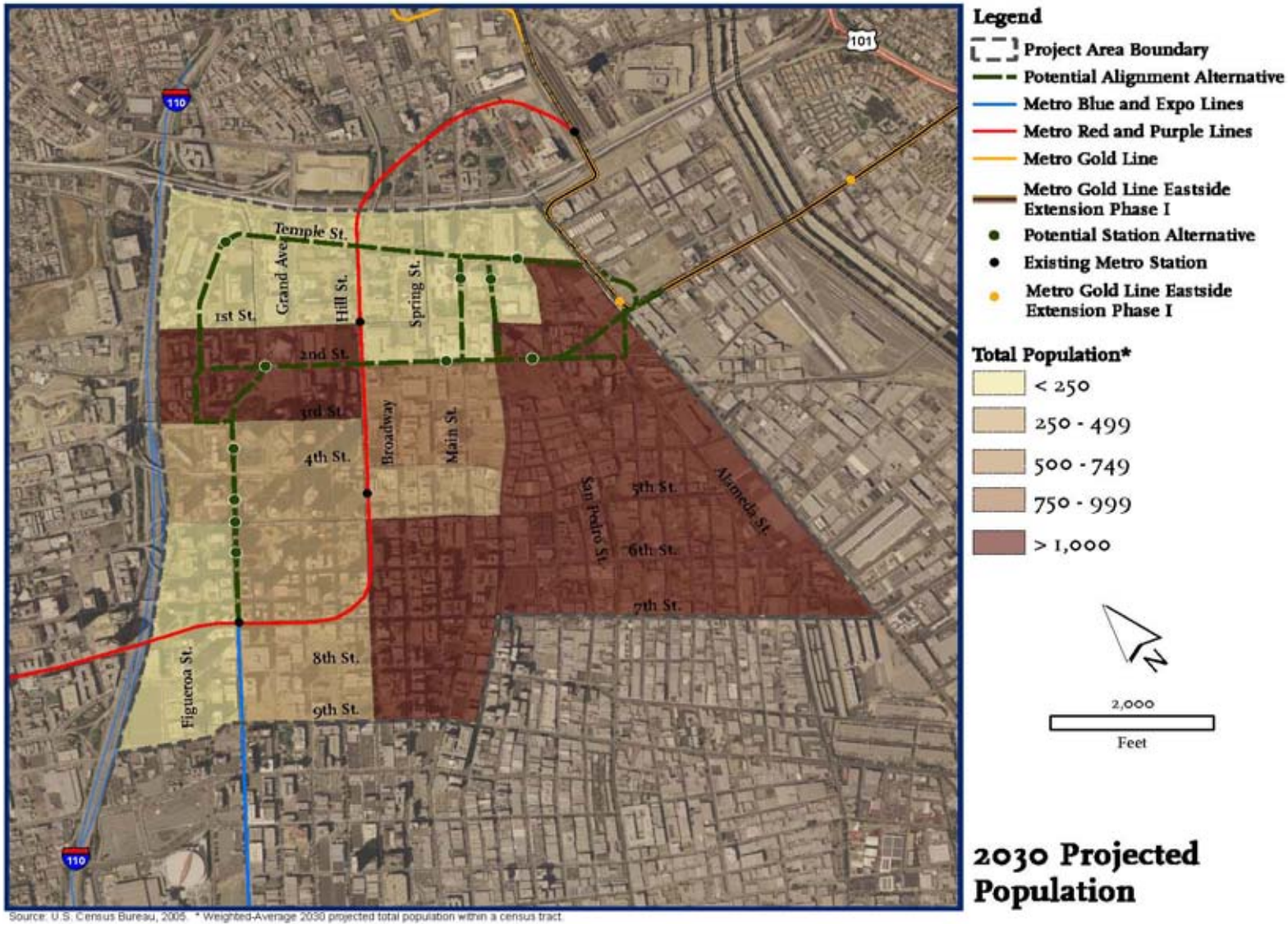


Figure 1-22 2030 Population in PSA

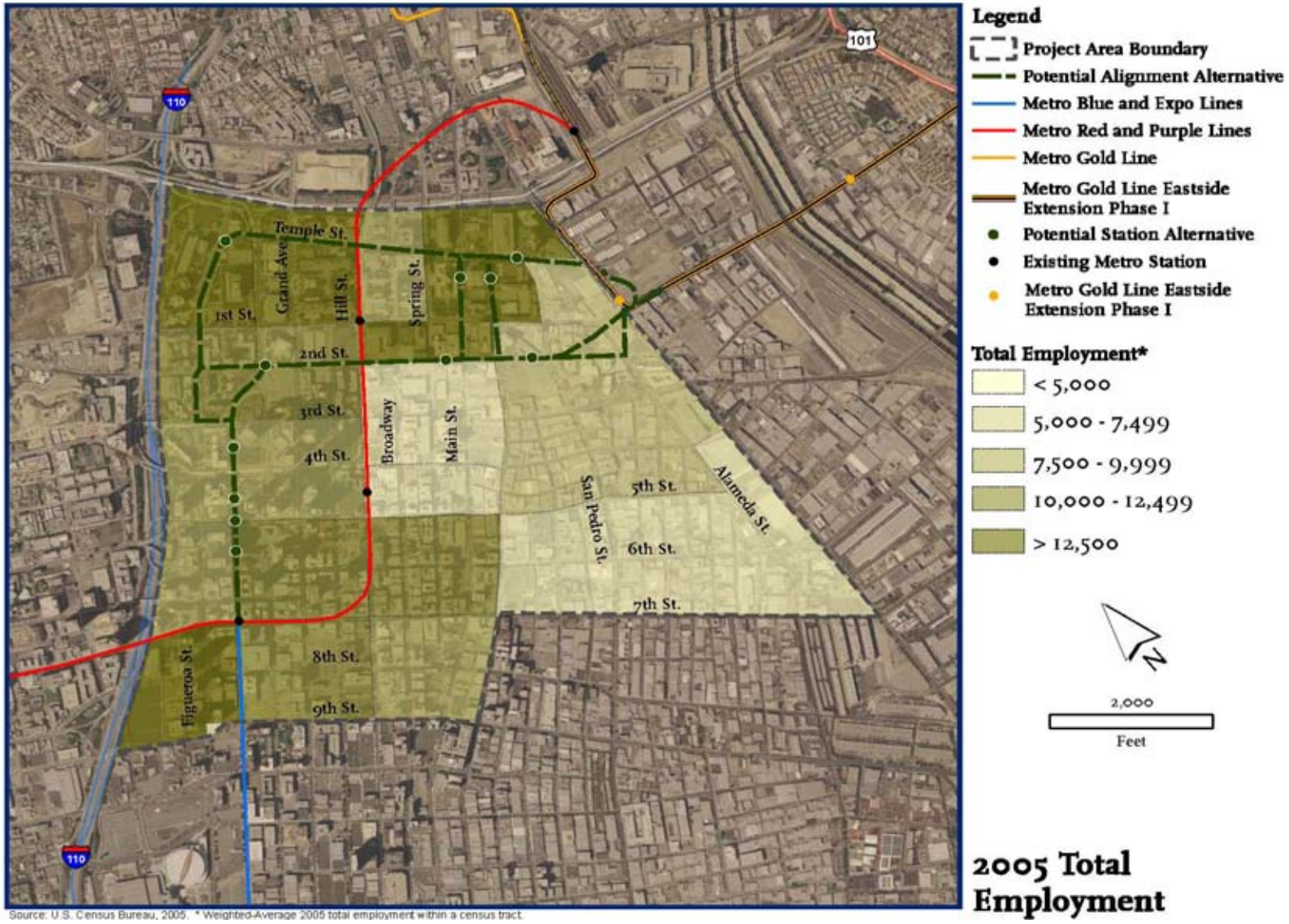


Figure 1-23 2005 Employment in PSA

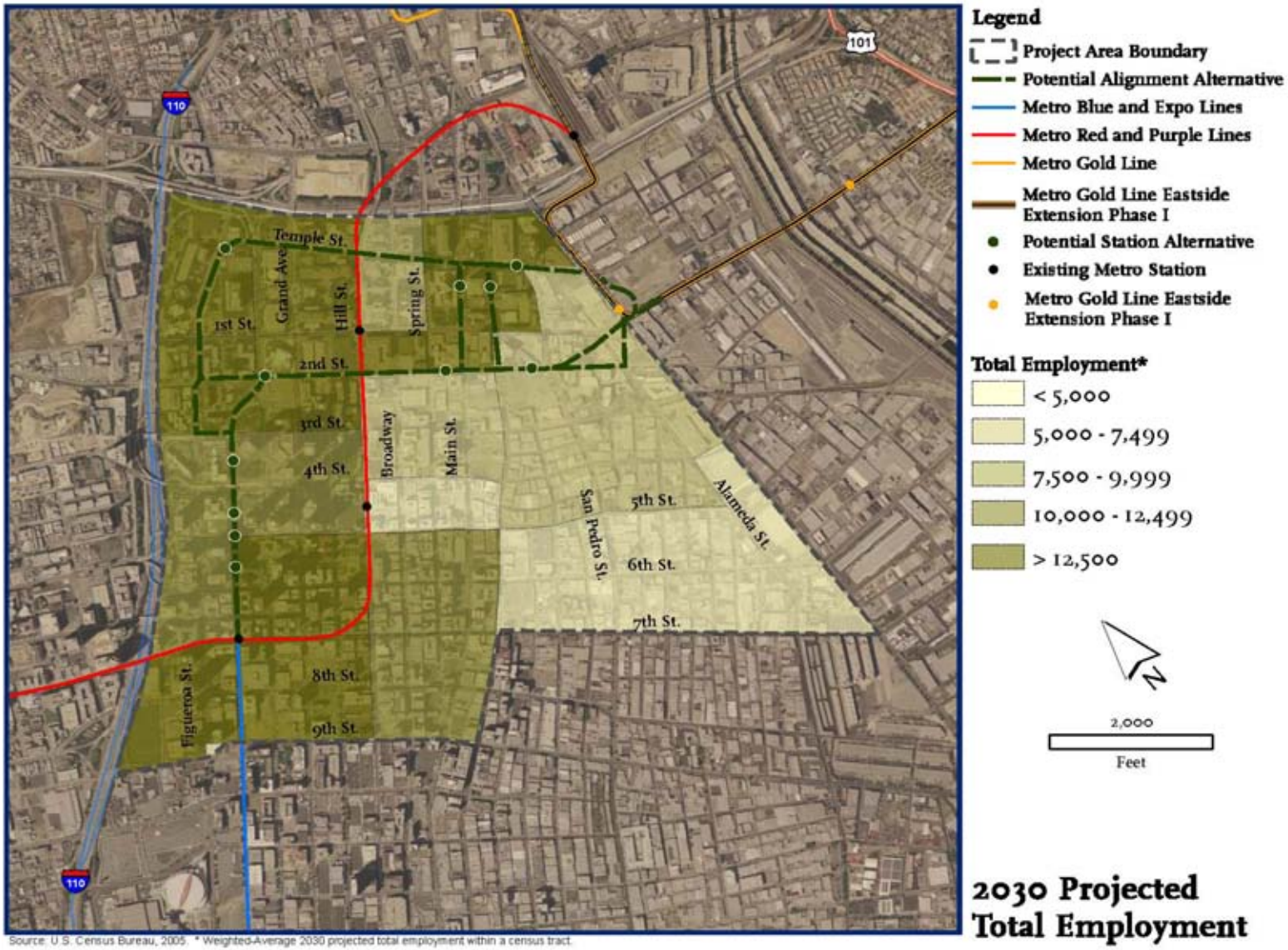


Figure 1-24 2030 Employment in PSA

Figure 1-24 shows the distribution of employment in the PSA in 2005. At that time, total employment in a majority of the census tracts within the PSA was over 5,000, with areas of highest concentration (greater than 12,500 jobs) in three locations:

- the area bounded by SR-110, Flower St., 7th St., and 9th St.;
- the area bounded by SR-110, Hill St.,US-101, and 1st St.; and
- part of the area bounded by Hill St., Alameda St., US-101, and 2nd St.

A large employment base indicates that a significant number of workers commute within, into, and out of the PSA. Figure 1-25 shows the projected distribution of employment in 2030.

Table 1-15 summarizes the PSA's projected growth in population, households and employment relative to the entire County.

Table 1-15 Population, Household, and Employment Growth

	2005	2030	Forecast Increase Between 2005-2030
Population			
PSA	17,795	20,738	16.5%
LA County	10,010,315	12,193,030	21.8%
PSA % of LA County	0.18%	0.17%	---
Households			
PSA	9,673	12,287	27.0%
LA County	3,298,210	4,116,567	24.8%
PSA % of LA County	0.29%	0.39%	---
Employment			
PSA	168,328	188,591	12.0%
LA County	4,644,010	5,651,043	21.7%
PSA % of LA County	3.62%	3.34%	---

Source: SCAG, 2005 data and 2030 projections

Household Income

Socioeconomic trends in the PSA are correlated to transit-dependent communities; household income is an important factor. In 2005, the PSA had about 7,000 low-income households, about 2,000 medium-income households, and only about 400 high-income households.

Low-income households include those households considered to be living in poverty. The US Census Bureau's defined 2005 poverty threshold as an annual average salary of $12,755 for a two-person household. Low-income households represented about 75 percent of the PSA's total households. The high proportion of low-income households underscores the need for public transit.

Figure 1-26 shows the distribution of low-income households in 2005. Census tracts within the PSA that have greater than 1,000 low-income households were:

- the area bounded by SR-110, Hill St., 1st St., and 3rd St.; and
- the area bounded by Hill St., Alameda St., 5th St., and 7th St.

Figure 1-27 shows the projected distribution of low income households in 2030. The number of low-income households is projected to increase by roughly 26 percent to about 9,000 in 2030.

Age Distribution

Demographic data are presented in 1.4 Demographics. Figure 1-28 shows the distribution of residents age 65 and over in the PSA. The senior population is highest west of Hill St. and south of 1st St. Figure 1-29 shows the distribution of residents age 18 and under in the PSA. The youth population is found primarily in the southern part of the PSA, south of 5th St.

Young and elderly residents within the PSA are more likely to depend on public transit because of inability to drive or lack of private vehicle accessibility.

Public Transportation Ridership and Vehicle Accessibility

Nearly 70 percent of the households in the PSA have no car. Figure 1-9 shows the distribution of households with no available vehicles.

Figure 1-30 shows the percentage of the employed population age 16 and over who lived in the PSA relied on public transportation in 2005. Twenty-three percent of employed residents age 16 and over rely on public transit for their commuting needs. Some of the PSA's transit-dependent population live within convenient walking distance (one-quarter to one-half mile) of the Regional Connector termini, while the rest will be able to easily access the Regional Connector with a bus or rail transfer. When comparing vehicle accessibility and public ridership patterns in the Regional Connector PSA, the trends suggest that even households in the PSA with one or more cars have a higher propensity to use public transportation than similar households elsewhere in the County.

There are also a large number of commuters from outside the PSA who utilize transit to get to employment and other opportunities within the PSA. As explained earlier in this section, they will benefit from the development of the Regional Connector.

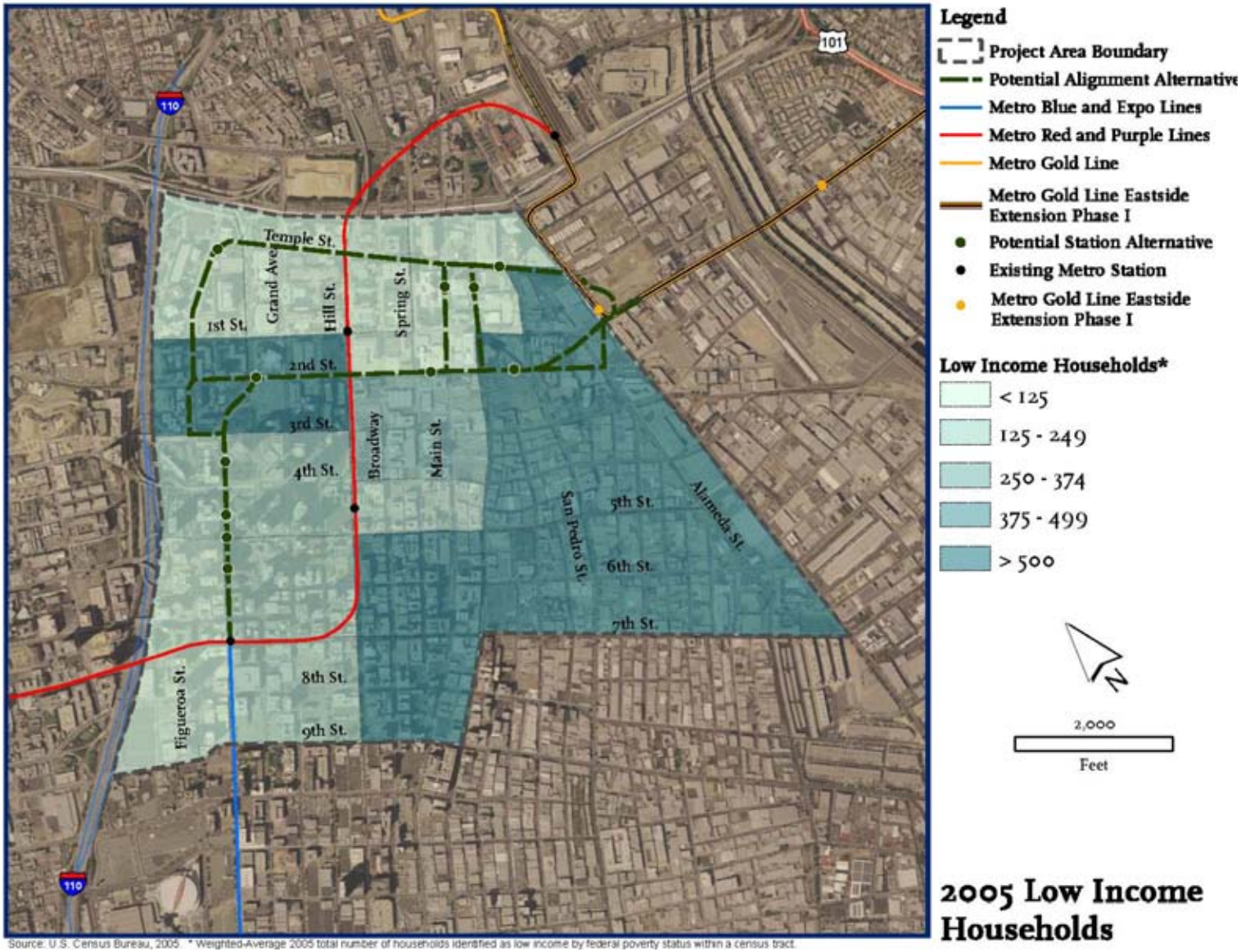
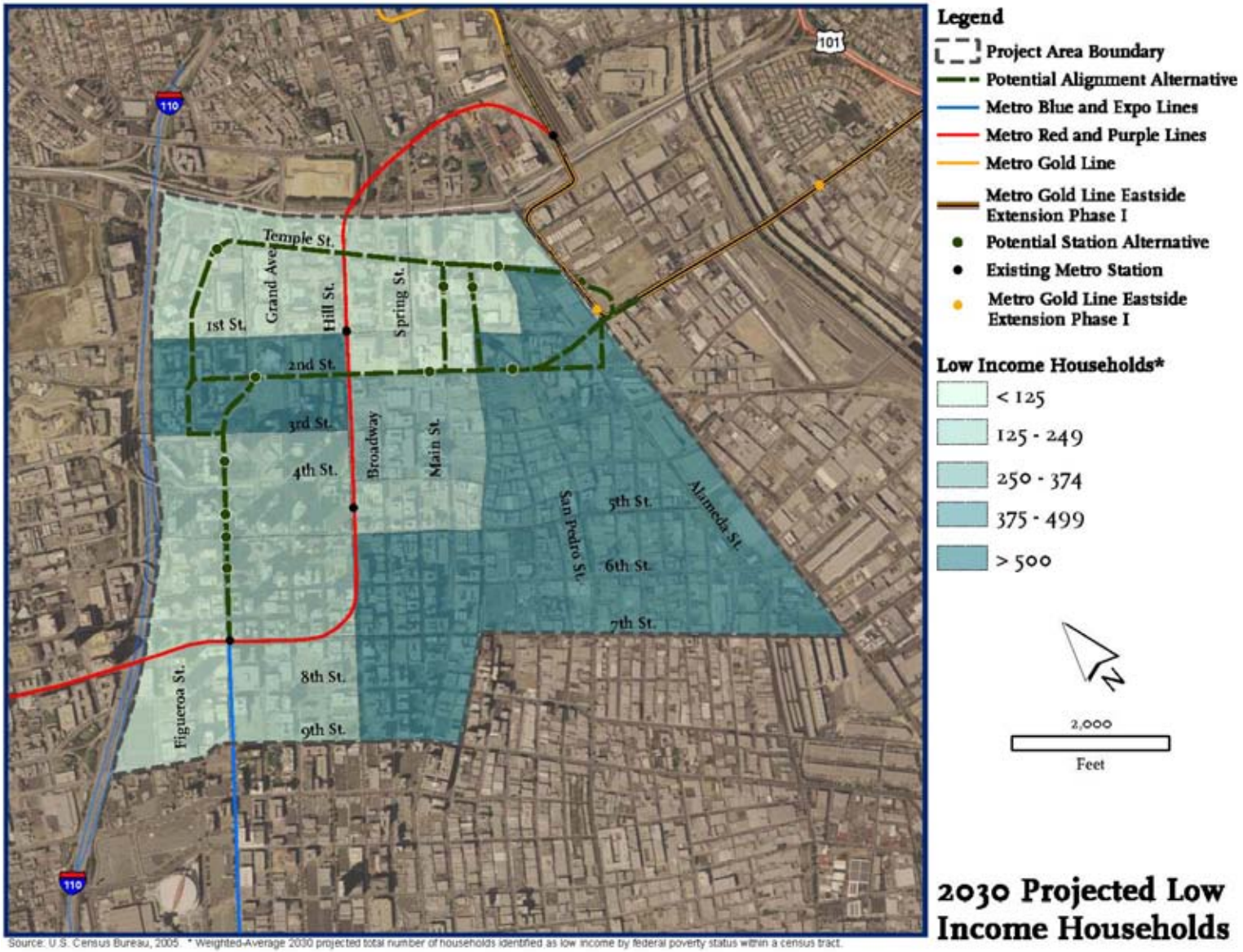


Figure 1-25 2005 Low Income Households



Source: U.S. Census Bureau, 2005. * Weighted-Average 2030 projected total number of households identified as low income by federal poverty status within a census tract.

Figure 1-26 2030 Low Income Households

Table 1-16 summarizes the transit dependency characteristics in the PSA relative and the entire County.

Table 1-16 Transit Dependent Demographic Information

	PSA	LA County	PSA % of LA County
Population	17,795	10,010,315	0.18%
Under 18 years	976	2,798,604	0.03%
Over 65 years	3,497	926,670	0.38%
Households	9673	3,298,210	0.29%
No vehicle households	8586	671,214	1.28%
Use public transportation	1025	254,091	0.40%
Low income households	7,244	1,481,896	0.49%
Total employment	168,328	4,644,010	3.62%

Source: SCAG, 2005 data and 2030 projections

1.8.5 Project Study Area Population and Employment Growth

Providing public transportation to densely-populated areas can increase ridership by making transit more accessible to a larger population. Population and employment density data for the PSA are presented in 1.4 Project Study Area Demographics. The areas of highest population density are found in two locations within the PSA:

- the area bounded by 1st St., 3rd St., SR-110, and Hill St.; and
- the area south of 5th St. and east of Hill St.

Figure 1-31 shows the distribution of population densities in 2005.

The highest employment density exists in the PSA in the area bounded by US-101, 3rd St., SR-110, and Hill St. Figure 1-32 shows the distribution of employment densities in 2005.

Population and employment densities are projected to increase in the PSA in 2030. Average population density is projected to grow to roughly 13,600 persons per square mile, and average employment density is expected to be nearly 124,000 employees per square mile. Figures 1-33 and 1-34 show projected 2030 population and employment densities.

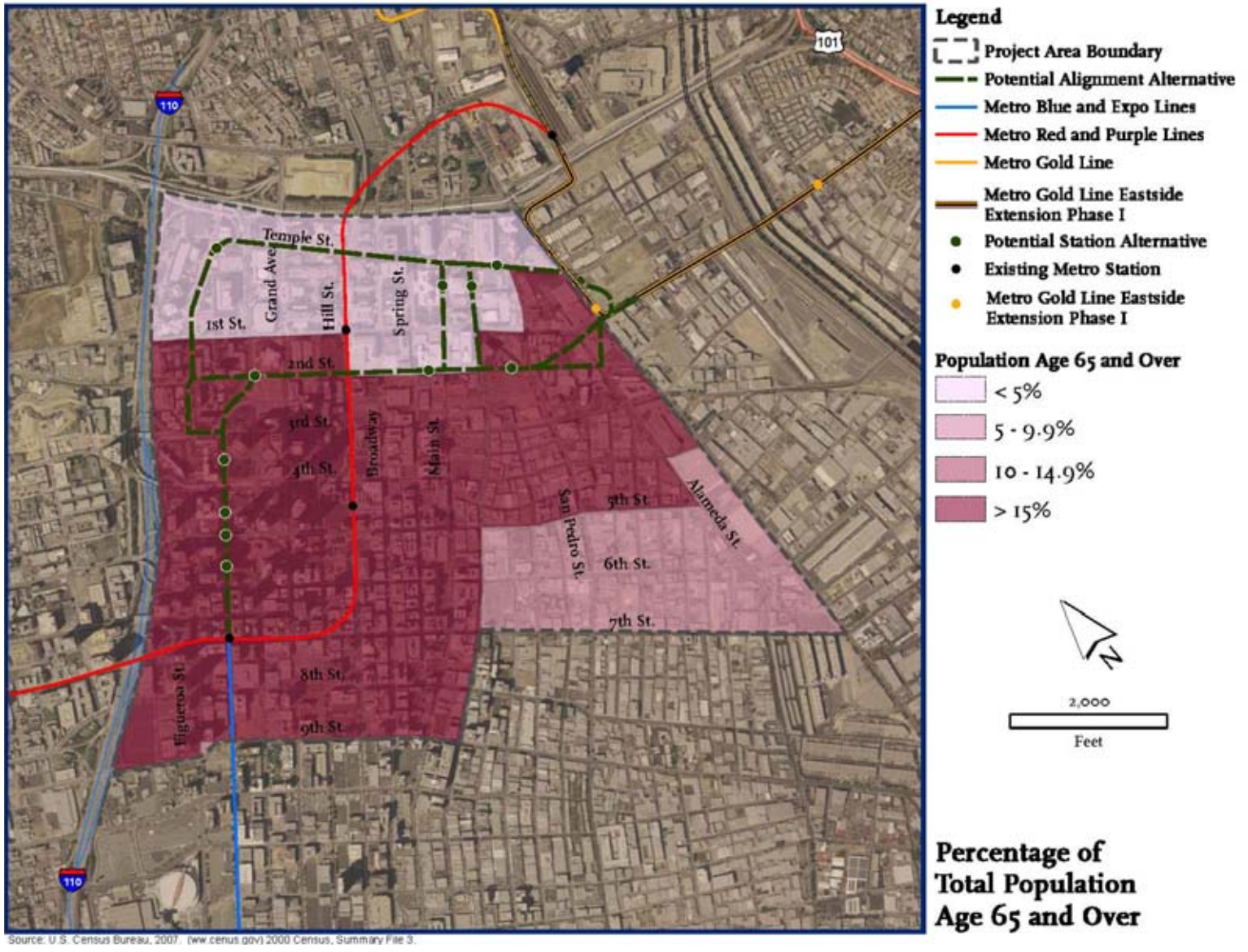
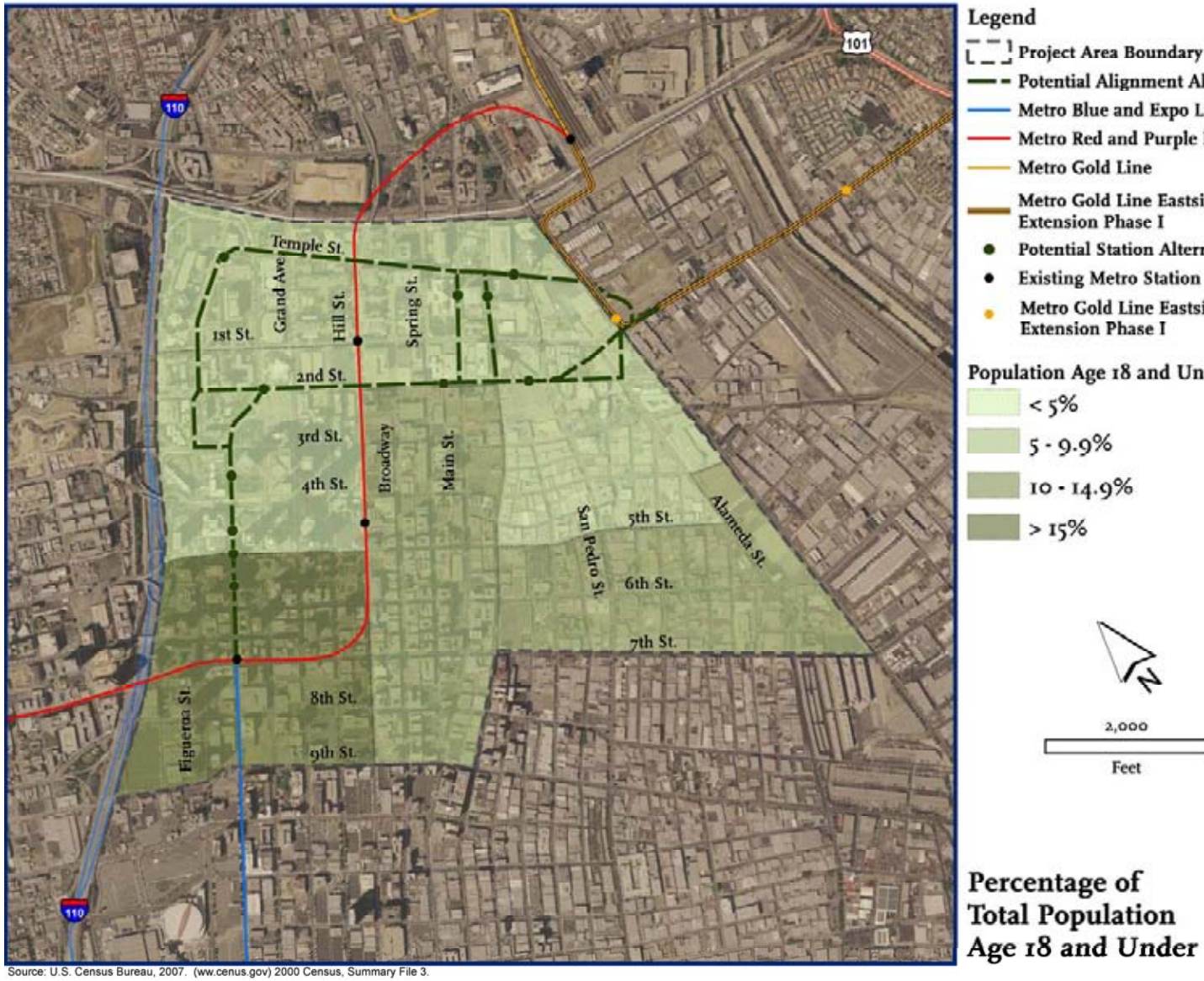
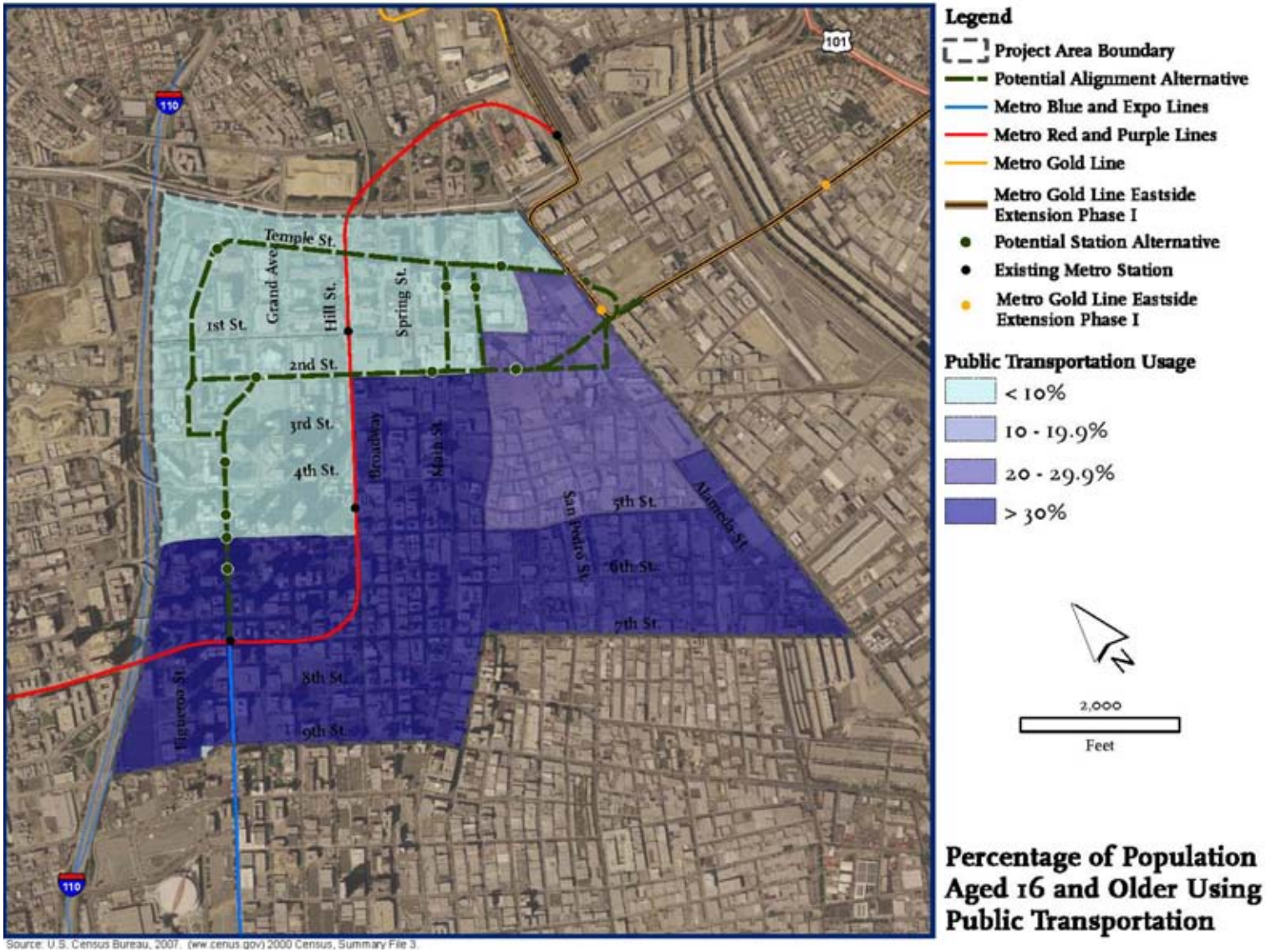


Figure 1-27 Population Age 65 and Over



Source: U.S. Census Bureau, 2007. (ww.cenus.gov) 2000 Census, Summary File 3.

Figure 1-28 Population Age 18 and Under



Source: U.S. Census Bureau, 2007. (ww.cenus.gov) 2000 Census, Summary File 3.

Figure 1-29 Population Age 16 and Over Who Use Public Transportation

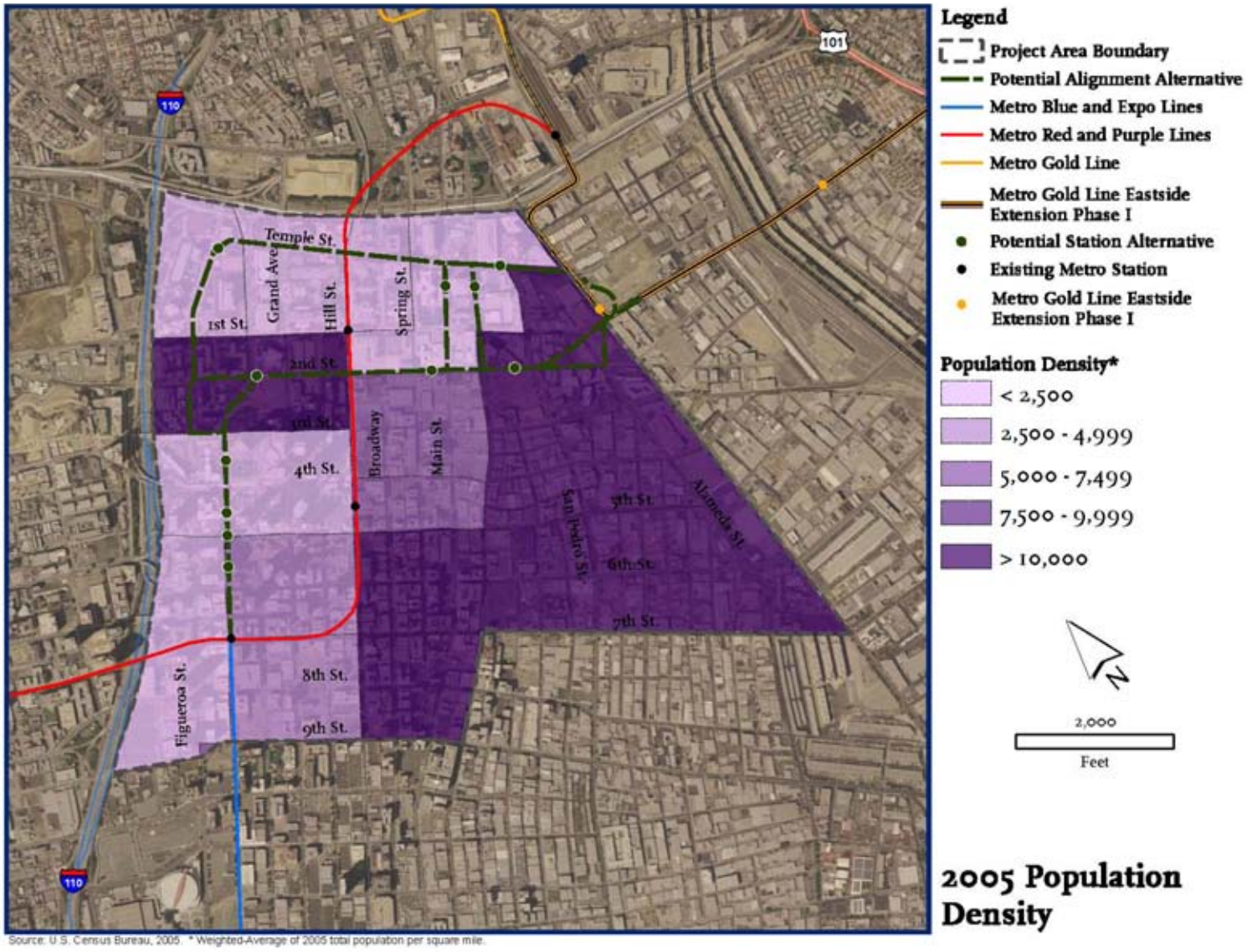


Figure 1-30 2005 Population Density

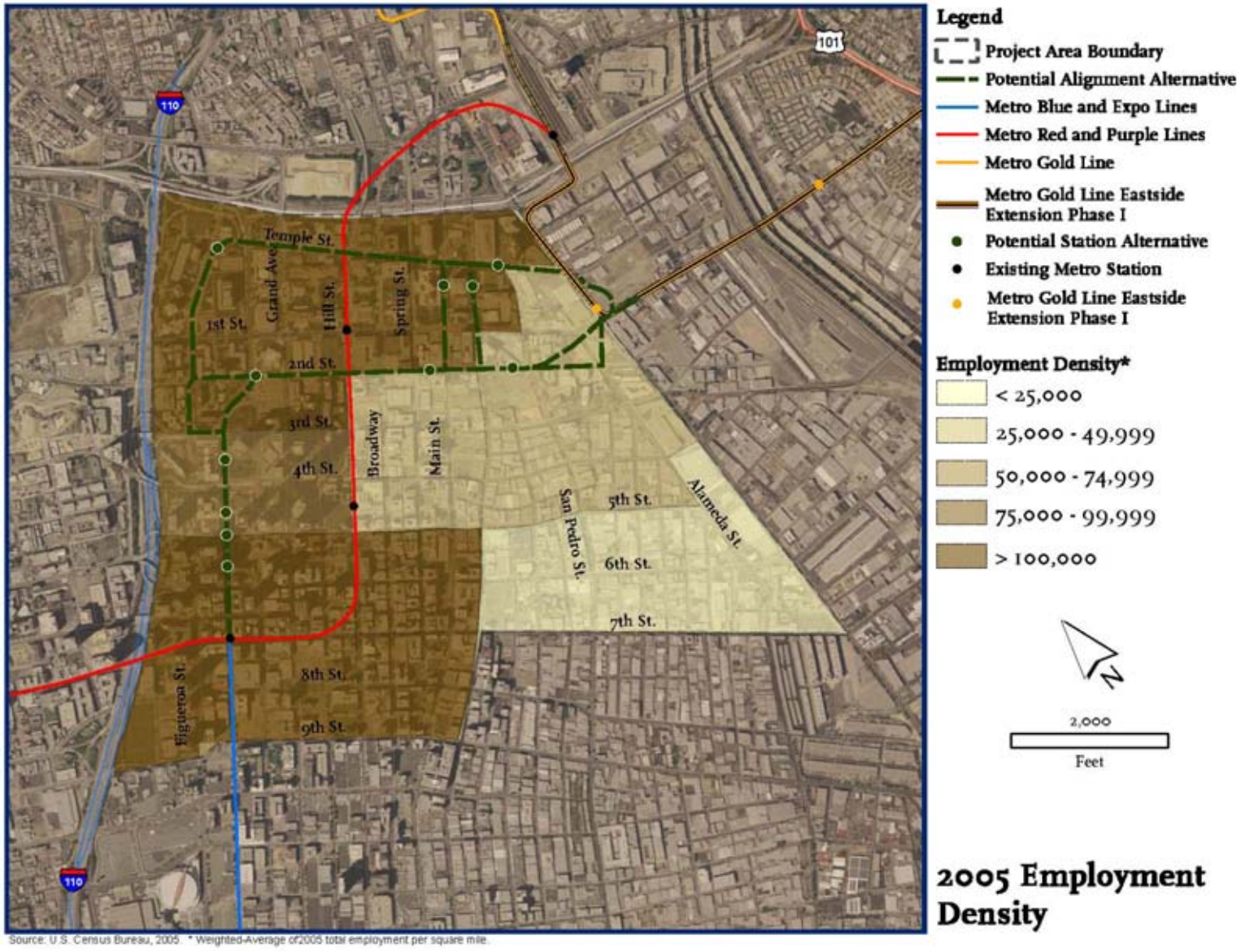
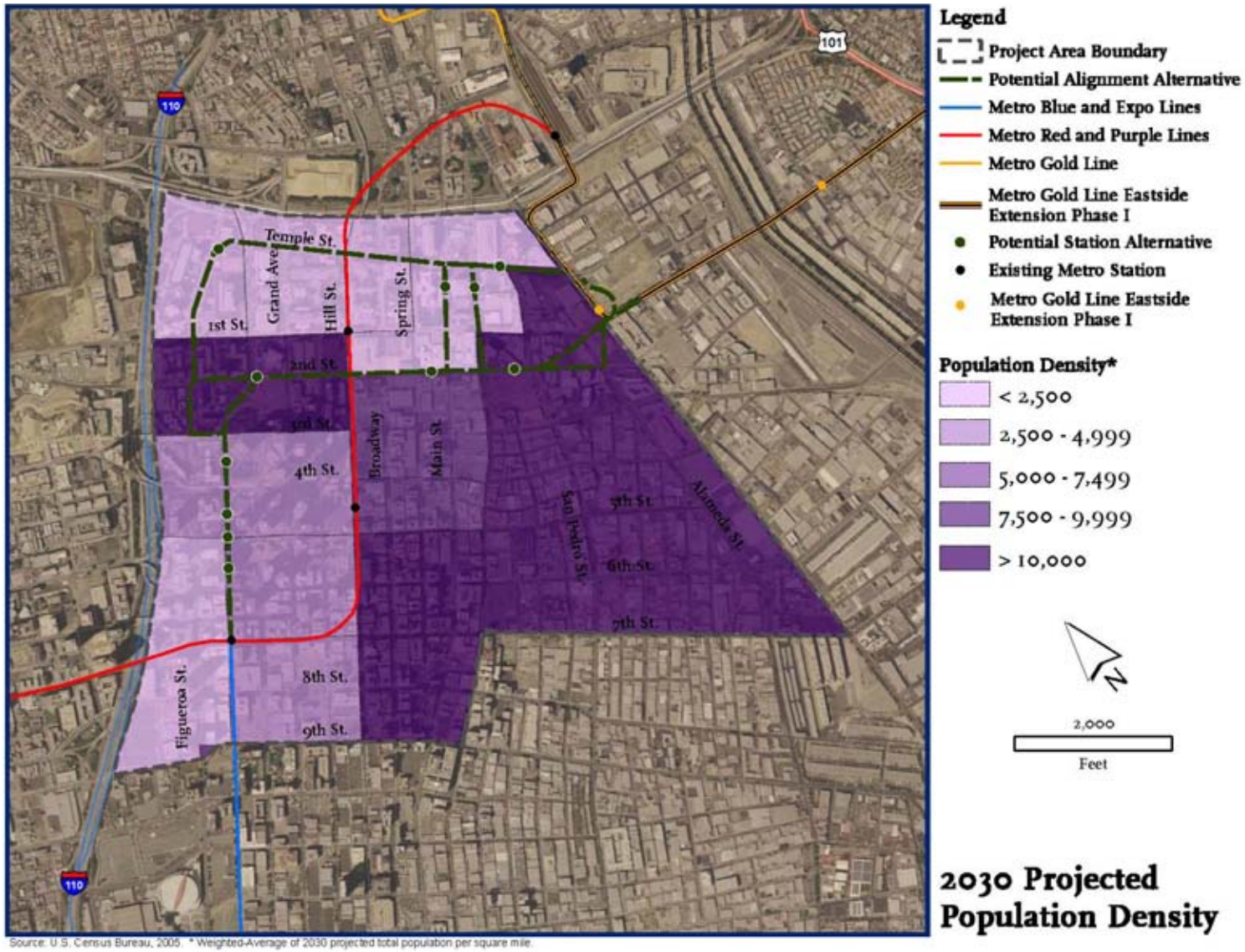


Figure 1-31 2005 Employment Density



Source: U.S. Census Bureau, 2005. * Weighted-Average of 2030 projected total population per square mile.

Figure 1-32 2030 Population Density

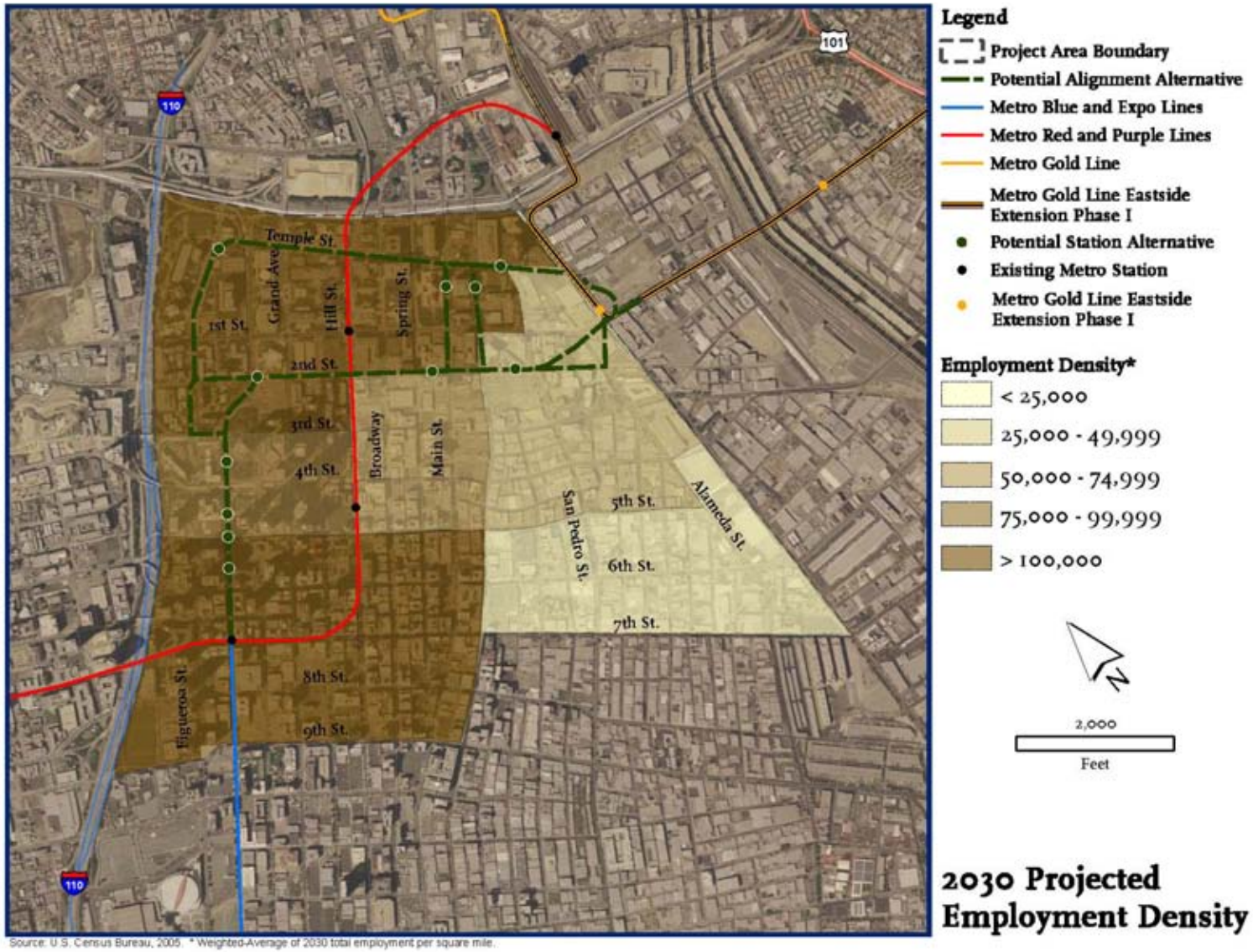


Figure 1-33 2030 Employment Density

1.8.6 Travel Demand Justifies the Need for Transit Services

Traffic patterns in the PSA are discussed in 1.6 Performance of the Travel System. Table 1-17 presents traffic volumes within the PSA, illustrating the high volume of vehicles on the arterial network. These high volumes in concert with high pedestrian traffic result in blockages at many intersections within the PSA. The result is a strong and growing demand for a high-capacity transit alternative.

1.8.7 Local Land Use Policies and Guidelines that Support Transit

Recognizing the significant limitations on construction or expansion of roadways within the PSA, there is increased focus on increasing the use of public transit rather only making roadway improvements for personal vehicle travel.

County of Los Angeles General Plan

The County's General Plan establishes a number of goals and corresponding policies that support the development of public transit.

- Goal C-1: An accessible circulation system that ensures the mobility of people and goods throughout the County.
  - Policy C1.1: Expand the availability of transportation options throughout the County
  - Policy C1.2: Encourage a range of transportation services at both the regional and local levels, especially for transit dependent populations.
  - Policy C1.3: Secure an affordable countywide transportation system for all users.
  - Policy C1.4: Maintain transportation right-of-way corridors for future transportation.
- Goal C-2: An efficient circulation system that effectively utilizes and expands multi-modal transportation options.
  - Policy C2.1: Support the linking of regional transportation systems.
  - Policy C2.2: Expand transportation options throughout the County.

Table 1-17 Arterial Traffic Volumes by Intersection											
Intersection	Time	Total Number of Vehicles at Intersection									
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	TEMPLE
ALAMEDA	AM	3913	2546	4267	NA	NA	NA	NA	NA	NA	3022
	PM	4120	2755	2927	NA	NA	NA	NA	NA	NA	3427
BROADWAY	AM	3430	3189	2739	2370	2599	2069	2170	1834	2494	NA
	PM	3357	2290	2704	2897	2574	2717	3273	2854	2807	3509
CENTRAL	AM	2443	1506	3041	NA	NA	NA	NA	NA	NA	NA
	PM	2711	1799	1904	NA	NA	NA	NA	NA	NA	NA
FIGUEROA	AM	NA	NA	3863	2786	4021	4353	3679	2498	4540	1990
	PM	NA	NA	5862	4002	5565	4780	3630	3913	3297	2025
FLOWER	AM	NA	NA	NA	NA	NA	NA	NA	2150	2515	NA
	PM	NA	NA	NA	NA	NA	NA	NA	3758	3347	NA
GRAND	AM	3562	NA	NA	NA	2614	2828	2889	2105	NA	2603
	PM	4148	NA	NA	NA	3028	2484	3379	2778	NA	3306
HILL	AM	3649	NA	3309	2635	2660	2316	2360	2034	2164	NA
	PM	4551	NA	3520	3068	2500	2607	3382	2649	2702	NA
HOPE	AM	NA	NA	NA	NA	NA	NA	NA	1567	NA	2693
	PM	NA	NA	NA	NA	NA	NA	NA	2318	NA	3342
LOS ANGELES	AM	2919	1822	2797	NA	1825	1745	NA	NA	NA	3041
	PM	3398	2236	2324	NA	2072	2374	NA	NA	NA	3466
MAIN	AM	2249	1263	2176	1473	1710	1552	1821	NA	NA	1730
	PM	3308	2783	2923	3060	2514	2324	2509	NA	NA	3382
OLIVE	AM	2590	NA	NA	2029	2609	2461	2838	2329	2986	NA
	PM	3655	NA	NA	2765	3430	2950	2823	2632	2374	NA
SAN PEDRO	AM	2256	1437	3040	1653	NA	NA	NA	NA	NA	1456
	PM	2737	2036	2197	2764	NA	NA	NA	NA	NA	1729
SPRING	AM	3445	2131	2555	1996	2149	1646	2058	1548	2681	2973
	PM	2919	1851	2431	2284	1704	2125	2231	1791	3171	2167

Source: Data compiled from recent traffic studies conducted for downtown projects.

Downtown Design Guidelines

The Community Redevelopment Agency of the City of Los Angeles (CRA) has drafted design guidelines for all new developments within downtown Los Angeles. These guidelines provide incentives for residential development by complementing or modifying code requirements such as density limits. With the overall goal of creating a livable downtown, guidelines focus on providing the following:

- a broad range of housing types;
- accessible transportation with emphasis on walking, biking, and transit other than autos;
- shops and services within walking distance to housing;
- safe, visually-pleasing and walkable streets;
- parks and other gathering places near to shops and services; and
- public recreational open space within walking distance to home.

The guidelines set forth specific standards for design and construction, including use of sustainable materials and practices, preserving historically- and culturally-significant buildings, and supporting environmental and aesthetic resources. The guidelines ultimately call for developers to consider pedestrians and not cars in their design process. The objective is to create a cohesive transition along blocks while creating inviting and open spaces that encourage pedestrian traffic. As outlined above, increasing public transit options is one way to meet this objective.

Little Tokyo Planning & Design Guidelines

As a result of recent resurgence and popularity in the Little Tokyo district of downtown (see Figure 1-1 for a map), a set of design guidelines was created with the intent of encouraging individual expression and continuity of the surrounding environment through building and street design, while enhancing elements and aesthetics that are significant to the Japanese-American Community. In addition to the preservation of existing physical and cultural spaces, the guidelines identify specific standards for new developments and streetscapes in order to maintain continuity throughout. Street dedication requirements, such as those in place for new development east of Alameda St. between Temple St. and 1st St., promote pedestrian- and transit-friendly designs which support cohesiveness through the corridor while maintaining cultural integrity. This, in turn, will enhance pedestrian activity and increase the attractiveness of walking and transit use in the area.

CommuteSmart®

Metro provides services through CommuteSmart® to help people find alternatives to a single-person car commute such as carpooling, vanpooling, park-and-ride, and public transit. CommuteSmart® also assists employers to set up rideshare programs, create incentives for commuting, and perform ongoing assessments and training. Improvement

of public transit options while promoting the use of public transit would increase ridership more than either done alone.

1.9 Potential Transit Markets

Potential transit markets are two-fold for the Regional Connector:

- the activity centers and major destinations that include public and private uses, density of population and employment, and major travel patterns that traverse the PSA;
- travel patterns through the PSA, since the Regional Connector would link over 50 miles of Metro LRT service from Pasadena to Long Beach, and from Culver City to the Eastside and everywhere in between.

This AA will result in projections of ridership generated by people moving within the PSA and through the PSA to get to and from homes, jobs, services, and entertainment.

Key advantages for the Regional Connector presented by the PSA are the easy bus connections provided by the dense transit network, convenient regional and intercity rail interface, and the location of activities and services within walking and biking distance of each other.

1.9.1 Activity Centers and Destinations

Several activity centers exist within the PSA. These include Educational, Recreational, Business/Industrial and Commercial centers. Figure 1-35 illustrates activity centers within the PSA.

Downtown has long been considered a major destination for employment and services; it is experiencing a resurgence as a center for entertainment and the arts, and increasingly, residential living.

Bunker Hill

The Bunker Hill District is located generally between First St. on the north, Hill St. on the east, Third St. on the south, and Figueroa St. on the west. Major downtown destinations located within Bunker Hill include the Walt Disney Concert Hall, Museum of Contemporary Art (MOCA) and several high-rise office towers, senior and market-rate housing, hotels and commercial/retail centers. Bunker Hill offers over 3,200 residential units mainly in mid- and high-rise buildings.

Large development projects planned for this area include Civic Park and the Grand Avenue Development Project, which will transform this area into a regional arts, entertainment, and residential destination. The Grand Avenue Development is a $3 billion project that includes 3.6 million square feet of development with 449,000 square feet of retail. It is currently planned for 2,600 housing units, almost doubling the existing number of units in the area.

Civic Center

Bordering Bunker Hill to the northeast is the Civic Center, which serves as a hub for City, County, State, and Federal government with the second-largest concentration of civic buildings in the country. The Cathedral of Our Lady of the Angels, the Ahmanson Theater, Mark Taper Forum, and the Dorothy Chandler Pavilion are other major destinations in this district.

Civic Center is undergoing active redevelopment. The new headquarters for the state Department of Transportation (Caltrans) District 7 has recently been completed, development of the new Los Angeles Police Department Headquarters is underway, and construction of a U.S. Federal Courthouse is soon to begin.

Little Tokyo

East of Civic Center is Little Tokyo, which serves as the center of the largest Japanese-American community in the continental United States. The Japanese American National Museum and The Geffen Contemporary at MOCA are located here, along with a lively shopping district.

The popularity of Little Tokyo is evidenced by the active residential development underway, with recently completed and current projects adding more than 2,000 residential units. Significant developments in the early planning stages include a 4.5-acre site adjacent to the Little Tokyo Arts District Station of the Metro Gold Line. Early concepts from developers identified high-density combination of office and housing with strong connections to the adjacent Metro Gold Line Eastside Expansion.

Toy District

The Toy District is a 12-block shopping area with over 500 retail businesses located south of Little Tokyo and north of Central City East. Development here is centered on mixed-use. The proposed Medallion building, one of several projects currently under construction, will provide 192 residential lofts and over 200,000 square feet of retail space.

Financial Core

The Financial Core District is located south of Bunker Hill and is dominated by high-rise office buildings. The Central Library, built in 1926, destroyed by fire in 1986, and rebuilt, expanded, and re-opened in 1993 is located here. Other landmarks in this district include the Millennium Biltmore Hotel (built in 1923) and Pershing Square (dating back as far as 1866 as a park).

The proposed 2.7-million square-foot, four-phase Metropolis mixed-use development will be located in the southwestern end of the Financial District. Phase I of this project, which began construction in 2008, will provide 360 residential units. Park Fifth is another major planned 76-story high-rise development across from Pershing Square and will include over 700 condos and a 200-room hotel.

Historic Core

To the east of the Financial Core is the Historic Core District, containing a large concentration of historic and architecturally-significant buildings, including the Bradbury Building (built in 1893). The Grand Central Market (dating back to 1917 as an open-air market) and the Broadway Historic Theater District (with theaters dating back to the early 1900s) are destinations in this district.

Development here is focused on conversion of old neglected buildings into lofts and apartments. The Historic Core experiences high volume retail sales on Broadway St., which is a largely sidewalk-oriented retail district. Due to the shortage of parking in the area, the retail district is reliant on public transit to bring patrons to the neighborhood.

Jewelry District

The largest jewelry district in the U.S. and second largest in the world is located southwest of the Historic Core, where 5,000 businesses generate billions of dollars in revenue.

Development in this area includes the proposed construction of 875 condominium units at 8th St. and Grand Ave. Like the Historic Core, parking is in short supply and the district attracts a high volume of retail sales.

Central City East

The Central City East District is located south of the Toy District and consists primarily of commercial uses, including wholesale buildings and warehouses. The Flower Market, produce, fish and food processing industries as well as import/export businesses employ nearly 20,000 people in this area. Housing in this district consists mainly of the 6,500 single-room occupancy hotel units. This area is also important in providing social services, including alcohol treatment, mental health services, and job training.

Outside of the Project Study Area

Other important downtown development projects outside of the PSA include the recently-opened LA Live, a 4-million square foot complex of retail, restaurants, office, theater, hotel, parking, and residential space adjacent to the Staples Center.

Regional Activity Centers and Destinations

Due to the improved linkages provided by the Regional Connector, LRT will be enhanced throughout the region thereby attracting new ridership on existing lines.

Key regional activity centers that will attract riders to ride seamlessly through the PSA to get destinations that, today, require more than one transfer, include:

- University of Southern California via Metro Expo Line
- Los Angeles Trade Technical College via Metro Blue Line
- Downtown Long Beach via Metro Blue Line