

# Washington Boulevard Light Rail Transit Corridor Study

## Final Report

July 2012 | Prepared For:

Southern California Association of Governments and  
The Gateway Cities Coalition



# Washington Boulevard Light Rail Transit Corridor Study

## Final Report

July 2012 | Prepared For:  
Southern California Association of Governments and  
The Gateway Cities Coalition

This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation and the California Department of Transportation (Caltrans). The views and opinions of the agency expressed herein do not necessarily reflect those of the U. S. Department of Transportation, nor Caltrans.

The contents of this report reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the Southern California Association of Governments (SCAG) or DOT. This report does not constitute a standard, specification or regulation.





***TABLE OF CONTENTS***

1. INTRODUCTION .....	1-1
2. ECONOMIC ANALYSIS .....	2-1
3. DESIGN CONCEPTS AND PRIORITY STRATEGIES.....	3-1
4. FINANCIAL FEASIBILITY ANALYSIS .....	4-1

***Appendices***

**Appendix A: Washington Boulevard Light Rail Transit Corridor Baseline Report**

**Appendix B: Economic Market Analysis Data**

**Appendix C: Full Pro Forma Results**

SOUTHERN CALIFORNIA ASSOCIATION  
OF GOVERNMENTS  
WASHINGTON BOULEVARD LIGHT RAIL  
TRANSIT CORRIDOR STUDY  
TABLE OF CONTENTS

*List of Figures*

Figure 1-1	Project Study Area .....	1-2
Figure 2-1	Multi-Family Housing Sales Value by Unit Size, Whittier Boulevard Station Area, 2009 to 2011 .....	2-3
Figure 3-1	Rosemead Boulevard Station Area Proposed Development Concept .....	3-15
Figure 3-2	Norwalk Boulevard Station Area Proposed Development Concept .....	3-19
Figure 3-3	Lambert Road Station Area Proposed Development Concept .....	3-24

S O U T H E R N C A L I F O R N I A A S S O C I A T I O N  
O F G O V E R N M E N T S  
W A S H I N G T O N B O U L E V A R D L I G H T R A I L  
T R A N S I T C O R R I D O R S T U D Y  
T A B L E O F C O N T E N T S

*List of Tables*

Table 2-1	Estimated New Multi-Family Housing Unit Sales Values and Minimum Qualifying Income .....	2-5
Table 2-2	Five-Year Demand for New For-Sale Multi-Family Housing Units, 3-Mile-Radius Market Areas for Proposed Station Areas and Project Area Total .....	2-6
Table 2-3	Potential Market Demand for New For-Sale Multi-Family Housing Units with Rail Transit, 3-Mile-Radius Market Areas for Proposed Station Areas and Project Area Total .....	2-8
Table 2-4	Five-Year Demand for New For-Rent Multi-Family Housing Units, 3-Mile-Radius Market Areas for Proposed Station Areas and Project Area Total .....	2-9
Table 2-5	Potential Market Demand for New For-Rent Multi-Family Housing Units with Rail Transit, 3-Mile-Radius Market Areas for Proposed Station Areas and Project Area Total .....	2-11
Table 2-6	Five-Year Potential Market Demand for Multi-Family Housing Units, 2011 to 2016 .....	2-12
Table 2-7	Shopping Center Types .....	2-15
Table 2-8	Five-Year Market Demand for New Retail Building Space, Proposed Station Areas, 2011 to 2016 .....	2-19
Table 2-9	Potential Market Demand for Retail Development, 2011 to 2016 .....	2-20
Table 4-1	Sample Pro Forma Summary .....	4-4
Table 4-2	Opportunity Site: Washington and Rosemead Development Pro Forma Summary .....	4-7
Table 4-3	Opportunity Site: Washington and Norwalk Development Pro Forma Summary .....	4-9
Table 4-4	Opportunity Site: Washington and Lambert Development Pro Forma Summary .....	4-10

*SOUTHERN CALIFORNIA ASSOCIATION  
OF GOVERNMENTS  
WASHINGTON BOULEVARD LIGHT RAIL  
TRANSIT CORRIDOR STUDY  
TABLE OF CONTENTS*

## *I INTRODUCTION*

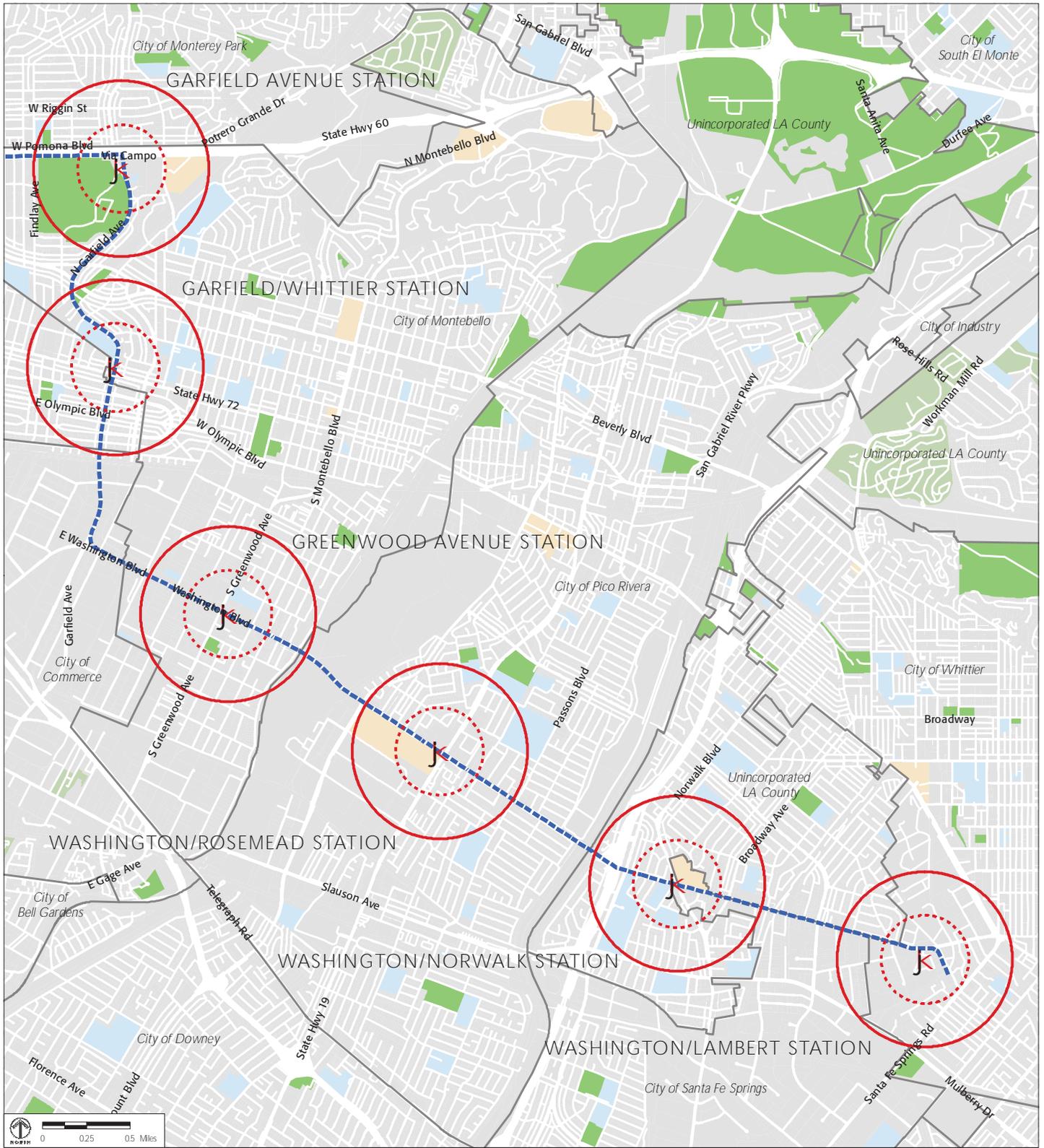
This report provides market study information; land use, mobility, and design strategy recommendations; development prototypes for three selected station sites; and financial feasibility information, for the Washington Boulevard Light Rail Transit Corridor Study. The Study is being undertaken for the Washington Boulevard Coalition, made up of the cities of Commerce, Pico Rivera, Santa Fe Springs, Whittier, and the Gateway Cities Council of Governments with the sponsorship of the Southern California Association of Governments. Baseline information, providing background and existing conditions within the Washington Boulevard Light Rail Transit Corridor is provided in Appendix A.

### *A. Project Area*

The Eastside Transit Corridor Phase 2 Project Area, shown in Figure 1-1, is generally bounded by Pomona Boulevard and the State Route 60 (SR-60) freeway to the north, Peck Road and Painter Avenue to the east, Olympic and Washington Boulevards to the south, and Atlantic Boulevard to the west. This study specifically focuses on the ½-mile radii around six proposed stations along the Washington Boulevard alignment, located on Garfield Avenue and Washington Boulevard in portions of the cities of Montebello, Commerce, Pico Rivera, Santa Fe Springs, and Whittier, and portions of unincorporated Los Angeles County.

### *B. Background*

The proposed Eastside Transit Corridor Phase 2 Project will extend light rail transit services to communities farther east of East Los Angeles and provide an opportunity to connect with the Los Angeles County Metropolitan Transportation Authority (Metro) Gold Line Eastside Extension and the rest of Metro's regional transit network. The primary goal of the Eastside Transit Corridor Phase 2 project is to provide a transportation system that better serves the region's communities without negatively impacting quality of life.



- Half Mile From Station
- Quarter Mile From Station
- Proposed Alignment
- City Boundaries

FIGURE 1-1

PROJECT STUDY AREA

In 2007, the Eastside Transit Corridor Phase 2 Alternatives Analysis process was initiated for an 80-square-mile study area located in eastern Los Angeles County. There were 47 proposed alignments initially studied. In January 2010, Metro reduced the number of alignments to two: the Washington Boulevard alignment and SR-60 alignment.

Both of the proposed alignments have benefits and impacts, as it is challenging to construct a high-capacity light rail transit system in a heavily developed, urban area with constrained street right-of-way widths lined with one- and two-story buildings. For the purposes of this study, the analysis in the following chapters focuses upon the Washington Boulevard alignment.

The Washington Boulevard alignment would be an aerial system with six stations located along Garfield Avenue and Washington Boulevard. This alternative is expected to have more daily weekday boardings (20,800) and annual boardings (7.6 million) than the alternatives. In addition, this alternative is forecast to attract more new transit riders (6,280 daily) and save more travel time per rider (6,293 hours of travel time savings for all riders).

The SR-60 alignment would also be an aerial system with four stations located along the SR-60 corridor. This alignment would result in fewer daily weekday boardings (18,300) and annual boardings (6.7 million) than the Washington Boulevard alignment, and is forecast to result in about 40 percent fewer new transit riders (3,835 daily) and travel time benefits (3,474 hours).

The Alternatives Analysis determined that the total project capital costs for the Washington Boulevard alignment would be \$1.65 billion, while the cost of the SR-60 alignment would be \$1.51 billion. Of these total costs, \$1.27 billion is expected to be available from local funding through Measure R. These funds would be available beginning in Fiscal Year 2012-2014, with project completion expected in Fiscal Year 2013-2015. Additional funding sources being explored include the Federal Transit Administration's (FTA) New Starts program, as well as other federal and State funding sources.

The New Starts program is the federal government's primary financial resource for supporting locally planned, implemented, and operated transit service capital investments. Funding for projects is dependent on the project's ability to meet a set of assessment criteria, which the FTA uses to rank projects. The assessment criteria include the following:

- ◆ Mobility Improvements;
- ◆ Environmental Benefits;
- ◆ Operating Efficiencies;
- ◆ Cost Effectiveness;
- ◆ Transit Supportive Land Use;
- ◆ Economic Development Effects; and
- ◆ Other Factors.

These criteria were considered in the Alternatives Analysis and will also be considered in this study, as it is critical that the selected alignment meets the criteria and is eligible for New Starts funding.

Metro initiated the preparation of a Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Eastside Transit Corridor Phase 2 Project in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), which is currently underway. The EIS/EIR is analyzing both alternative alignments, the findings of which will be influential in Metro's decision of a preferred alternative.

### *C. Objectives*

This study is intended to demonstrate the readiness of the Coalition Cities for light rail in the event that the Washington Boulevard alignment is selected as the preferred alignment for the Eastside Transit Corridor Phase 2. Since funding from the New Starts program is integral to this process, the criteria for funding are incorporated in the objectives listed below. In addition, the following objectives are guided by the principles of livability, mobility, pros-

perity, and sustainability that are at the forefront of the Compass Blueprint program.

- ◆ **Improve Mobility.** Demonstrate how the Washington Boulevard light rail system will increase the overall mobility of the communities along Washington Boulevard by identifying strategies to integrate transit with land use planning and provide a high-quality pedestrian, bicycle, and transit network to and between station areas.
- ◆ **Benefit the Environment.** Demonstrate how the Washington Boulevard alternative will benefit the environment by identifying locations for compact development around station areas that will encourage transit use, and equally important, discourage vehicular use and related environmental impacts.
- ◆ **Identify Transit Supportive Land Uses.** Identify transit-supportive plans and policies that apply to the proposed station areas and develop new strategies to improve the regulatory environment in such a way that facilitates transit-oriented development.
- ◆ **Quantify Economic Benefits.** Demonstrate the economic benefits associated with a new light rail system along the Washington Boulevard alignment by comparing and quantifying new housing and retail demand with and without the transit investment.
- ◆ **Ensure Coordination Between Coalition Cities.** Bring Coalition City members together to support a unified plan and implementation strategy for each station area in order to ensure the overall success of the Washington Boulevard light rail system.

#### *D. Contents of the Report*

In addition to this Introduction, the Washington Boulevard Light Rail Transit Corridor Study Final Report includes the following chapters:

- ◆ **Chapter 2: Economics Analysis,** quantifies the projected residential and retail market demand for each of the six proposed station sites based up-

on current conditions in the absence of the proposed public investment in light rail transit and the potential market demand resulting from the availability of rail transit.

- ◆ Chapter 3: Priority Strategies and Design Concepts, provides broad policy and design recommendations for the Washington Boulevard Light Rail corridor and specific strategies to facilitate implementation of the development prototypes at each of the three selected station areas: Rosemead, Norwalk, and Lambert.
- ◆ Chapter 4: Financial Feasibility Analysis, discusses the factors relating to the financial feasibility of development and analyzing the feasibility of developing the design concepts prepared for the Rosemead, Norwalk, and Lambert station sites.

## 2 *ECONOMIC ANALYSIS*

This chapter outlines the economic analysis that was conducted for the Washington Boulevard Light Rail Transit Corridor. The analysis quantifies the projected residential and retail market demand for each of the six proposed station sites based upon current conditions in the absence of the proposed public investment in light rail transit and the potential market demand resulting from the availability of rail transit.

### *I. RESIDENTIAL MARKET POTENTIAL*

For residential uses, the economic analysis focuses on multi-family housing, which includes all attached housing products—townhouses, duplexes through quadplexes, condos, and apartments. The analysis does not address single-family detached housing because it typically does not generate enough residual land value to make redevelopment financially feasible. Also, a primary intent of the project is to assess the potential for transit-oriented development, and such development entails higher densities to house more people within walking distance of transit stations.

The economic analysis projects market demand for both for-sale housing and rental housing. Many multi-family housing products can be built for both, but the market demand and project revenue vary between for-sale and rental properties.

The economic analysis first quantifies existing market demand. To establish a baseline, this level of analysis reflects current conditions in the absence of new public investment in light rail transit. The second level of analysis determines the market potential, that is, the number of housing units that could be supported in the project area with the inducement of public transit investments.

The residential market-demand analysis uses data from a variety of sources. The US Census Bureau and the California Department of Finance provide basic demographic, economic, and housing data over time. Nielsen, the leading national provider of market data, provides demographic, economic, and housing data for

individual market areas and provides projections for the next five years. Finally, Redfin provides web-based information on residential sales in the market area.

#### *A. Market Area*

The first step in projecting market demand is to define the market area, the area that will generate and attract new households and the area in which the station areas will compete for those new households.

The potential market is defined not by city boundaries but by the market area from which new households might choose a place to live. The economic analysis defines the residential market area as the area within a 3-mile radius of each proposed rail station. The 3-mile distance is sufficiently large to fairly represent the potential market. Generally, one would prefer a somewhat larger market area for residential analysis, but for the proposed station locations, larger market areas begin to take in areas that are fundamentally different markets, not relevant to the analysis.

The 3-mile-radius market area, however, is too large in the sense that the market areas for each station area overlap. The stations are 1.5 miles apart or less. Thus the quantified demand for multi-family housing units for an individual station area includes some units that are also counted in the market demand for the adjacent station areas. The data presented in the analysis portray the demand for an individual station area. However, if one community is more aggressive in promoting redevelopment, it could capture market demand from an adjacent station area, which then might not live up to the potential quantified in the analysis.

The market demand analysis does include a total for the entire project area. The project area in this context is an agglomeration of the 3-mile radii around each individual station. The project-area totals eliminate the double-counting from overlapping market areas.

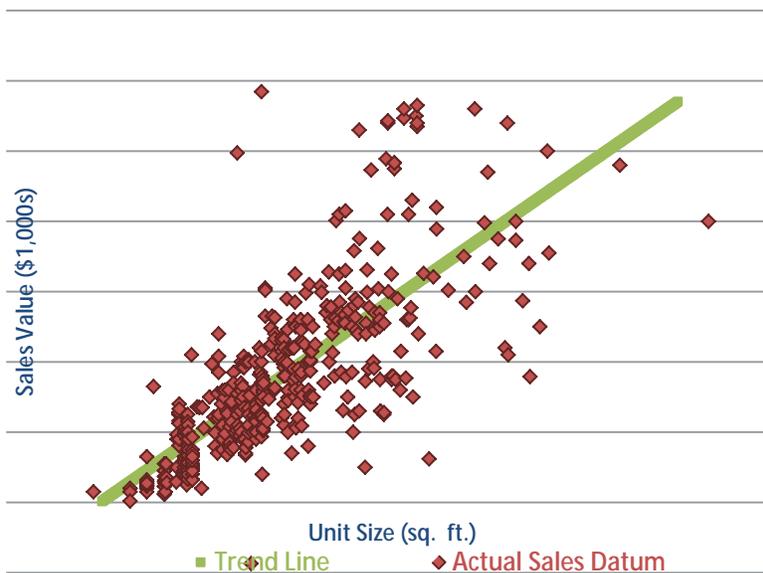
*B. For-Sale Housing Value*

Before quantifying market demand for for-sale housing, one must first have a range of housing values, because the price of housing relates to household income and thus to the number of households likely qualified to purchase new housing.

Using data on multi-family unit sales since 2008, the economic analysis plotted the sales price and square footage. The analysis provides a separate projection for sales per square foot for each station area. As an example, Figure 2-1 below shows the data set and the best-fit line for the Whittier Boulevard market area. Charts for the other station areas are provided in Appendix B.

FIGURE 2-1 MULTI-FAMILY HOUSING SALES VALUE BY UNIT SIZE, WHITTIER BOULEVARD STATION AREA, 2009 TO 2011

Source:



The

Planning Center | DC&E, 2011, using data from Redfin.com.

The available data for multi-family unit sales since 2008 include very few new units. The analysis therefore calculates the best fit line for all sales since 2008. The analysis then estimates new multi-family sales by applying a premium for new units calculated using the price per square foot of new units and the average price per square foot for all sales in each market area.

Table 2-1 presents this data for the market area for each proposed station. The analysis assumes that the smallest new multi-family unit would be a one-bedroom, one-bathroom, 750-square-foot unit. It also shows the estimated price of a typical new two-bedroom, two-bath, 1,200-square-foot multi-family unit. Based on the estimated price of the smallest one-bedroom unit, Table 2-1 shows the minimum annual household income range needed to afford the minimum size multi-family unit. The derivation of demand in for-sale multi-family housing presented in the following section is based on those households with at least the minimum income identified in Table 2-1.

### *C. For-Sale Multi-Family Housing Demand*

Table 2-2 derives the projected demand for new multi-family for-sale housing in each proposed station's 3-mile-radius market area and for the project area as a whole over the next five years (the project-area totals eliminate the effect of overlapping trade areas and thus are less than the sum of the data for each station area). The project area can expect an increase of 5,150 new households over the next five years. Growth in the station market areas could range from a low of 1,240 households in the Lambert Road station area to a high of 1,700 households in the Garfield Avenue and Greenfield Avenue station areas.

Across the project area, homeowners can be expected to account for about 76 percent of the household growth, about 3,930 new homeowner households over five years. And past trends suggest that multi-family units will account for about 11 percent of demand created by the household growth. Over five years then, the analysis suggests that the project area could support the development of 440 new multi-family for-sale housing units. Among the proposed station areas, the level of support would range from a low of 67 new units in the Lambert Road

TABLE 2-1 *ESTIMATED NEW MULTI-FAMILY HOUSING UNIT SALES  
VALUES AND MINIMUM QUALIFYING INCOME*

Proposed Station	Minimum 1-Bedroom Unit Estimated Price (\$)	Annual Income Range (\$) for Minimum 1-Bedroom Unit	Typical 2-Bedroom Unit Estimated Price (\$)
Garfield	309,000	50,000–74,999	431,000
Whittier	224,000	50,000–74,999	352,000
Greenwood	197,000	35,000–49,999	293,000
Rosemead	203,000	35,000–49,999	296,000
Norwalk	229,000	50,000–74,999	308,000
Lambert	212,000	35,000–49,999	308,000

Source: The Planning Center | DC&E, 2011.

market area to a high of 198 units in the Garfield Avenue market area. Appendix B provides data for each individual station area in Table A-1 through Table A-6.

#### *D. Potential Market Demand*

The preceding discussion quantified market demand today, in the absence of the proposed public investment in light rail transit. Numerous surveys have quantified that the length of the work commute is a primary factor, if not the dominant factor, in choosing a place to live. The availability of rail transit would put housing in the analyzed market areas in closer proximity to more jobs and thus could attract even more new households than past trends would suggest. Furthermore, research and writings point to substantial changes in the type of housing that will be desired in the near future, driven by changing demographics.

The question is, to what degree will changes in preference alter the future demand for housing? To avoid too much complexity, the analysis limits itself to

TABLE 2-2 *FIVE-YEAR DEMAND FOR NEW FOR-SALE MULTI-FAMILY HOUSING UNITS, 3-MILE-RADIUS MARKET AREAS FOR PROPOSED STATION AREAS AND PROJECT AREA TOTAL*

	Garfield	Whittier	Greenwood	Rosemead	Norwalk	Lambert	Project Area
2011 Number of Households (estimate) <sup>a</sup>	31,400	25,000	35,800	38,800	30,600	28,300	108,100
2016 Number of Households (projection) <sup>b</sup>	33,100	26,400	37,500	40,400	32,000	29,400	113,300
5-Year Increase in Number of Households <sup>c</sup>	1,700	1,400	1,700	1,470	1,410	1,240	5,150
Homeownership Rate <sup>d</sup>	73%	74%	61%	86%	86%	86%	76%
5-Year Increase in Homeowners <sup>e</sup>	1,240	1,030	1,040	1,260	1,210	1,070	3,930
Multi-Family Housing as Portion of All Homeowners <sup>f</sup>	16%	16%	16%	6%	6%	6%	11%
New Multi-Family Housing Home Purchases <sup>g</sup>	198	165	167	76	75	67	440

<sup>a</sup> The data have been rounded from the original data analysis and may not precisely calculate as presented. More detailed data are provided in Appendix B.

<sup>b</sup> The market areas for the individual stations overlap. The data presented for the project area eliminates the effects of overlapping market areas, and thus the data in the project area column do not necessarily represent the sum of the data for each station area.

<sup>c</sup> The number of households in 2011 and 2016 (rows 1 and 2) represent the number of households with annual household incomes in the range specified in Table 2-1, or higher. The data are estimates and projections from Nielsen.

<sup>d</sup> The homeownership rate (row 4) is a 2011 estimate by income category from Nielsen. The datum for the project area is derived based on the five-year increase in the number of households (row 3) divided by the five-year increase in homeowners, and it therefore represents the weight of the individual station area homeownership rates and the projected household growth in each market area.

<sup>e</sup> The five-year increase in homeowners (row 5) is derived by multiplying the projected growth in households (row 3) by the homeownership rate (row 4).

<sup>f</sup> Multi-family housing as a portion of all homeowners represents the portion of owner-occupied housing that is single-family attached and multi-family. The data for the Garfield Avenue, Whittier Boulevard, and Greenwood Avenue market areas are estimates from the US Census Bureau's American Community Survey for the Southwest San Gabriel Valley county subdivision. The data for the Rosemead Boulevard, Norwalk Avenue, and Lambert Road stations are estimates from the same source for the Whittier county subdivision.

<sup>g</sup> New multi-family housing home purchases represent the number of multi-family housing units that would be needed over the next five years to accommodate the projected growth in the number of households for each market area. The data are derived by multiplying the projected increase in homeowner households (row 5) by the portion of homeowners living in multi-family housing units (row 7).

Source: The Planning Center | DC&E, 2011, using data from Nielsen and the US Census Bureau.

two considerations. First, what is the increased number of households that would be attracted to the project area by the availability of transit? Second, to what degree will changing preference in housing type increase the demand for multi-family housing over single-family detached housing?

The National Association of Realtors' 2011 Community Preferences Survey asked how important it would be to have public rail transit within easy walking distance when making a decision on where to live. Of the respondents, 14 percent indicated it would be very important and another 28 percent indicated somewhat important. The project area would not currently attract those potential buyers. To quantify the potential market, the analysis assumes that these buyers constitute 15 percent of future market demand, demand that is not represented in the data in Table 2-2.

As indicated in Table 2-2, under the mix of existing housing in the project area, only about 11 percent of all housing units are multi-family. Demographic forces will change that pattern. Baby boomers are approaching retirement, and an increasing share of them indicate in surveys a desire to downsize their housing. Gen Y, larger than the baby boom generation, is entering the housing market, and in surveys they express an increasing desire for smaller, more compact housing. Finally, the portion of households with children is on a continuing downward trend. Soon to be published research suggests that these changing preferences could alter development trends, leading to multi-family housing becoming the dominant form of housing constructed in Southern California over the next 20 years. To capture this change in demand, the analysis assumes that multi-family will constitute 35 percent of new housing.

Given these two assumptions, Table 2-3 calculates what the potential market demand would be with the public investment rail transit. The result is a more than threefold increase in demand for new for-sale multi-family housing units.

TABLE 2-3 *POTENTIAL MARKET DEMAND FOR NEW FOR-SALE MULTI-FAMILY HOUSING UNITS WITH RAIL TRANSIT, 3-MILE-RADIUS MARKET AREAS FOR PROPOSED STATION AREAS AND PROJECT AREA TOTAL*

	Market Demand, Current Conditions	Market Potential, with Rail Transit
Garfield	198	508
Whittier	165	421
Greenwood	167	348
Rosemead	76	516
Norwalk	75	498
Lambert	67	439
Project Area	440	1,570

Source: The Planning Center | DC&E, 2011.

*E. For-Rent Multi-Family Housing Market Demand*

Calculation of market demand for rental housing follows the same general methodology as that used with for-sale housing. The analysis does, however, use all income categories for which the number of households is projected to increase, thus the total number of households will be somewhat different between the for-sale and for-rent data.

Table 2-4 derives the projected demand for new multi-family for-rent housing in each proposed station’s 3-mile-radius market area and for the project area as a whole over the next five years (the project area totals eliminate the effect of overlapping trade areas and thus are less than the sum of the data for each station

TABLE 2-4 *FIVE-YEAR DEMAND FOR NEW FOR-RENT MULTI-FAMILY HOUSING UNITS, 3-MILE-RADIUS MARKET AREAS FOR PROPOSED STATION AREAS AND PROJECT AREA TOTAL*

	Garfield	Whittier	Greenwood	Rosemead	Norwalk	Lambert	Project Area
2011 Number of Households (estimate) <sup>a</sup>	51,500	41,400	42,900	44,900	30,600	28,300	138,880
2016 Number of Households (projection) <sup>b</sup>	53,500	43,000	44,600	46,500	32,000	29,400	144,490
5-Year Increase in Number of Households <sup>c</sup>	2,000	1,600	1,700	1,600	1,400	1,100	5,610
Rentership Rate <sup>d</sup>	39%	39%	31%	15%	15%	15%	27%
5-Year Increase in Renter Households <sup>e</sup>	770	630	520	240	210	170	1,510
Multi-Family Housing as Portion of All Rentals <sup>f</sup>	69%	69%	69%	64%	64%	64%	68%
5-Year Market Area Demand by New Multi-Family Renters <sup>g</sup>	535	437	361	151	133	108	1,030

<sup>a</sup> The data have been rounded from the original data analysis and may not precisely calculate as presented. More detailed data are provided in Appendix B in Table A-7 through Table A-12.

<sup>b</sup> The market areas for the individual stations overlap. The data presented for the project area eliminates the effects of overlapping market areas, and thus the data in the project area column do not necessarily represent the sum of the data for each station area.

<sup>c</sup> The number of households in 2011 and 2016 (rows 1 and 2) represent the number of households within the income categories projected to increase in households. See Table A-7 through Table A-12 for the specific income categories for each proposed station market area.

<sup>d</sup> The rentership rate (row 4) is a 2011 estimate by income category from Nielsen. The datum for the project area is derived based on the five-year increase in the number of households (row 3) divided by the five-year increase in renter households, and it therefore represents the weight of the individual station area rentership rates and the projected household growth in each market area.

<sup>e</sup> The five-year increase in renter households (row 5) is derived by multiplying the project growth in households (row 3) by the rentership rate (row 4).

<sup>f</sup> Multi-family housing as a portion of all renters represents the portion of renter-occupied housing that is single-family attached and multi-family. The data for the Garfield Avenue, Whittier Boulevard, and Greenwood Avenue market areas are estimates from the US Census Bureau's American Community Survey for the Southwest San Gabriel Valley county subdivision. The data for the Rosemead Boulevard, Norwalk Avenue, and Lambert Road stations are estimates from the same source for the Whittier county subdivision.

<sup>g</sup> Five-year market demand represents the number of multi-family housing units that would be needed over the next five years to accommodate the projected growth in the number of households for each market area. The data are derived by multiplying the projected increase in renter households (row 5) by the portion of renter households living in multi-family housing units (row 7).

Source: The Planning Center|DC&E, 2011, using data from Nielsen and the US Census Bureau.

area). The project area can expect an increase of 5,610 new households over the next five years.

Across the project area, renter households can be expected to account for about 27 percent of the household growth in the relevant income categories, about 1,510 new renter households over five years. And past trends suggest that multi-family units will account for about 68 percent of demand created by the household growth. Over five years, then, the analysis suggests that the project area could support the development of 1,030 new multi-family for-rent housing units. Among the proposed station areas, the level of support would range from a low of 108 new units in the Lambert Road market area to a high of 535 units in the Garfield Avenue market area. Appendix B provides data for each individual station area in Table A-1 through Table A-6.

#### *F. Potential Market Demand*

As with the analysis of for-sale housing demand, the projection of for-rent multi-family housing demand presented in Table 2-4 represent current conditions and does not reflect the potential public investment in rail transit. To quantify the potential market, the analysis once again assumes an increase in household growth reflecting a 15 percent share of potential renters not captured currently. The analysis also assumes that the shift in demographics that will transform the mix of housing to be constructed will add 10 percent to multi-family housing's share of all rentals.

Table 2-5 projects the market demand for new for-rent multi-family housing units in each of the proposed station market areas and for the entire project area. With the addition of rail transit, the demand for rental units would increase by nearly 50 percent. Over five years, the project area could support the development of up to 1,480 new multi-family rental housing units.

TABLE 2-5 *POTENTIAL MARKET DEMAND FOR NEW FOR-RENT MULTI-FAMILY HOUSING UNITS WITH RAIL TRANSIT, 3-MILE-RADIUS MARKET AREAS FOR PROPOSED STATION AREAS AND PROJECT AREA TOTAL*

	Market Demand, Current Conditions	Market Potential, with Rail Transit
Garfield	535	763
Whittier	437	625
Greenwood	361	509
Rosemead	151	184
Norwalk	133	184
Lambert	108	155
Project Area	1,030	1,480

Source: The Planning Center | DC&E, 2011.

### *G. Residential Market Potential Summary*

The foregoing analysis summarized in Table 2-6 below, shows that even in this down market and even without investment in rail transit, changing demographics can support multi-family development in the project area. But that demand has not induced redevelopment. Part of the reason might be that redevelopment is not financially feasible with current land values and the allowable development densities.

Another key market condition that has inhibited substantial new residential investment is market fragmentation. For example, while the project area, in theory, could support 440 new for-sale multi-family housing units, the reality is that even in the proposed Garfield Avenue station market area, which has the highest level of demand, the demand is spread across five different income categories. It is difficult to develop market rate projects when one has to attract buyers from across a variety of market segments.

TABLE 2-6 *FIVE-YEAR POTENTIAL MARKET DEMAND FOR MULTI-FAMILY HOUSING UNITS, 2011 TO 2016*

Proposed Station	For-Sale Housing Units	For-Rent Housing Units	Total Multi-Family Residential Development Market Potential
Garfield	508	763	1,271
Whittier	421	625	1,046
Greenwood	348	509	857
Rosemead	516	184	700
Norwalk	498	184	682
Lambert	439	155	594
Project Area	1,570	1,480	3,050

Source: The Planning Center | DC&E, 2011.

Public investment in rail transit, however, would greatly increase the total market demand for multi-family housing across all income segments. The magnitude of the increase should be sufficient to attract developers and investors to each station area for a mix of product types and incomes.

## *II. RETAIL MARKET POTENTIAL*

The economic analysis quantifies the demand for retail building space for three primary reasons. First, to the degree that each station area has excess retail building space, vacant and functionally obsolete retail sites would make good opportunity sites for infill development. Second, ground-floor retail is often viewed as a valuable amenity to residents who live above, but vertical mixed-use is not financially feasible if there is limited demand for retail space. Contrary to

popular belief, there is no magic to vertical mixed-use; having two, three, or more floors of residences overhead will not make a good retail location out of a poor one. Finally, transit stations have the potential to anchor great places, places that become community destinations. Once again, though, this only holds true if there is sufficient consumer spending to support the businesses there.

This section of the economic analysis begins with a brief description of the methodology and an overview of the fundamentals of retail market demand. Subsequent sections then calculate current and future market demand for retail development.

#### *A. Retail Market Analysis Methodology*

Four steps make up the basic retail market analysis methodology.

- ◆ **Define the Trade Area.** In general terms, the trade area is the geographic area from which a retail business or center will draw most of its customers. Several factors affect the size and boundaries of the trade area, including the type of shopping center, location of competitive retail facilities, and visibility and access to major roads and highways.
- ◆ **Calculate Market Potential.** The market potential represents the total amount of retail building space that spending by trade-area residents can support. The analysis estimates the total trade area spending by type of store (e.g., pharmacy, women's clothing). Dividing the spending by the average sales per square foot calculates the gross square footage of supportable retail building space.
- ◆ **Identify Competitive Facilities.** Competitive facilities are the trade area's existing and planned retail centers that offer a similar scale of goods. The amount of competition is expressed in terms of gross square footage of retail building space.
- ◆ **Determine Market Demand.** Subtracting the square footage of competitive retail facilities from the total square footage of retail space that trade ar-

ea spending can support determines the market demand. Market demand represents the additional retail building space that the market can support without generating new vacancies.

### *B. Fundamentals of Retail Markets*

#### 1. Convenience, Comparison, and Experience

An easy way to understand retail markets is to categorize retail into two groups based on the type of goods or service, the need for which instigates the shopping trip. These groups include convenience goods and services, and comparison goods. Table 2-7 describes the types of shopping centers that typically serve these two groups.

Generally, the goods and services that most people need on a regular basis (convenience goods and services) are close to where people live. For these regular purchases, most consumers have built up knowledge of where to go to get what they want, whether their discriminator is price and convenience or quality. Groceries, medicines, fast food restaurants, and hair care are typical convenience goods and services. Because convenience goods and services usually have low cost margins and high sales volumes, convenience retailers are located throughout an area, close to concentrations of households. These businesses typically locate in convenience centers and neighborhood shopping centers. Importantly, these types of businesses are also the primary tenants in vertical mixed-use buildings and in transit station areas that serves as a neighborhood or community destination.

Consumers tend to compare goods across brands and across retailers for items they purchase infrequently or rarely. This habit of comparing induces retailers to locate near each other. It also promotes larger-scale retailers who can stock many different brands of similar products. Clothing, electronics, and furniture are quintessential comparison goods. Full-service restaurants, which consumers patronize infrequently, also fall into this group. Because comparison goods have higher cost margins and lower sales volumes, and because consumers purchase

TABLE 2-7 *SHOPPING CENTER TYPES*

Shopping Center Type	Building-Size Range (SqFt)	Trade Area	
		Size (Radius/ Miles)	Population Range
Convenience	< 30,000	½	< 5,000
Neighborhood	30,000–100,000	1½	3,000–40,000
Community	100,000–450,000	3–5	40,000–150,000
Regional	300,000–900,000	8	150,000 or more
Super-regional	500,000–2 million	12	300,000 or more

Source: Beyard, Michael D. et al., *Shopping Center Development Handbook*, 3rd ed., Washington D.C.: Urban Land Institute, 1999.

these goods infrequently, comparison goods retailers tend to locate close to major transportation corridors that give access to a greater number of consumers. These businesses typically locate in community, regional, and super-regional shopping centers.

With both of these types of retail, quick easy access, a knowledge of individual retailers and their locations (formed through advertising, signage, and visibility during regular travels), and previous experience can influence where consumers shop. In communities where the automobile is the dominant mode of transportation, retailers respond by locating near and seeking visibility to auto traffic. In contrast, in neighborhoods served by rail transit, the station area becomes a lucrative business location, where many residents pass by every day.

A third, hybrid type of retail is experiential shopping. In this type of shopping, the experience of the trip is of equal if not greater importance than the material need for a good or service. The experiential value may accrue from socialization with friends, from entertainment, or from the quality of the place. Downtowns,

new town centers, lifestyle centers, and even shopping malls all attempt to enhance the shopping experience and provide a mix of businesses and amenities to create an enjoyable shopping experience. Transit station areas can provide an excellent opportunity to create an experiential neighborhood or community destination.

## 2. Trade Area

A trade area is the geographic area from which a retail center will draw the majority of its customers. Sophisticated market-analysis models for individual retailers often define primary, secondary, and even tertiary trade areas. It is generally sufficient, however, for planning level retail analyses to define a single primary trade area.

Several factors affect the size and boundaries of the trade area, including the type of shopping center, location of competitive retail facilities, physical barriers, and visibility and access to major roads and highways. The radial definition of a trade area based on its scale (Table 2-7) provides the starting point for defining a trade area. As the Urban Land Institute cautions, however, “A trade area does not lend itself to concentric circles around a potential site.”

The economic analysis considers two levels of trade area. The primary focus is on the trade area for convenience goods and services, because these are the types of businesses most likely to locate in a vertical-mixed use building and in a transit station area. The analysis also considers a community-scale trade area to help identify potential opportunities to create a retail/entertainment destination.

## 3. Household Spending

The household is the basic economic unit at the center of retail analysis. The US Bureau of Labor Statistics publishes an annual report, the Consumer Expenditure Survey, detailing how Americans spend their annual income. Nielsen, the preeminent marketing data firm, interprets that data for individual locations, based on the demographics and lifestyle characteristics of the households residing in that area. Nielsen reports the data both for types of goods and services (e.g., bakery goods, household repairs, and reading materials) and for types of stores

(e.g., grocery stores, men's clothing stores, and full-service restaurants) using standard retail business categories from the North American Industrial Classification System. Appendix B provides data for the average annual household expenditures for trade-area households by type of product or service for each proposed station area.

#### 4. Sales Efficiency

Sales efficiency is the average annual sales per square foot of retail businesses. Sales efficiency varies by store type, by individual business, and among different locations of an individual retail chain. Every two years the Urban Land Institute and the International Council of Shopping Centers conduct a survey of retail locations throughout the country. From that survey, they publish average sales efficiency data by type of store in *Dollars and Cents of Shopping Centers/The SCORE*. The current edition was published for 2008. This analysis adjusts those national figures for Los Angeles County using data from the US Census Bureau's *Economic Census*.

#### 5. Market Potential and Market Demand

Dividing total spending by average sales efficiency determines the market potential—the total amount of retail building space that can be supported. For example, households within 1.5 miles of the proposed Garfield Avenue station spend about \$102,299,379 per year at grocery stores and supermarkets. Dividing that by the average sales efficiency for this type of store, \$522.01 per square foot per year, indicates that this trade area can support about 196,000 square feet of supermarkets. Market demand is the difference between the market potential and the amount of existing building space used for those types of stores.

#### C. Existing Retail Market Demand

As with the residential market assessment, the economic analysis first calculates the market demand under existing conditions. The subsequent section considers the increase in market support that would be generated by increased spending from new households attracted to the trade area by new investment in public transit.

Table 2-8 quantifies the demand for new retail development, measured in building square footage, at each proposed station area from 2011 to 2016. The analysis has not yet incorporated data on planned or approved projects that have not been constructed. That square footage should be deducted from the supportable amount of retail building space in Table 2-8 to obtain an accurate picture of development potential.

#### 1. Local-Serving Retail

The convenience goods column represents the types of businesses that would most likely be attracted to vertical mixed-use buildings and the area around a transit station. The analysis shows that under current conditions, there would be no support for new retail development in four of the station areas. Indeed, the numbers indicate that these areas already have an excess amount of retail building space, more than can be supported by the spending of neighborhood residents.

This is understandable at the Garfield and Rosemead stations, where there is substantial community-scale retail development that attracts spending from a larger trade area. Interestingly, Norwalk also has similar existing retail development, but the analysis suggests that over the next five years there could be a very small increase in market demand. There could also be a small increase in demand at the Greenwood station.

#### 2. Community-Scale Retail

The comparison goods column represents the types of businesses that draw from and rely on a larger trade area. Typically these businesses seek to locate at major transportation nodes. The level of demand does not imply that the station area could capture all of that demand. It does, however, suggest that five of the station areas could explore the possibility of building on some of that demand to create a destination at or near the station area.

TABLE 2-8 *FIVE-YEAR MARKET DEMAND FOR NEW RETAIL BUILDING SPACE, PROPOSED STATION AREAS, 2011 TO 2016*

	Convenience Goods (SqFt)	Comparison Goods (SqFt)
Garfield	0	183,000
Whittier	0	0
Greenwood	1,200	132,000
Rosemead	0	134,000
Norwalk	2,500	119,000
Lambert	0	103,000

Source: The Planning Center | DC&E, 2011, using data from Nielsen, The Urban Land Institute, US Census Bureau, and the LA County Assessor.

#### *D. Potential Market Demand*

The preceding analysis evaluated demand for additional retail building space based on current conditions. If, however, the public invests in rail transit in the project area, the residential market potential analysis showed that the area could more than triple its household growth. And, all of those new households would provide additional consumer spending and thus support more retail development.

To assess the potential market demand for retail development, the economic analysis assumes that each station area captures the number of households calculated in Table 2-6. The resulting potential market demand for convenience goods and services is presented in Table 2-9 along with the increase in demand generated by household growth induced by rail transit.

TABLE 2-9 *POTENTIAL MARKET DEMAND FOR RETAIL DEVELOPMENT, 2011 TO 2016*

	Total Convenience Goods Market Demand (Building SqFt)	Net Increase with Rail Transit (Building SqFt)
Garfield	0	0
Whittier	16,000	16,000
Greenwood	74,100	72,900
Rosemead	0	0
Norwalk	67,000	64,500
Lambert	17,900	17,900

Source: The Planning Center|DC&E, 2011.

The analysis shows that two stations, Whittier Boulevard and Lambert Road could support new retail development as a result of rail transit when they would not support more retail under current conditions. Two other stations, Greenwood Avenue and Norwalk Avenue would support substantially more retail development with the introduction of rail transit.

Finally, two stations, Garfield Avenue and Rosemead would not support additional retail development, even with transit-induced household growth. This, however, should not be a troubling concern because these two stations, more than any other, already have a significant amount of retail goods and services available within walking distance from the proposed transit station.

#### *E. Retail Market Potential Summary*

Having retail goods and services in close proximity, especially within walking distance, is important for transit-oriented development. Surveys indicate that having basic goods, shopping, and entertainment within walking distance is even

more important to attract residents that having transit within walking distance. Furthermore, the majority of vehicle trips are for things other than the work commute. For more compact forms of development to effectively reduce greenhouse gas emissions, things like shopping and entertainment need to be within walking distance. Finally, having a grocery store is often a requirement to attract buyers and renters who can afford the housing cost required for redeveloping existing sites with higher density housing.

The economic analysis finds that in the absence of public investments in rail transit, the project area would not attract a sufficient number of new households to support new commercial development that could fundamentally alter the development patterns and level of economic activity in the project area. With rail transit however, the market conditions could exist to support community-planned efforts to re-envision the corridor, revitalize the entire area, and reduce greenhouse gas emissions.

#### 1. Garfield Avenue Station

The proposed location of the Garfield Avenue station already supports a strip of retail uses. Furthermore, within walking distance of the station is an Albertson's supermarket at Montebello Plaza, a Smart & Final, and a variety of chain and non-chain restaurants, as well as pedestrian scale development with restaurants and shopping along Garfield on the north side of the SR-60 freeway. Even though household growth would not necessarily support the development of additional retail, the transit zone around the station already has a full range of shopping and entertainment opportunities. This station area is primed for transit-oriented development. Redevelopment should take care to not demolish the existing convenience goods and services that exist. Furthermore, improving the walkability of the transit zone would increase the likelihood that transit-oriented development helps decrease vehicle trips.

#### 2. Whittier Boulevard Station

The transit zone around the proposed Whittier Boulevard station has retail goods and services, primarily located on small lots fronting the road. Transit-induced household growth could ultimately support a small increase in the

amount of retail building space. However, the lack of a supermarket within close proximity to the proposed station will likely constrain the potential to fully realize demand for housing. A possible economic development strategy would be to consider promoting redevelopment of some of the existing strip development along Whittier Boulevard. Reducing the amount of retail building space would bolster the net demand for new retail development, and possibly improve the viability of attracting a grocery-store anchored retail development in the transit zone. The economic analysis finds that there is an excess amount of retail building space in this trade area, and thus, reducing the amount of retail building space would not necessarily result in a one-for-one loss of retail sales. There would still be sufficient building space to accommodate the needs of neighborhood residents and a grocery store might be a welcomed addition to the community.

### 3. Greenwood Avenue Station

The economic analysis finds that this station area could support a small amount of additional retail development under current conditions, and up to 74,000 square feet if the area captures the full demand for new housing with the addition of light rail. As with the Whittier Boulevard station, however, the lack of a super market within proximity to the station will constrain the ability to realize the full potential for new housing. There is a Wal-Mart supercenter fairly close, so this might not be a significant constraint to transit-oriented development.

Because this station area is bounded by industry on two sides and the Rio Hondo on a third, the potential market demand for retail development suggests that the transit zone around this proposed station could develop into a thriving neighborhood destination. While the Pico Rivera Towne Center clearly would compete for consumer spending, this area has the potential to create a unique destination in the project area.

### 4. Rosemead Boulevard Station

Of all the station areas, the transit zone around the Rosemead Boulevard station has the most fully developed commercial offerings. The economic analysis finds that this trade area will not support additional retail development, even with the

rail-induced household growth. However, no new retail development would be needed to serve residents of transit-oriented development. Improving the walkability of the transit zone, however, would improve the area's attractiveness to potential residents. Indeed, the level of development in this area will likely translate into higher land acquisition costs than in the other station areas, and thus, housing developers will have to attract higher-income residents to afford the higher housing cost. In this sense, investments in walkability would be an incentive to transit-oriented development.

#### 5. Norwalk Avenue Station

The transit zone around the proposed Norwalk station has a full variety of retail offerings, only somewhat less extensive than the Rosemead Boulevard station area. The economic analysis finds that this area could support a slight increase in retail building space under current conditions, and up to 67,000 square feet of new retail if it captures its full potential of household growth with the development of light rail transit.

This area already has a grocery, so it should be well positioned to attract redevelopment for transit-oriented development. As with the Rosemead station, however, improving the walkability and pedestrian conditions will help to attract residents and developers.

With the potential level of demand for new retail, assuming the development of rail transit, this station area could redevelop some mid-block retail buildings with multi-family housing, and increase the market support for new retail to a level that would allow the development of a new retail center, perhaps one integrated with or connected to the transit station.

#### 6. Lambert Road

The transit zone around the proposed Lambert Road station cannot support new retail development under current conditions. With the introduction of rail transit however, the area could potentially support up to 17,900 square feet of new retail. This is not a large amount, and probably is insufficient on its own to induce a developer to build a stand-alone retail center. That said, it is probably a

*SOUTHERN CALIFORNIA ASSOCIATION  
OF GOVERNMENTS  
WASHINGTON BOULEVARD LIGHT RAIL  
TRANSIT CORRIDOR STUDY  
ECONOMIC ANALYSIS*

**sufficient level of demand to warrant consideration of some new commercial activity at the transit station or as part of a mixed-use transit-oriented development.**

### 3 PRIORITY STRATEGIES AND DESIGN CONCEPTS

Building from the economic analysis, development prototypes were developed for three of the proposed station sites along the Washington Boulevard Light Rail corridor: Rosemead, Norwalk, and Lambert. The three station sites, as described below in Section C of this chapter, were selected in consultation with the Washington Boulevard Coalition and land use concepts were developed based upon the financial feasibility and pro forma analysis in Chapter 4.

This chapter provides a list of broad policy and design recommendations for the Washington Boulevard Light Rail corridor and specific strategies to facilitate implementation of the development prototypes at each of the three selected station areas. These recommendations consist of suggested General Plan policies and land use changes, overall design strategies, and key station area strategies and design concepts intended to promote an active and attractive built environment that supports future light rail investment.

The following strategies support the Compass Blueprint Growth Vision principles of mobility, livability, prosperity, and sustainability by:

- ◆ Focusing growth in existing and emerging centers and along major transportation corridors
- ◆ Creating significant areas of mixed-use development and walkable communities
- ◆ Targeting growth around existing and planned transit stations
- ◆ Preserving existing open space and stable residential areas

#### A. General Plan Amendment Strategies

As General Plans set the policy framework for future land uses and development design, the jurisdictions along the corridor (Monterey Park, Montebello, Pico Rivera, Whittier, and Unincorporated Los Angeles County) should amend their General Plan to revise the land use designations and land use map and include policies to foster high density, mixed-use land uses within the

station area ½-mile radii. Below are suggested policies pertaining to the Land Use, Circulation/Transportation, and Urban Design/Community Character Elements (or similar):

1. Recommended Policies (Land Use Element):

- ◆ Concentrate commercial, mixed-use, and medium- to high-density residential development along transit corridors and major intersections that can be served efficiently by light rail transit and alternative transportation modes.
- ◆ Provide for housing near jobs, transit routes, schools, shopping areas, and recreation to discourage long commutes; promote public transit, walking, and biking; and lessen traffic congestion.
- ◆ Allow for density bonuses and other incentives to encourage mixed-use development projects in mixed-use designations.
- ◆ Provide for a variety of housing types including, but not limited to, single-family attached and detached, condominiums, and multi-family apartments.
- ◆ Support development and redevelopment that creates jobs for all income and educational levels.
- ◆ Promote infill development, redevelopment, rehabilitation, and reuse efforts that contribute positively to existing neighborhoods and surrounding areas.
- ◆ Establish incentives to promote the use and development of vacant infill parcels and the intensification of land uses on underutilized parcels to realize the greatest benefit to the community.
- ◆ Plan and direct growth to areas where the future rail transit system will support and stimulate high density development.
- ◆ Allow and encourage the creation of studios and workspaces for artists, craftspeople, and other professions and allow for self-employment and home occupations, where compatible with the desired neighborhood character.

- ◆ Designate land for industrial uses sufficient to meet future city needs, but only in locations that will not negatively impact residential neighborhoods.
- ◆ Promote the design of complete neighborhoods that are structured to be family-friendly, encourage walking, biking, and the use of mass transit, foster community pride, enhance neighborhood identity, ensure public safety, improve public health, and address the needs of all ages and abilities.
- ◆ Preserve, protect, and enhance established neighborhoods by providing sensitive transitions between those neighborhoods and adjoining areas, and require new development to respect and respond to those existing physical characteristics, buildings, streetscapes, open spaces, and urban form that contribute to the overall character and livability of the neighborhood.
- ◆ Encourage privately initiated redevelopment efforts in residential, commercial, and industrial areas and use public resources where available to stimulate and leverage private investment.

## 2. Recommended General Plan Policies (Circulation Element)

- ◆ Allow, encourage, and facilitate transit-oriented development, mixed-use, and infill projects in appropriate locations to reduce vehicular trips, especially near future light rail stations and along major transportation corridors.
- ◆ Require new development to provide and enhance connectivity to existing transportation facilities via the provision of key roadway connections, sidewalks, and bicycle facilities.
- ◆ Require new/infill development to provide good internal circulation facilities that meets the needs of walkers, bicyclists, children, seniors, and persons with disabilities.
- ◆ Strive to attain an automobile Level of Service (LOS) of D or better (or an equivalent standard under another analytical methodology). An automobile LOS of E or F may be acceptable under the following circum-

stances: 1) improvements necessary to attain an automobile LOS of D or better would decrease the effectiveness of the nonautomotive components of the multi-modal circulation system (i.e. pedestrians, bicyclists, mass/public transit, etc.), or 2) improvements necessary to increase the effectiveness of the non-automotive components of the multimodal transportation system result in a decrease in automobile LOS.

- ◆ Implement multi-modal LOS (MMLOS) system in place of traditional LOS to assess the performance of all modes of travel to prioritize bicycle, pedestrian, and transit.
- ◆ Develop flexible parking provision requirements to be used in areas served by transit or with successful provision of non-automotive uses.
- ◆ Develop and implement bicycle parking standards for mixed use, multi-family, and retail uses. Such standards should address both short term and long term bicycle parking needs.
- ◆ Implement standard protocol of taking bicycle and pedestrian counts when commissioning or requiring vehicular traffic counts.

### 3. Recommended General Plan Policies (Urban Design Element)

- ◆ Encourage an overall high quality streetscape design, where feasible, that promotes narrow roadways; bike lanes; on-street parking; minimal curb cuts; enhanced crosswalks; appropriate sidewalk widths; landscaped medians and parkways; street trees, planters, and wells; street lighting; street furniture; wayfinding; enhanced paving; public art; and other features that contribute to the desired character of the community, where appropriate.
- ◆ Apply design standards that promote the use of high quality building materials, architectural and site designs, landscaping, signage, and amenities.
- ◆ Promote a variety of housing styles and encourage the use of front porches, stoops, and individual unit entries, where appropriate.
- ◆ Promote appropriate transitions in building height and bulk which are sensitive to the visual and physical character of adjacent neighborhoods.

- ◆ Apply right-of-way design standards that promote urban forestry and encourage urban greening throughout the streetscape.
- ◆ Encourage the preparation of specific or master plans to guide development in areas that have particular importance due to their location, characteristics, or potential for new development, such as infill sites within proximity to future light rail transit.

#### 4. Land Use

The current land uses along the corridor vary widely from single-family homes and neighborhood commercial to multi-family apartment, heavier commercial, and industrial and manufacturing. There are numerous underutilized parcels within the corridor station areas, suitable for more intensive, transit-supportive uses. The careful weaving of new transit-supportive development into the fabric of the corridor, and station areas in particular, will be a major key to the success of the Washington Boulevard Light Rail Corridor.

The General Plan land uses should be exemplified by intensive and mixed-use compatible land use designations along the Washington Boulevard corridor, particularly within the station areas and key intersections, and less intensive land use designations away from the main corridor. The specific intensity and type of uses should build upon existing physical characteristics and balance preservation of existing character with introduction of uses that will enhance that character and support transit investment.

- ◆ Existing General Plan policies should be changed for all jurisdictions along the Washington Boulevard corridor. In addition to General Plan policy recommendations included in Section A above, specific land use strategies are identified in Section C below for the three station areas.
- ◆ Existing General Plan land use designations for parcels in the station areas would need to be changed (specific land use designations suggested in Section C below). The General Plan land use designations would provide the land use framework for the location, use, and intensity of new development in the station areas.

## *B. Design Strategies*

The uses and built character of the eight-mile Washington Boulevard corridor varies widely from one end to the other. The following section provides design and mobility strategies for the corridor as a whole as well as specific priority strategies and design concepts for three key proposed station areas, Rosemead, Norwalk, and Lambert.

### 1. Site Design

Site design is the most basic component of the design process for any development project. It involves fundamental decisions about where buildings are located on a site, how they relate to their surroundings, and where space is provided for pedestrians, vehicles, and bicyclists. Private development also shapes the public realm by defining the edges of the street. New development within the station areas should be planned so that it emphasizes the needs of pedestrians, rather than vehicles along the busy arterial streets, which has the power to reinvigorate the public realm. The following list summarizes the main categories of site design:

#### a. Siting and Orientation

The proposed station areas already include a number of everyday uses. Successful site design must coordinate a variety of activities. Buildings should be located where they can connect to the public realm, but must also be arranged within the site so that appropriate space is provided for parking, outdoor seating and open space, and pedestrian and bicycle linkages.

- ◆ Buildings should be highly visible and readily accessible from the sidewalk, encouraging people to walk from place to place.
- ◆ Sidewalk width should reflect the level of adjacent activity. For example, buildings should be setback to allow for wider sidewalk widths in Mixed-Use and commercial areas.
- ◆ Front setbacks or build-to-lines should set the amount of space, if any, that lies between the building and sidewalk or street to define the transition between private development and the public realm.

- ◆ Site design must determine how each building's mass-its three-dimensional form-will fit within the site as a whole. The site design must strike a balance that provides a built edge to define the public realm, while not presenting an overwhelming face to the street.
- ◆ Buildings should be placed at the corner/intersection to give prominence. Design corner sites to acknowledge and maximize this prominence and help define the edge of the street intersection.
- ◆ Small plazas, courtyards, and other outdoor spaces should be included to create a visual connection to the public realm as well as a physical transition zone between the building and the street.
- ◆ Outdoor seating can be incorporated to encourage foot traffic and provide places where people are encouraged to stop and linger. Outdoor seating areas can be located within the interior of the site for residents and employees or closer to the public realm.

b. Neighborhood Context

Current development within the proposed station areas is predominately low-density. The design of infill development within station areas must be sensitive to the existing surrounding residential context and positively contribute to the public realm.

- ◆ Site design should carefully balance the need to respond to the existing context with the need to introduce new development that can improve the character and the scale of the surrounding area.
- ◆ Coordination between multiple sites should be encouraged to help develop a consistent community character. New projects should consider adjacent sites to identify potential opportunities for the coordination of building programs, site amenities, and functional operations.

c. Site Access

Vehicle access should not dominate a site, even where vehicle access must be accommodated for parking or loading areas. Pedestrian and bicycle access should be given equal consideration.

- ◆ Entrances to buildings should be oriented toward the public street where they are visible and inviting to people on foot to add to the visual interest of the public realm.
- ◆ Though it is important to allow vehicles to access a site, existing and new access points should be re-designed/ designed to minimize conflicts with pedestrians and bicyclists.

d. Parking

Though the goal along the Corridor and within the station areas will be to promote use of transit and alternative modes of travel, places must be designed to accommodate all modes, including the automobile. The challenge is to provide parking supply that is slightly constrained but does not deter customers, frustrate tenant, or create problems for nearby residents. Parking needs should be addressed at a corridor-wide scale and met with creative designs that prioritize the pedestrian and are incorporated into sites without dominating the public realm.

- ◆ Parking lots should be visually separated from the street, as well as surrounding residential areas.
- ◆ Landscaping and pathways should be incorporated to make parking lots more attractive and functional and to help buffer from surrounding uses.
- ◆ Large surface parking areas should be divided into smaller units to decrease visual impacts of large expanses of pavement and vehicles using landscaped walkways, tree rows, or outbuildings.
- ◆ Parking garages and lots need to be designed so they are well integrated with their surroundings, particularly those associated with the transit stations. Attention to architectural detail can be used to conceal the massing of garages, allowing them to better fit into the context of adjacent buildings.
- ◆ Safe and secure facilities should be provided for parking bikes, similar to vehicles.
- ◆ Parking demand management programs can be implemented to allow for a reduced parking while still meeting the needs of drivers. Cities and the

County should consider reduced parking standards and policies, such as minimum and maximum requirements. Parking demand management programs should be implemented on a corridor-wide scale to avoid over-parking at stations without demand management programs in place.

- ◆ Parking areas should incorporate safe and secure bicycle parking that addresses the different needs of both short- and long-term visitors.

## 2. Mobility (Street Networks and Connectivity)

The proposed station areas are located along busy arterial streets that could benefit from an alternative to automobile traffic to support new development and to reduce congestion. Improved connectivity and complete streets – streets that provide for all modes and users of transportation – will be important in the proposed station areas, particularly along the high-flow, congested arterials in order to accommodate the variety of transportation choices necessary to support more intensive development, while minimizing the amount of land required for automobile travel and storage.

### a. Connectivity

Good connectivity within a site - the directness of links and density of connections in the network - allows people to easily move to and from the public realm. This ease of movement encourages use of alternative modes of transportation. Site planning should increase connectivity by implementing design solutions that maximize access and optimize pedestrian use of new development.

- ◆ Infill of the very large sites within the proposed station areas, including large shopping centers and manufacturing and industrial sites should provide short street segments and walkable block sizes to create a highly-connected network of streets.
- ◆ Reconstruction of segments of existing streets should be considered where feasible so streets are more compatible with alternative modes of travel.

- ◆ Design access points to minimize conflicts with pedestrians and bicyclists including limiting the number of access points, minimizing the width of driveways, and placing all driveways at right angles to the street.
- ◆ Connect new development to the street and public realm by designing with clear pedestrian connections to the sidewalk.
- ◆ Transit stops should be integrated into the public realm through site design that incorporates the transit facility into public spaces adjacent to compatible uses such as restaurants, retail, and other commercial services that meet the needs of residents and other transit patrons.

#### b. Complete Streets

Streets within the proposed station areas should be redesigned according to the key principles of Complete Streets so that streets are designed and operate to enable safe access for all users. These principles include balancing user needs; designing for pedestrians, bicyclists, motorists, commercial deliveries, and public transportation users of all ages and abilities; and multimodal intersection design<sup>1</sup>.

#### 3. Pedestrian Realm/Streetscape

The visual elements of a street, including the road, adjoining buildings, street lights, street furniture, trees, landscaping and open spaces, combine to form the street's character and can contribute to the unique character of a block or entire neighborhood. Creating a safe, accessible and attractive pedestrian environment will encourage pedestrian movement through the proposed station areas and attract the diverse and concentrated mix of uses necessary to support the future light rail. Careful redesign of the pedestrian spaces within the station areas will need to consider dimensions, amenities, lighting, provision of short-term bicycle parking, and the design of the buildings fronting the pedestrian path.

- ◆ Sidewalk widths should be commensurate with the level of pedestrian activity desired for the specific street frontage. Sidewalk widths should

---

<sup>1</sup> As defined by AB 1138, there are eight categories of users: automobiles, transit pedestrians, bicycles, the elderly, the disabled, children, and commercial vehicles.

provide space for pedestrian amenities, for local business activity to spill out onto the sidewalk, and for a leisurely walking pace without vehicle traffic dominating the pedestrian realm.

- ◆ Semi-public outdoor spaces, such as plazas or courtyards, should be integrated into commercial development where feasible to help support pedestrian activity and connect to the public realm.
- ◆ Outdoor areas should be visible from public streets and accessible from buildings, as well as streets and pedestrian and bicycle networks. These areas should be used to connect different uses.
- ◆ Outdoor seating should be incorporated into site design in order to encourage foot traffic and provide places where people are encouraged to stop and linger.
- ◆ Trees and other plant materials should be used as a means of enriching the pedestrian experience, enhancing aesthetics, and improving the health, sustainability and ecological function of the urban environment. A coordinated selection and spacing of tree species and other plantings can establish a distinctive identity for the corridor or particular station area within a community.
- ◆ Public art should be incorporated to facilitate pedestrian use by animating pedestrian spaces and fostering community identity through the addition of visual and intellectual interest in the public streetscape.
- ◆ Pedestrian routes and building facades should be appropriately illuminated to their use and location, with light fixture design selected to best complement the architectural design of the project.
- ◆ Street furniture and other amenities such as trash receptacles, bike racks, kiosks, and newsstands, should be located in conjunction with active pedestrian areas such as intersections, key building entries, public parks and plazas, transit stops, important intersections and pedestrian streets to help animate the pedestrian realm, support public use, and establish the character and identity of an area.

## 2. Building Design

Quality and strategic building design would ensure that future development within the station areas contribute to the positive character of the communities, particularly the public realm. Buildings should include architectural features that respond to the local context.

### a. Building Frontage

Well-designed and thoughtfully proportioned building frontage provides visual interest and contributes to a community's character.

- ◆ The rhythm and level of detail of building facades along the streets should be used to create visual interest and activate the pedestrian realm.
- ◆ Windows, awnings, canopies, and arcades can be used to enliven the pedestrian environment, provide ground floor commercial to be seen by passersby, and provide cover from the elements.
- ◆ Building exteriors should incorporate a limited number of complementary colors and materials and innovative new or traditional materials to create visually appealing and stimulating buildings.
- ◆ Where multiple-tenant spaces are incorporated into a building, individual tenant spaces should characterize a building's structural elements.
- ◆ The mass of large buildings should be broken into proportional components that relate to the human scale.

### b. Resource Conservation

Design solutions should incorporate strategies to conserve resources during both construction and operation of the building.

- ◆ Numerous systems including rooftop catchment, "greywater" plumbing as well as low-water-use fixtures and appliances should be considered in all new and renovated buildings.
- ◆ Green roofs should be used as an effective tool to provide multiple environmental benefits.

- ◆ Energy conservation techniques tailored to the climate of the Los Angeles region should be incorporated to minimize energy needed for lighting, heating, cooling, and ventilation.
- ◆ Cost-efficient and sustainable construction materials and practices should be utilized in all development.
- ◆ Adaptive reuse of existing underutilized buildings and opportunity sites should be a primary strategy within the station areas. Adaptive reuse would help conserve natural resources, preserve history and reinforce neighborhood character and identity.

c. Roof Design

The form, color and texture of the roof should be addressed as an integral part of the overall building design.

- ◆ The design of the roof's shape should reflect the configuration of the building's mass and volume and should have a consistent character from all vantage points.

d. Signage

Signage should be intended to identify the occupant or occupants.

- ◆ Information should be limited to the occupants and addresses and should not be used for the purposes of advertising.
- ◆ A building's signage should conform to the architectural detailing of the associated building including building scale, design, and materials selection.
- ◆ Signs should not obscure architectural details such as recesses, structural bays or fenestration with wall-mounted signs.

C. *Station-Specific Strategies (correlated to design concepts)*

As stated above, three of the proposed stations along the Washington Boulevard Light Rail corridor, Rosemead, Norwalk, and Lambert, were selected for

further study. These three areas were selected through consultation with the Coalition based upon a combination of factors including the economic analysis contained within Chapter 2 and the desire to study a range of station area “types” (corridor, residential/mixed-use and office-serving). Development prototypes were developed for each of the three station sites based upon the financial feasibility and pro forma analysis in Chapter 4. The following strategies provide direction specific to the three stations and their respective development prototypes as illustrated in the site renderings in Figures 3-1 through 3-3.

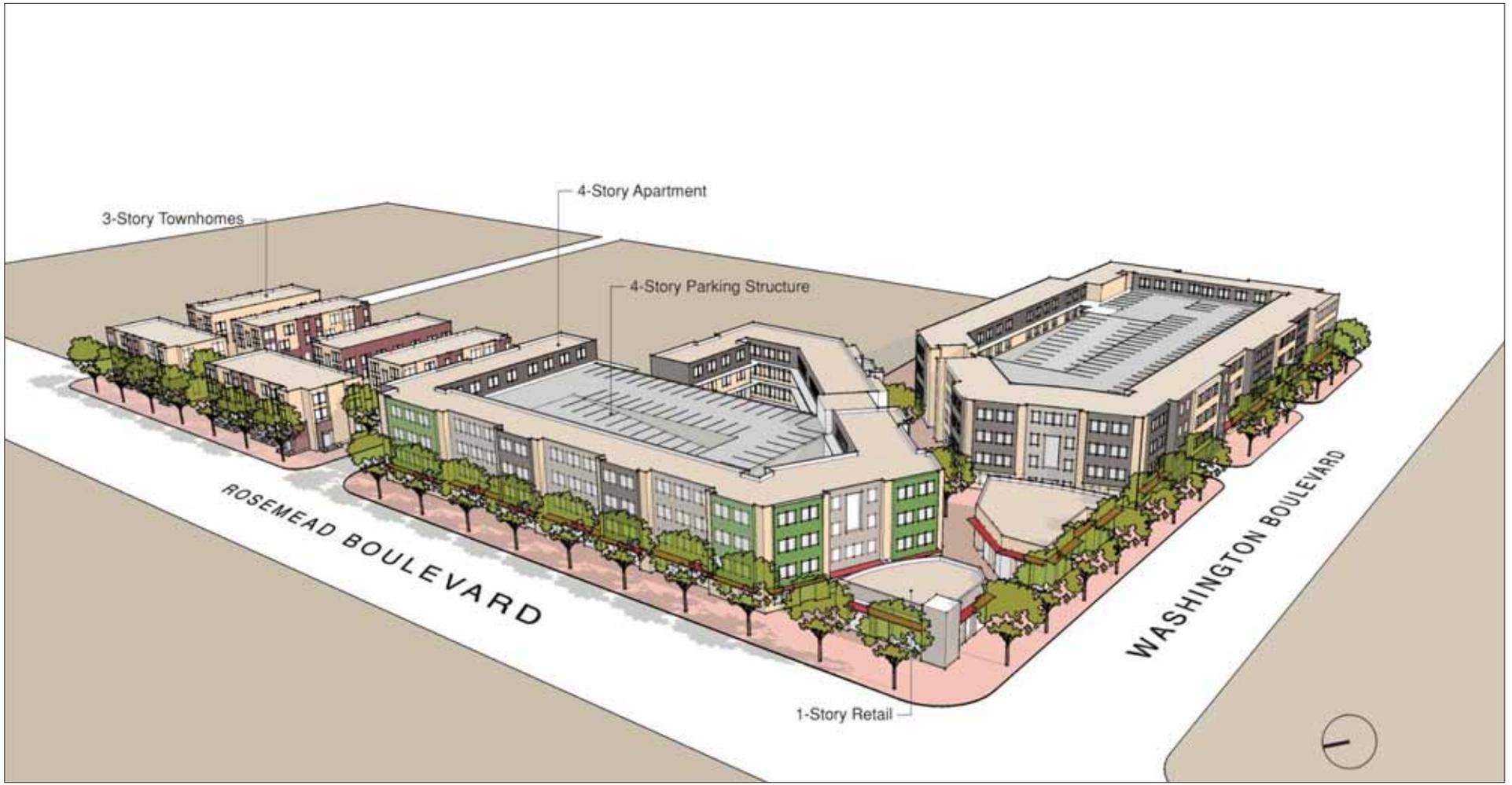
#### 1. Washington/Rosemead Station

The design concept for the Rosemead Gold Line Station includes both high density residential and retail commercial (see Figure 3-1). The development prototype was prepared for the blocks at the northeast corner of the Washington Boulevard/Rosemead Boulevard intersection. The residential component includes 241 units at 33.2 dwelling units per acre (du/ac) and 28,600 square feet of retail with a 1.7 floor area ratio (FAR). Parking for residential uses, commercial uses, and rail station users, is provided in a 504-space structure. This Gold Line station would potentially be located in at-grade at the intersection of Washington Boulevard and Rosemead Boulevard. Surrounding land uses currently include general commercial (restaurants and retail) and medium density multi-family residential.

##### a. Land Use

- ◆ Amend the City of Pico Rivera General Plan Land Use Element to add the following Mixed Use land use designation:
  - The Mixed Use land use designation is intended to provide for the integration of both residential and commercial/retail/office uses within a single project. Appropriate land uses include high density residential, allowing for a range of multi-family housing types, and a broad range of commercial, retail, service, and office uses.

*Minimum/Maximum Land Use Intensity: 14-35 units per net acre; Floor Area Ratio of  $\leq 1.75$ .*



Source: The Planning Center | DC&E, 2012.

FIGURE 3-1  
ROSEMEAD BLVD STATION AREA PROPOSED DEVELOPMENT CONCEPT

- ◆ Amend the City of Pico Rivera General Plan Land Use Map to apply the Mixed Use land use designation to the parcels at the northeast corner of the Washington Boulevard/Rosemead Boulevard intersection.
- ◆ Amend the City of Pico Rivera Zoning Code to include a Mixed Use zoning classification with a density range of 14-35 du/ac and Retail Commercial with a maximum FAR of 1.75.
- ◆ Amend the City of Pico Rivera Zoning Map to change the General Commercial and Multiple Family Residential zones at the northeastern corner of the Washington Boulevard/Rosemead Boulevard intersection to Mixed Use.

b. Site Design

- ◆ Provide one-story retail oriented towards the street, located on the street corner so that the building meets the corner to emphasize the intersection of the streets and Gold Line station. One-story buildings will also step back the height to buildings behind.
- ◆ Provide four-story apartment buildings with internal four-story structured parking to define the edge of the street immediately adjacent to the one-story retail along Washington Boulevard and Rosemead Boulevard.
- ◆ Provide three-story townhome buildings one block north on Washington Boulevard and Rosemead Boulevard.
- ◆ Site all buildings at the back of the sidewalk to provide a strong definition of the public realm. Buildings should be separated from the street only by the sidewalk and landscaped park strip. The landscaped park strip should be integrated with the design of the physical structures.
- ◆ Place entrances to the buildings and walkways into the site directly from the sidewalk.

c. Mobility (Street Network and Connectivity)

- ◆ Provide buffered bicycle lanes or cycle tracks to provide links between proposed land uses, transit station, and both the Rio Hondo and San Gabriel River Bike Paths to the west.
- ◆ Provide a pedestrian plaza on Rosemead Boulevard. to connect the station to the sidewalk.
- ◆ Provide unique special intersection and crosswalk paving to link proposed land uses to Gold Line station.
- ◆ Place formal transit stops or shelters at all four corners of the intersection for Washington and Rosemead transit service.
- ◆ Locate bicycle racks for short-term visitors such as customers and provide long-term secure bicycle parking for employees and residents.
- ◆ Include pedestrian-scale treatments and lighting to promote strong connections into and out of apartment and retail uses. Consider curb-type roadway treatment (closed to vehicles with bollards), to provide easy bicycle access and separation of bicycle and pedestrian flows.
- ◆ Locate a bicycle station internal to the site linked from the street by a bike access route to provide bicycle repairs, related commerce.
- ◆ Provide structured parking internal to the buildings for the apartment units and tuck-under parking for the townhome units.
- ◆ Amend development standards to implement a parking ratio of 1.8 spaces per dwelling unit and 2 spaces per 1,000 square feet of commercial retail.
  - Structured parking should accommodate secure long-term bicycle storage.
  - Structured parking should, at a minimum, be wired for future provision of electric vehicle charging stations.

d. Pedestrian Realm

- ◆ Site all buildings at the back of the sidewalk to provide a strong definition of the public realm.

- ◆ Maintain landscaped areas, including mature trees, along the street edge to activate building facades, soften the building mass, and provide shade.
- ◆ Integrate a public outdoor plaza internal to the site between the apartment buildings and retail. The plaza should maximize circulation opportunities between apartment buildings, retail, and the street.
- ◆ Incorporate landscaping at the edges of the internal walkways and plaza to help define the spatial organization of the site.

e. Building Design

- ◆ Incorporate building details such as recessed windows and entries to add depth and solidity to the apartment and townhome building facades.
- ◆ Design the façade of the apartment buildings to have a distinct base (retail), middle, and top.
- ◆ Use large window proportions and clear glass in retail buildings for visibility by both pedestrians and motorists at the street level.
- ◆ Design doors or sliding windows of one-story corner retail buildings to enable uses to expand onto the sidewalk. Particular emphasis should be given to encouraging expansion of uses onto the plaza.

2. Washington/Norwalk Station

The design concept for the Norwalk Station includes both high density residential and retail commercial (see Figure 3-2). The development prototype was prepared for the blocks at the southwestern and southeastern corners of the Washington Boulevard/Norwalk Boulevard intersection. The residential component includes 116 units at 50 du/ac and 32,700 square feet of retail with a 1.0 FAR. Parking for residential uses, commercial uses, and rail station users, is provided in a 629-space structure. This Gold Line station would potentially be located in an at-grade structure at the intersection of Washington Boulevard and Norwalk Boulevard, with immediate access to the Santa Fe Springs Marketplace and new development opportunities. Surrounding land uses include retail commercial, a church, and low-density residential.



Source: The Planning Center | DC&E, 2012.

FIGURE 3-2  
NORWALK BLVD STATION AREA PROPOSED DEVELOPMENT CONCEPT

a. Land Use

- ◆ Amend the May 2012 Public Review Draft of the County of Los Angeles General Plan 2035 to incorporate the following land use changes:
  - Designate the area within a ½ mile radius of the proposed Norwalk Boulevard Station as a TOD District.
  - Apply the Mixed Use (MU) land use designation to the blocks at the southwestern and southeastern corners of the Washington Boulevard/Norwalk Boulevard intersection.

- ◆ Amend the County of Los Angeles Zoning Map to apply the Mixed Use Development (MXD) land use designation to the southwest and southeast corners of the Washington Boulevard/Norwalk Boulevard intersection. Current allowable density/intensity is sufficient.

*Minimum/Maximum Land Use Intensity: 20-50 units per net acre*

*Floor Area Ratio: 1.0 FAR.*

- ◆ Amend the City of Santa Fe Springs General Plan Land Use Element to add the following Mixed Use land use designation:
  - The Mixed Use land use designation is intended to provide for the integration of both residential and commercial/retail/office uses within a single project. Appropriate land uses include high density residential, allowing for a range of multi-family housing types, and a broad range of commercial, retail, service, and office uses.

*Minimum/Maximum Land Use Intensity: 20-50 units per net acre; Floor Area Ratio of ≤ 1.0.*

- ◆ Amend the City of Santa Fe Springs General Plan Land Use Map to apply the Mixed Use land use designation to the Commercial parcels at the southwest and southeast corners of the Washington Boulevard/Norwalk Boulevard intersection.
- ◆ Amend the City of Santa Fe Springs Zoning Map to include a Mixed Use zoning classification with a density range of 20-50 du/ac and Retail Commercial with a maximum FAR of 1.0.

- ◆ Amend the City of Santa Fe Springs Zoning Map to change the Community Commercial zone at the southwest and southeast corners of the Washington Boulevard/Norwalk Boulevard intersection to Mixed Use.

b. Site Design

- ◆ Provide one-story retail oriented towards the street, located on the street corner so that the building meets the corner to emphasize the intersection of the streets at the southwest corner of Washington Boulevard and Norwalk Boulevard. One-story buildings will also step back the height to buildings behind.
- ◆ Provide four-story buildings with internal four-story structured parking to define the edge of the street along Washington Boulevard and the eastern side of Norwalk Boulevard.
  - Provide three floors of apartment units above ground floor retail along Washington Boulevard. and two floors of apartment units above two-story townhomes along Norwalk Boulevard.<sup>2</sup>
- ◆ Provide three-story townhome buildings along the western side of Norwalk Boulevard.
- ◆ Site all buildings at the back of the sidewalk to provide a strong definition of the public realm. Buildings should be separated from the street only by the sidewalk and landscaped park strip.
- ◆ Place entrances to the buildings and walkways into the site directly from the sidewalk.

c. Mobility (Street Networks and Connectivity)

- ◆ Provide a mid-block crosswalk on Washington Boulevard, aligned with main entrance into the apartment building and interfacing with uses on south side of Washington Boulevard.

---

<sup>2</sup> Retail requires higher ceilings than residential. Retail should be a minimum of 12 feet.

- ◆ Provide bicycle lanes or other facilities, as planned for station improvements, to provide links between station, proposed land uses, and the San Gabriel River Bike Trail.
  - ◆ Construct a pedestrian plaza, with major stops and shelters, for the Monetebello Bus Lines on Norwalk Boulevard. and Metro on Washington Boulevard (if stops cannot be provided adjacent to the station to the east).
  - ◆ Provide unique special intersection and crosswalk paving to link proposed land uses to Gold Line station.
  - ◆ Provide structured parking internal to the buildings for the apartment units and tuck-under parking for the townhome units.
  - ◆ Amend development standards to implement a parking ratio of 1.8 spaces per dwelling unit and 2 spaces per 1,000 square feet of commercial retail.
    - Structured parking should accommodate secure long-term bicycle storage.
    - Structured parking should, at a minimum, be wired for future provision of electric vehicle charging stations.
  - ◆ Locate bicycle racks for short-term visitors such as customers and provide long-term secure bicycle parking for employees and residents.
- d. Pedestrian Realm
- ◆ Site all buildings at the back of the sidewalk to provide a strong definition of the public realm.
  - ◆ Maintain landscaped areas, with seating available, along the street edge to activate building facades and street.
  - ◆ Place a defined main entrance to the apartment building mid-block along the south side of Washington Boulevard.
  - ◆ Incorporate landscaping at the edges of the internal walkways and plaza to help define the spatial organization of the site.
  - ◆ Retail uses should include awnings, canopies, and arcades to provide visual interest along the street.

e. Building Design

- ◆ Subdivide the horizontal mass of the apartment buildings into smaller increments with vertical architectural elements to be more compatible with adjacent townhome buildings and surrounding uses.
- ◆ Incorporate different colors and materials on the upper floors of the apartment building to help differentiate between the retail uses at the buildings' base and the building body and top.
- ◆ Townhome buildings should incorporate front porches or stoops to activate the street.

2. Washington/Lambert Station

The design concept for the Lambert Station includes both high density residential and retail commercial (see Figure 3-3). The development prototype was prepared for the block at the southeast corner of the Washington Boulevard/Lambert Road intersection. The residential component includes 231 units at 53.7 dwelling units per acre (du/ac). The FAR for the commercial component is significantly higher than the Rosemead and Norwalk Station Areas at 3.2 FAR as the Lambert design concept includes a 78,000-square-foot medical office building with parking for the office building provided in the building structure. Parking for residential uses, commercial retail and office uses, and rail station users, is provided in a 751-space structure. This Gold Line station would potentially be located in an at-grade structure at the intersection of Washington Boulevard and Lambert Boulevard, and centered in the staging area to maximize street front retail and commercial uses. Surrounding land uses include retail and restaurant commercial, hospital and supporting office commercial.

f. Land Use

- ◆ Amend the City of Whittier General Plan Land Use Element to add the following Mixed Use land use designation:



Source: The Planning Center | DC&E, 2012.

FIGURE 3-3  
LAMBERT RD STATION AREA PROPOSED DEVELOPMENT CONCEPT

- The Mixed Use land use designation is intended to provide for the integration of both residential and commercial/retail/office uses within a single project. Appropriate land uses include high density residential, allowing for a range of multi-family housing types, and a broad range of commercial, retail, service, and office uses.

*Minimum/Maximum Land Use Intensity: 35-55 units per net acre; Floor Area Ratio of  $\leq 3.2$ .*

- ◆ Amend the City of Whittier General Plan Land Use Map to apply the MU land use designation to the parcels at the southeast corner of the Washington Boulevard/Lambert Road intersection.
- ◆ Amend the Title 18 – Zoning of the City of Whittier Municipal Code to include a mixed-use zoning classification (MU) with a residential density range of 35-55 du/ac and maximum FAR of 3.2.
- ◆ Amend the City of Whittier Zoning Map to change the General Commercial, Commercial Office, and Heavy Multiple Residential zones at the southeastern corner of the Washington Boulevard/Lambert Rd intersection to Mixed Use (MU).

g. Site Design

- ◆ Provide five-story office building oriented towards the street, located on the street corner at the southeast corner of Washington Boulevard and Lambert Road. Office uses are intended to support the nearby Presbyterian Intercommunity Hospital.
- ◆ Provide four-story apartment buildings with internal four-story structured parking to define the edge of the street along Washington Boulevard.
- ◆ Site all buildings at the back of the sidewalk to provide a strong definition of the public realm. Buildings should be separated from the street only by the sidewalk and landscaped park strip.
- ◆ Place entrances to the buildings and walkways into the site directly from the sidewalk.

**h. Mobility (Street Networks and Connectivity)**

- ◆ Provide mid-block crosswalk on Washington Boulevard, aligned with main entrance and passageway into the apartment building and the Rivera-Crowndale/Washington Boulevard intersection.
- ◆ Provide a pedestrian throughway, via an open cul-de-sac with bollards, from the passageway to provide access to and from adjacent neighborhood.
- ◆ Provide buffered bicycle lanes or cycle tracks, to provide links between proposed land uses, Gold Line station, and the Whittier Boulevard Bike Trail.
- ◆ Provide special intersection and crosswalk paving to link proposed land uses to Gold Line station and additional bicycle links to the south on Lambert Road.
- ◆ Provide structured parking internal to the buildings for the apartment units and office, and tuck-under parking for the townhome units.
- ◆ Amend development standards to implement a parking ratio of 1.8 spaces per dwelling unit and 2.0 spaces per 1,000 square feet of commercial retail/office.
  - Structured parking should accommodate secure long-term bicycle storage.
  - Structured parking should, at a minimum, be wired for future provision of electric vehicle charging stations.
- ◆ Locate bicycle racks for short-term visitors such as customers and provide long-term secure bicycle parking for employees and residents.
  - Locate bicycle racks in the first level of the parking structure near an office building entrance for office employees.
- ◆ Place formal stops and shelters for Montebello Bus Lines and Sunshine Shuttle service on Washington Boulevard, linked with highly visible crosswalk treatments at the Lambert Road intersection.

i. Pedestrian Realm

- ◆ Site all buildings at the back of the sidewalk to provide a strong definition of the public realm.
- ◆ Maintain landscaped areas, with seating available, along the street edge to activate building facades and street.
- ◆ Place a defined main entrance to the apartment building mid-block along the south side of Washington Boulevard.
- ◆ Incorporate landscaping at the edges of the internal walkways and plaza to help define the spatial organization of the site.
- ◆ Retail uses should include awnings, canopies, and arcades to provide visual interest along the street.
- ◆ Locate bicycle racks for secure short-term parking near retail establishments.

j. Building Design

- ◆ Subdivide the horizontal mass of the apartment buildings into smaller increments with vertical architectural elements to be more compatible with adjacent townhome buildings and surrounding uses.
- ◆ Incorporate different colors and materials on the upper floors of the apartment building to help differentiate between the retail uses at the buildings' base and the building body and top.
- ◆ Locate entries on the front facade of apartment and office buildings and provide direct access to the sidewalk or street.
- ◆ Enhance upper story windows of apartment buildings with architectural details such as sills, molded surrounds, and lintels.
- ◆ Where possible, employ operable windows in the office building to take advantage of breezes and reduce energy costs.
- ◆ Encourage a timeless architectural style specific to Whittier that is integrated with the station.

*SOUTHERN CALIFORNIA ASSOCIATION  
OF GOVERNMENTS  
WASHINGTON BOULEVARD LIGHT RAIL  
TRANSIT CORRIDOR STUDY  
PRIORITY STRATEGIES AND DESIGN CONCEPTS*

## 4 *FINANCIAL FEASIBILITY ANALYSIS*

This chapter discusses the factors relating to the financial feasibility of development and analyzes the feasibility of developing the design concepts prepared for the Rosemead, Norwalk, and Lambert station sites presented in Chapter 3.

### *I. ANALYZING DEVELOPMENT FEASIBILITY*

The financial feasibility of a possible development is analyzed using a development pro forma. A pro forma calculates the costs of development and the revenue flow generated by the final development, adjusting these for the time value of money and the costs to borrow money. The pro forma determines the amount of equity investment (i.e. actual cash) required of the developer and the rate of return on that investment. The pro forma then estimates the financial feasibility of a development project, indicating whether or not the rate of return is sufficiently high to attract a developer to invest in that project.

#### *A. Lease Rates*

The rents paid by office, retail, and residential tenants are the income source that repays the development costs. Business tenants are willing to pay some base level of rent just for the building space, and then some premium rent if the location will generate more revenues for their business. Similarly, residential tenants pay some base level of rent just for the building space, and then pay some amount of premium if the housing units provide amenities and location advantages.

During the recession, and even as the economy has started to recover, market conditions have continued to put downward pressure on retail and office lease rates. As the regional and national economies continue to slowly improve, it is possible that lease rates will start to rise. Construction costs, however, will also likely rise somewhat as economic growth returns and the real estate

development industry recovers. Thus any benefits of rising lease rates would be offset by rising construction cost.

In contrast, market conditions have put upward pressure on residential lease rates, especially for multi-family housing, since the recession. These market conditions include the conversion of millions of households across the country from owners to renters. Equally as important though, the expected impact of the echo boom generation moving out of their parents' homes and into their first housing has and will continue to drive demand for multi-family housing construction. However, the current multi-family housing construction boom will not likely put upward pressure on residential construction costs until the single-family housing market returns to a more normal level.

#### *B. Return on Investment*

In a typical development processes, the development firm puts up some amount of its own money, while bringing in an outside investor for the majority of the required equity investment. The developer obtains a construction loan, which might cover most of the development costs and some of the land acquisition costs (with the equity investment covering the remainder of the costs). Upon completion of the project, the developer takes out permanent financing and pays off the construction loan. Typically, the developer would then hold the property for a short period, maybe three to five years, and, with a leasing track record, sell the property. Upon the sale of the property the developer pays off the permanent loan. What is left over after that final payment represents the developer's final return on the initial investment.

Developers and investors most often use the internal rate of return (IRR) to measure the expected return on their investments and to decide whether or not to invest in a particular project. Under current market conditions – namely the economic recession and its slow recovery, the 2008 collapse of the financial services sector and its slow recovery, the loss of wealth from the

stock market crash and the 25 to 30 percent decline in real estate values, and the increased investor aversion to risk brought on by these events – there is less money available for investment in development. Conversations with developers, brokers, and investors suggest that an IRR of 20 percent will be needed to attract equity investment in development projects for the next few years, at least. The pro forma analysis assumes a financial feasibility goal of a 20 percent IRR over the short term, as the economy and financial markets continue to recover slowly. This might decline to 15 percent in 3 to 5 years, if market conditions continue to improve, but the pro forma analysis uses the more conservative 20 percent IRR so as to not oversell the potential for redevelopment.

### *C. Residual Land Value*

Residual land value is the amount the developer can afford to pay to acquire the land, given the IRR goal and the amount of development the site can accommodate with its size, shape, and zoning requirements. Because the equity required for a development is directly related to the cost to acquire land and because this cost occurs at the beginning of the project, the land acquisition cost is the one factor that most immediately influences the rate of return.

With an IRR target of 20 percent, the pro forma analysis calculates the remaining variable, the residual land value. A feasibility gap – the difference between the residual land value and the estimated land acquisition cost for each opportunity site – exists when the residual land value is less than the cost to acquire the site. A gap represents the level of subsidy required for redevelopment to occur under near-term market conditions. The feasibility gap percentage, the residual land value expressed as a percentage of the estimated market value, indicates how far off the proposed development is from being feasible under market conditions. In contrast, a feasibility surplus exists when the residual land value exceeds the cost to acquire the site. A surplus would represent the additional return the developer can expect, the ability to provide additional investment in the project for public benefit, or

the additional payment for land acquisition that might be necessary to induce a hesitant seller to part with their property.

#### *D. Pro Forma Summaries*

The development pro forma is summarized for each opportunity site in the following four sections. A sample pro forma summary is presented and explained below in Table 4-1. Full pro forma results are provided in Appendix C.

TABLE 4-1 *SAMPLE PRO FORMA SUMMARY*

---

#### **Development Cost Summary**

---

- (1) Total Development Cost

---

- (2) Amount Financed

---

- (3) Equity Required

---

---

#### **Financial Feasibility Summary**

---

- (4) IRR without subsidy

---

- (5) Residual Land Value @ 20% IRR

---

- (6) Site's Estimated Market Value

---

- (7) Excess Value/(Feasibility Gap)

---

#### **1. Development Cost Summary**

This section describes the cost to develop the project. If the project were developed for sale, then these costs reflect the total cost through the sale of units. If the project were to be developed for lease, then these costs reflect the total costs through the lease up of units. Costs of ongoing operations and maintenance until the project is sold, assumed to be five years after

construction, are not included in the development cost summary but are reflected in the overall financial feasibility. All costs are detailed in the full pro forma results in Appendix C.

1. Total Development Cost. This datum indicates the total cost to develop the project. It includes land acquisition, design and engineering, site preparation, construction, and financing.
2. Amount Financed. This datum indicates the portion of the total development cost that would likely be financed through a construction loan. Some of these data may appear to be high, but that is because the development scenario analyzed includes a partial or total write-down of land acquisition cost in order to be financially feasible.
3. Equity Required. The difference between the total development cost and the amount financed is the equity investment required of the developer. The project's financial feasibility, measured by the internal rate of return (IRR), is based on this level of equity investment.

## 2. Financial Feasibility Summary

This section describes the project's financial feasibility. If the project were developed for sale, the analysis assumes the return from the ultimate sales price of the project, including taxes and sales commission. If the project were to be developed for lease, the analysis assumes that the project would be sold after five years of operation and the financial analysis includes the return from the project's ultimate sales price plus the profits over five years of operations.

4. IRR Without Subsidy. The development cost summary reflects the subsidy necessary to make the project financially feasible. The subsidy is usually in the form of a write-down on the land acquisition cost. In contrast, this datum reflects the IRR the project would generate without any subsidy.

5. Residual Land Value. This datum indicates the amount that a developer could afford to pay for the land, excluding sales commission, due diligence, etc., and earn a 20 percent IRR. The IRR has been calculated based on the net cash flow after taxes and debt service.
6. Site's Estimated Market Value. This datum reflects the market value at which the site might be purchased, excluding any sales commissions, due diligence, etc. The Planning Center|DC&E has estimated the market value based on an assessment of other property sales in the area. This estimate does not reflect an appraisal of the site and it should not be used for making investment and other decisions. This estimate is intended solely to illustrate the relative feasibility of a conceptual development scenario for the site.
7. Excess Value/(Feasibility Gap). This datum is the difference between the site's estimated market value and the residual land value. In some cases, the feasibility gap is greater than the site's estimated market value, indicating that the project, to be financial feasible, would require a 100 percent write down of the land acquisition cost plus an additional subsidy.

*E. Opportunity Site: Washington and Rosemead*

This is a 7.1-acre site with several parcels that have standalone commercial buildings and surface parking. The development scenario would demolish the 42,400 square feet of existing buildings, and redevelop the site with a 504-space parking structure, 210 two- and three-bedroom condominiums in vertical mixed-use and stand-alone buildings, 28,600 square feet of ground floor retail, 31 three-bedroom townhouses, and a residential clubhouse. The development scenario would also provide 2.5 acres of landscaped open space.

The parking structure would provide 378 parking spaces for the condominium units, (1.8 spaces per unit), 57 spaces for the commercial uses (2.0 spaces per 1,000 square feet), and 69 parking spaces for rail station users.

SOUTHERN CALIFORNIA ASSOCIATION  
OF GOVERNMENTS  
WASHINGTON BOULEVARD LIGHT RAIL  
TRANSIT CORRIDOR STUDY  
FINANCIAL FEASIBILITY ANALYSIS

Because the rail station parking would account for 13.7 percent of the parking capacity, the pro forma assumes that Metro would provide funding for 13.7 percent of the parking garage construction cost.

The pro forma analysis, summarized in Table 4-2 below, estimates the site's current value at \$13.8 million. Assuming the site can be acquired for its estimated value, the development scenario would generate an IRR of 20.8 percent. Achieving a 20 percent IRR would create a residual land value of \$13.9 million, about \$58,900 more than the site's estimated value.

The pro forma models the development scenario as a for-sale product. If the ground floor commercial and condominiums were developed for rental, held for five years, and then sold, it would generate an IRR of only 10.7 percent. Achieving an IRR of 20 percent would require a subsidy of \$5.7 million, or 41 percent of the estimated site value.

TABLE 4-2 *OPPORTUNITY SITE: WASHINGTON AND ROSEMEAD  
DEVELOPMENT PRO FORMA SUMMARY*

<b>Development Cost Summary</b>	
Total Development Cost	\$68,800,000
Amount Financed	\$49,900,000
Equity Required	\$18,940,000
<b>Financial Feasibility Summary</b>	
IRR	20.8%
Residual Land Value @ 20% IRR	\$ 13,860,000
Site's Estimated Market Value	\$ 13,800,000
Excess Value/(Feasibility Gap)	\$ 58,900

Source: The Planning Center | DC&E, 2011.

*F. Opportunity Site: Washington and Norwalk*

This is a 3.5-acre site with about 37,000 square feet of existing commercial building space. The development scenario would demolish the existing buildings and develop the site with a 629-space parking structure and a mixed-use building with 32,700 square feet of ground-floor retail and 116 townhouse and condominium residential units. About 42,000 square feet of the site area would be landscaped open space and sidewalks. The pro forma assumes three months of site work and nine months of construction, with sales equally distributed across three months.

The parking structure would provide 209 spaces for residential uses (1.8 per unit), 65 spaces for commercial uses (2.0 spaces per 1,000 square feet), and 355 spaces for the rail station. Because 56.5 percent of the spaces are for rail station users, the pro forma assumes that Metro would provide that percentage of the parking structure construction costs.

The pro forma analysis, summarized in Table 4-3, estimates the site's current value at \$9,260,000. Assuming that the site could be acquired for the estimated value, the development scenario would generate an IRR of 22.0 percent. A 20 percent IRR generates a residual land value that is \$97,600 higher than the estimated value.

The pro forma models the development scenario as a for-sale product. If the project were developed for rental, held for five years, and then sold, it would generate an IRR of only 8.4 percent. Achieving an IRR of 20 percent would require a subsidy of \$5.2 million, or 56 percent of the estimated site value.

*G. Opportunity Site: Washington and Lambert*

This is a 4.4-acre site with 95,000 square feet of existing buildings. The development scenario would demolish the existing buildings, and redevelop the site with a 751-space parking structure, 308 one-, two- and three-bedroom condominiums in stand-alone buildings, and 9,000 square feet of ground floor

TABLE 4-3 *OPPORTUNITY SITE: WASHINGTON AND NORWALK  
DEVELOPMENT PRO FORMA SUMMARY*

<b>Development Cost Summary</b>	
Total Development Cost	\$38,770,000
Amount Financed	\$27,660,000
Equity Required	\$11,110,000
<b>Financial Feasibility Summary</b>	
IRR	22.0%
Residual Land Value @ 20% IRR	\$9,360,000
Site's Estimated Market Value	\$9,260,000
Excess Value/(Feasibility Gap)	\$ 97,600

Source: The Planning Center | DC&E, 2011.

retail in a mixed use building with 78,000 square feet of medical office space. The development scenario would also provide 1.5 acres of landscaped open space.

The parking structure would provide 554 parking spaces for the condominium units, (1.8 spaces per unit), 156 spaces for the commercial uses (2.0 spaces per 1,000 square feet), and 41 parking spaces for rail station users. Because the rail station parking would account for 5.4 percent of the parking capacity, the pro forma assumes that Metro would provide funding for that portion of the parking garage construction cost.

The pro forma analysis, summarized in Table 4-4 below, estimates the site's current value at \$14.4 million. Assuming the site can be acquired for its estimated value, the development scenario would generate an IRR of 28.8 percent. Achieving a 20 percent IRR would create a residual land value of \$15.1 million, about \$721,000 more than the site's estimated value.

TABLE 4-4 *OPPORTUNITY SITE: WASHINGTON AND LAMBERT  
DEVELOPMENT PRO FORMA SUMMARY*

<b>Development Cost Summary</b>	
Total Development Cost	\$100,600,000
Amount Financed	\$ 74,600,000
Equity Required	\$ 26,000,000
<b>Financial Feasibility Summary</b>	
IRR	28.8%
Residual Land Value @ 20% IRR	\$ 15,090,000
Site's Estimated Market Value	\$ 14,370,000
Excess Value/(Feasibility Gap)	\$721,000

Source: The Planning Center | DC&E, 2011.

The pro forma models the development scenario as a for-sale product. If the project were developed for rental, held for five years, and then sold, it would generate an IRR of only 7.3 percent. Achieving an IRR of 20 percent would require a subsidy of \$12.6 million, or 88 percent of the estimated site value.

*A P P E N D I X A*

WASHINGTON BOULEVARD LIGHT  
RAIL TRANSIT CORRIDOR  
BASELINE REPORT





# Washington Boulevard Light Rail Transit Corridor Study

## Baseline Report

October 20, 2011 | Prepared For:

Washington Boulevard Coalition Cities and the  
Southern California Association of Governments

Whittier | Commerce | Santa Fe Springs | Pico Rivera

This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation and the California Department of Transportation (Caltrans). The views and opinions of the agency expressed herein do not necessarily reflect those of the U. S. Department of Transportation, nor Caltrans.

The contents of this report reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the Southern California Association of Governments (SCAG) or DOT. This report does not constitute a standard, specification or regulation.



**SOUTHERN CALIFORNIA  
ASSOCIATION of GOVERNMENTS**





## TABLE OF CONTENTS

1. INTRODUCTION .....	1-1
2. LAND USE AND URBAN DESIGN .....	2-1
3. MOBILITY .....	3-1
4. ECONOMIC ANALYSIS .....	4-1
5. ISSUES, CONSTRAINTS, AND OPPORTUNITIES .....	5-1

### Appendices

Appendix A: Traffic Data Sources

Appendix B: Economic Analysis Data

Appendix C: TOD Readiness Scoring Descriptions

**WASHINGTON BOULEVARD**  
**LIGHT RAIL TRANSIT CORRIDOR STUDY**  
**BASELINE REPORT**  
 TABLE OF CONTENTS

List of Figures

Figure 1-1	Project Study Area.....	1-2
Figure 2-1	Study Area Existing Land Uses.....	2-4
Figure 2-2	Photos of the Washington Boulevard Corridor .....	2-5
Figure 2-3	Garfield Avenue Station Area Existing Land Uses.....	2-8
Figure 2-4	Garfield Avenue Station Area General Plan Designations.....	2-9
Figure 2-5	Garfield Avenue Station Area Zoning.....	2-10
Figure 2-6	Photos of the Garfield Avenue Station Area.....	2-11
Figure 2-7	Garfield Avenue Station Area Infill Opportunity.....	2-13
Figure 2-8	Garfield/Whittier Station Area Existing Land Uses .....	2-14
Figure 2-9	Garfield/Whittier Station Area General Plan Designations.....	2-16
Figure 2-10	Garfield/Whittier Station Area Zoning .....	2-17
Figure 2-11	Photos of the Garfield/Whittier Station Area.....	2-18
Figure 2-12	Garfield/Whittier Station Area Infill Opportunity .....	2-20
Figure 2-13	Greenwood Avenue Station Area Existing Land Uses.....	2-22
Figure 2-14	Greenwood Avenue Station Area General Plan Designations.....	2-23
Figure 2-15	Greenwood Avenue Station Area Zoning.....	2-24
Figure 2-16	Photos of the Greenwood Avenue Station Area .....	2-25
Figure 2-17	Greenwood Avenue Station Area Infill Opportunity.....	2-27
Figure 2-18	Washington/Rosemead Station Area Existing Land Uses.....	2-29
Figure 2-19	Washington/Rosemead Station Area General Plan Designations.....	2-30
Figure 2-20	Washington/Rosemead Station Area Zoning.....	2-31
Figure 2-21	Photos of the Washington/Rosemead Station Area.....	2-32
Figure 2-22	Washington/Rosemead Station Area Infill Opportunity .....	2-35
Figure 2-23	Washington/Norwalk Station Area Existing Land Uses .....	2-36

TABLE OF CONTENTS

Figure 2-24 Washington/Norwalk Station Area General Plan  
Designations..... 2-38

Figure 2-25 Washington/Norwalk Station Area Zoning ..... 2-39

Figure 2-26 Photos of the Washington/Norwalk Station Area ..... 2-40

Figure 2-27 Washington/Norwalk Station Area Infill Opportunity ..... 2-41

Figure 2-28 Washington/Lambert Station Area Existing Land Uses ..... 2-44

Figure 2-29 Washington/Lambert Station Area General Plan  
Designations..... 2-45

Figure 2-30 Washington/Lambert Station Area Zoning ..... 2-46

Figure 2-31 Photos of the Washington/Lambert Station Area ..... 2-47

Figure 2-32 Washington/Lambert Station Area Infill Opportunity ..... 2-49

Figure 3-1 Washington/Rosemead Level of Service Summary..... 3-9

Figure 3-2 Washington/Norwalk Level of Service Summary ..... 3-10

Figure 3-3 Washington/Lambert Level of Service Summary ..... 3-11

Figure 3-4 Major Trip Generators ..... 3-19

Figure 3-5 Garfield Avenue Station Area Transit Services..... 3-22

Figure 3-6 Garfield/Whittier Station Area Transit Services..... 3-23

Figure 3-7 Greenwood Avenue Station Area Transit Services ..... 3-24

Figure 3-8 Washington/Rosemead Station Area Transit Services..... 3-25

Figure 3-9 Washington/Norwalk Station Area Transit Services..... 3-26

Figure 3-10 Washington/Lambert Station Area Transit Services..... 3-27

Figure 3-11 Garfield Avenue Station Area Existing Bike Facilities..... 3-28

Figure 3-12 Garfield/Whittier Station Area Existing Bike Facilities..... 3-29

Figure 3-13 Greenwood Avenue Station Area Existing Bike  
Facilities ..... 3-30

Figure 3-14 Washington/Rosemead Station Area Existing Bike  
Facilities ..... 3-31

Figure 3-15 Washington/Norwalk Station Area Existing Bike  
Facilities ..... 3-32

Figure 3-16 Washington/Lambert Station Area Existing Bike  
Facilities ..... 3-33

Figure 4-1 Multi-family Housing Sales Value by Unit Size,  
Garfield/Whittier Station Area (2009 to 2011)..... 4-3

TABLE OF CONTENTS

List of Tables

Table 3-1	Major Roadway Characteristics in Station Areas .....	3-2
Table 3-2	Level of Service Information from Passons and Rosemead Boulevards Studies .....	3-5
Table 3-3	Level of Service Information from Washington Boulevard Redevelopment Plan.....	3-6
Table 3-4	Level of Service Information from PIH Study .....	3-8
Table 3-5	Project Station Area Transit Services .....	3-20
Table 4-1	Estimated New Multi-Family Housing Unit Sales Values and Minimum Qualifying Income .....	4-4
Table 4-2	Five-Year Demand for New For-Sale Multi-Family Housing Units, Three Mile Radius Market Areas for Proposed Station Areas .....	4-7
Table 4-3	Potential Market Demand for New For-Sale Multi- Family Housing Units, Three-Mile-Radius Market Areas for Proposed Station Areas .....	4-8
Table 4-4	Five-Year Demand for New For-Rent Multi-Family Housing Units, Three-Mile Radius Market Areas for Proposed Station Areas.....	4-9
Table 4-5	Potential Market Demand for New For-Rent Multi- Family Housing Units, Three-Mile-Radius Market Areas for Proposed Station Areas .....	4-11
Table 4-6	Five-Year Potential Market Demand for New For-Rent Multi-Family Housing Units (2011-2016).....	4-12
Table 4-7	Five-Year Market Demand for New Retail Building Space (Square Feet) in Proposed Station Areas (2011- 2016).....	4-13
Table 4-8	Potential Market Demand (square feet) for Retail Development (2011-2016) .....	4-15
Table 5-1	TOD Readiness Scorecard .....	5-3

## **1 INTRODUCTION**

This report provides baseline information for the Washington Boulevard Light Rail Transit Corridor Study, being undertaken for the Washington Boulevard Coalition, which is made up of the cities of Commerce, Pico Rivera, Santa Fe Springs, Whittier, and the Gateway Cities Council of Governments with the sponsorship of the Southern California Association of Governments. It is intended to provide a comprehensive overview of existing conditions in the study area, including an assessment of existing land uses, zoning, and general plan designations; existing plans and policies that govern development in the study area; opportunity sites for potential development around future Metrolink stations; existing circulation patterns, including the inter-modal network for public transit riders, pedestrians and bicyclists; and finally, an economic analysis to assess future market potential for multi-family and retail development if they have the support of public transit investments.

### **A. Project Area**

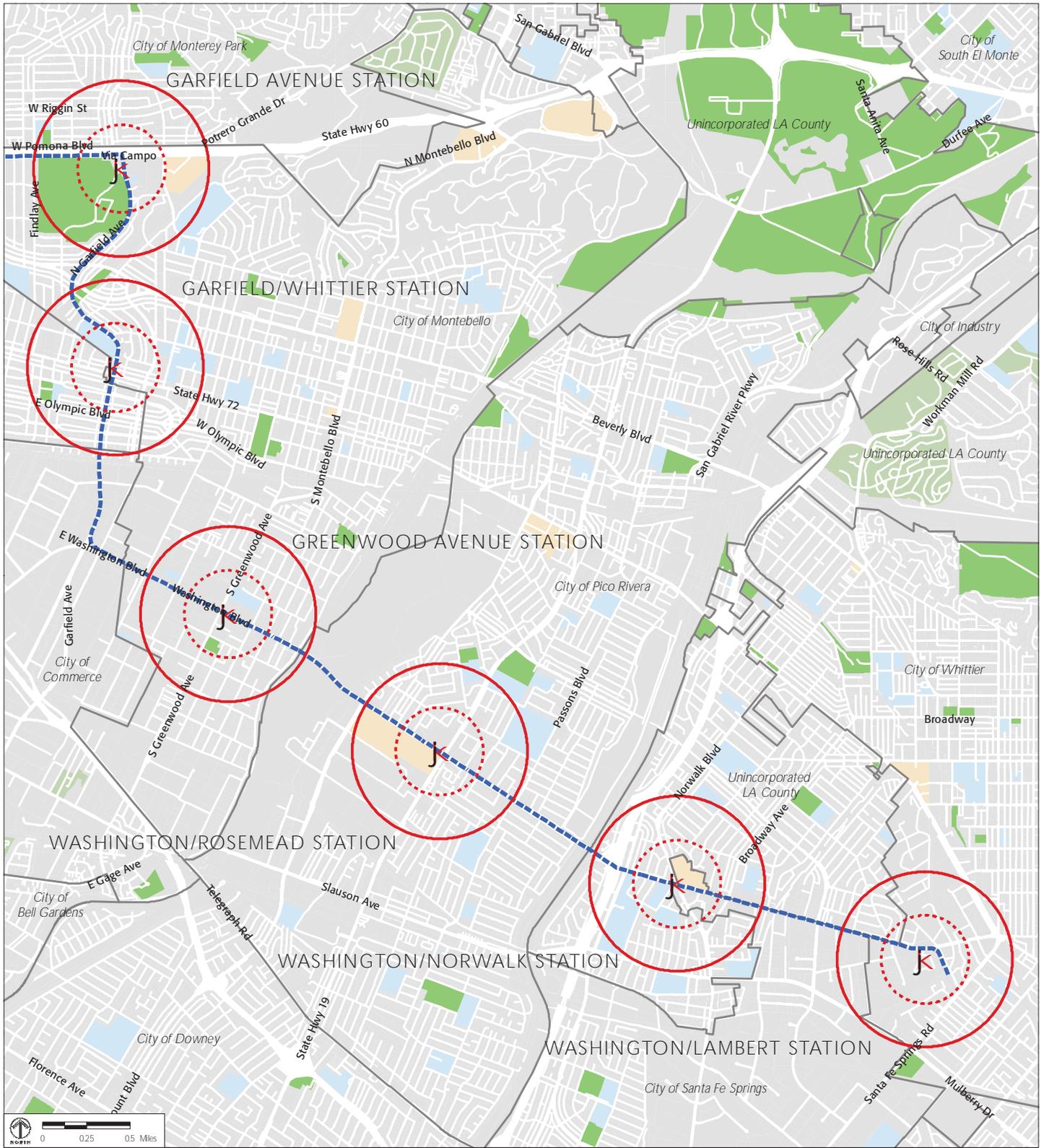
The Eastside Transit Corridor Phase 2 Project Area, shown in Figure 1-1, is generally bounded by Pomona Boulevard and the State Route 60 (SR-60) freeway to the north, Peck Road and Painter Avenue to the east, Olympic and Washington Boulevards to the south, and Atlantic Boulevard to the west. This study specifically focuses on the ½-mile radii around six proposed stations along the Washington Boulevard alignment, located on Garfield Avenue and Washington Boulevard in portions of the cities of Montebello, Commerce, Pico Rivera, Santa Fe Springs, and Whittier, and portions of unincorporated Los Angeles County.

### **B. Background**

The proposed Eastside Transit Corridor Phase 2 Project will extend light rail transit services to communities farther east of East Los Angeles and provide an opportunity to connect with the Los Angeles County Metropolitan

*WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT*  
INTRODUCTION

Transportation Authority (Metro) Gold Line Eastside Extension and the rest  
of



- Half Mile From Station
- Quarter Mile From Station
- Proposed Alignment
- City Boundaries

FIGURE 1-1  
 PROJECT STUDY AREA

Metro's regional transit network. The primary goal of the Eastside Transit Corridor Phase 2 project is to provide a transportation system that better serves the region's communities without negatively impacting quality of life. In 2007, the Eastside Transit Corridor Phase 2 Alternatives Analysis process was initiated for an 80-square-mile study area located in eastern Los Angeles County. There were 47 proposed alignments initially studied. In January 2010, Metro reduced the number of alignments to two: the Washington Boulevard alignment and SR-60 alignment.

Both of the proposed alignments have benefits and impacts, as it is challenging to construct a high-capacity light rail transit system in a heavily developed, urban area with constrained street right-of-way widths lined with one- and two-story buildings.

The Washington Boulevard alignment would be an aerial system with six stations located along Garfield Avenue and Washington Boulevard. This alternative is expected to have more daily weekday boardings (20,800) and annual boardings (7.6 million) than the alternatives. In addition, this alternative is forecast to attract more new transit riders (6,280 daily) and save more travel time per rider (6,293 hours of travel time savings for all riders).

The SR-60 alignment would also be an aerial system with four stations located along the SR-60 corridor. This alignment would result in fewer daily weekday boardings (18,300) and annual boardings (6.7 million) than the Washington Boulevard alignment, and is forecast to result in about 40% fewer new transit riders (3,835 daily) and travel time benefits (3,474 hours).

The Alternatives Analysis determined that the total project capital costs for the Washington Boulevard alignment would be \$1.65 billion, while the cost of the SR-60 alignment would be \$1.51 billion. Of these total costs, \$1.27 billion is expected to be available from local funding through Measure R. These funds would be available beginning in Fiscal Year 2012-2014, with project completion expected in Fiscal Year 2013-2015. Additional funding

sources being explored include the Federal Transit Administration's (FTA) New Starts program, as well as other federal and State funding sources.

The New Starts program is the federal government's primary financial resource for supporting locally planned, implemented, and operated transit service capital investments. Funding for projects is dependent on the project's ability to meet a set of assessment criteria, which the FTA uses to rank projects. The assessment criteria include the following:

- ◆ Mobility Improvements;
- ◆ Environmental Benefits;
- ◆ Operating Efficiencies;
- ◆ Cost Effectiveness;
- ◆ Transit Supportive Land Use;
- ◆ Economic Development Effects; and
- ◆ Other Factors.

These criteria were considered in the Alternatives Analysis and will also be considered in this study, as it is critical that the selected alignment meets the criteria and is eligible for New Starts funding.

Metro initiated the preparation of a Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Eastside Transit Corridor Phase 2 Project in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), which is currently underway. The EIS/EIR is analyzing both alternative alignments, the findings of which will be influential in Metro's decision of a preferred alternative.

### C. Objectives

This study is intended to demonstrate the readiness of the Coalition Cities for light rail in the event that the Washington Boulevard alignment is selected as the preferred alignment for the Eastside Transit Corridor Phase 2. Since

funding from the New Starts program is integral to this process, the criteria for funding are incorporated in the objectives listed below. In addition, the following objectives are guided by the principles of livability, mobility, prosperity, and sustainability that are at the forefront of the Compass Blueprint program.

- ◆ **Improve Mobility.** Demonstrate how the Washington Boulevard light rail system will increase the overall mobility of the communities along Washington Boulevard by identifying strategies to integrate transit with land use planning and provide a high-quality pedestrian, bicycle, and transit network to and between station areas.
- ◆ **Benefit the Environment.** Demonstrate how the Washington Boulevard alternative will benefit the environment by identifying locations for compact development around station areas that will encourage transit use, and equally important, discourage vehicular use and related environmental impacts.
- ◆ **Identify Transit Supportive Land Uses.** Identify transit-supportive plans and policies that apply to the proposed station areas and develop new strategies to improve the regulatory environment in such a way that facilitates transit-oriented development.
- ◆ **Quantify Economic Benefits.** Demonstrate the economic benefits associated with a new light rail system along the Washington Boulevard alignment by comparing and quantifying new housing and retail demand with and without the transit investment.
- ◆ **Ensure Coordination Between Coalition Cities.** Bring Coalition City members together to support a unified plan and implementation strategy for each station area in order to ensure the overall success of the Washington Boulevard light rail system.

#### D. Contents of the Report

In addition to this Introduction, the Baseline Report includes the following chapters:

- ◆ **Chapter 2: Land Use and Urban Design**, describes the existing land uses, plans, policies, and projects, as well as an overview of the existing urban design characteristics within the study area. An overview of the infill opportunities within each station area is also provided.
- ◆ **Chapter 3: Mobility**, reviews existing vehicle trip generation, bicycle and pedestrian transportation, and public transit ridership data and headways in the study area.
- ◆ **Chapter 4: Economic Analysis**, defines the residential and retail market area around each rail station and determines current and projected multi-family housing and retail demand with and without a light rail investment.
- ◆ **Chapter 5: Issues, Constraints, and Opportunities**, summarizes the findings of the issues, constraints, and opportunities that have come out of the baseline analysis.

## 2 LAND USE AND URBAN DESIGN

This chapter provides an overview of the existing land use and urban design characteristics of the Washington Boulevard alignment, including the Washington Boulevard corridor and the six proposed station areas. The station areas include the ½-mile radii around each proposed station. This chapter discusses existing land use designations, physical characteristics, relevant plans and policies, recent/planned projects, and potential infill opportunities within the Washington Boulevard corridor study area.

### A. General Plan and Zoning Designations

The General Plan and zoning designations described below have been normalized by Metro in order to provide a consistent set of designations for all jurisdictions within the proposed station areas. As a result, the designations described below may be slightly different from those found in each jurisdiction's General Plan and Zoning Ordinance. Any major differences are noted.

### B. Infill Opportunity Screen

The Infill Estimation Tool was used to identify properties within the six proposed station areas that have the potential for infill development in the future. This tool compares the difference between the assessed property valuation of improvements and the valuation of land in order to identify parcels with a low improvement-to-land value (I/L) ratio<sup>1</sup>, which is often an indicator of infill development readiness. In addition to the I/L ratio, other

---

<sup>1</sup> The I/L ratio is based on assessed value when, under terms of Proposition 13, properties are sold or substantially remodeled. Assessor parcel data is never 100 percent accurate; because properties are constantly changing ownership, it is not possible to always have an up-to-date, or real time analysis in reports. Based on past experience, parcel opportunity screen results are generally around 90 percent correct, which is adequate for this type of analysis. It is known that Proposition 13 can affect the absolute value of a given parcel in comparison to its values in today's dollars. Though this may affect the calculated I/L ratio, it still stands as a good indicator of improvements on a given property.

criteria can be considered in order to capture opportunity sites for infill development.

For this study, opportunity sites were selected based on the following criteria:

- ◆ Less than \$50 per square-foot of built value
- ◆ Site visit-verified site
- ◆ Vacant parcel
- ◆ Low existing floor area ratio (< 0.2)
- ◆ Low improvement-to-land value ratio (< 1.0)
- ◆ No improvement data

The results of the Infill Estimation Tool for each proposed station area are described in the following sections. The market analysis provided in Chapter 4 indicates the future level of demand for new multi-family and retail development for these opportunity sites with the addition of a light rail transit line through the study area.

### C. Washington Boulevard Corridor

As described in the Introduction, the Washington Boulevard alignment runs along both Garfield Avenue and Washington Boulevard, through portions of the cities of Monterey Park, Montebello, Commerce, Pico Rivera, Santa Fe Springs and Whittier, and unincorporated Los Angeles County. This 8-mile corridor varies widely from one end to the other and the following sections provide an overview of the land use and character of the corridor as a whole and around each proposed station area.

#### 1. Existing Designations and Land Uses

The northernmost part of the Washington Boulevard alignment follows along Garfield Avenue, from the City of Monterey Park, just north of the State Route 60 freeway to Washington Boulevard in the City of Commerce. The northern section of this stretch is heavily residential with a mix of single- and multi-family homes lining the corridor, with commercial uses at major intersections, as shown in Figure 2-1. The land uses change drastically in the City

of Commerce, where nearly all uses are industrial. The intersection of Garfield Avenue and Washington Boulevard is surrounded by large manufacturing and industrial uses, which continue along Washington Boulevard to Greenwood Avenue. From Greenwood Avenue to Norwalk Boulevard, the corridor becomes more residential and commercial in nature, with single- and multi-family homes lining the street and large shopping centers located at major intersections. Washington Boulevard also crosses over the Rio Hondo and San Gabriel Coastal Basin Spreading Grounds, which are both part of the Los Angeles County groundwater recharge system. The eastern part of the corridor, running through the Cities of Santa Fe Springs and Whittier, becomes more industrial again, with commercial uses mixed in. The final segment of the corridor is adjacent to the Presbyterian Intercommunity Hospital in the City of Whittier.

## **2. Physical Characteristics**

As described above, the 8-mile-long Washington Boulevard alignment passes through a wide variety of neighborhoods and land uses between the City of Monterey Park and the City of Whittier. The physical characteristics of the corridor vary as well, from a quiet residential streetscape to a bustling commercial corridor, as demonstrated in the photos in Figure 2-2. The Garfield Avenue section begins as a commercial corridor just north of the State Route 60 freeway and becomes more residential in character moving south. Mature trees and turf landscaping strips line the street as it curves past multi-family housing and small-scale retail uses. The street trees and landscaping diminish as the corridor becomes more commercial near Whittier Boulevard. After passing under the Metrolink train tracks, Garfield Avenue turns into an industrial thoroughfare, catering to large trucks and cars as opposed to pedestrians. As the alignment travels east on Washington Boulevard, the industrial uses transition to commercial and residential, as does the streetscape.

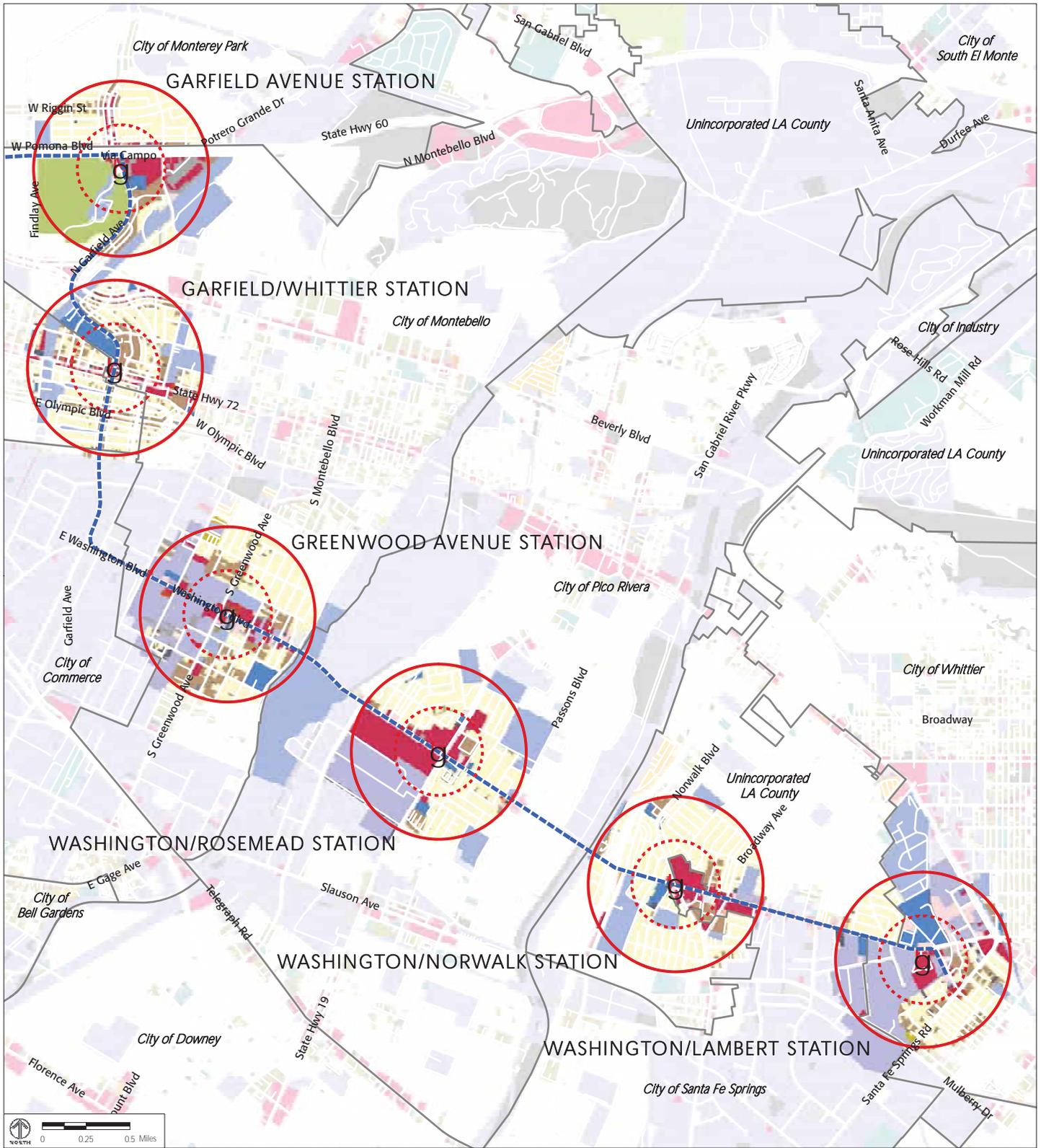


FIGURE 2-1  
 STUDY AREA EXISTING LAND USES



FIGURE 2-2

PHOTOS OF THE WASHINGTON BOULEVARD CORRIDOR

## D. Station Areas

### 1. Garfield Avenue Station

The Garfield Avenue Station would be the first of the six stations along the Washington Boulevard alignment. The station would be located just south of State Route 60 in the City of Montebello. The ½-mile radius around the station area includes a portion of the City of Monterey Park to the north of State Route 60 and the City of Montebello to the south. Preliminary concept plans for the design of the station envision an aerial station with mixed commercial and residential immediately adjacent to the station, an enhanced streetscape and freeway underpass, and a landscape enhancement zone north of State Route 60.

#### a. Existing Designations and Land Uses

The area north of State Route 60 is a primarily residential neighborhood with single- and multi-family homes located behind small-scale retail fronting Garfield Avenue, as shown in Figure 2-3. The General Plan and zoning designations, shown in Figures 2-4 and 2-5, match the existing uses with commercial and multi-family residential designations along Garfield and Pomona, and residential designations behind. The General Plan designation is exclusively single-family residential, while the zoning designations are primarily medium-density residential with some high-density residential. This section of Garfield has a good mix of neighborhood uses within close proximity of homes and the State Route 60 freeway. Bella Vista Elementary School is located amidst single-family homes. Additional freeway-oriented retail uses are located along Pomona Boulevard adjacent to the freeway.

South of State Route 60 has a very different feel, with the City of Montebello Country Club and Hilton Garden Inn comprising the southwest portion of the ½-mile radius, as shown in Figure 2-3. The east side of Garfield Avenue is lined with some limited retail uses that back up to larger modern shopping centers, and a concentration of well-maintained multi-family homes. Other uses in this area include the Our Lady of the Miraculous Medal Church and School, Schurr High School, the Southern California Edison utility right-of-way, and some single-family housing. The utility right-of-way has been trans-

formed into a greenbelt throughout this area, providing open space opportunities for local residents. The General Plan and zoning designations for the southern half of this station area are generally similar to the existing land uses. The main differences are due to the limited amount of zoning designations compared to those in the General Plan.

b. Physical Characteristics

As mentioned above, the character of this station area varies widely from the quiet residential and commercial area north of the State Route 60 freeway to the auto-oriented shopping centers and multi-family housing developments south of the freeway. The variety is shown in the photos in Figure 2-6. Heading north on Garfield Avenue from the freeway is a welcoming gateway into the City of Monterey Park, with mature street trees, a landscaped median and pedestrian-friendly streetscape. This area would benefit from additional investment in the public realm to help attract local businesses to the existing storefronts. Behind this commercial core are established residential neighborhoods on quiet streets lined with well-maintained front yards and trees, creating a pleasant walking environment.

The pleasant curvilinear character of Garfield Avenue continues south of the freeway as it passes by the Montebello Country Club, shopping centers and multi-family housing; although the character of the land uses is noticeably different. The most notable difference is the auto-orientation of the shopping centers located just south of the freeway along Via Campo. Each of these centers is dominated by large parking lots fronting the big box stores. While this design does not lend itself to pedestrian activity, the location of these centers near residential areas makes them a valuable asset to this community, and an opportunity to build upon. Further down Garfield Avenue, the character becomes more residential as it passes single- and multi-family homes. These homes and the overall streetscape are in good condition and provide a nice pedestrian environment.

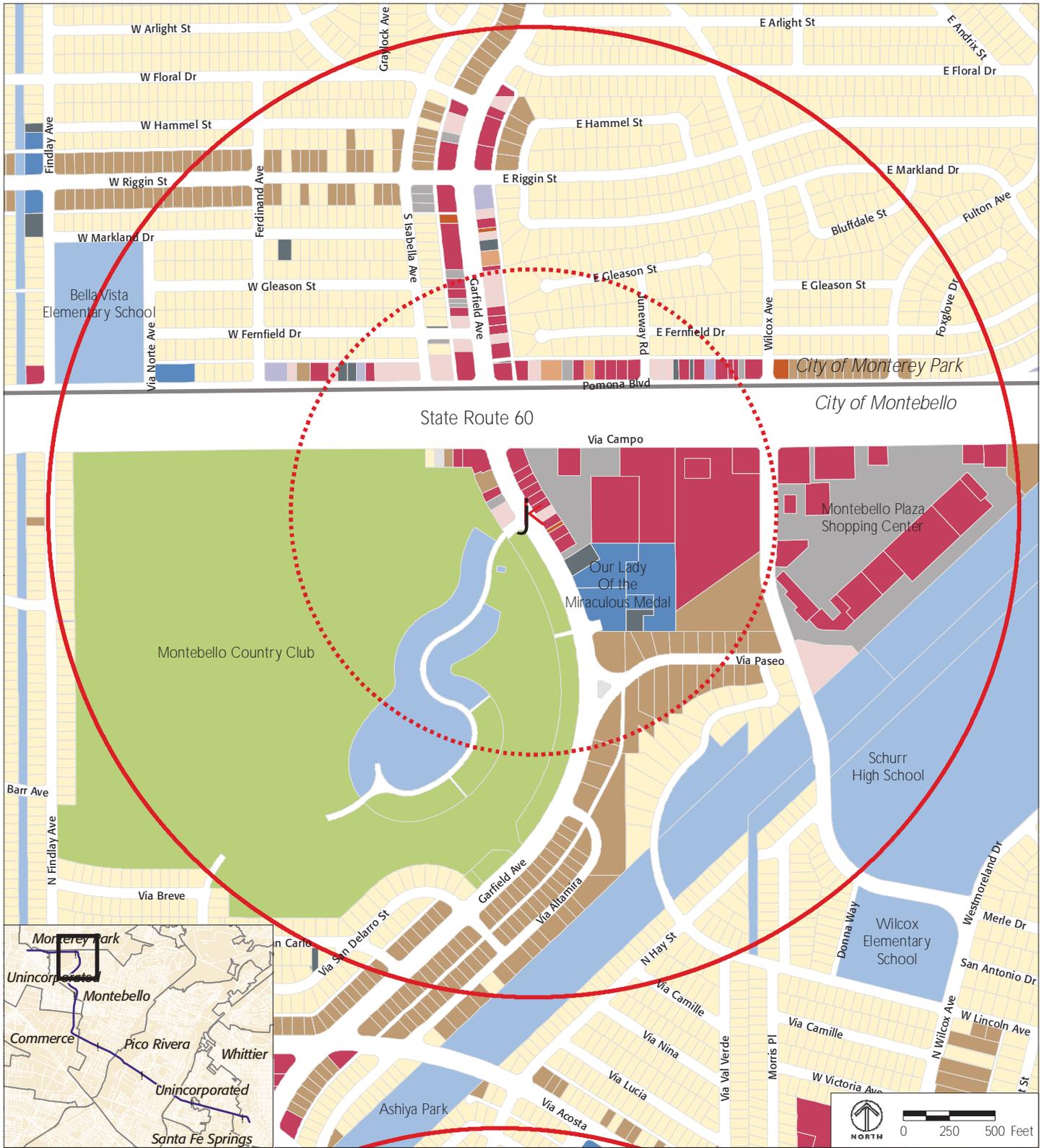


FIGURE 2-3

**GARFIELD AVENUE STATION AREA  
 EXISTING LAND USES**

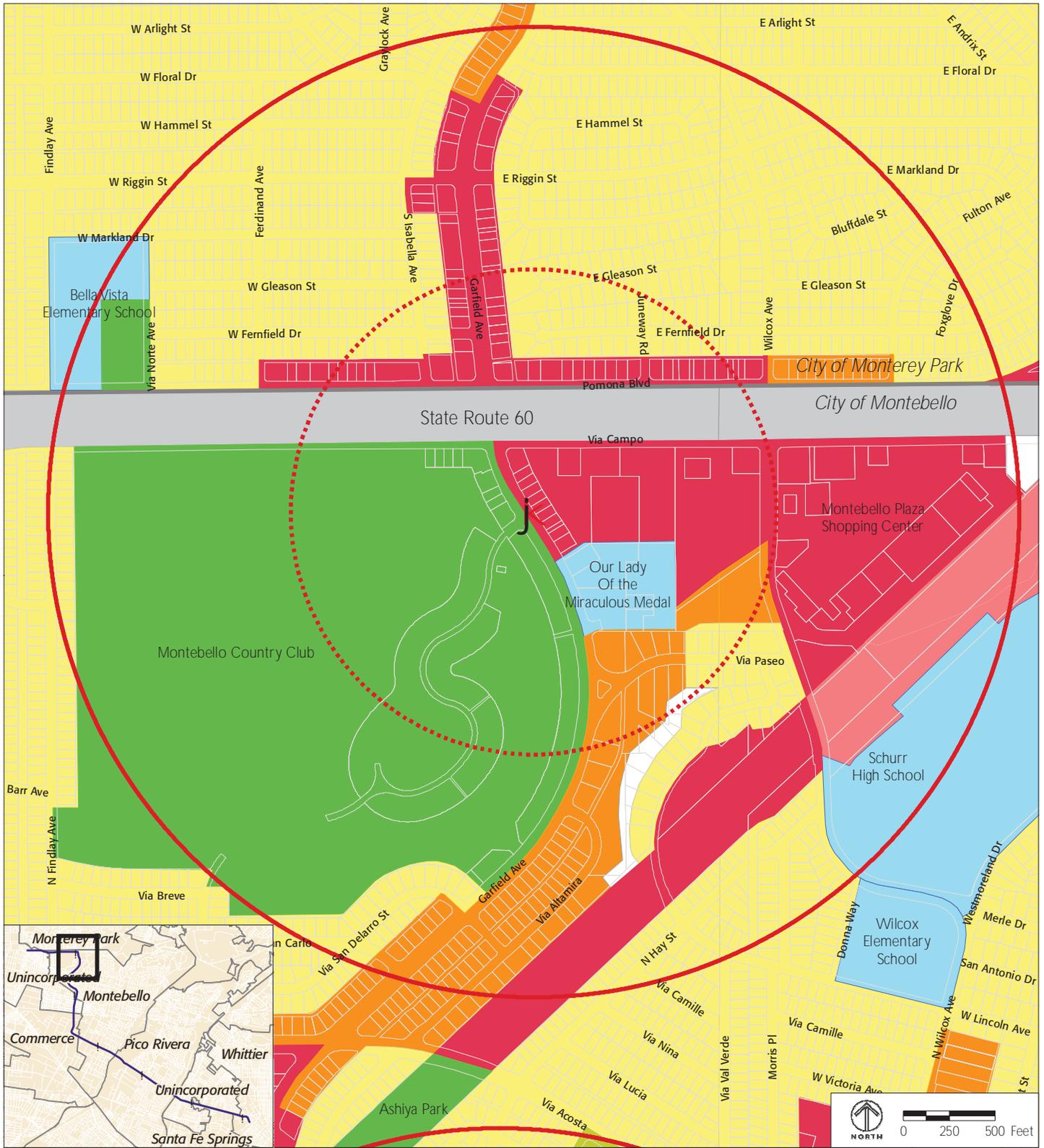
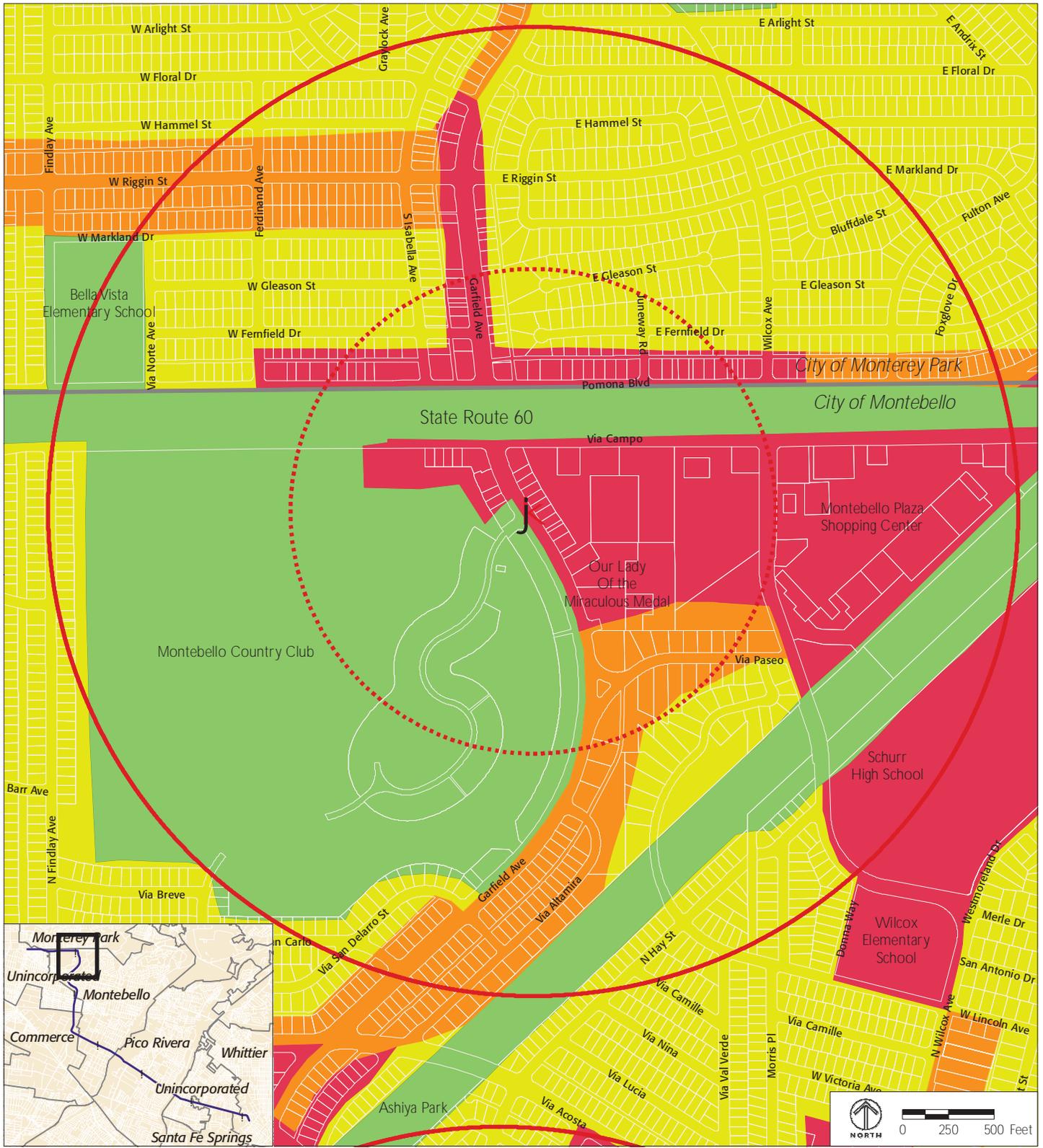


FIGURE 2-4

GARFIELD AVENUE STATION AREA GENERAL PLAN DESIGNATIONS



- Industrial
- Commercial
- High Density Residential
- Medium Density Residential
- Open Space & Public Lands
- Half Mile From Station
- Quarter Mile From Station
- City Boundaries

FIGURE 2-5

GARFIELD AVENUE STATION AREA ZONING



FIGURE 2-6

PHOTOS OF THE GARFIELD AVENUE STATION AREA

c. Plans, Policies, and Projects

There are no special plans, policies or projects within the Garfield Avenue station area for either the City of Montebello or Monterey Park.

d. Infill Opportunities

The potential infill opportunity sites within the Garfield Avenue station area are shown in Figure 2-7 and listed below:

- ◆ Commercial parcels on the west side of Garfield Avenue between Riggin Street and Fernfield Drive.
- ◆ Parcels on the southwest corner of Via Campo and Garfield Avenue, adjacent to Montebello Country Club.
- ◆ Shopping centers east of Garfield Avenue, which could be intensified or redesigned to better serve TOD.

**2. Garfield/Whittier Station**

The proposed Garfield/Whittier Station would be located at a vibrant intersection near the border of the City of Montebello and unincorporated LA County. The ½-mile radius around this station extends into the City of Commerce to the south. Preliminary concept plans for the design of the station envisions an aerial station that creates a southern terminus to the “greenway” of Garfield Avenue. The design of this station would provide a signature gateway onto the Whittier Boulevard commercial corridor and into the City of Montebello. Land uses around the station site are envisioned for mixed commercial and residential uses. Improvements to access, connectivity and streetscape, particularly secure paths to the station for students to the north, are an important part of this concept.

a. Existing Designations and Land Uses

This area has a well-integrated mix of uses, as shown in Figure 2-8, from single- and multi-family homes to locally-serving retail and schools. The residential areas have a good mix of housing types and densities, with multi-family homes scattered amongst single-family residences. The multi-family homes

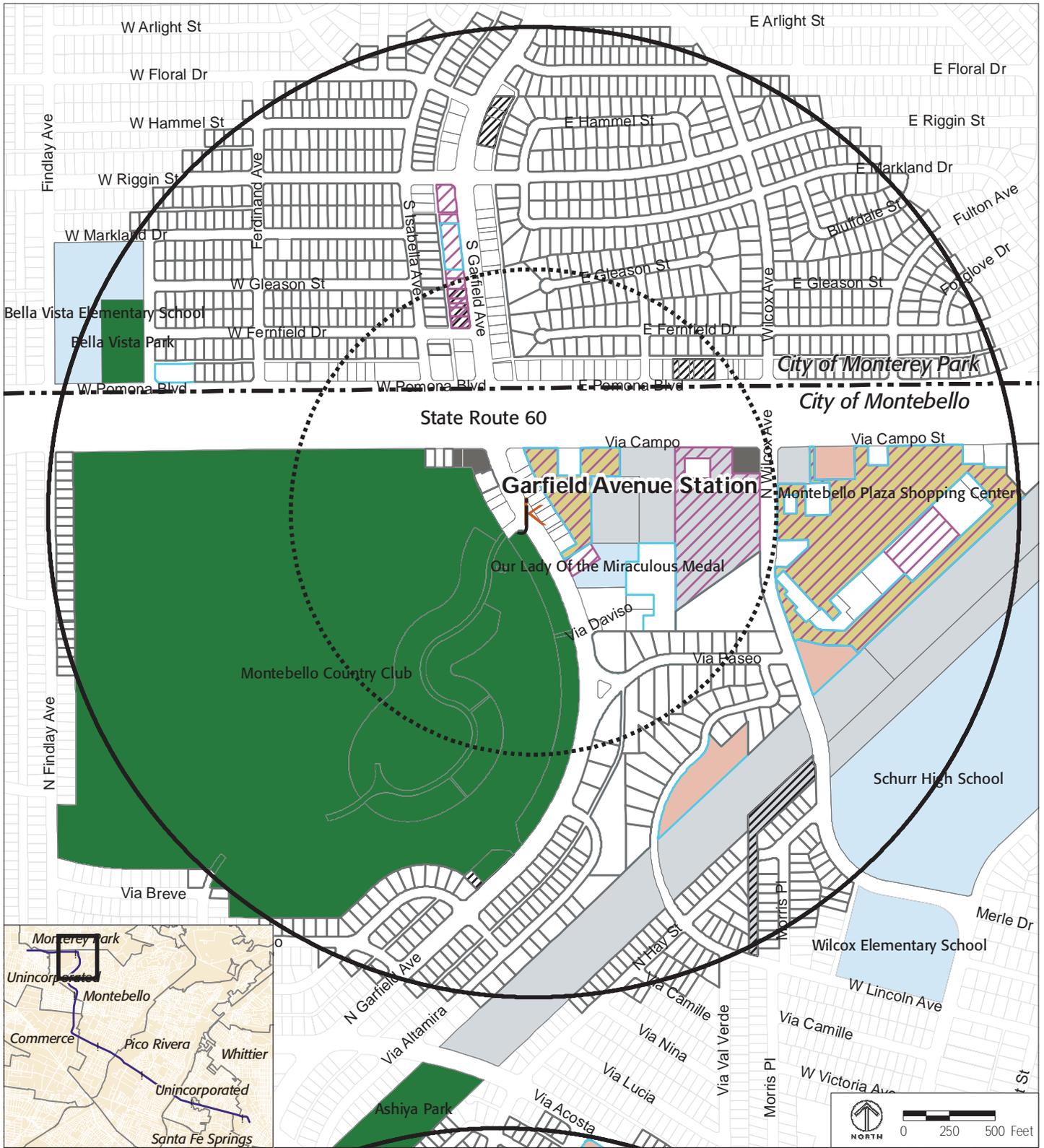


FIGURE 2-7

GARFIELD AVENUE STATION AREA INFILL OPPORTUNITY

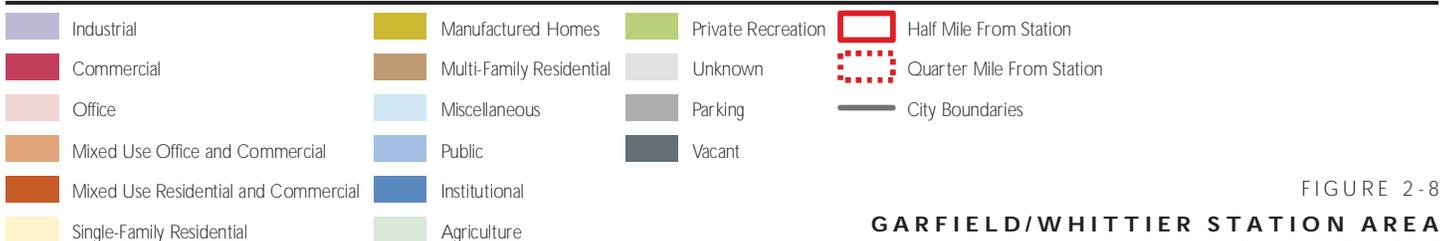
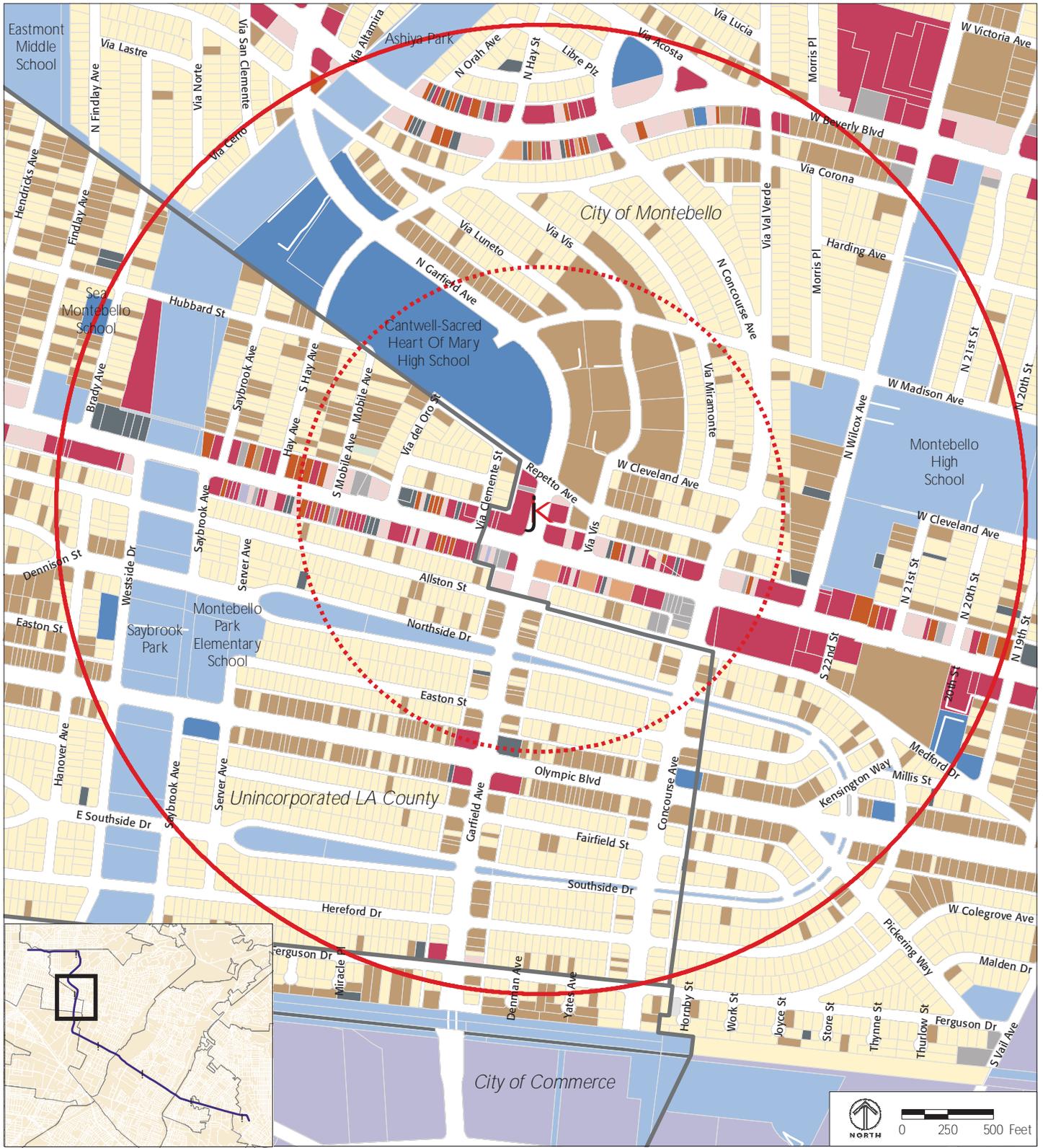


FIGURE 2-8

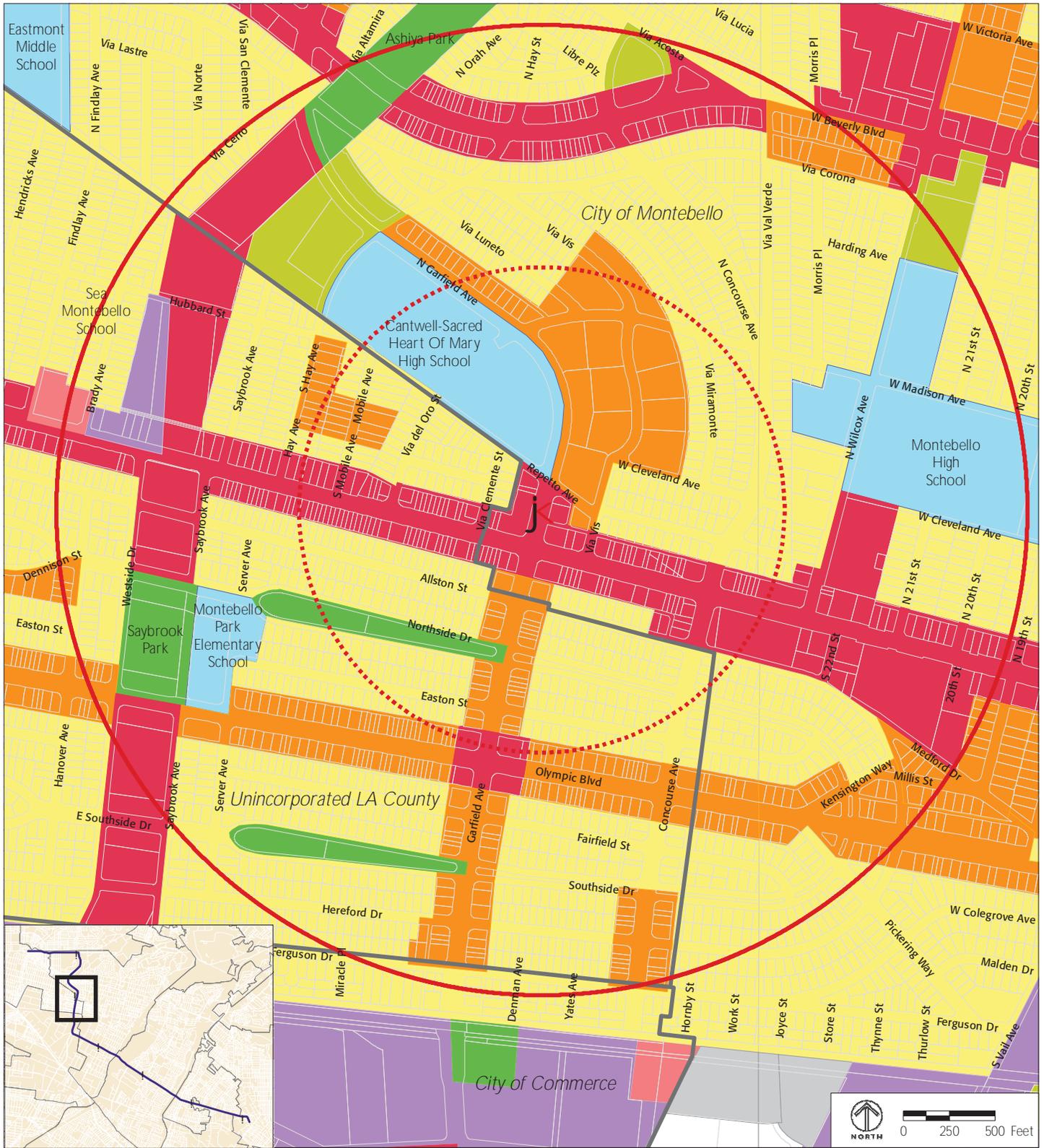
**GARFIELD/WHITTIER STATION AREA  
 EXISTING LAND USES**

tend to be located on the larger streets, while the single-family homes are set back on quieter streets. Whittier Boulevard is a bustling commercial street with aging retail lining the street. Some vacant sites provide potential opportunities for enhancing the corridor with newer commercial or mixed-use developments. Additional retail uses are located around the intersection of Garfield Avenue and Olympic Boulevard. A number of schools are located within the ½-mile radius, including Cantwell-Sacred Heart of Mary High School, Montebello High School and Montebello Park Elementary School. The Southern California Edison utility right-of-way extends through the western portion of the station area, serving as a greenway with parks, nurseries and other similar uses.

The General Plan designations, shown in Figure 2-9, are very close to the existing uses, while the zoning designations are quite different. The entire western portion and part of the eastern portion of the station area are designated high-density residential, whereas there is a mix of single- and multi-family residential uses existing in this area. In many areas, the zoning calls for single-family while the General Plan designation is high-density residential. The zoning designations, shown in Figure 2-10, also fail to include commercial uses on Garfield Avenue south of Olympic Boulevard.

#### b. Physical Characteristics

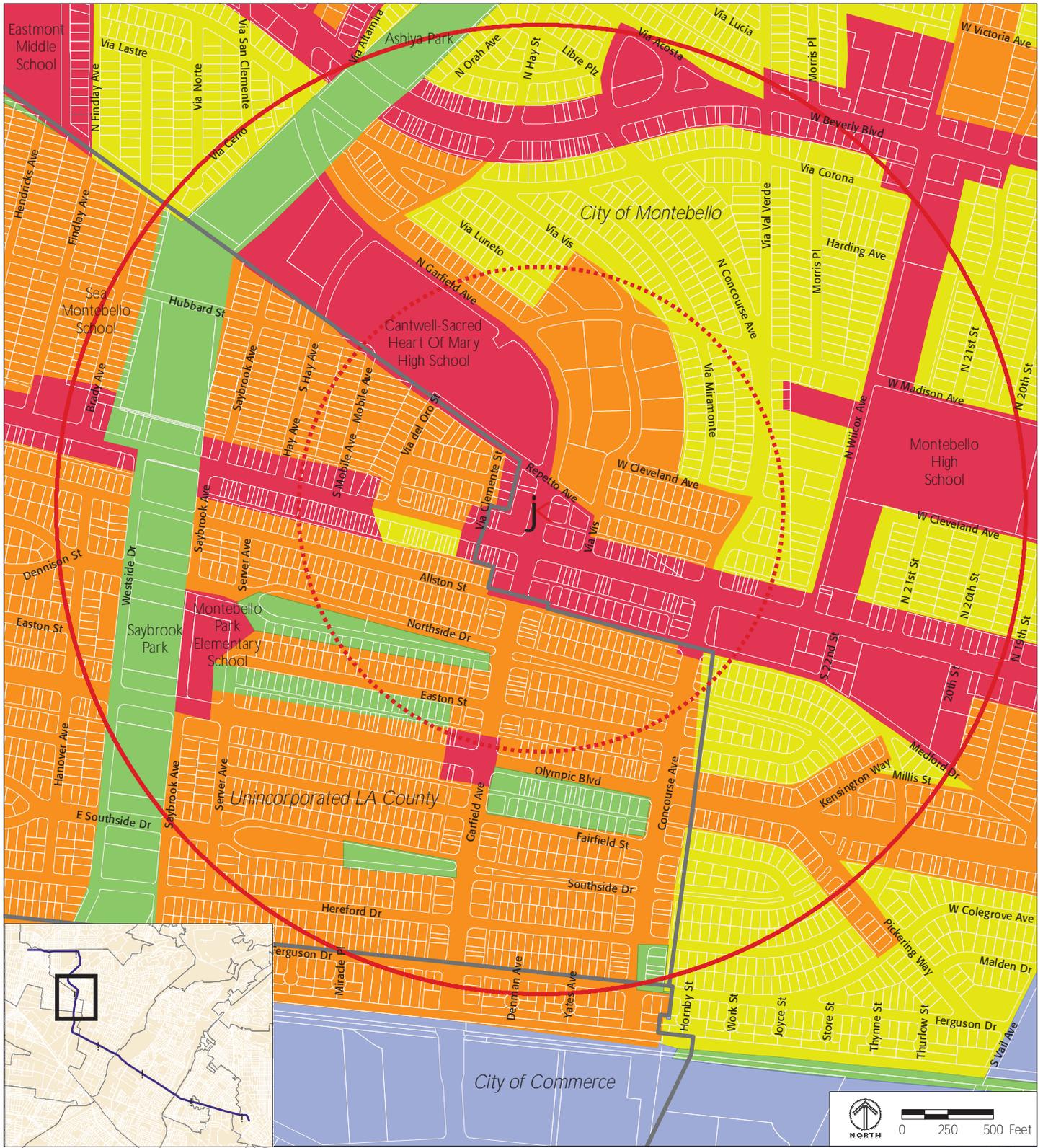
There are a number of unique attributes of this area that make it both interesting and pedestrian-friendly. Photos of this station area are shown in Figure 2-11. The northern part of the ½-mile radius is characterized by the heavily landscaped curvilinear streets, winding through the residential neighborhoods. Also located in this part is the Cantwell-Sacred Heart of Mary High School and its associated green spaces that border Garfield Avenue. Further south, the street pattern resembles somewhat of a traditional grid pattern, but with couplets incorporated as well. The two couplets, located on either side of Olympic Boulevard, wrap around two landscaped greenways with walking paths down the middle. Northside Drive and Southside Drive are mirror images that wrap around to the east connecting at Olympic Boulevard. The



- |                             |                          |                              |                           |
|-----------------------------|--------------------------|------------------------------|---------------------------|
| Single Family Residential   | Industrial/Manufacturing | Civic/Public Facilities      | Half Mile From Station    |
| Multi Family Residential    | Medical Facilities       | Transportation/Right-of-Ways | Quarter Mile From Station |
| Commercial/Major Office Use | Educational Institutions | Vacant/Undifferentiated      | City Boundaries           |
| Electrical Facilities       | Parks                    |                              |                           |

FIGURE 2-9

GARFIELD/WHITTIER STATION AREA GENERAL PLAN DESIGNATIONS



- Industrial
- Commercial
- High Density Residential
- Medium Density Residential
- Open Space & Public Lands
- Half Mile From Station
- Quarter Mile From Station
- City Boundaries

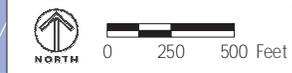


FIGURE 2-10  
 GARFIELD/WHITTIER STATION AREA ZONING



FIGURE 2-11  
PHOTOS OF THE GARFIELD/WHITTIER STATION AREA

streets between these are pleasant for walking with plentiful landscaping and street trees.

Adding to the pedestrian-friendliness of this area are the small-scale retail stores on Garfield Avenue. These stores are designed for pedestrian access and provide needed services within walking distance of many homes. The Metrolink rail line runs just south of the ½-mile radius, creating a barrier between the residential neighborhoods to the north and the industrial uses to the south. This separation helps retain the neighborhood feel north of the tracks without the impacts of industrial uses.

c. Plans, Policies, and Projects

The City of Montebello Redevelopment Project Area includes the parcels fronting Whittier Boulevard between Garfield Avenue and Concourse Avenue. There are no current projects underway in the Redevelopment Project Area, although funding has been provided in the past for façade improvements.

d. Infill Opportunities

Few infill opportunity sites exist within the Garfield/Whittier station area. Those that exist are shown in Figure 2-12 and listed below:

- ◆ Four corner parcels at the intersection of Garfield Avenue and Olympic Boulevard.
- ◆ Northeast corner of Whittier Boulevard and Brady Avenue.
- ◆ Southeast corner of Whittier Boulevard and Concourse Avenue.

**3. Greenwood Avenue Station**

The proposed Greenwood Avenue Station would be located within the City of Montebello, although the ½-mile radius around this station extends into the Cities of Commerce and Pico Rivera. Preliminary concept plans for the design of the station envision an aerial station that creates a gateway between Commerce and Montebello from east to west and north to south. This station site takes advantage of multiple bus lines. Land uses around the station



site are envisioned for mixed-use with commercial and residential uses. Improvements to streetscape, connectivity and safety, including safe routes for students on Greenwood Avenue south of Washington Boulevard, as well as maintaining truck routes and providing parking close to the station, are important components of this station concept.

a. Existing Designations and Land Uses

As shown in Figure 2-13, the western half of this station area is dominated by large-scale industrial and manufacturing uses, while the eastern half is more residential in nature. The industrial and manufacturing uses extend from the City of Commerce east into this station area. Commercial and industrial uses line Washington Boulevard and serve as a buffer between the busy corridor and the residential neighborhoods. A number of multi-family developments are clustered along Greenwood Avenue, as well as some along Washington Boulevard. These homes are surrounded by lower density single-family homes to the north and east, and industrial uses to the west. The Chet Hollifield Library and Park, Greenwood Elementary, and Calvary Chapel Christian Academy are all located within the station area, as is the De Paul Evangelization Center, a religious retreat center. The westernmost portion of the Rio Hondo Coastal Spreading Grounds and recreational bike path are also within the ½-mile radius. The Riverside Metrolink rail line has a station just outside the ½-mile radius of this proposed station to the northwest.

The General Plan and zoning designations, shown in Figures 2-14 and 2-15, are very close to the existing land uses on the ground. There are no major differences between the different maps.

b. Physical Characteristics

There are distinct differences between the industrial western part of this station area and the residential and commercial eastern part; including the block patterns, architecture and streetscapes. Photos of this station area are shown in Figure 2-16. The industrial uses tend to be large non-descript buildings with few variations and large parking lots for trucks and other equipment. Large blocks and dead-end streets create a poor level of connectivity in this

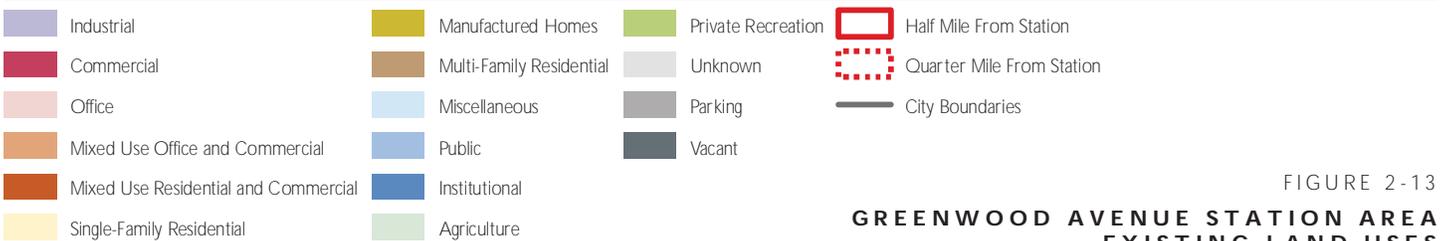
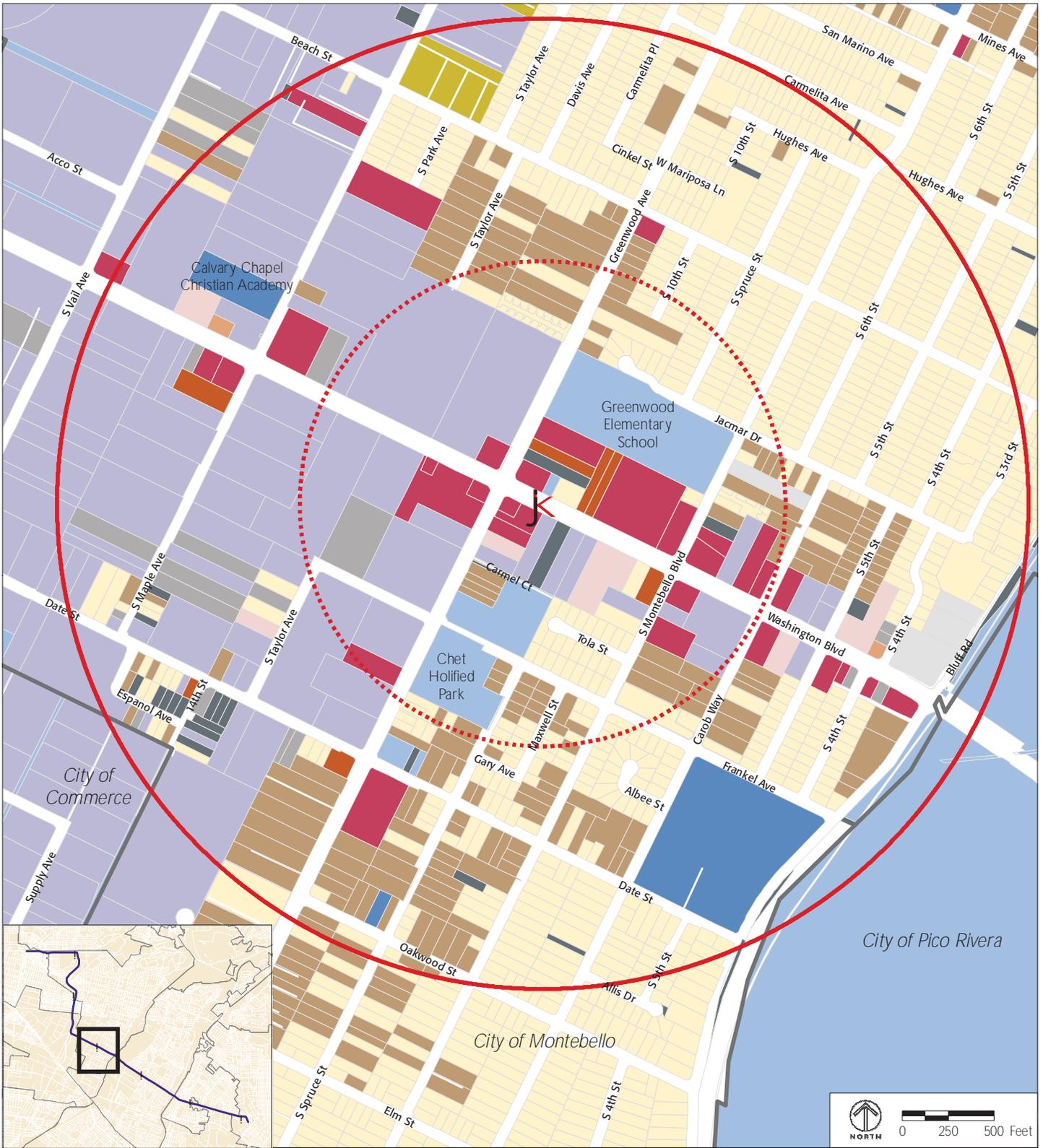


FIGURE 2-13  
**GREENWOOD AVENUE STATION AREA  
 EXISTING LAND USES**

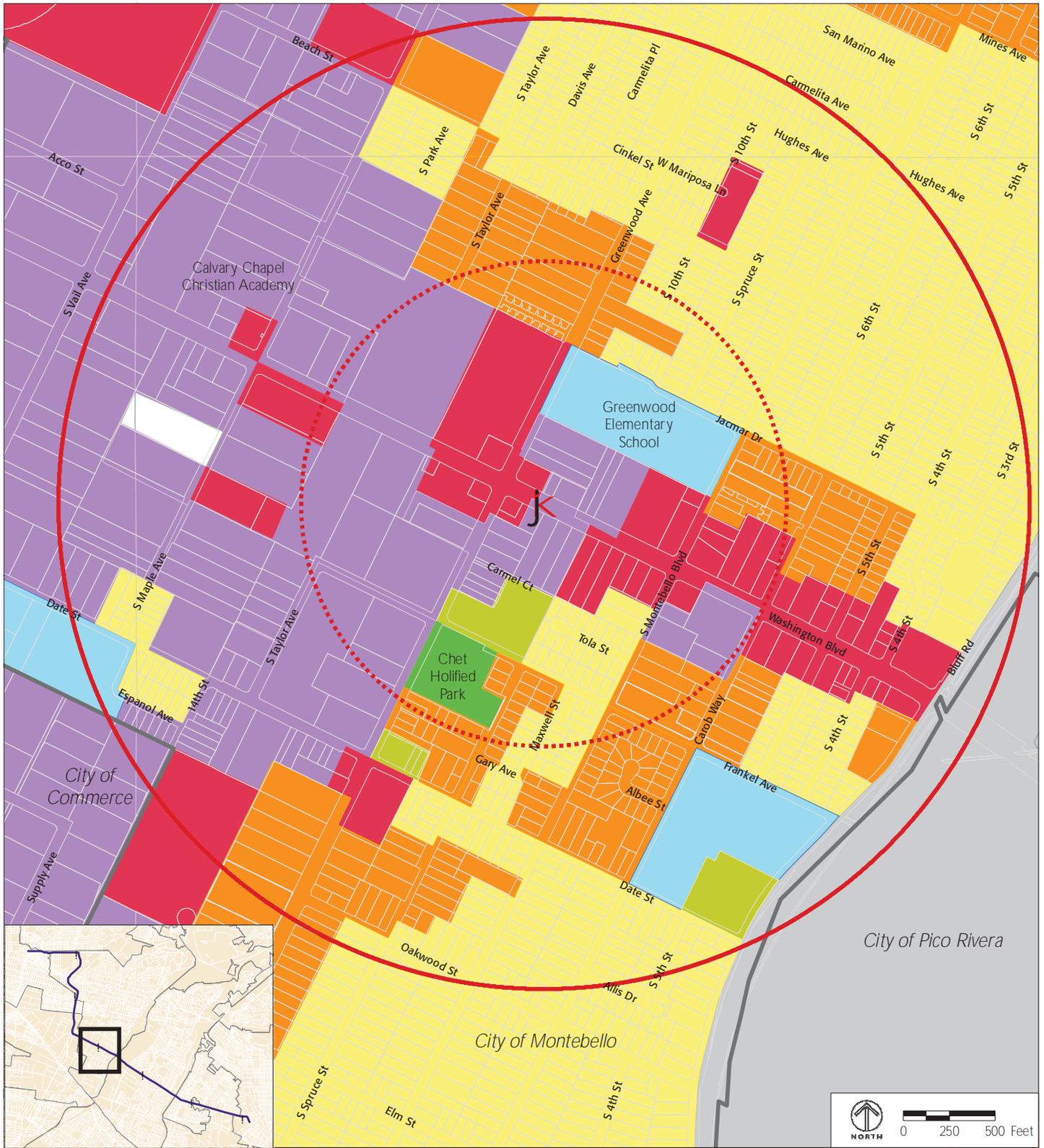
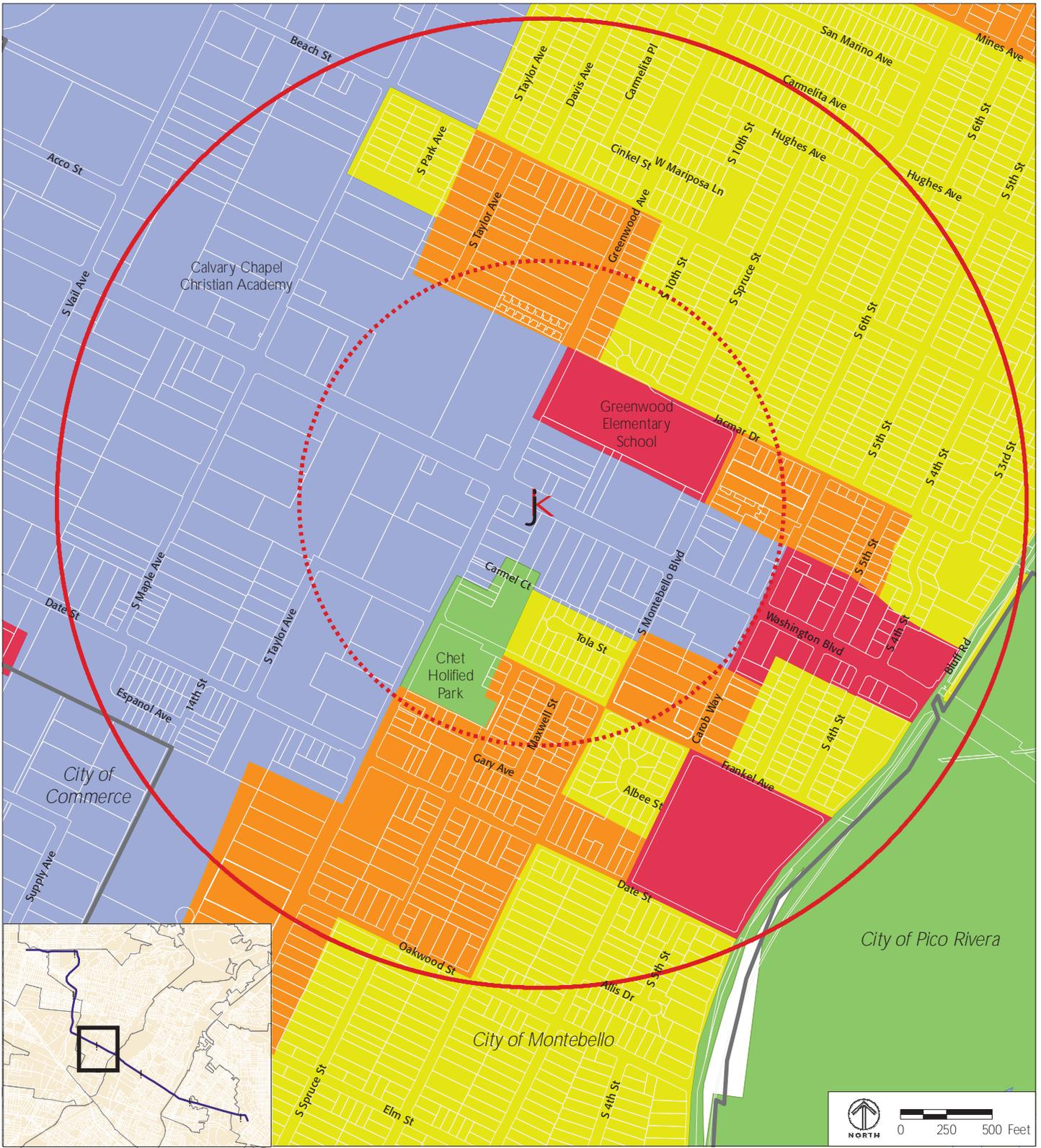


FIGURE 2-14  
 GREENWOOD AVENUE STATION AREA GENERAL PLAN DESIGNATIONS



- Industrial
- Commercial
- High Density Residential
- Medium Density Residential
- Open Space & Public Lands
- Half Mile From Station
- Quarter Mile From Station
- City Boundaries

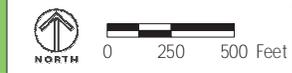


FIGURE 2-15  
 GREENWOOD AVENUE STATION AREA ZONING



FIGURE 2-16  
PHOTOS OF THE GREENWOOD AVENUE STATION AREA

area. In addition, landscaping and pedestrian amenities are lacking. The residential areas have an entirely different character, with traditional grid patterns, landscaping, street trees and other pedestrian amenities. There is a mix of aging and modern multi-family residential development, including a new townhome development overlooking the Rio Hondo spreading basin. There is some opportunity to improve the quality of the older housing stock in this neighborhood and potential to increase the density of housing near the proposed station.

c. Plans, Policies, and Projects

A very small portion of the area within the ½-mile radius of this station area is located in the City of Commerce and is part of the City's Redevelopment Project Area 4. The objectives of this redevelopment project area are the elimination of blight and removal of constraints to new development.

d. Infill Opportunities

The potential infill opportunity sites within the Greenwood Avenue station area are shown in Figure 2-17 and listed below:

- ◆ Numerous industrial parcels west of Greenwood Avenue.
- ◆ Parcels fronting Washington Boulevard east of Greenwood Avenue.
- ◆ Parcels fronting Greenwood Avenue between Washington Boulevard and Greenwood Elementary.

**4. Washington/Rosemead Station**

The proposed Washington/Rosemead Station would be located between the two coastal spreading grounds within the City of Pico Rivera, thus branding the station area as "a place between two rivers". Preliminary concept plans for the design of the station envisions an at-grade station that takes advantage of its location adjacent to the Pico Rivera Towne Center and Market Place on either side of Washington Boulevard, reinforcing and integrating these established centers of the community. Safe pedestrian and bicycle access to the station are important elements of the design concept.

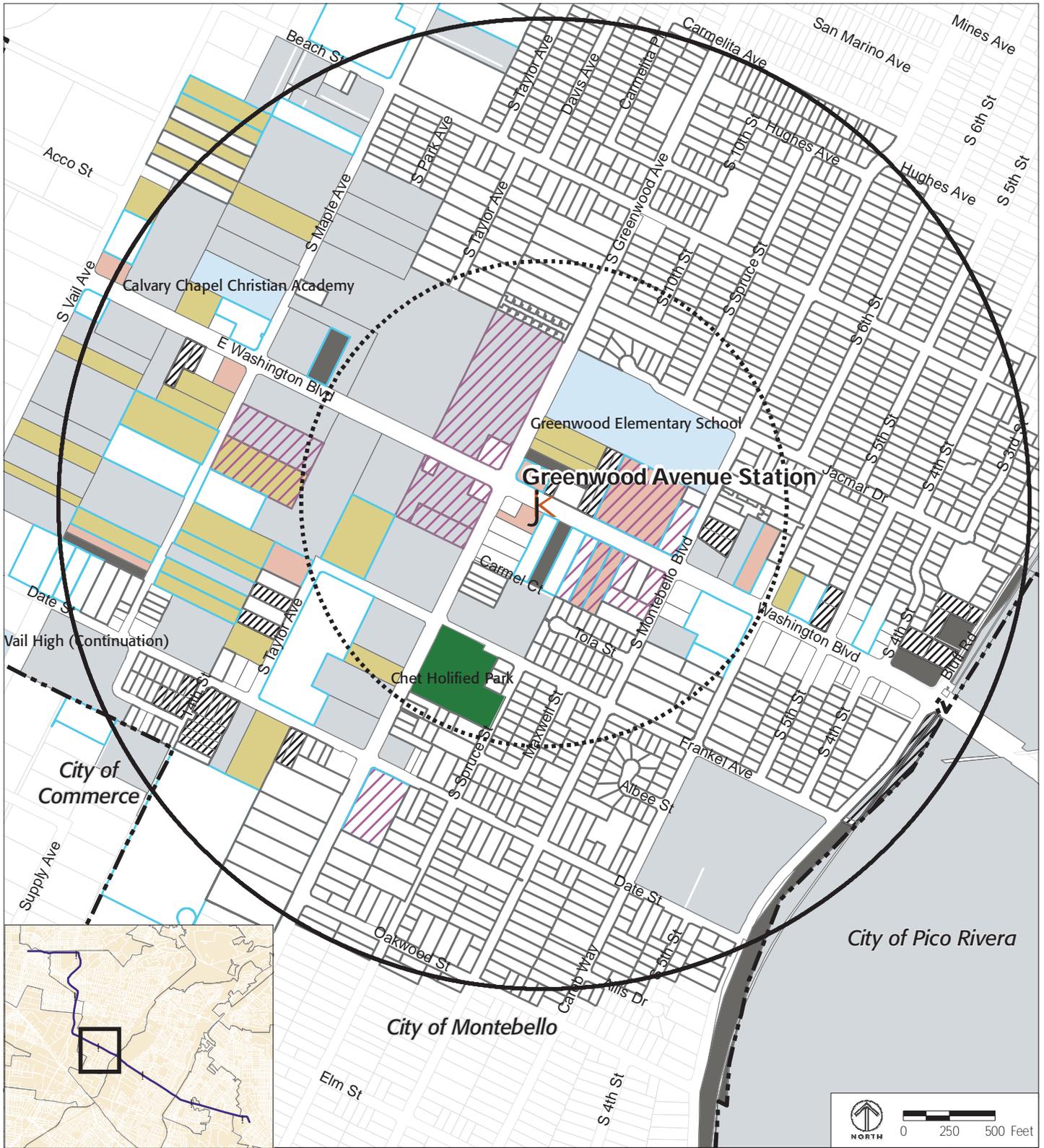


FIGURE 2-17

GREENWOOD AVENUE STATION AREA INFILL OPPORTUNITY

a. Existing Designations and Land Uses

As shown in Figure 2-18, this station area is heavily focused on commercial uses within the Pico Rivera Towne Center, extending from Paramount Boulevard to Rosemead Boulevard, and the new Market Place shopping center at the northwest corner of Rosemead and Washington Boulevard. The areas surrounding these shopping centers are dominated by industrial uses to the southwest and residential uses in all other directions. Most of the residential areas are devoted to single-family homes, although there are a few multi-family developments within the station area. There are also a number of schools, including Rio Vista Elementary, Valencia Elementary, Mary E. Meller Elementary, Rivera Elementary, and El Rancho High School, which are all within the ½-mile radius.

For the most part, the existing land uses in this station area match up with the General Plan and zoning designations shown in Figures 2-19 and 2-20. However, the main difference is the large commercial development (Pico Rivera Towne Center), which is designated for industrial uses. Other than this major land use, there are some smaller differences such as single-family housing built on commercially-zoned land.

b. Physical Characteristics

This station area is located along a busy stretch of Washington Boulevard that is lined with successful businesses and low-density residences. Photos of this station area are shown in Figure 2-21. The corridor manages both auto and pedestrian traffic with multiple travel lanes, wide sidewalks, landscaping and street trees. The consistent streetscape helps to improve the walkability of this area despite the large shopping centers with parking lots facing the street. The Pico Rivera Towne Center is a prominent use on the south side of Washington Boulevard and backs up to large industrial uses. Although both of these uses tend to be auto-oriented, the buildings are newer and well-maintained, which enhances the overall character of the area. The residential areas are primarily older single-family homes on quiet streets; however there are some newer single- and multi-family developments mixed-in as well.

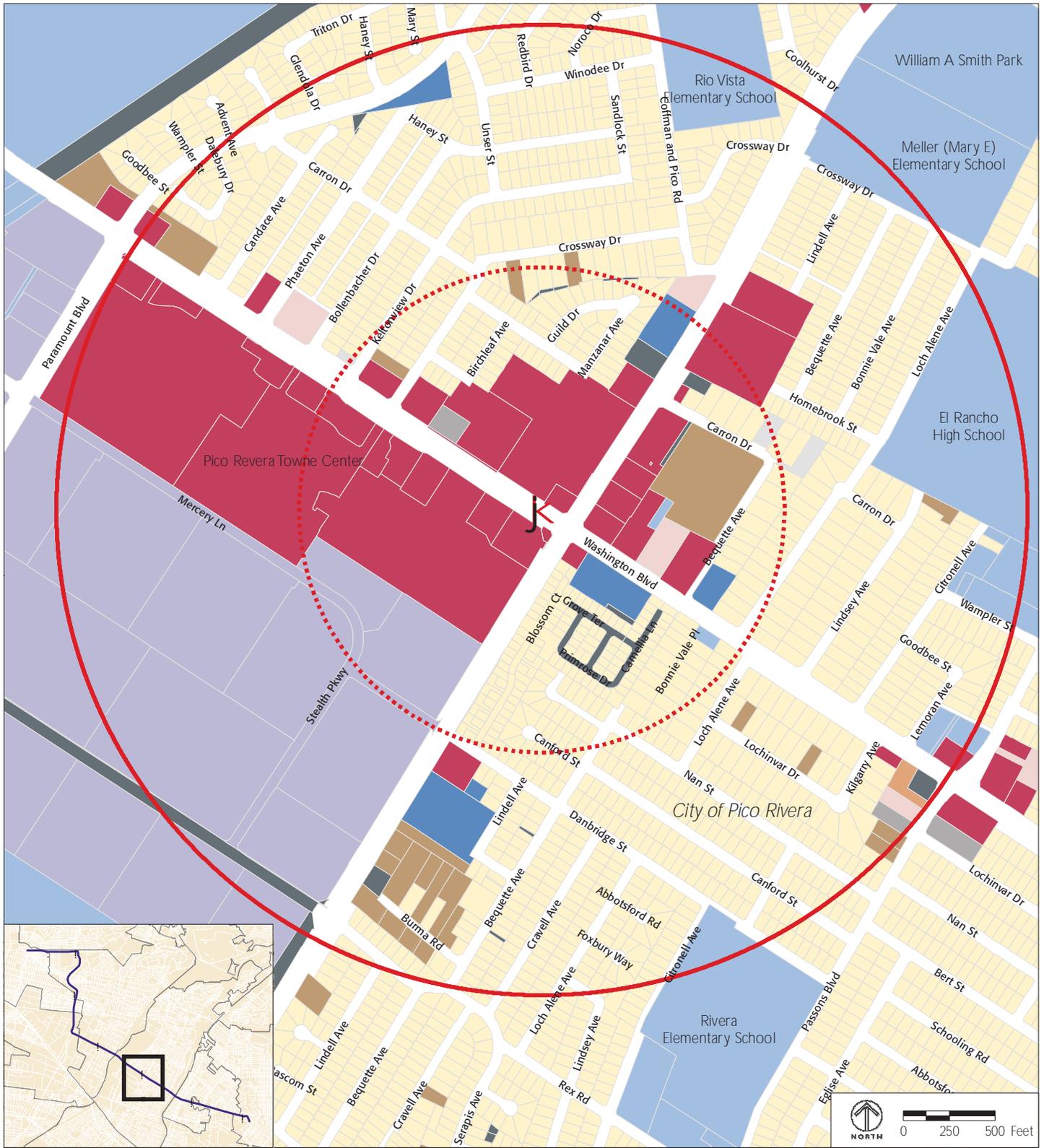


FIGURE 2-18  
**WASHINGTON/ROSEMEAD STATION AREA  
 EXISTING LAND USES**

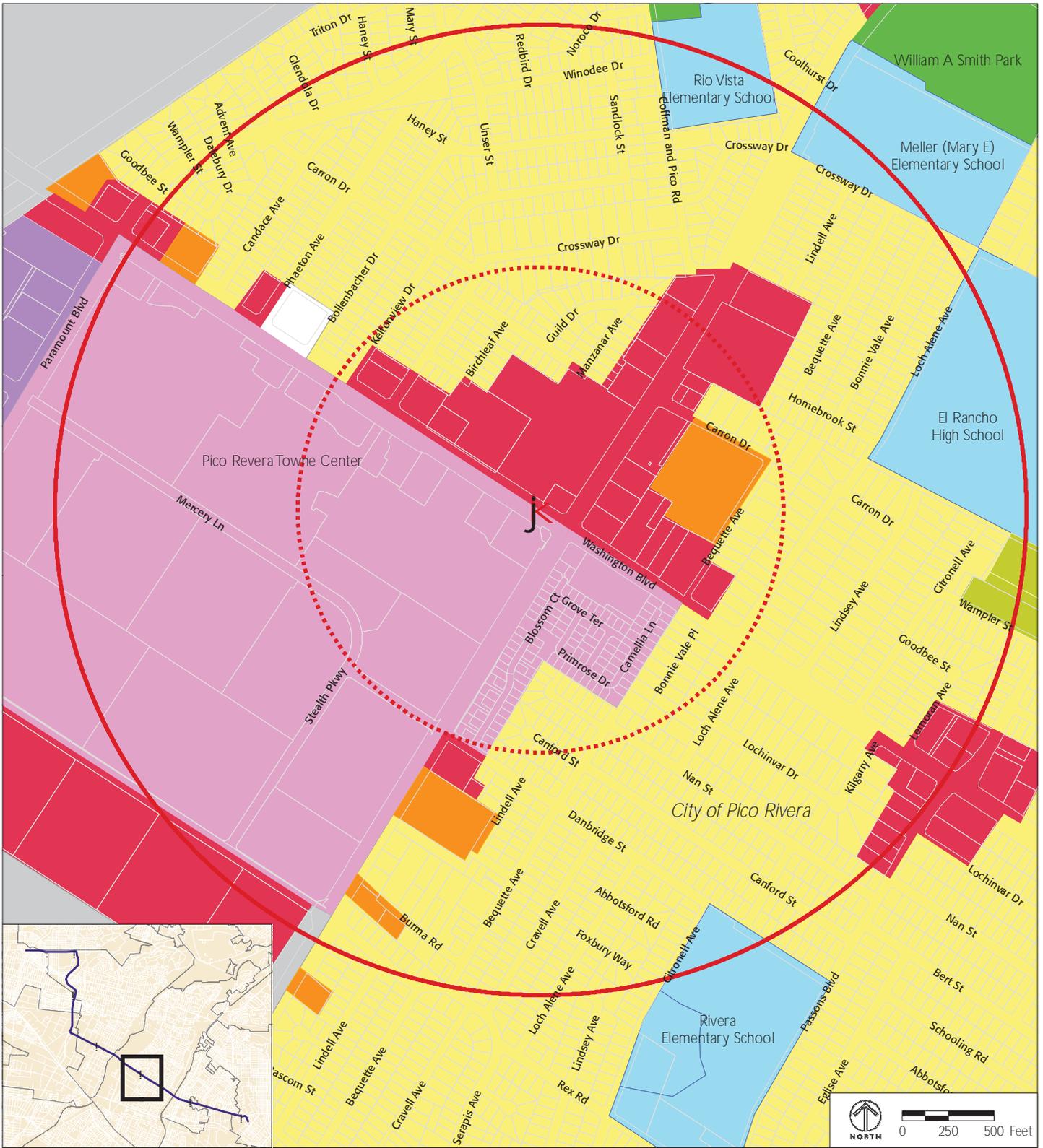
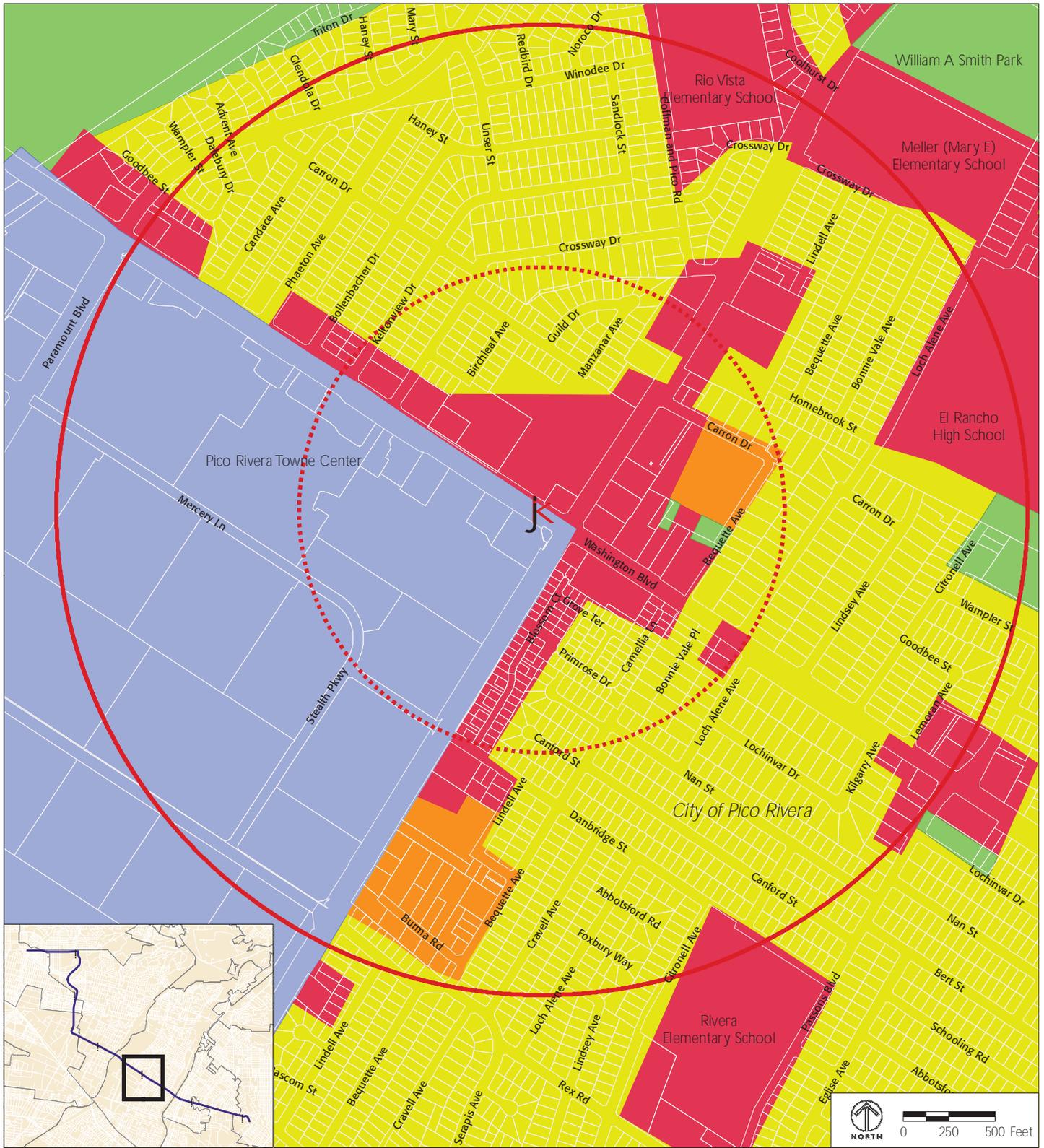


FIGURE 2-19

WASHINGTON/ROSEMEAD STATION AREA GENERAL PLAN DESIGNATIONS



- Industrial
- Commercial
- High Density Residential
- Medium Density Residential
- Open Space & Public Lands
- Half Mile From Station
- Quarter Mile From Station

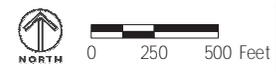


FIGURE 2-20  
 WASHINGTON/ROSEMEAD STATION AREA ZONING



FIGURE 2-21

PHOTOS OF THE WASHINGTON/ROSEMEAD STATION AREA

c. Plans, Policies, and Projects

The City of Pico Rivera has designated a Redevelopment Project Area on the south side of Washington Boulevard between Paramount and Rosemead Boulevards. It extends to the northwest and southeast corners of Rosemead and Washington Boulevards. The following specific plans apply to this Redevelopment Area.

The Rancho de Bartolo Specific Plan (SP 400.4) encompasses the area south of Washington Boulevard between Paramount and Rosemead Boulevards. The objectives of the plan include promoting the timely redevelopment of the Northrop-Grumman plant, providing new employment opportunities, eliminating or reducing the adverse environmental effects associated with future development, and ensuring that any future development is compatible with the surrounding community. The land uses permitted in this area include Commercial Retail, Entertainment, Office, Food-Serving, Public/Institutional, Light Industrial/Distribution, Heavy Industrial, and Rail Yard. There are four sub-areas that have different permitted land uses to ensure adequate separation and buffering between incompatible uses. An urban design plan ensures high quality development in the Specific Plan area. The Specific Plan area has been developed with the Pico Rivera Towne Center and neighboring industrial development.

The southeast corner of Rosemead and Washington Boulevards is within Specific Plan 301, prepared in 1996. This Specific Plan provides for the development of 113 single-family homes, a recreation area and a senior housing complex with 128 units. A small commercial use on the corner is allowed to remain as part of the Specific Plan. There are specific development standards for each of the uses within the Specific Plan area, as well as general urban design development concepts. The overall residential density is not permitted to exceed the highest density residential designation in the General Plan (30 units per acre). The Specific Plan area has been fully developed with these uses.

d. Infill Opportunities

The potential infill opportunity sites within the Washington/Rosemead station area are located mostly along Washington Boulevard. They are shown in Figure 2-22 and listed below:

- ◆ Commercial parcels fronting Washington Boulevard west of Rosemead Avenue.
- ◆ Northeast corner of Washington Boulevard and Rosemead Avenue.

**5. Washington/Norwalk Station**

The proposed Washington/Norwalk Station would be located on the border of unincorporated Los Angeles County and the City of Santa Fe Springs, with a majority of the ½-mile radius from the station being in unincorporated LA County. Preliminary concept plans for the design of the station envisions an at-grade station that take advantage of the Santa Fe Springs Market Place and surrounding neighborhoods, and integrates Santa Fe Springs' Heritage Art and Public Space Program. Land uses around the station site are envisioned for mid-level mixed-use development. Improvements to streetscape, safety and connectivity to the station, particularly from neighborhoods to the northeast, are important components of the station area concept.

a. Existing Designations and Land Uses

This station area is similar to the proposed Washington/Rosemead station area, in that a major shopping hub adjacent to the proposed station is surrounded by primarily single-family housing, as shown in Figure 2-23. In this case the commercial uses extend along Washington Boulevard from Norwalk Boulevard to the eastern edge of the ½-mile radius. Multi-family housing is mixed in with the commercial uses and set back from Washington Boulevard. The remaining parts of the station area are devoted to single-family housing, a number of schools and the First Fundamental Bible Church. The schools within the ½-mile radius include Pioneer High School, Brethren Christian, Ada S. Nelson Elementary School, Phelan Elementary and Washington Elementary. Los Nietos Middle School and Aeolian Elementary are just outside the ½-mile radius.

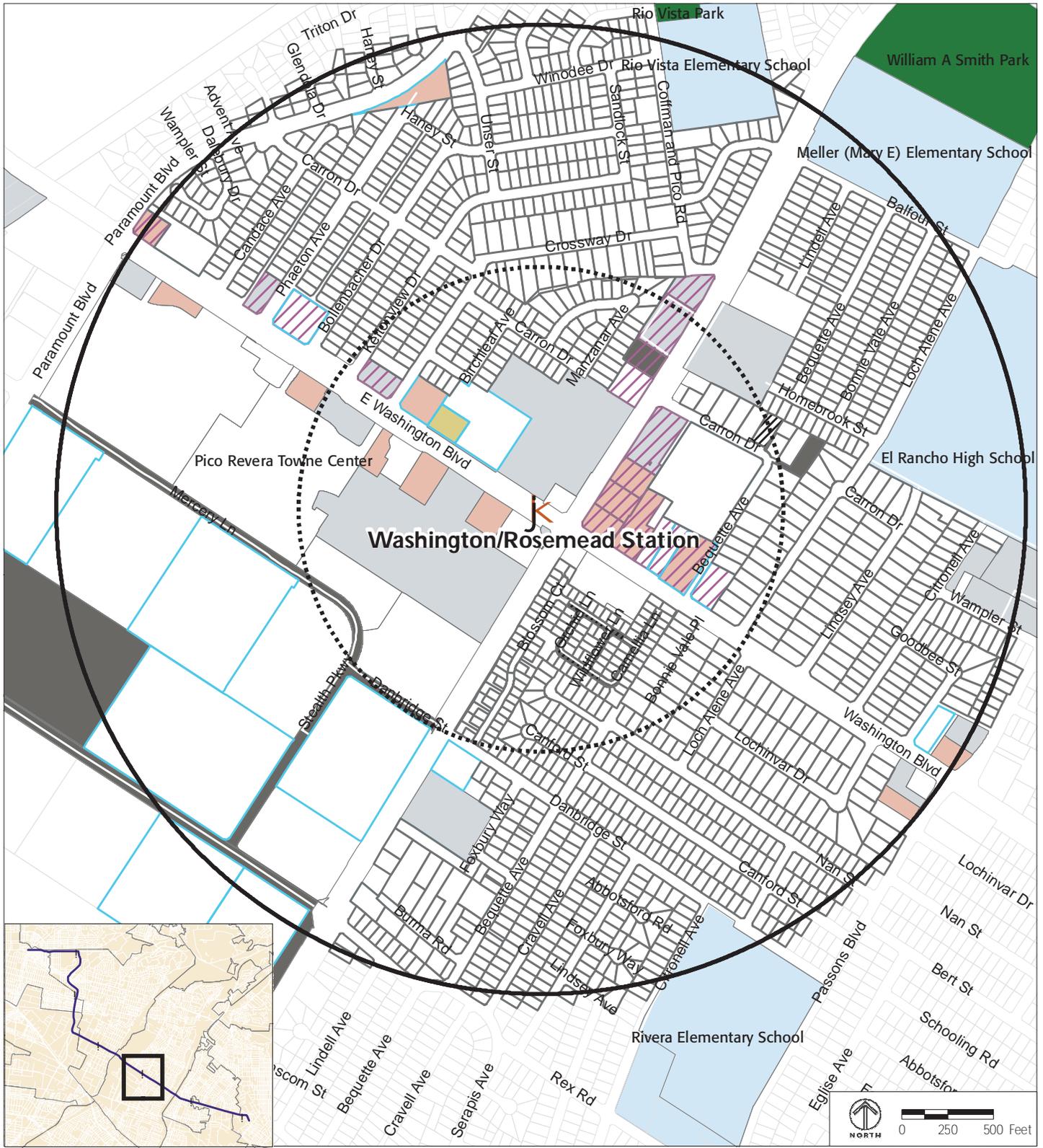


FIGURE 2-22

WASHINGTON/ROSEMEAD STATION AREA INFILL OPPORTUNITY

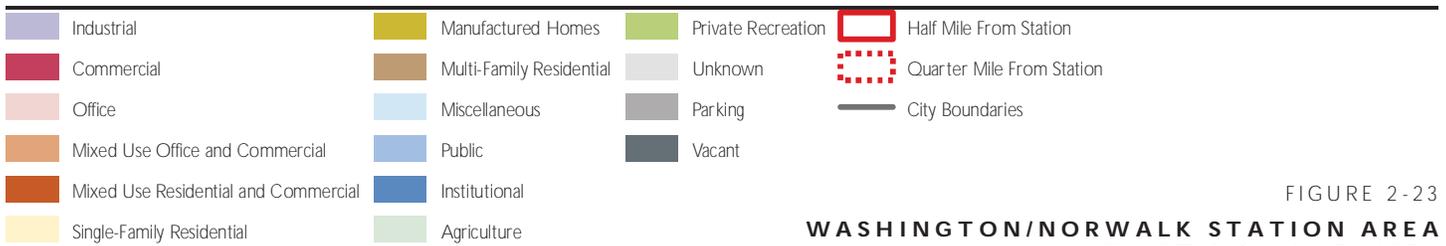
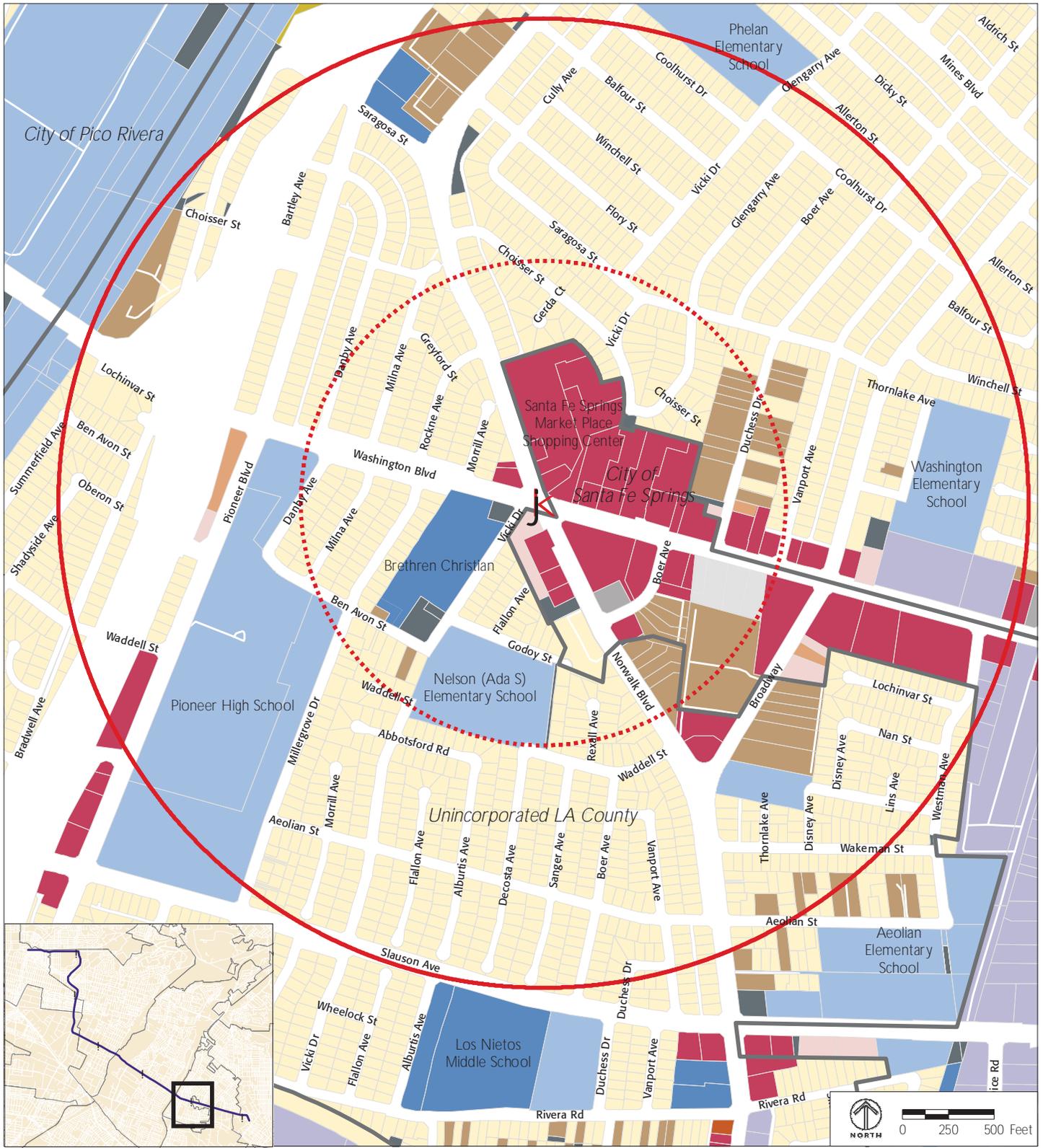


FIGURE 2-23

WASHINGTON/NORWALK STATION AREA  
EXISTING LAND USES

The General Plan designations, shown in Figure 2-24, match the existing land uses very well. However the zoning, shown in Figure 2-25, is slightly different due to the normalized zoning categories used by Metro.

b. Physical Characteristics

The majority of this station area is made up of older single-family residential neighborhoods on quiet streets away from the busy Washington Boulevard corridor. However, these homes are within walking distance of a major shopping center, schools and other amenities that create a vibrant community around the proposed station. Photos of this station area are shown in Figure 2-26. The multi-family housing around the commercial uses is older and in many cases could be improved to provide better housing conditions. Although the commercial centers are not contiguous and tend to be auto-oriented, there is potential to create a more pedestrian-friendly streetscape along Washington Boulevard, by building off of the existing uses. The public realm could also be improved to better serve current and future pedestrians in the area.

c. Plans, Policies, and Projects

The commercial parcels fronting Washington Boulevard within the City of Santa Fe Springs city limits are within the Washington Redevelopment Project Area. This Redevelopment Project was formed in 1986 and amended in 2001 and 2010. The 2010 Amendment provides the City's Redevelopment Agency with powers, duties and obligations to implement and further the program generally established for the Project Area. However it does not present a specific plan or establish specific projects for the redevelopment, rehabilitation and revitalization of any area within the Project Area.

d. Infill Opportunities

The potential infill opportunity sites within the Washington/Norwalk station area are shown in Figure 2-27 and listed below:

- ◆ Parcels on the southwest and southeast corners of Washington Boulevard and Norwalk Boulevard.

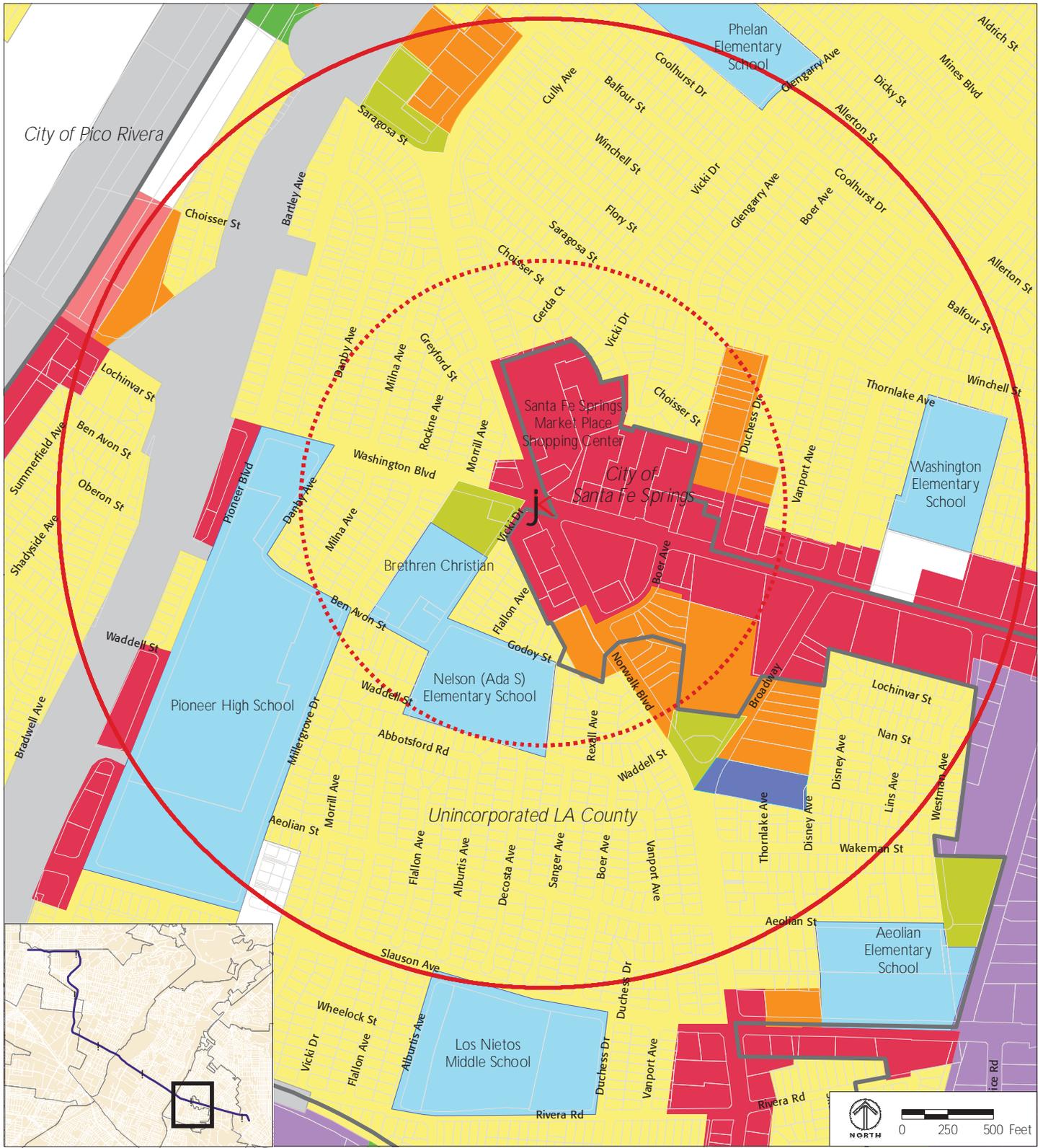
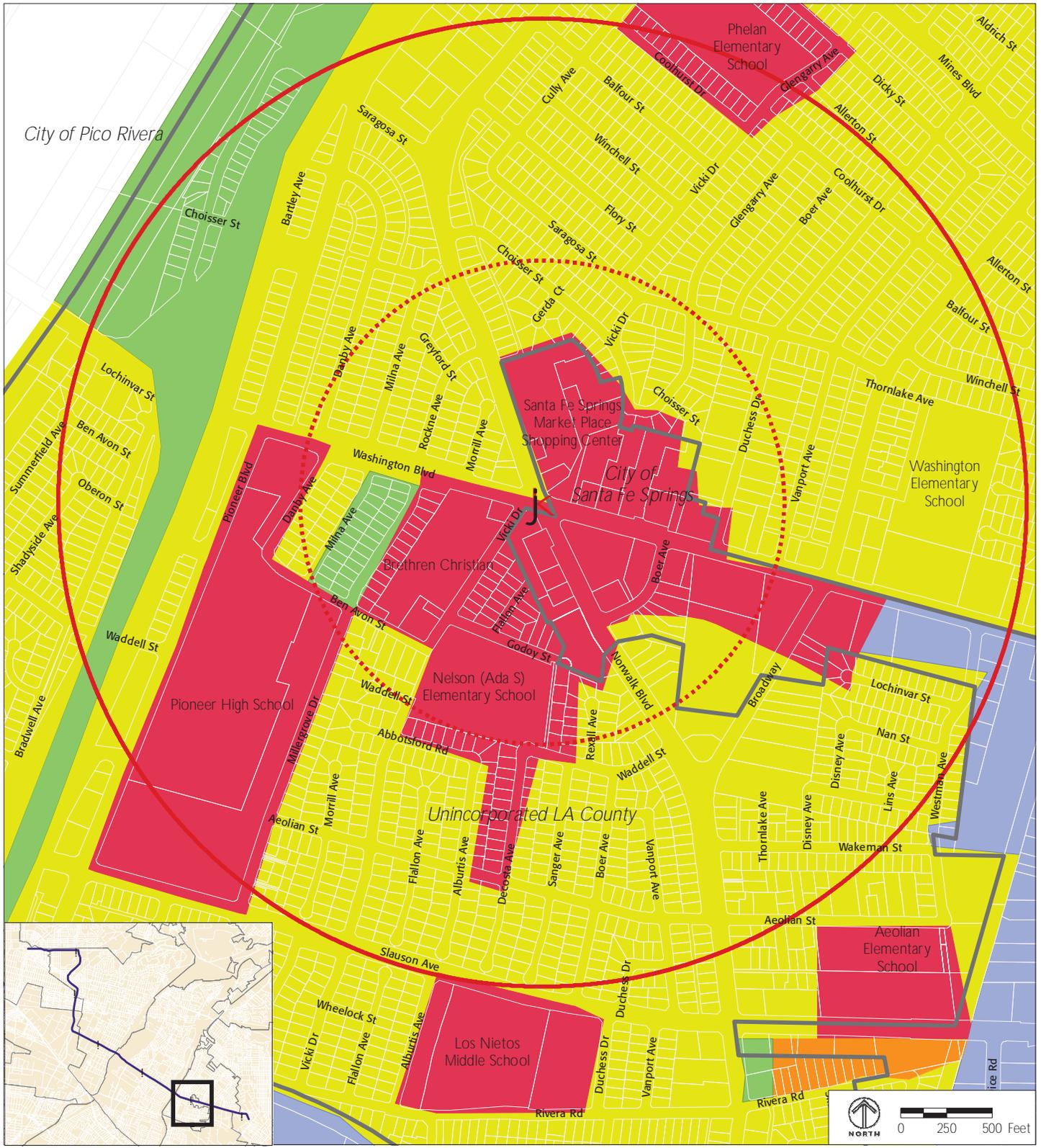


FIGURE 2-24

WASHINGTON/NORWALK STATION AREA GENERAL PLAN DESIGNATIONS



- Industrial
- Commercial
- High Density Residential
- Medium Density Residential
- Open Space & Public Lands
- Half Mile From Station
- Quarter Mile From Station
- City Boundaries

FIGURE 2-25



FIGURE 2-26

PHOTOS OF THE WASHINGTON/NORWALK STATION AREA

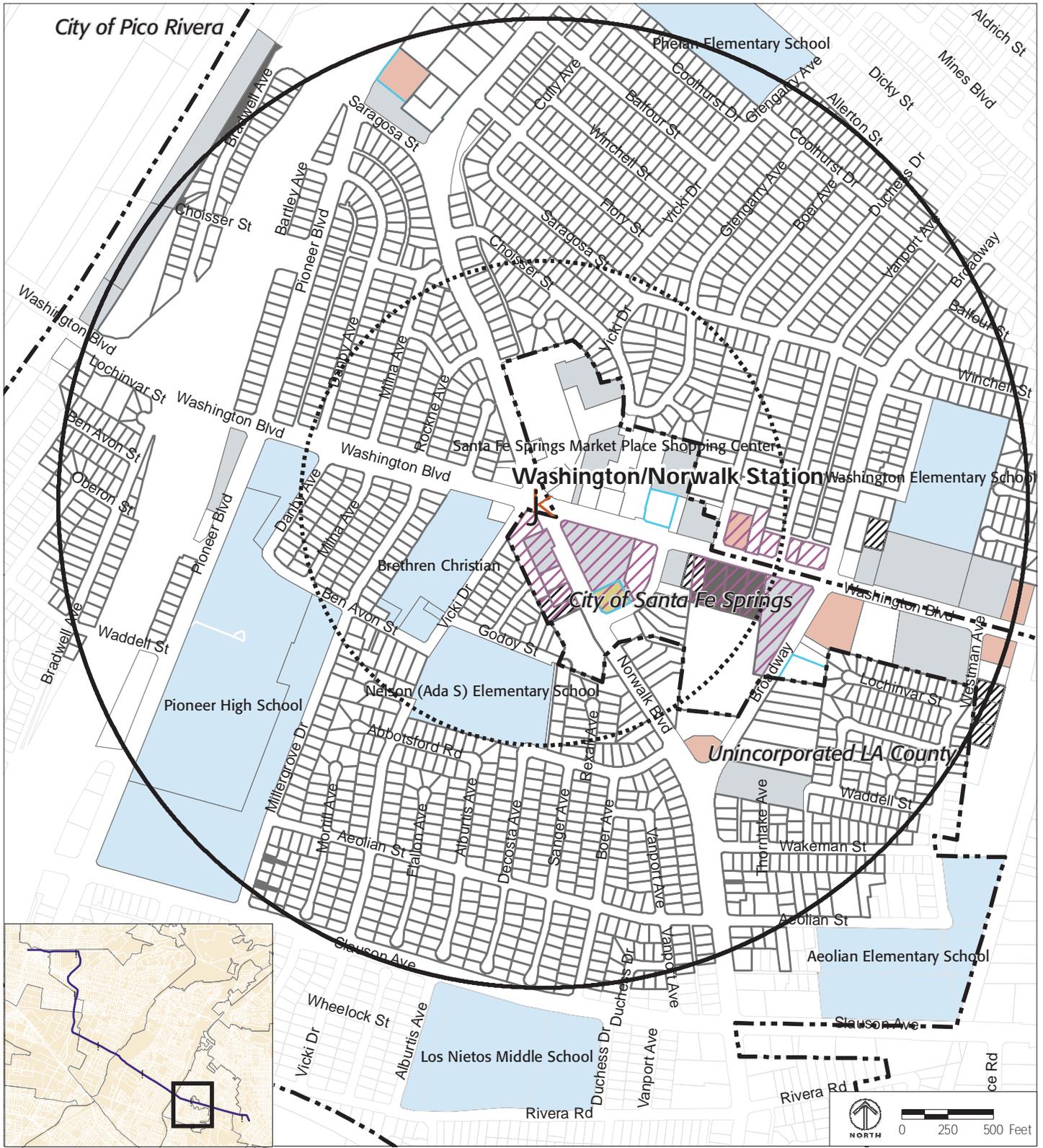


FIGURE 2-27

WASHINGTON/NORWALK STATION AREA INFILL OPPORTUNITY

- ◆ Parcels on the north and south sides of Washington Boulevard east of Boer Avenue.

## 6. Washington/Lambert Station

The proposed Washington/Lambert Station would be located within the City of Whittier, with the ½-mile radius extending into the City of Santa Fe Springs and unincorporated LA County. Whittier Boulevard, a major corridor through this area, intersects the eastern edge of the ½-mile radius. Preliminary concept plans for the design of the station envisions an at-grade station with a fully integrated TOD project that contains ground-floor retail and residential above. This signature terminus station would feature timeless architecture in the spirit of the Whittier Boulevard Specific Plan; mid-level mixed-use development supporting the nearby hospital; improvements to streetscape, safety, connectivity and parking.

### a. Existing Designations and Land Uses

This station area is split into four different areas, two of which are primarily industrial and office uses, and two that are primarily residential, as shown in Figure 2-28. The industrial and office uses in the City of Santa Fe Springs are separated from those in Whittier by the Presbyterian Intercommunity Hospital. In addition, there is a more even mix of industrial and office uses in Whittier than there are in Santa Fe Springs, where a majority of the land is developed with industrial uses. There is also a hub of commercial uses at the intersection of Washington and Lambert, with a Home Depot and locally-serving restaurants and retail. Evergreen Elementary is located in the southeastern part of the ½-mile radius, as is part of the former Fred C. Nelles Youth Correctional Facility, which was closed in 2004. Both of these uses are surrounded by primarily single-family residential uses, mixed with some multi-family homes. The Whittier Greenway trail is located on an abandoned railroad right-of-way between Santa Fe Springs Road and Whittier Boulevard.

The General Plan and zoning designations for this area generally match the industrial and residential portions, but there are greater differences in terms of commercial designations and uses. The General Plan designations, shown in

Figure 2-29, include more commercial/major office uses along Washington Boulevard and within the existing industrial areas. The zoning, shown in Figure 2-30, designates the Presbyterian Intercommunity Hospital as commercial rather than institutional or medical, due to the normalization of zones that was done by Metro.

b. Physical Characteristics

As in most areas that have a mix of residential and industrial uses, the scale and character of these areas vary by use. Photos of this station area are shown in Figure 2-31. The industrial areas have larger lots, nondescript buildings, and few pedestrian amenities. However, Washington Boulevard provides a better walking environment with nice sidewalks, street trees and buffers from passing cars in certain places. The hospital is a major use in this area and is separated from the street by ample landscaping and large parking lots. This design reduces the pedestrian access to the hospital since the front door is not on the main street. Although the Home Depot shopping center across the street is dominated by large parking lots, the restaurants and smaller retail stores are brought up to the street edge, creating a pedestrian-oriented streetscape.

The residential neighborhoods surrounding the station area are generally post-war single-family housing developments on quiet streets. Although the quality of the housing stock and landscaping varies between streets, these neighborhoods are stable overall.

c. Plans, Policies, and Projects

A number of parcels within the station area are part of City of Whittier Redevelopment Project Areas. The industrial and office uses, located between the Presbyterian Intercommunity Hospital and Whittier Boulevard, are within the Whittier Boulevard Commercial Corridor Original Project Area. Commercial parcels along Lambert Road and Washington Boulevard are within the Whittier Boulevard Commercial Corridor Additional Project Area. Additionally, parcels on the east side of Whittier Boulevard are within

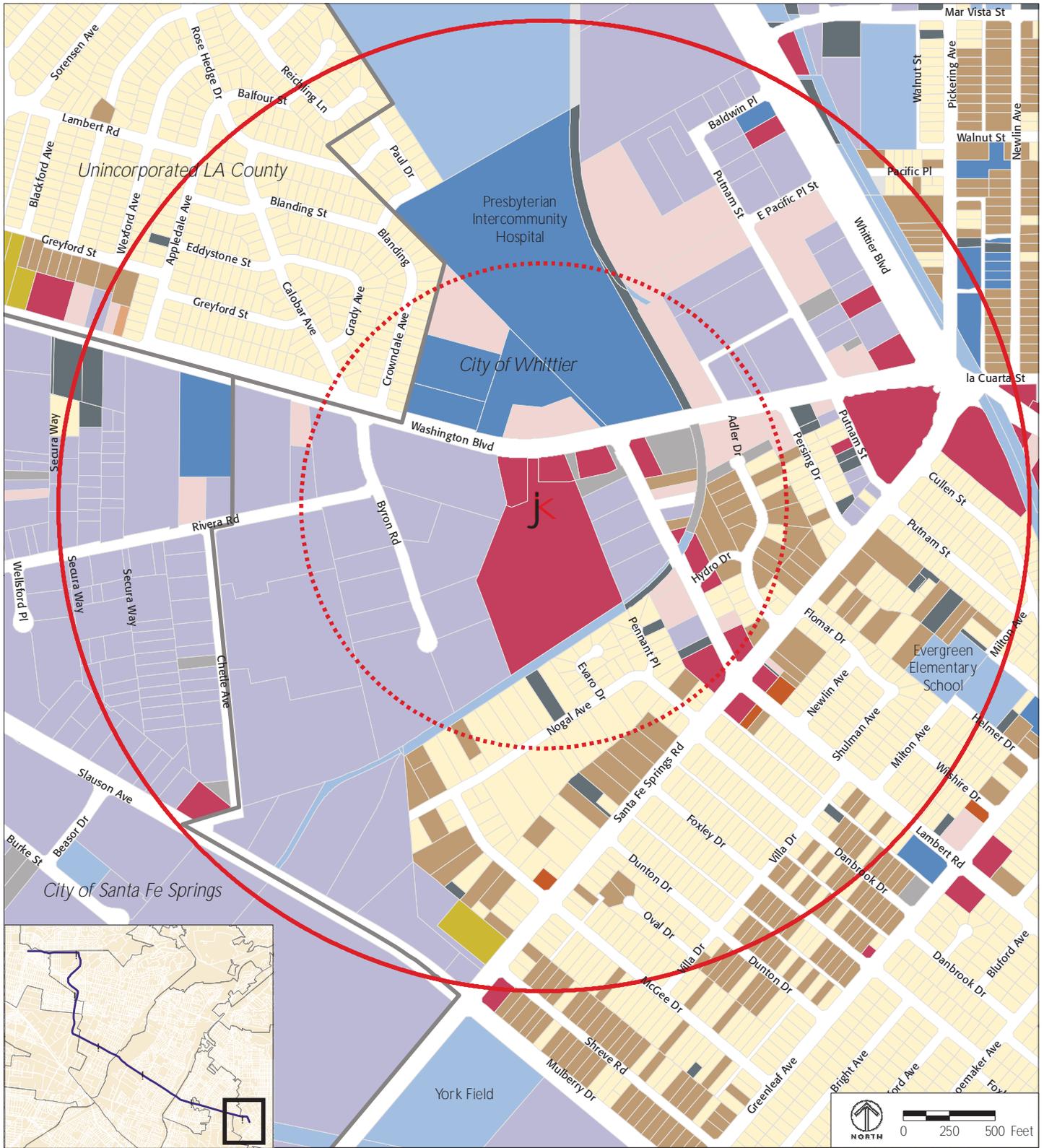


FIGURE 2-28

WASHINGTON/LAMBERT STATION AREA  
 EXISTING LAND USES

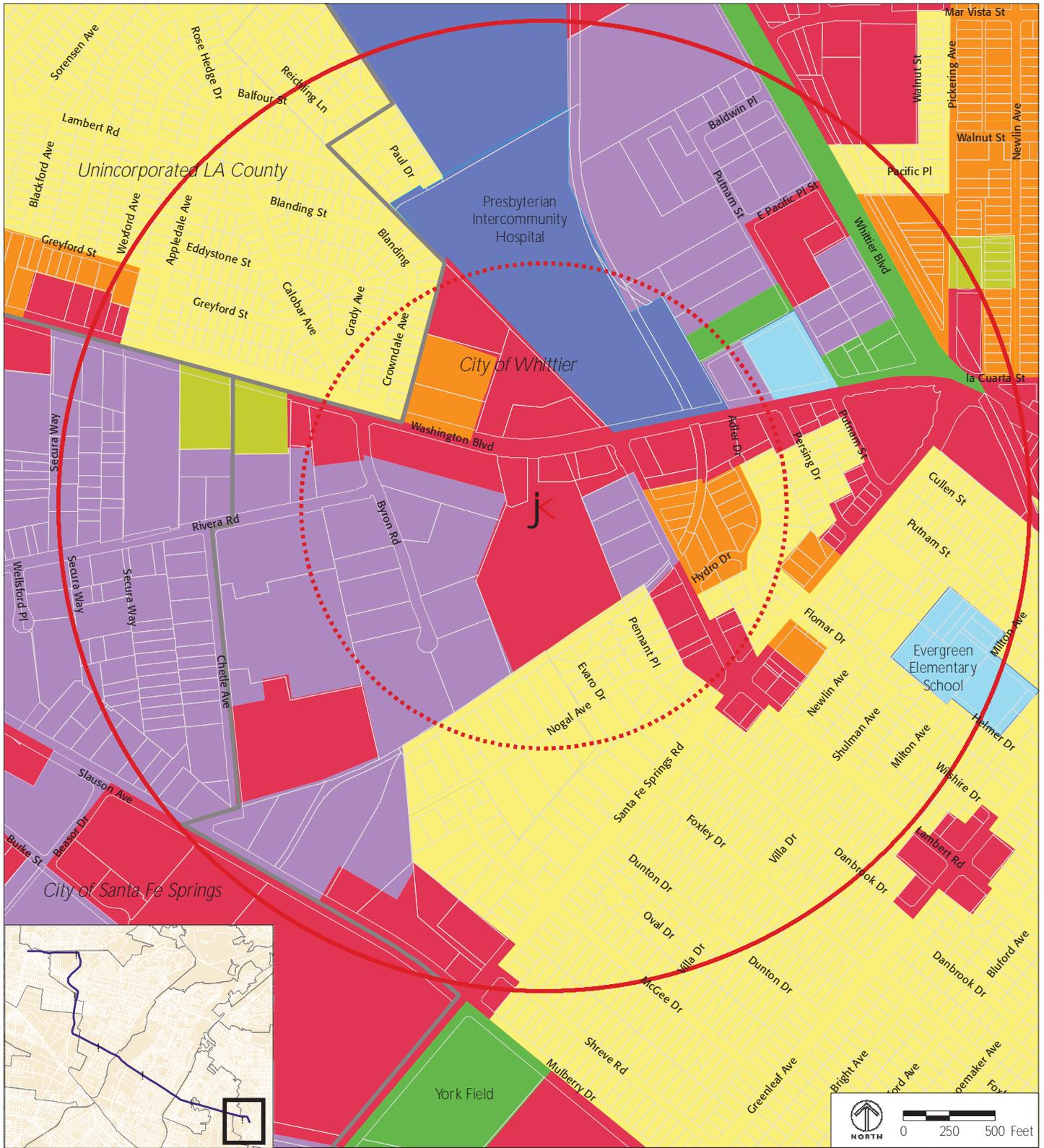
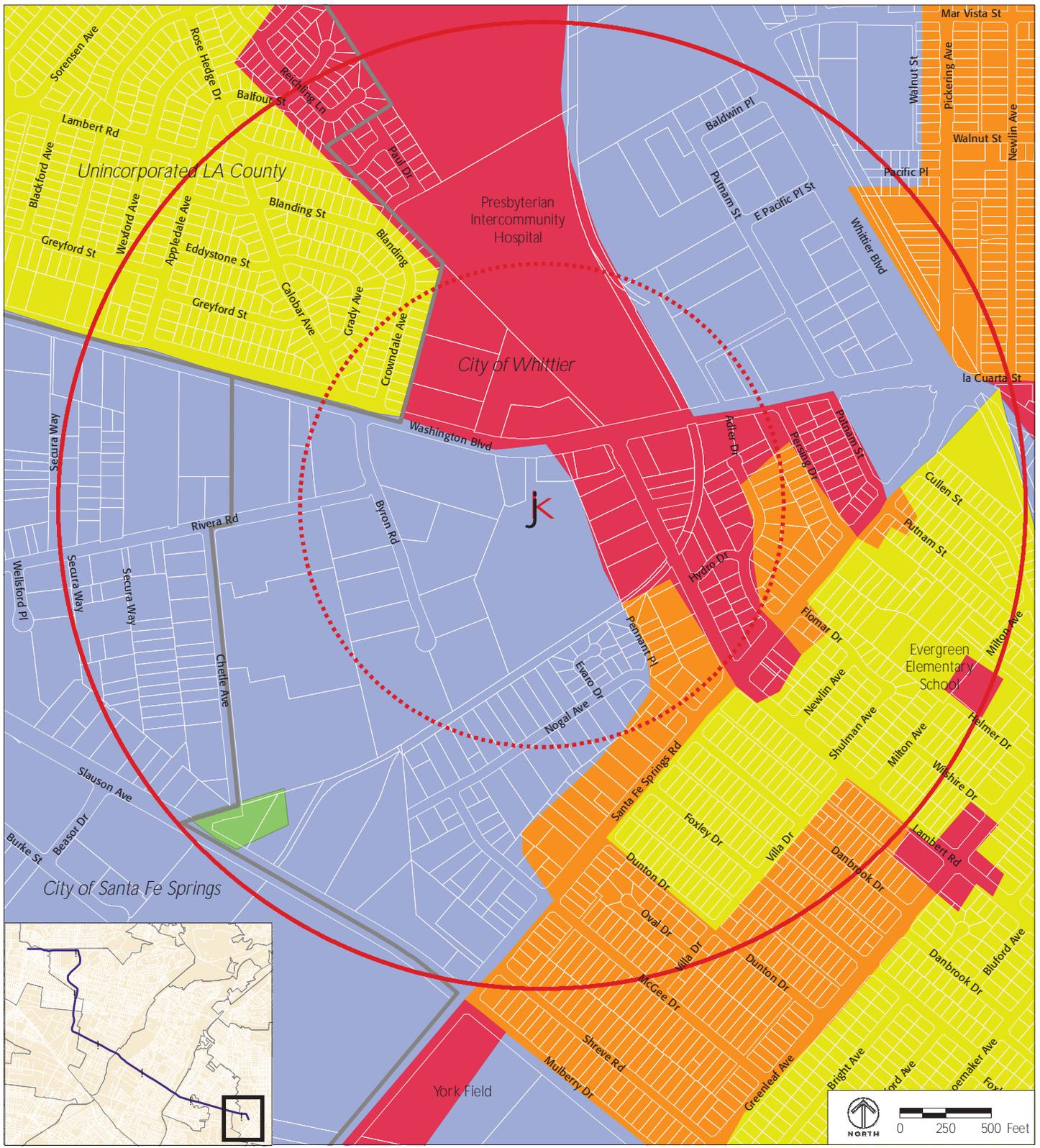


FIGURE 2-29

WASHINGTON/LAMBERT STATION AREA GENERAL PLAN DESIGNATIONS



- Industrial
- Commercial
- High Density Residential
- Medium Density Residential
- Open Space & Public Lands
- Half Mile From Station
- Quarter Mile From Station
- City Boundaries

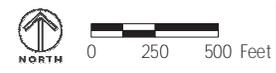


FIGURE 2-30  
 WASHINGTON/LAMBERT STATION AREA ZONING



FIGURE 2-31  
PHOTOS OF THE WASHINGTON/LAMBERT STATION AREA

the Whittier Boulevard Redevelopment Project and the Whittier Earthquake Recovery Redevelopment Project.

The City of Whittier has identified a number of development projects that are currently underway or planned for the future. These projects include the Presbyterian Intercommunity Hospital expansion, which is currently underway, and the Workplace District Sites (1, 2, 3, and 6), which are planned for future development. The Workplace District sites, totaling 95 acres, are located on the former Fred C. Nelles Youth Correctional Facility, the northern part of the Whittier Boulevard Commercial Corridor Original Project Area, and on the northwest corner of Washington Boulevard and Whittier Boulevard.

d. Infill Opportunities

The potential infill opportunity sites within the Washington/Lambert station area are shown in Figure 2-32 and listed below:

- ◆ Parcels between Whittier Boulevard and the Presbyterian Intercommunity Hospital.
- ◆ Parcels south of Washington Boulevard.

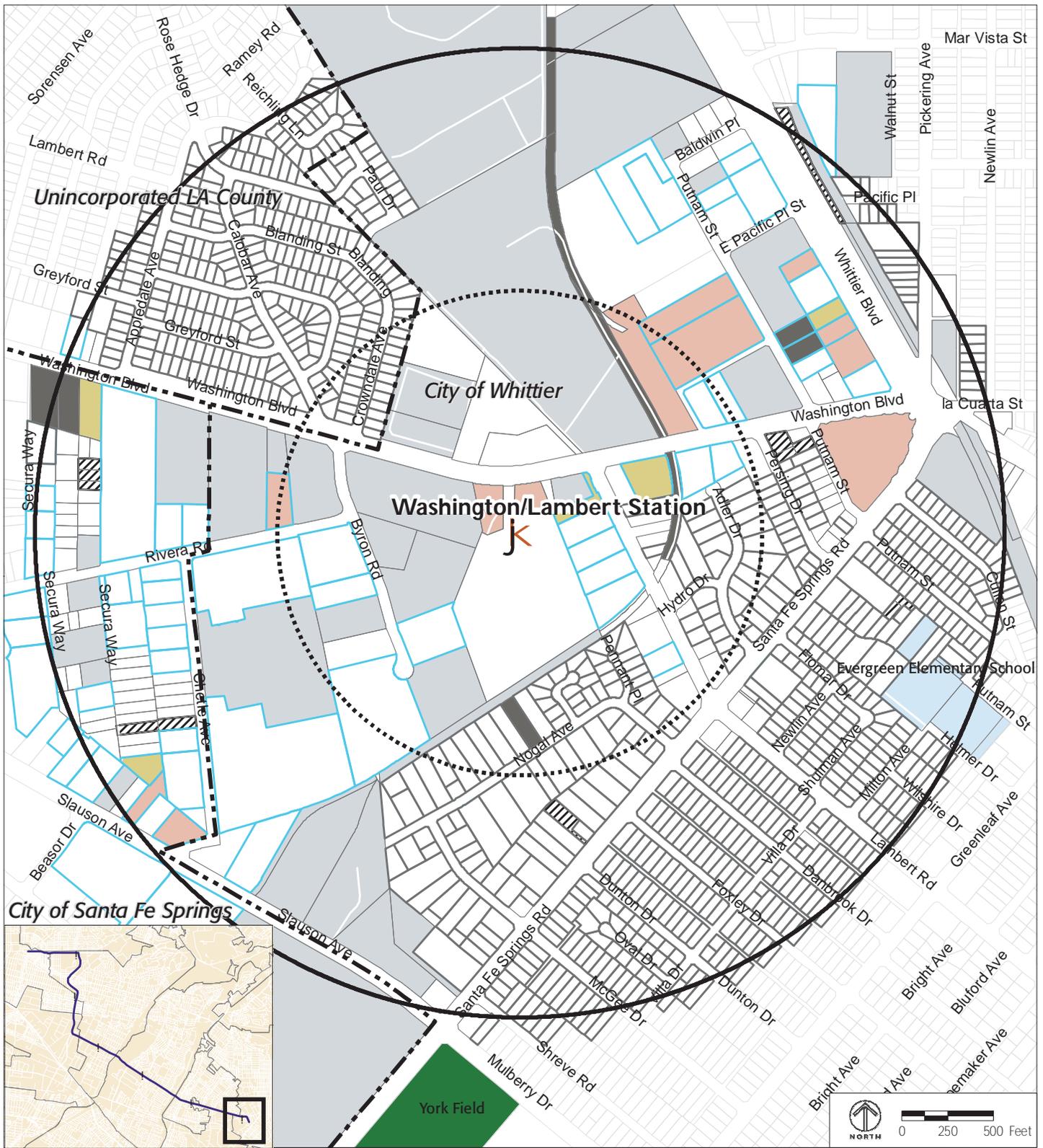


FIGURE 2-32

WASHINGTON/LAMBERT STATION AREA INFILL OPPORTUNITY

*WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT  
LAND USE AND URBAN DESIGN*

### 3 MOBILITY

This chapter provides a summary of the existing study area traffic and circulation conditions for transit-oriented development (TOD) land use concepts for the proposed station areas along the Washington Boulevard alignment.

#### A. Analysis Methodology

The study area for the project traffic/circulation study includes a radius area of ¼- to ½-mile at each of the proposed station sites. A ¼-mile distance is generally considered to be the acceptable walking distance for a typical pedestrian, but some pedestrians are willing to walk up to a ½-mile between land uses or between transit stops and destinations.

Barriers to pedestrian and bicycle movements, such as the connectivity of the TOD roadway system, affect pedestrian access to transit stations and bus stop areas from nearby businesses and other activity centers. Walking/biking distances to local origins and destinations have a direct impact on the mode split of the TOD once a majority of the new land uses have been constructed and are in operation. Vehicle access must be efficient and avoid conflicts with routes of other trip modes. The layout of the TOD circulation network creates opportunities and constraints that must be balanced in the land use planning process.

This chapter includes a review of existing recent traffic/circulation documents for the project station study areas, and existing roadway intersection levels of service. These documents are provided in Appendix A. Additionally, major trip generators/attractors within a ¼- to ½-mile distance from each station site and along the entire corridor are discussed. Peak-hour monitoring of major intersections was also conducted within each of the station study areas to achieve an understanding of particular operational issues by movement. This information, and estimated project roadway access points, distribution, and trip generation, will be used to determine the general effect of potential TOD projects on intersection operations.

**B. Existing Traffic Conditions in Station Study Areas**

A summary of existing roadway characteristics, traffic conditions, and major trip generators is provided in the sections below.

**1. Existing Major Roadway Characteristics in Study Area**

Table 3-1 provides a summary of the general roadway characteristics of major roadways within each of the station study areas.

TABLE 3-1 **MAJOR ROADWAY CHARACTERISTICS IN STATION AREAS**

<b>Roadway</b>	<b>Travel Lanes</b>	<b>Median Type</b>	<b>Parking</b>
Garfield Avenue Station Area			
Garfield Avenue	4	Striped	Permitted
Via Campo, west of Garfield	3, one way	None	Prohibited
Via Campo, east of Garfield	5	None	Prohibited
Wilcox Avenue	5	None	Prohibited
Garfield/Whittier Station Area			
Beverly Boulevard	4	Center 2WLTL or Striped	Permitted
Garfield Avenue	4	Striped	Permitted
Whittier Boulevard	4	Center 2WLTL or Striped	Permitted
Wilcox Avenue	2	Striped	Permitted
Greenwood Avenue Station Area			
Greenwood Avenue	4	Center 2WLTL or Striped	Prohibited
Washington Boulevard	6	Center 2WLTL or Striped	Prohibited
Washington/Rosemead Station Area			

WASHINGTON BOULEVARD  
 LIGHT RAIL TRANSIT CORRIDOR STUDY  
 BASELINE REPORT  
 MOBILITY

Roadway	Travel Lanes	Median Type	Parking
Paramount Boulevard, north of Washington	4	Center 2WLTL or Striped	Prohibited
Paramount Boulevard, south of Washington	4	Raised	Permitted
Rosemead Boulevard	4	Raised	Prohibited
Washington Boulevard	6	Raised	Prohibited
Passons Boulevard	2	Raised	Prohibited
Washington/Norwalk Station Area			
Pioneer Boulevard	4	Center 2WLTL or Raised	Permitted
Norwalk Boulevard	4	Center 2WLTL	Permitted
Washington Boulevard	4	Center 2WLTL or Striped	Prohibited
Broadway, north of Washington	4	Striped	Permitted
Broadway, south of Washington	2	Striped	Permitted
Washington/Lambert Station Area			
Lambert Road	4	Striped	Permitted
Washington Boulevard	4	Center 2WLTL	Prohibited
Whittier Boulevard	4	Raised	Permitted
Santa Fe Springs Road	4	Raised	Permitted

Note: 2WLTL = Two-way left turn lane (in striped median).

Source: KOA, 2011.

## 2. Available Existing Conditions Traffic Data

Level of service information was compiled for area intersections, based on information provided by local jurisdictions, including the cities of Santa Fe Springs, Pico Rivera, and Whittier. This information was supplemented by peak-hour monitoring of roadways within each station area, as summarized below.

Table 3-2 provides a summary of the level of service information for area intersections within the station study area in Pico Rivera. The information is based on a City analysis for the County Congestion Management Program (CMP) of the Rosemead Boulevard/Washington Boulevard intersection, and a traffic study conducted for a development near the Passons Boulevard/Washington Boulevard intersection (Washington at Passons Retail Center Traffic Impact Study).

Table 3-3 provides a summary of the level of service information for area intersections within two of the station sites in the Santa Fe Springs area. This information is based on existing and future conditions analyzed for the Washington Boulevard Redevelopment Plan.

The data within Table 3-3 indicates that out of the 21 intersections analyzed for the Santa Fe Springs study area, nine locations are operating at poor level of service values of E or F under existing conditions. In the future analyzed period, the year 2028, 11 locations have been estimated to be operating at poor level of service values.

Table 3-4 provides a summary of additional level of service information for area intersections within the Washington/Lambert station area. This information is based on existing and future conditions analyzed for the Presbyterian Intercommunity Hospital (PIH) project traffic study.

The data within Table 3-4 indicates that out of the 13 intersections analyzed for the PIH project traffic study, one location is operating at poor level of

service values of E or F under existing (year-2006 for this study) and the year-2010 forecast conditions.

The level of service data summarized within Tables 3-2 through 3-4 is illustrated within the related station study areas in Figures 3-1 through 3-3.

TABLE 3-2 **LEVEL OF SERVICE INFORMATION FROM PASSONS AND ROSEMEAD BOULEVARDS STUDIES**

Intersection	Station Area	Existing*		Cumulative		Existing +	
		LOS	LOS	LOS**	LOS**	Growth +	Project**
		AM	PM	AM	PM	AM	PM
Rosemead Blvd. & Washington Blvd.	Washington/Rosemead	D	D	N/A	N/A	N/A	N/A
Passons Blvd. & Washington Blvd.	Washington/Rosemead	C	D	C	D	C	D

\*City counts were conducted in 2011 for the Rosemead/Washington intersection. Traffic Counts were conducted in 2010 for the Passons/Washington development study.

\*\*Future projections were for the year 2011, for the Passons/Washington study. Future conditions were not analyzed for the Rosemead/Washington intersection.

WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT  
MOBILITY

TABLE 3-3 **LEVEL OF SERVICE INFORMATION FROM WASHINGTON BOULEVARD REDEVELOPMENT PLAN**

Intersection	Control	Station Area	Year 2008		Future 2028 Forecast			
			Existing LOS		Cumulative LOS		Existing+ Growth+ Project	
			AM	PM	AM	PM	AM	PM
Mines Blvd & Norwalk Blvd	S	Washington/ Norwalk*	A	A	B	B	B	B
Mines Blvd & Broadway Ave	S	Washington/ Norwalk*	A	A	A	A	A	A
Mines Blvd & Sorenson Ave	S	Washington/ Lambert & Washington/ Norwalk*	A	A	A	B	A	B
Pioneer Blvd & I-605 NB On-Ramp/Saragosa Ave	U	Washington/ Norwalk	D	E	F	F	F	F
Pioneer Blvd & I-605 NB Off-Ramp (North of Washington)	U	Washington/ Norwalk	C	E	C	F	C	F
Washington Blvd & Pioneer Blvd	S	Washington/ Norwalk	E	D	F	F	F	F
Washington Blvd & Norwalk Blvd	S	Washington/ Norwalk	E	E	F	F	F	F
Washington Blvd & Broadway Ave	S	Washington/ Norwalk*	D	D		F		F
Washington Blvd & Westman Ave	U	Washington/ Norwalk	F	F	F	F	F	F
Washington Blvd & Allport Ave	U	Washington/ Lambert & Washington/ Norwalk*	F	F	F	F	F	F
Washington Blvd & Sorensen Ave	S	Washington/ Lambert & Washington/ Norwalk*	C	A	D	B	D	B
Broadway Ave & Norwalk Blvd	S	Washington/ Norwalk	A	A	A	A	A	A
Pioneer Blvd & I-605 On-Ramp (South of Washington)	U	Washington/ Norwalk	B	C	C	C	C	C

WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT  
MOBILITY

Intersection	Control	Station Area	Year 2008		Future 2028 Forecast			
			Existing LOS		Cumulative LOS		Existing+ Growth+ Project	
			AM	PM	AM	PM	AM	PM
Pioneer Blvd & I-605 off-ramp (north of Slauson)	U	Washington/Norwalk	F	F	F	F	F	F
Slauson Ave & I-605 SB off-ramp	S	Washington/Norwalk*	B	B	C	C	C	C
Slauson Ave & Pioneer Blvd	S	Washington/Norwalk*	E	D	F	F	F	F
Slauson Ave & Norwalk Blvd	S	Washington/Norwalk*	E	D	F	F	F	F
Slauson Ave & Allport Ave	U	Washington/Lambert & Washington/Norwalk*	F	C	F	D	F	C
Slauson Ave & Sorensen Ave	S	Washington/Lambert*	C	C	D	E	D	E
Slauson Ave & Santa Fe Springs Rd	S	Washington/Lambert*	C	C	D	D	D	D
Sorensen Ave & Santa Fe Springs Rd	U	-	B	B	C	C	C	C

\* These intersections are near the perimeter of the station area ½-mile radius.

Control: U=unsignalized, S= signalized

Source: KOA, 2011.

WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT  
MOBILITY

TABLE 3-4 **LEVEL OF SERVICE INFORMATION FROM PIH STUDY**

Intersection	Station Area	Year 2006 Existing LOS		Year 2010 Forecast			
		AM	PM	w/Related		w/Project	
		AM	PM	AM	PM	AM	PM
Sorenson Ave & Washington Blvd	Washington/Lambert*	D	E	E	F	D	E
Lambert Rd & Washington Blvd	Washington/Lambert	C	C	C	C	C	C
Lambert Rd & Santa Fe Springs	Washington/Lambert	B	C	B	C	B	C
Pacific Pl & Putnam St	Washington/Lambert	A	A	A	A	A	A
Putnam St & Washington Blvd	Washington/Lambert	A	A	A	A	A	A
Pacific Pl & Whittier Blvd (west)	Washington/Lambert	A	A	A	A	A	A
Sorenson Ave & Whittier Blvd #	-	D	D	D	D	D	C
Philadelphia St & Whittier Blvd #	-	D	C	D	C	C	B
Penn St & Whittier Blvd	Washington/Lambert*	C	B	C	B	C	B
Mar Vista St & Whittier Blvd #	Washington/Lambert	C	B	B	B	B	B
Pacific Pl & Whittier Blvd (east)	Washington/Lambert	A	A	A	B	A	A
Santa Fe Springs/Pickering Ave & Washington/Whittier Blvd	Washington/Lambert	D	D	D	D	C	D
Greenleaf Ave & Whittier Blvd #	Washington/Lambert*	C	C	B	C	B	B

\* The intersections are near the perimeter of the 1/2-mile radius.

# Future conditions analysis haven taken into account the Caltrans traffic signal improvements along Whittier Boulevard.

Source: KOA, 2011.



**LEGEND**

2 Proposed Station

AM/PM LOS

Signalized

Unsignalized

1/4 Mile

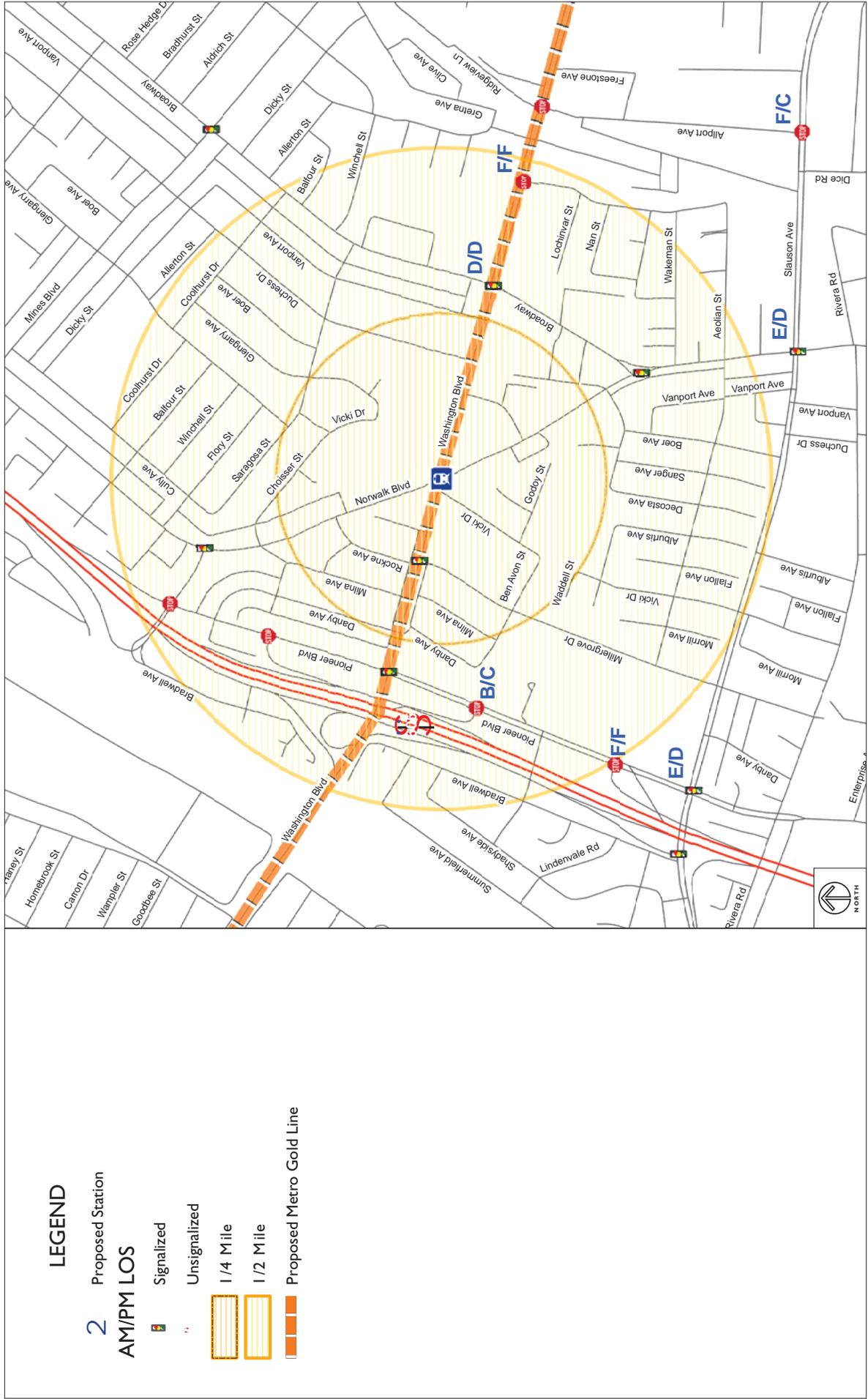
1/2 Mile

Proposed Metro Gold Line

Source: KOA, 2011

FIGURE 3-1

WASHINGTON/ROSEMEAD STATION AREA LEVEL OF SERVICE



**LEGEND**

2 Proposed Station

AM/PM LOS

Signalized

Unsignalized

1/4 Mile

1/2 Mile

Proposed Metro Gold Line

FIGURE 3-2

WASHINGTON/NORWALK STATION AREA LEVEL OF SERVICE

Source: KOA, 2011



### 3. Traffic Congestion Issues in All Areas

As limited data was available for some of the station study areas, a supplemental analysis was conducted to determine general areas of congestion in each area during weekday peak periods. The information below provides a summary of identified areas of congestion and general observations made during the monitoring that was conducted for this study.

#### a. Garfield Avenue

##### AM Peak Hour

- ◆ Light traffic volumes along Garfield Avenue.
- ◆ Garfield/Pomona – Northbound left turn lane volumes to State Route (SR)-60 westbound ramp was queued back to Via Campo. Heavy traffic to the westbound on-ramp at both northbound left and southbound right approaches.

##### PM Peak Hour

- ◆ Moderate traffic volumes along Garfield Avenue.

#### b. Pomona Boulevard

##### AM Peak Hour

- ◆ Light traffic volumes along Pomona Boulevard.

##### PM Peak Hour

- ◆ Moderate traffic volumes along Pomona Boulevard.

#### c. Via Campo

##### AM Peak Hour

- ◆ Light traffic volumes along Via Campo.

##### PM Peak Hour

- ◆ Moderate traffic volumes along Via Campo.

#### d. Beverly Boulevard

##### AM Peak Hour

- ◆ Light traffic volumes along Beverly Boulevard.

- ◆ Light traffic volumes at the eastbound and westbound approaches.

PM Peak Hour

- ◆ Light traffic volumes along Beverly Boulevard.
- ◆ Light traffic volumes at the southbound left turn lane and the eastbound and westbound approaches.

e. Whittier Boulevard

AM Peak Hour

- ◆ Light traffic volumes along Whittier Boulevard.

PM Peak Hour

- ◆ Moderate traffic volumes at the eastbound approach on Whittier Boulevard, west of Garfield Avenue.
- ◆ Light traffic conditions at the westbound approach on Whittier Boulevard, west of Garfield Avenue.

f. Washington Boulevard

AM Peak Hour

- ◆ Light vehicle volumes at the eastbound approach.
- ◆ Moderate vehicle volumes at the westbound approach.
- ◆ Rosemead/Washington – Moderate traffic volumes at approaches.

PM Peak Hour

- ◆ Moderate traffic volumes along Washington Boulevard, west of Greenwood Avenue.
- ◆ Light traffic volumes along Washington Boulevard, from Greenwood Avenue to Bluff Road.
- ◆ Moderate to heavy volumes along Washington Boulevard, east of Bluff Road.
- ◆ Heavy eastbound and moderate westbound volumes at the Passons Boulevard and Washington Boulevard intersection.
- ◆ Heavy traffic volumes at the eastbound approach on Washington Boulevard, east of Passons Boulevard.

- ◆ Moderate traffic volumes at the westbound approach on Washington Boulevard, east of Parsons Boulevard.
- ◆ Heavy traffic volumes at the eastbound and westbound approaches on Washington Boulevard, east of Broadway Avenue.

g. Greenwood Avenue

AM Peak Hour

- ◆ Light traffic volumes along Greenwood Avenue.

PM Peak Hour

- ◆ Light traffic volumes along Greenwood Avenue.

h. Rosemead Boulevard

AM Peak Hour

- ◆ Light traffic volumes along Rosemead Boulevard.

PM Peak Hour

- ◆ Moderate to heavy traffic volumes along Rosemead Boulevard.
- ◆ Heavy traffic volumes at the intersection of Rosemead Boulevard and Washington Boulevard.
- ◆ Significant queuing at the eastbound and westbound left-turn lanes.

i. Pioneer Boulevard

AM Peak Hour

- ◆ Light traffic volumes along Pioneer Boulevard.
- ◆ Pioneer/Washington – Moderate traffic volumes at approaches.

PM Peak Hour

- ◆ Moderate traffic volumes along Pioneer Boulevard.
- ◆ Heavy traffic volumes at the Pioneer Boulevard and Washington Boulevard intersection. Significant queuing at the westbound turn lane.

j. Norwalk Boulevard

AM Peak Hour

- ◆ Light traffic volumes along Norwalk Boulevard.

- ◆ Moderate traffic volumes at the Norwalk/Washington intersection approaches.

PM Peak Hour

- ◆ Moderate traffic volumes along Norwalk Boulevard.
- ◆ Heavy traffic volumes at the Norwalk Boulevard/Washington Boulevard intersection.

k. Lambert Road

AM Peak Hour

- ◆ Light traffic volumes along Lambert Road.
- ◆ Heavy traffic volumes at the Lambert/Washington intersection approaches.

PM Peak Hour

- ◆ Light traffic volumes along Lambert Road.
- ◆ Significant queuing at the eastbound right turn lane of the Lambert/Washington intersection.

l. Santa Fe Springs Road

AM Peak Hour

- ◆ Light traffic volumes along Santa Fe Springs Road.

PM Peak Hour

- ◆ Moderate traffic volumes along Santa Fe Springs Road.

m. Whittier Boulevard (Near Washington Boulevard/Santa Fe Springs Road)

AM Peak Hour

- ◆ Moderate traffic volumes along Whittier Boulevard.
- ◆ At the five-point intersection, traffic conditions were moderate/heavy.
- ◆ Moderate queuing at Whittier to Mar Vista movements, and significant queuing at the Whittier/Mar Vista left-turn lane.

#### PM Peak Hour

- ◆ Heavy traffic volumes along Whittier Boulevard, north of Washington Boulevard.
- ◆ Heavy traffic volumes along Whittier Boulevard, south of Washington Boulevard.
- ◆ Heavy traffic volumes at the five-point intersection.

#### 4. Major Trip Generators

As described in Chapter 2, a majority of land uses within the station study areas are low-density commercial, residential, with some light industrial uses. The industrial uses are more prevalent toward the center of the overall study area, near the intersection of Garfield Avenue/Washington Boulevard and spanning north to Flotilla Street and east to Greenwood Avenue. Higher density residential areas are present along Garfield Avenue, between Whittier Boulevard and Via Paseo. Large suburban-style commercial centers are present along Washington Boulevard, between Paramount Boulevard and Rosemead Boulevard.

Besides these general land use trends, the area also has the following more significant land uses, although some of these locations are not within walking distance of the project corridor:

- ◆ Montebello Municipal Golf Course – At the southwest corner of Garfield Avenue/Via Campo
- ◆ Hilton Garden Inn Montebello – At the southwest corner of Garfield Avenue/Via Campo
- ◆ Cantwell-Sacred Heart of Mary High School – At 329 North Garfield Avenue (near Hay Street)
- ◆ Commerce Citadel – Southwest of the Garfield Avenue/Washington Boulevard intersection
- ◆ Commerce Casino – Southwest of the Garfield Avenue/Washington Boulevard intersection

- ◆ Presbyterian Intercommunity Hospital – At north side of the Washington Boulevard/Lambert Road intersection
- ◆ Uptown Whittier District – To the northeast of the Washington Boulevard/Whittier Boulevard intersection
- ◆ The Quad at Whittier Shopping Center – To east of Washington Boulevard/Whittier Boulevard intersection

Additional high schools, community parks and recreation centers, and other local trip generators, are located within the overall corridor. These other locations have been mapped but not identified individually in the list above. The locations of these area trip generators, as they relate to the locations of the station study areas, as shown in Figure 3-4.

### C. Existing Transit and Bicycle Facilities in Station Study Areas

This report section provides information on existing public transit services and bicycle facilities within each station study area.

#### 1. Existing Transit Service in Station Study Areas

The study areas of the proposed station sites are served by public transit operated by Metro, Montebello Bus Lines, Norwalk Transit, the County of Los Angeles Department of Public Works, and the City of Monterey Park. Table 3-5 provides a summary of the existing transit services that operate within the station study areas. Destinations of each line are defined, along with the peak service frequencies.

The lines and stops of these transit routes within the proposed station areas are provided in Figure 3-5 through Figure 3-10.

#### 2. Existing Bicycle Facilities in Station Study Areas

The station study areas have existing bicycle facility networks, or are close to regional bicycle facilities that provide travel opportunities for this mode into and out of each area. The study areas, in general, have some signed bicycle

routes and a limited number of striped/signed bicycle lanes. The significant bicycle facilities in the area are the bicycle paths (dedicated rights-of-way) along the San Gabriel River and Rio Hondo corridors. The locations of roadway bicycle facilities within the proposed station areas are provided on Figures 3-11 through Figure 3-16.

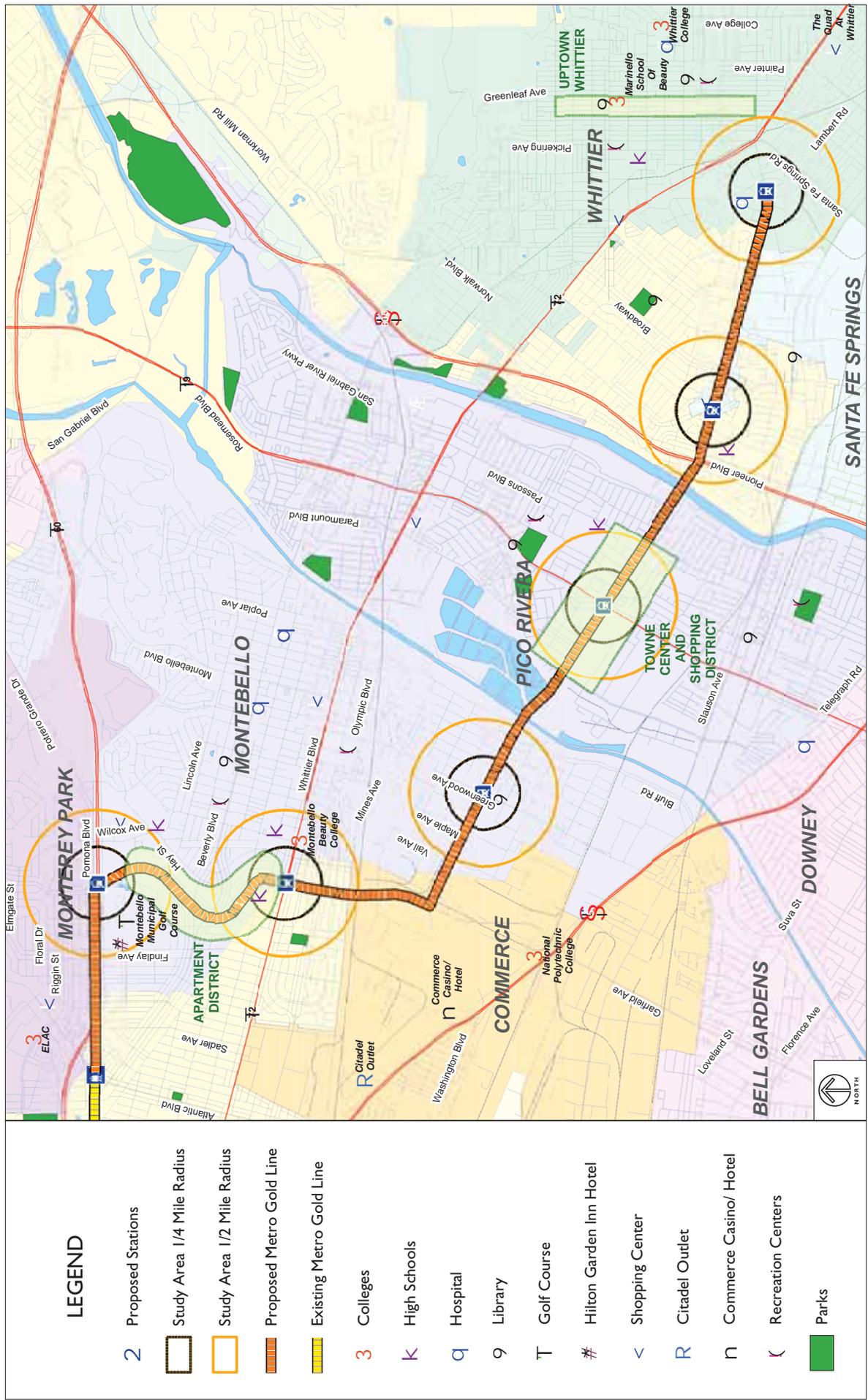


FIGURE 3 - 4

Source: KOA, 2011

WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT  
MOBILITY

TABLE 3-5 PROJECT STATION AREA TRANSIT SERVICES

Agency	Line	From	To	Via	Peak Frequency
Metro	84	Downtown LA	Eagle Rock	Eagle Rock Blvd	12-15 min
	18	Wilshire Center/Downtown LA	Montebello	6 <sup>th</sup> St & Whittier Blvd	7-10 min
	66	Wilshire Center/Downtown LA	Montebello	8 <sup>th</sup> & Olympic	7-10 min
	265	Pico Rivera	Lakewood Center Mall	Paramount Blvd	30 min
	266	Pasadena	Lakewood	Paramount Blvd & Lakewood Blvd	30 min
	270	Monrovia	Norwalk Station	Workman Mill Rd & Pech Rd	55 min
	577	El Monte	Long Beach	I-605 Freeway	40-44 min
	10	East Los Angeles College	Whitwood Mall	Whittier Blvd	12 min
	20	San Gabriel	Montebello	Montebello Blvd	15 min
	30	San Marino	South Gate	Garfield Ave	45 min
Montebello	40	Norwalk	Downtown LA	Beverly Blvd	9-12 min
	50	Downtown LA	La Mirada	Washington Blvd	30-35 min
	60	Pico Rivera	Santa Fe Springs	Passons Ave	27 min
	70	Circular Route within Montebello		Washington Blvd & Greenwood Ave	30 min
	342	Norwalk	Downtown LA	Beverly Blvd	*
	Norwalk	1	Rio Hondo College	Bellflower	Norwalk Blvd
3		Whittier Historic Depot	Artesia	Lambert Rd & Washington Blvd & Whittier Blvd	60 min

WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT  
MOBILITY

TABLE 3-4 PROJECT STATION AREA TRANSIT SERVICES (CONTINUED)

Agency	Line	From	To	Via	Peak Frequency
LA County DWP Shuttles	Sunshine	Whitwood Town Center	Sorenson Park	Washington Blvd & Whittier Blvd	60 min
	El Sol	East Los Angeles	Montebello	Whittier Blvd	30-60 min
Monterey Park Spirit	1	Shuttle Loop within City of Monterey Park		Riggin St & Wilcox Ave	40 min
	2	Shuttle Loop within City of Monterey Park		Riggin St & Wilcox Ave	40 min
	3	Shuttle Loop within City of Monterey Park		Riggin St	50 min

\* This express route departs Norwalk Blvd to Downtown LA in the morning peak hour and vice versa in the afternoon peak hour.  
Source: KOA, 2011.



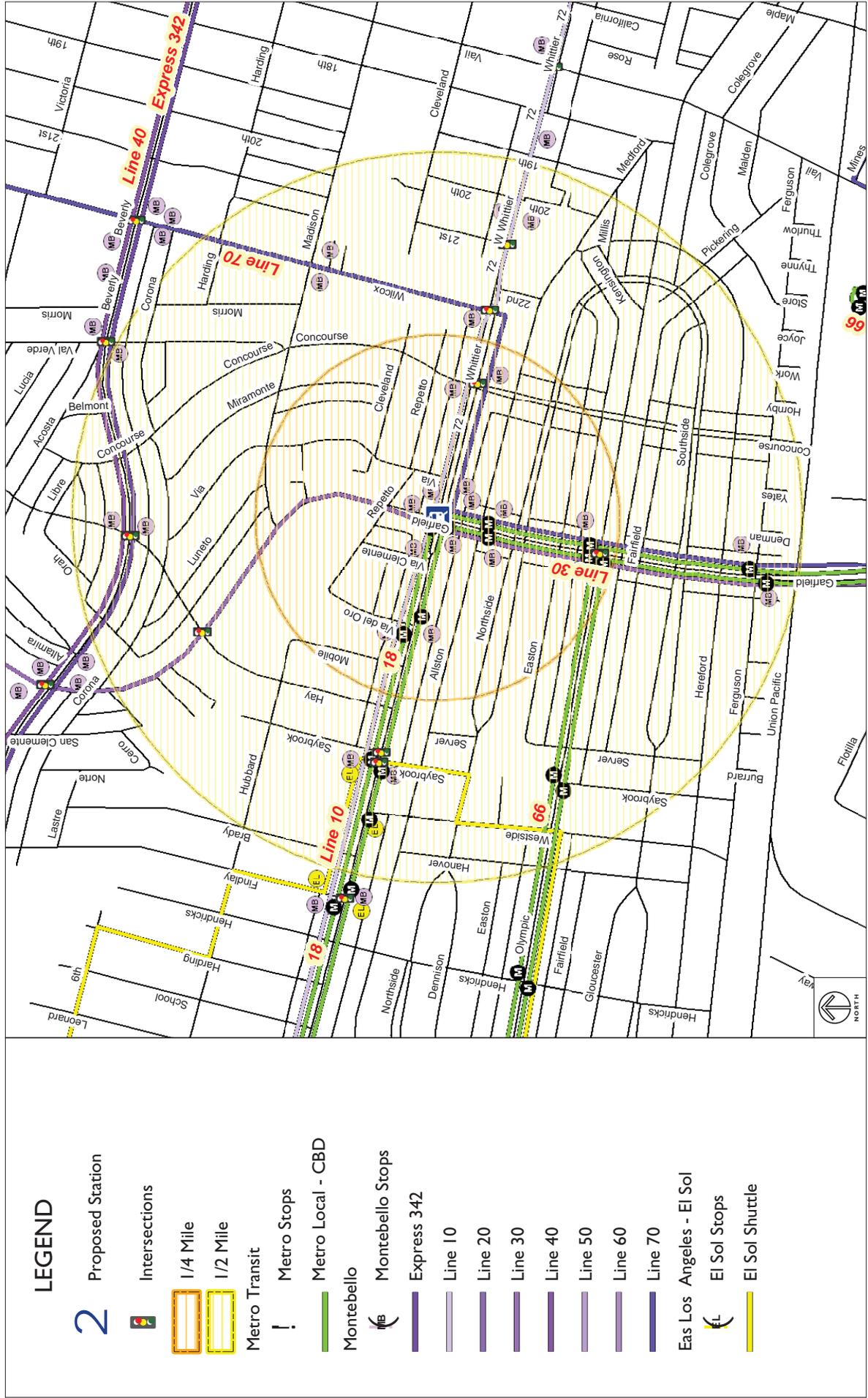
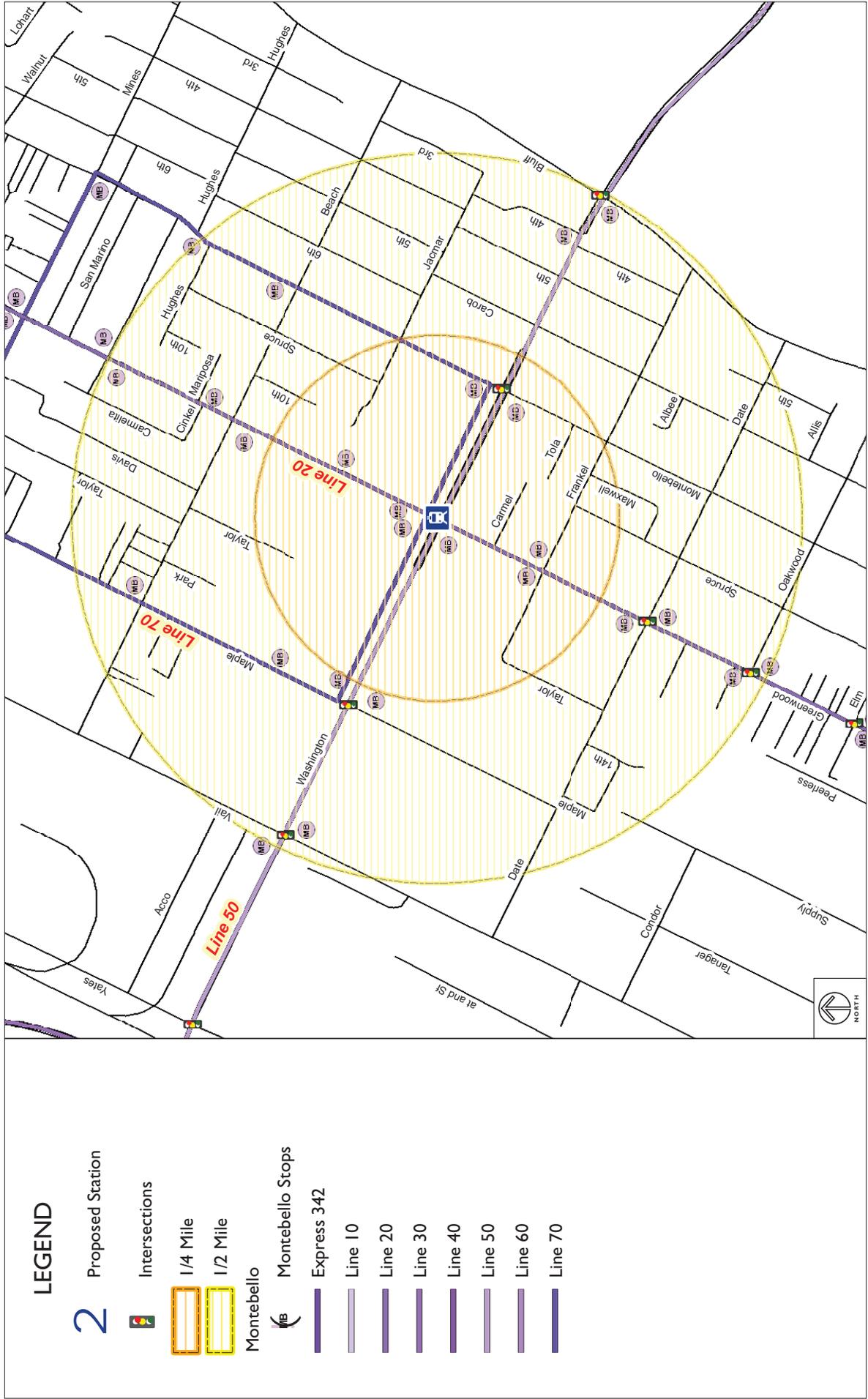


FIGURE 3 - 6

GARFIELD/WHITTIER STATION AREA TRANSIT SERVICES

Source: KOA, 2011



**LEGEND**

2 Proposed Station

Intersections

1/4 Mile  
1/2 Mile

Montebello

Montebello Stops

Express 342

Line 10

Line 20

Line 30

Line 40

Line 50

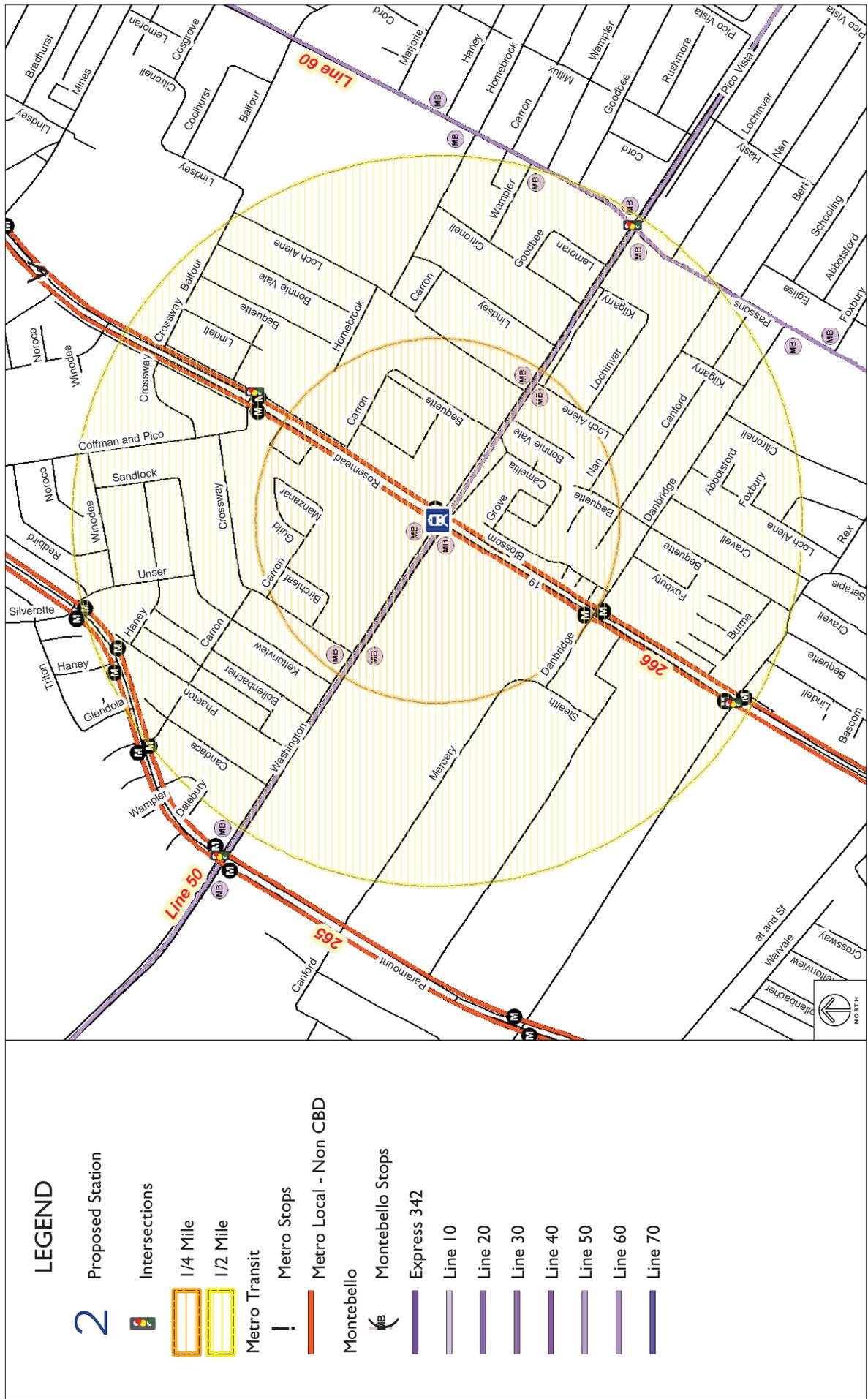
Line 60

Line 70

Source: KOA, 2011

FIGURE 3-7

**GREENWOOD AVENUE STATION AREA TRANSIT SERVICES**



**LEGEND**

- 2 Proposed Station
- Intersections
  - 1/4 Mile
  - 1/2 Mile
- Metro Transit
  - Metro Stops
  - Metro Local - Non CBD
- Montebello
  - Montebello Stops
  - Express 342
  - Line 10
  - Line 20
  - Line 30
  - Line 40
  - Line 50
  - Line 60
  - Line 70

Source: KOA, 2011

FIGURE 3-8



**LEGEND**

- 2 Proposed Station
- Intersections
- 1/4 Mile
- 1/2 Mile
- Metro Transit
- ! Metro Stops
- Metro Express 577
- Montebello
- Montebello Stops
- Express 342
- Line 10
- Line 20
- Line 30
- Line 40
- Line 50
- Line 60
- Line 70
- Norwalk
- Norwalk Stops
- Route 1
- Route 3

Source: KOA, 2011

FIGURE 3-9

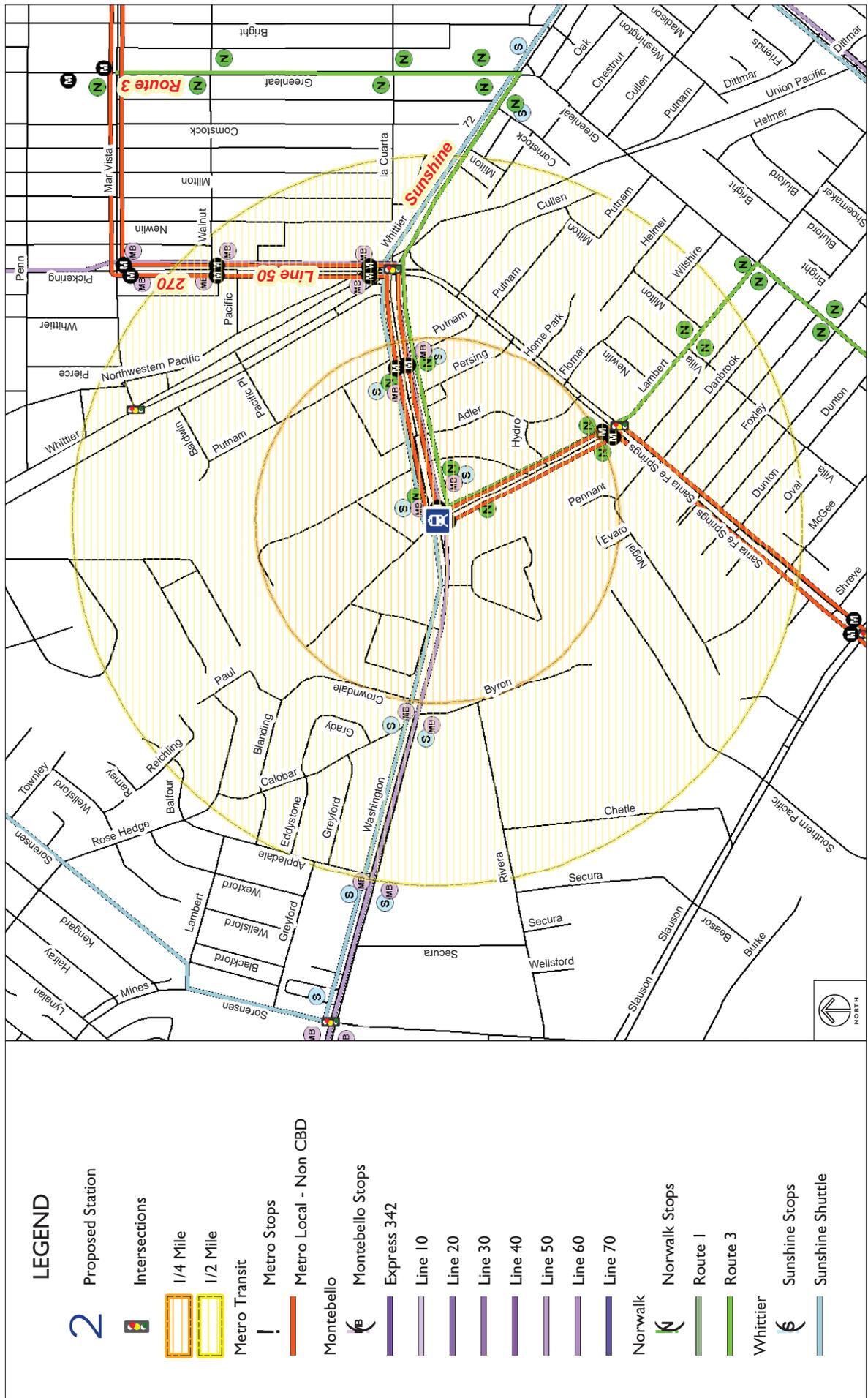
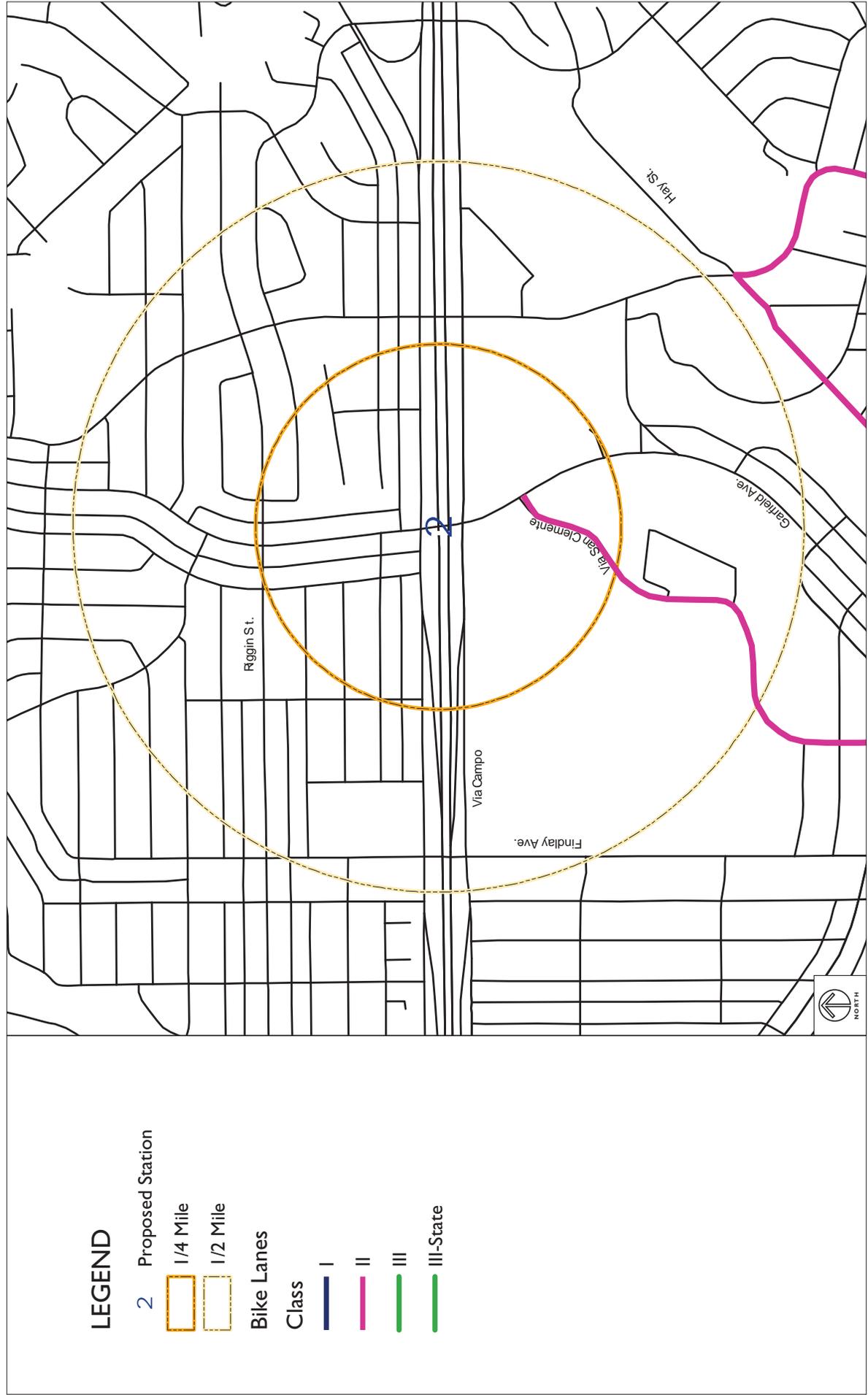


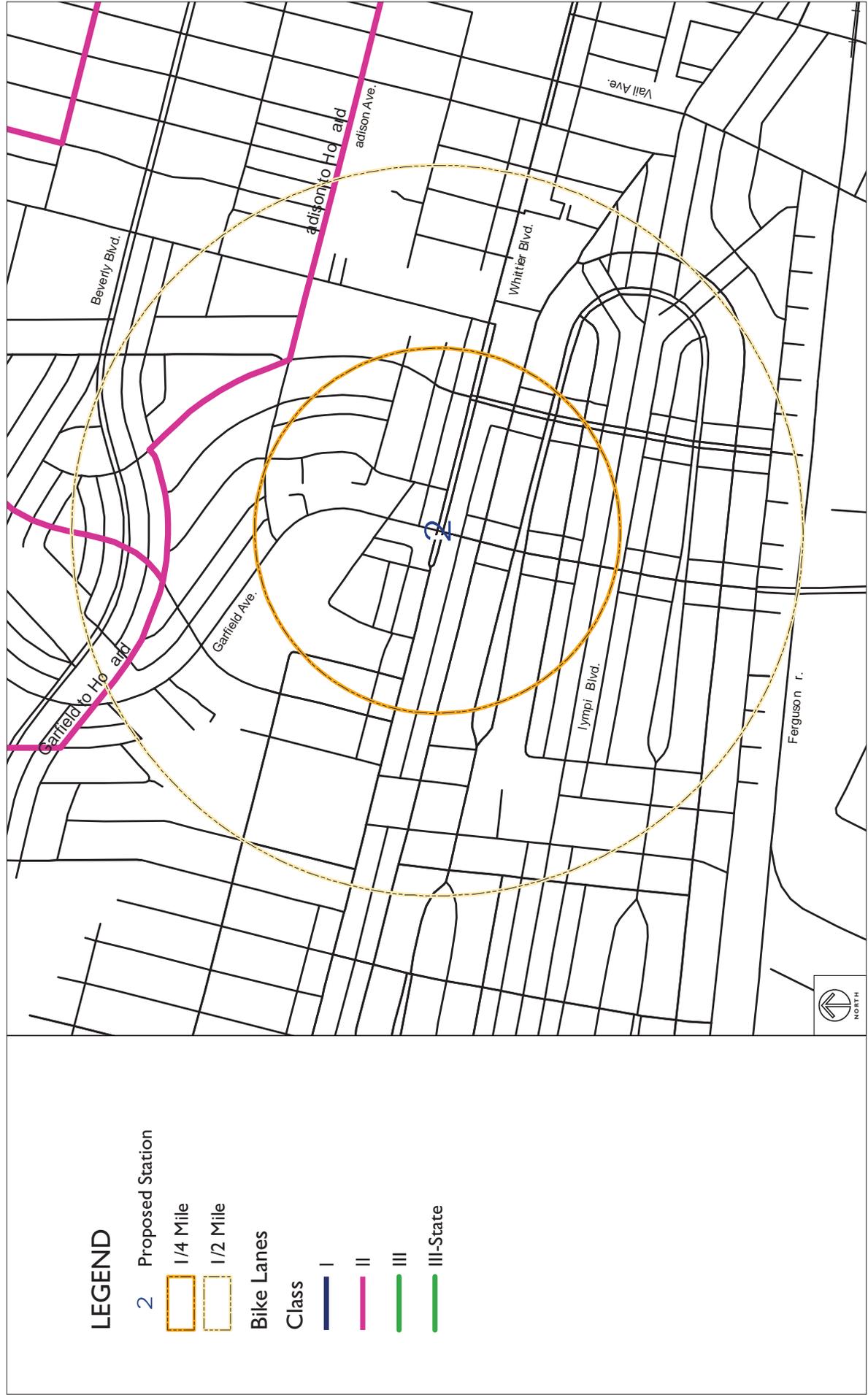
FIGURE 3-10

Source: KOA, 2011



Source: KOA, 2011

FIGURE 3-11  
GARFIELD AVENUE STATION AREA EXISTING BIKE LANES



Source: KOA, 2011

FIGURE 3-12

GARFIELD/WHITTIER STATION AREA EXISTING BIKE LANES



Source: KOA, 2011

FIGURE 3-13  
GREENWOOD AVENUE STATION AREA EXISTING BIKE LANES



Source: KOA, 2011

FIGURE 3-14

WASHINGTON/ROSEMEAD STATION AREA EXISTING BIKE LANES



**LEGEND**

2 Proposed Station

1/4 Mile

1/2 Mile

Bike Lanes

Class

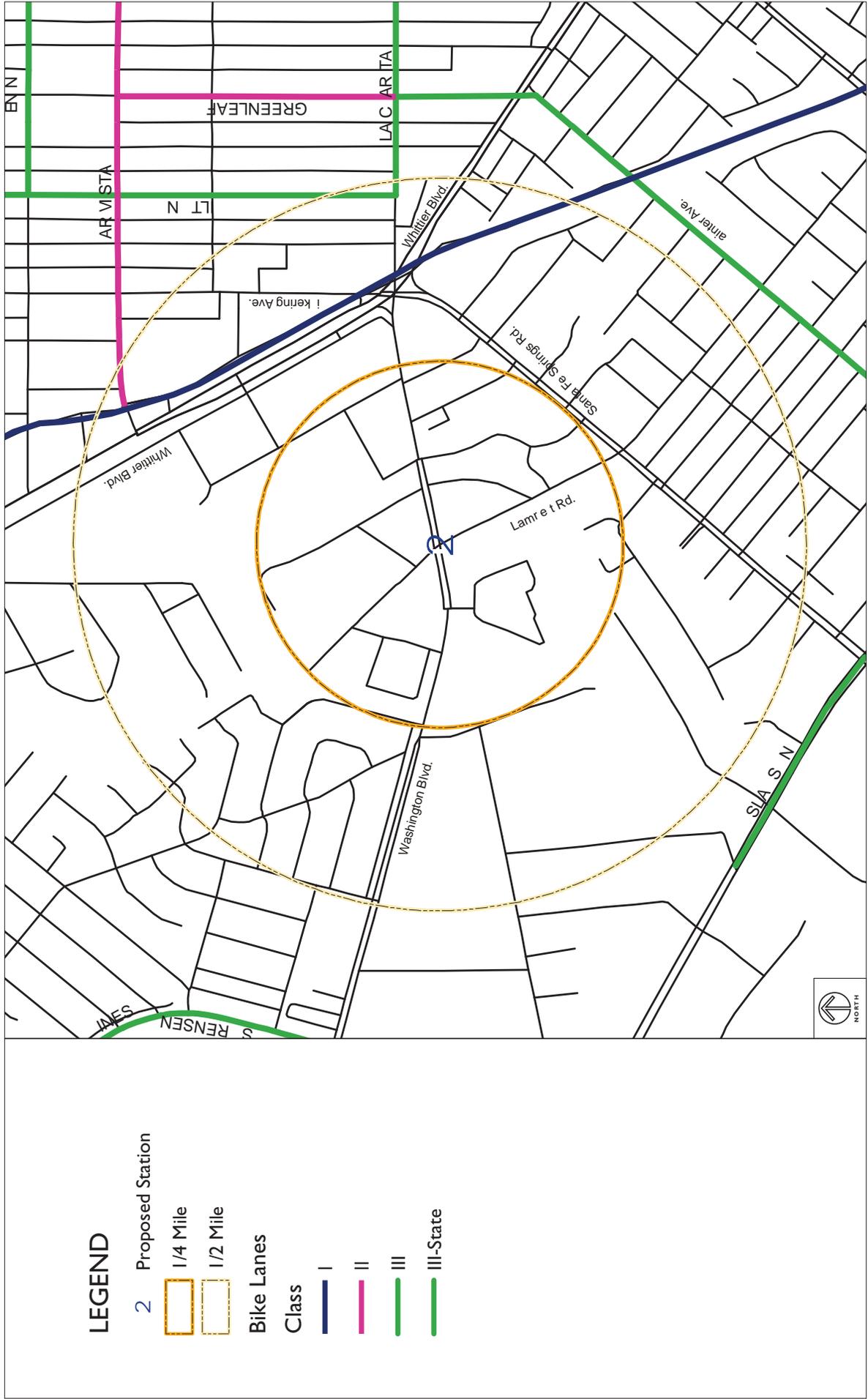
I

II

III

III-State





Source: KOA, 2011

FIGURE 3-16

WASHINGTON/LAMBERT STATION AREA EXISTING BIKE LANES

*WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT  
MOBILITY*

## 4 *ECONOMIC ANALYSIS*

This chapter presents the economic analysis for the Washington Boulevard corridor. The chapter is split into the residential and retail markets, focusing on the existing and potential for growth in both of these markets within each of the six proposed station areas.

### A. Residential Market Potential

For residential uses, the economic analysis focuses on multi-family housing, which includes all attached housing products—townhouses, duplexes through quadplexes, condos, and apartments. The analysis does not address single-family detached housing because it typically does not generate enough residual land value to make redevelopment financially feasible. Also, a primary intent of the project is to assess the potential for transit-oriented development (TOD), and such development entails higher densities to house more people within walking distance of transit stations.

The economic analysis projects market demand for both for-sale housing and rental housing. Many multi-family housing products can be built for both, but the market demand and project revenue vary between for-sale and rental properties.

The economic analysis first quantifies existing market demand. To establish a baseline, this level of analysis reflects current conditions in the absence of new public investment in light rail transit. The second level of analysis determines the market potential, that is, the number of housing units that could be supported in the project area with the inducement of public transit investments.

The residential market-demand analysis uses data from a variety of sources. The U.S. Census Bureau and the California Department of Finance provide basic demographic, economic, and housing data over time. Nielsen, the leading national provider of market data, provides demographic, economic, and housing data for individual market areas and provides projections for the next five years. Finally, Redfin provides web-based information on residential sales in the market area.

## 1. Market Area

The first step in projecting market demand is to define the market area, the area that will generate and attract new households and the area in which the station areas will compete for those new households.

The potential market is defined not by city boundaries but by the market area from which new households might choose a place to live. The economic analysis defines the residential market area as the area within a 3-mile radius of each proposed rail station. The 3-mile distance is sufficiently large to fairly represent the potential market. Generally, one would prefer a somewhat larger market area for residential analysis, but for the proposed station locations, larger market areas begin to take in other areas outside the station vicinity that are fundamentally different markets and therefore not relevant to the analysis.

Even so, however, the 3-mile-radius market area means that the market areas for each station area overlap. The stations are 1.5 miles apart at a maximum. Thus, the quantified demand for multi-family housing units for an individual station area includes some units that are also counted in the market demand for the adjacent station areas. The data presented in the analysis portray the demand for an individual station area. However, if one community is more aggressive in promoting redevelopment, it could capture market demand from an adjacent station area, which then might not live up to the potential quantified in the analysis.

The market demand analysis does include a total for the entire project area. The project area in this context is an agglomeration of the three-mile radii around each individual station. The project-area totals eliminate the double-counting from overlapping market areas.

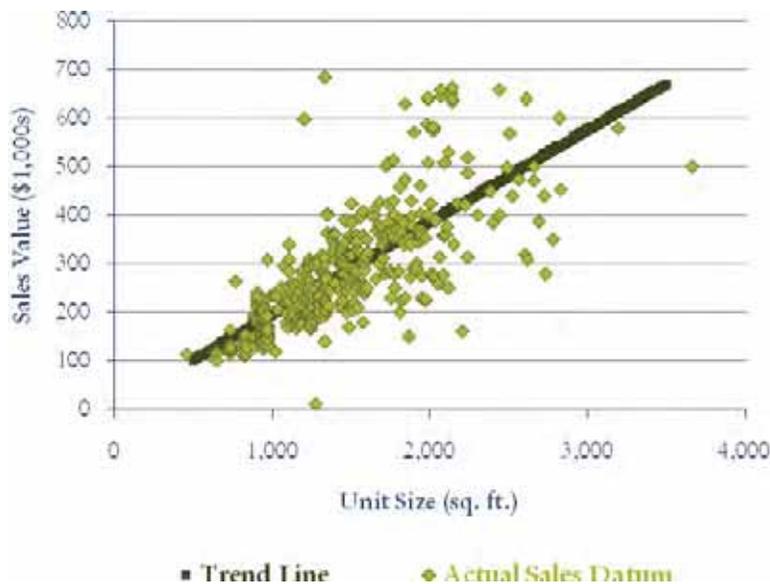
## 2. For-Sale Housing Value

Before quantifying market demand for for-sale housing, one must first have a range of housing values, because the price of housing relates to household

income and thus to the number of households likely qualified to purchase new housing.

Using data on multi-family unit sales since 2008, the economic analysis plotted the sales price and square footage. The analysis provides a separate projection for sales per square foot for each station area. As an example, Figure 4-1 below shows the data set and the best-fit line for the Garfield/Whittier market area. Charts for the other station areas are provided in Appendix B.

FIGURE 4-1 **MULTI-FAMILY HOUSING SALES VALUE BY UNIT SIZE, GARFIELD/WHITTIER STATION AREA (2009 TO 2011)**



The available data for multi-family unit sales since 2008 include very few new units. The analysis therefore calculates the best fit line for all sales since 2008. The analysis then estimates new multi-family sales by applying a premium for new units calculated using the price per square foot of new units and the average price per square foot for all sales in each market area.

Table 4-1 presents this data for the market area for each proposed station. The analysis assumes that the smallest new multi-family unit would be a one-bedroom, one-bathroom, 750-square-foot unit. It also shows the estimated price of a typical new two-bedroom, two-bath, 1,200-square-foot multi-family unit. Based on the estimated price of the smallest one-bedroom unit, Table 4-1 shows the minimum annual household income range needed to afford the minimum size multi-family unit. The derivation of demand in for-sale multi-family housing presented in the following section is based on those households with at least the minimum income identified in Table 4-1.

TABLE 4-1 *ESTIMATED NEW MULTI-FAMILY HOUSING UNIT SALES VALUES AND MINIMUM QUALIFYING INCOME*

Station Area	Minimum 1-Bedroom Unit Estimated Price (\$)	Annual Income Range (\$) for 1-Bedroom Unit	Typical 2-Bedroom Unit Estimated Price (\$)
Garfield Avenue	309,000	50,000–74,999	431,000
Garfield/Whittier	224,000	50,000–74,999	352,000
Greenwood Avenue	197,000	35,000–49,999	293,000
Washington/Rosemead	203,000	35,000–49,999	296,000
Washington/Norwalk	229,000	50,000–74,999	308,000
Washington/Lambert	212,000	35,000–49,999	308,000

### 3. Existing For-Sale Multi-family Housing Demand

Table 4-2 derives the projected demand for new multi-family for-sale housing in each proposed station’s 3-mile-radius market area and for the project area as a whole over the next five years without a transit investment (the project-area totals eliminate the effect of overlapping trade areas and thus are less than

the sum of the data for each station area). The project area can expect an increase of 5,150 new households over the next five years. Growth in the station market areas could range from a low of 1,240 households in the Washington/Lambert station area to a high of 1,700 households in the Garfield Avenue and Greenfield Avenue station areas.

Across the project area, homeowners can be expected to account for about 76 percent of the household growth, totaling about 3,930 new homeowner households over five years. Past trends suggest that multi-family units will account for about 11 percent of demand created by the household growth. Over five years, therefore, the analysis suggests that the project area could support the development of 440 new multi-family for-sale housing units. Among the proposed station areas, the level of support would range from a low of 67 new units in the Washington/Lambert market area to a high of 198 units in the Garfield Avenue market area. Appendix B provides data for each individual station area in Tables A-1 through A-6.

#### **4. Potential Market Demand**

The preceding discussion quantified market demand today, in the absence of the proposed public investment in light rail transit. Numerous surveys have concluded that the length of the work commute is a primary factor, if not the

dominant factor, in choosing a place to live. The availability of rail transit would put housing in the analyzed market areas in closer proximity to more jobs and thus could attract even more new households than past trends would suggest. Furthermore, research and writings point to substantial changes in the type of housing that will be desired in the near future, driven by changing demographics.

The question is, to what degree will changes in preference alter the future demand for housing? To avoid too much complexity, the analysis limits itself to two considerations. First, what is the increased number of households that would be attracted to the project area by the availability of transit? Second,

to what degree will changing preference in housing type increase the demand for multi-family housing over single-family detached housing?

The National Association of Realtors' 2011 Community Preferences Survey asked how important it would be to have public rail transit within easy walking distance when making a decision on where to live. Of the respondents, 14 percent indicated it would be very important and another 28 percent indicated somewhat important. The project area would not currently attract those potential buyers. To quantify the potential market, the analysis assumes that these buyers constitute 15 percent of future market demand, demand that is not represented in the data in Table 4-2.

As indicated in Table 4-2, under the mix of existing housing in the project area, only about 11 percent of all housing units are multi-family. Demographic forces will change that pattern. Baby boomers are approaching retirement, and an increasing share of them indicate in surveys a desire to downsize their housing. Gen Y, larger than the baby boom generation, is entering the housing market, and in surveys they express an increasing desire for smaller, more compact housing. Finally, the portion of households with children is on a continuing downward trend. Soon to be published research suggests that these changing preferences could alter development trends, leading to multi-family housing becoming the dominant form of housing constructed in Southern California over the next 20 years. To capture this change in demand, the analysis assumes that multi-family will constitute 35 percent of new housing.

Given these two assumptions, Table 4-3 calculates what the potential market demand would be with the investment in rail transit. The result is a more than threefold increase in demand for new for-sale multi-family housing units.

## **5. Existing For-Rent Multi-family Housing Market Demand**

Calculation of market demand for rental housing follows the same general methodology as that used with for-sale housing. The analysis does, however, use all income categories for which the number of households is projected to

TABLE 4-2 FIVE-YEAR DEMAND FOR NEW FOR-SALE MULTI-FAMILY HOUSING UNITS, 3-MILE RADIUS MARKET AREAS FOR PROPOSED STATION AREAS

	Garfield Avenue	Garfield/Whittier	Greenwood Avenue	Washington/Rosemead	Washington/Norwalk	Washington/Lambert	Project Area
(1) 2011 Number of Households (Estimate)	31,400	25,000	35,800	38,800	30,600	28,300	108,100
(2) 2016 Number of Households (Projection)	33,100	26,400	37,500	40,400	32,000	29,400	113,300
(3) 5-Year Increase in Number of Households	1,700	1,400	1,700	1,470	1,410	1,240	5,150
(4) Homeownership Rate	73%	74%	61%	86%	86%	86%	76%
(5) 5-Year Increase in Homeowners	1,240	1,030	1,040	1,260	1,210	1,070	3,930
(6) Multi-Family Housing as Portion of All Homeowners	16%	16%	16%	6%	6%	6%	11%
(7) New Multi-Family Housing Home Purchases	198	165	167	76	75	67	440

**Notes:**

- The data have been rounded from the original data analysis and may not precisely calculate as presented. More detailed data are provided in Appendix B.
- The market areas for the individual stations overlap. The data presented for the project area eliminates the effects of overlapping market areas, and thus the data in the project area column do not necessarily represent the sum of the data for each station area.
- The number of households in 2011 and 2016 (rows 1 and 2) represent the number of households with annual household incomes in the range specified in Table 4-1 or higher. The data are estimates and projections from Nielsen.
- The homeownership rate (row 4) is a 2011 estimate by income category from Nielsen. The datum for the project area is derived based on the five-year increase in the number of households (row 3) divided by the five-year increase in homeowners, and it therefore represents the weight of the individual station area homeownership rates and the projected household growth in each market area.
- The five-year increase in homeowners (row 5) is derived by multiplying the projected growth in households (row 3) by the homeownership rate (row 4).
- Multi-family housing as a portion of all renters represents the portion of renter-occupied housing that is single-family attached and multi-family. The data for the Garfield Avenue, Garfield/Whittier, and Greenwood Avenue market areas are estimates from the US Census Bureau's American Community Survey for the Southwest San Gabriel Valley county subdivision. The data for the Washington/Rosemead, Washington/Norwalk, and Washington/Lambert stations are estimates from the same source for the Whittier county subdivision.
- New multi-family housing home purchases represent the number of multi-family housing units that would be needed over the next five years to accommodate the projected growth in the number of households for each market area. The data are derived by multiplying the projected increase in homeowner households (row 5) by the portion of homeowners living in multi-family housing units (row 7).

Source: The Planning Center | DC&E, 2011, using data from Nielsen and the US Census Bureau.

TABLE 4-3 *POTENTIAL MARKET DEMAND FOR NEW FOR-SALE MULTI-FAMILY HOUSING UNITS, 3-MILE-RADIUS MARKET AREAS FOR PROPOSED STATION AREAS*

Station Area	Market Demand, Current Conditions	Market Potential, with Rail Transit
Garfield Avenue	198	508
Garfield/Whittier	165	421
Greenwood Avenue	167	348
Washington/Rosemead	76	516
Washington/Norwalk	75	498
Washington/Lambert	67	439
Project Area	440	1,570

increase, thus the total number of households will be somewhat different between the for-sale and for-rent data.

The projected demand for new multi-family for-rent housing in each proposed station's 3-mile-radius market area and for the project area as a whole over the next five years is shown in Table 4-4 (the project area totals eliminate the effect of overlapping trade areas and thus are less than the sum of the data for each station area). The project area can expect an increase of 5,610 new households over the next five years.

Across the project area, renter households can be expected to account for about 27 percent of the household growth in the relevant income categories, about 1,510 new renter households over five year, and past trends suggest that multi-family units will account for about 68 percent of demand created by the household growth. Over five years then the analysis suggests that the project area could support the development of 1,030 new multi-family for-rent hous-

TABLE 4-4 FIVE-YEAR DEMAND FOR NEW FOR-RENT MULTI-FAMILY HOUSING UNITS, 3-MILE RADIUS MARKET AREAS FOR PROPOSED STATION AREAS

	Garfield Avenue	Garfield/Whittier	Greenwood Avenue	Washington/Rosemead	Washington/Norwalk	Washington/Lambert	Project Area
(1) 2011 Number of Households (Estimate)	51,500	41,400	42,900	44,900	30,600	28,300	138,880
(2) 2016 Number of Households (Projection)	53,500	43,000	44,600	46,500	32,000	29,400	144,490
(3) 5-Year Increase in Number of Households	2,000	1,600	1,700	1,600	1,400	1,100	5,610
(4) Rentership Rate	39%	39%	31%	15%	15%	15%	27%
(5) 5-Year Increase in Renter Households	770	630	520	240	210	170	1,510
(6) Multi-Family Housing as Portion of All Rentals	69%	69%	69%	64%	64%	64%	68%
(7) 5-Year Market Area Demand by New Multi-Family Renters	535	437	361	151	133	108	1,030

Notes:

- The data have been rounded from the original data analysis and may not precisely calculate as presented. More detailed data are provided in Appendix B.
- The market areas for the individual stations overlap. The data presented for the project area eliminates the effects of overlapping market areas, and thus the data in the project area column do not necessarily represent the sum of the data for each station area.
- The number of households in 2011 and 2016 (rows 1 and 2) represent the number of households within the income categories projected to increase in households. See Table A-7 through Table A-12 in Appendix B for the specific income categories for each proposed station market area.
- The rentership rate (row 4) is a 2011 estimate by income category from Nielsen. The datum for the project area is derived based on the five-year increase in the number of households (row 3) divided by the five-year increase in renter households, and it therefore represents the weight of the individual station area rentership rates and the projected household growth in each market area.
- The five-year increase in renter households (row 5) is derived by multiplying the project growth in households (row 3) by the rentership rate (row 4).
- Multi-family housing as a portion of all renters represents the portion of renter-occupied housing that is single-family attached and multi-family. The data for the Garfield Avenue, Garfield/Whittier, and Greenwood Avenue market areas are estimates from the US Census Bureau's American Community Survey for the Southwest San Gabriel Valley county subdivision. The data for the Washington/Rosemead, Washington/Norwalk, and Washington/Lambert stations are estimates from the same source for the Whittier county subdivision.
- Five-year market demand represents the number of multi-family housing units that would be needed over the next five years to accommodate the projected growth in the number of households for each market area. The data are derived by multiplying the projected increase in renter households (row 5) by the portion of renter households living in multi-family housing units (row 7).

Source: The Planning Center | DC&E, 2011, using data from Nielsen and the US Census Bureau.

ing units. Among the proposed station areas, the level of support would range from a low of 108 new units in the Washington/Lambert market area to a high of 535 units in the Garfield Avenue market area. Appendix B provides data for each individual station area in Tables A-1 through A-6.

## **6. Potential Market Demand**

As with the analysis of for-sale housing demand, the projection of for-rent multi-family housing demand presented in Table 4-4 represent current conditions and does not reflect the potential public investment in rail transit. To quantify the potential market, the analysis once again assumes an increase in household growth reflecting a 15-percent share of potential renters not captured currently. The analysis also assumes that the shift in demographics that will transform the mix of housing to be constructed will add 10 percent to multi-family housing's share of all rentals.

Table 4-5 projects the market demand for new for-rent multi-family housing units in each of the proposed station market areas and for the entire project area. With the addition of rail transit, the demand for rental units would increase by nearly 50 percent. Over five years, the project area could support the development of up to 1,480 new multi-family rental housing units.

## **7. Residential Market Potential Summary**

The analysis shows that even in this down market and without investment in rail transit, changing demographics can support multi-family development in the project area. But that demand has not induced redevelopment. Part of the reason might be that redevelopment is not financially feasible with current land values and allowable development densities.

Another key market condition that has inhibited substantial new residential investment is market fragmentation. For example, while the project area, in theory, could support 440 new for-sale multi-family housing units, the reality is that even in the proposed Garfield Avenue station market area, which has the highest level of demand, the demand is spread across five different income

categories. It is difficult to develop market rate projects when one has to attract buyers from across a variety of market segments.

TABLE 4-5 *POTENTIAL MARKET DEMAND FOR NEW FOR-RENT MULTI-FAMILY HOUSING UNITS, 3-MILE-RADIUS MARKET AREAS FOR PROPOSED STATION AREAS*

Station Area	Market Demand, Current Conditions	Market Potential, with Rail Transit
Garfield Avenue	535	763
Garfield/Whittier	437	625
Greenwood Avenue	361	509
Washington/Rosemead	151	184
Washington/Norwalk	133	184
Washington/Lambert	108	155
<b>Project Area</b>	<b>1,030</b>	<b>1,480</b>

Public investment in rail transit, however, would greatly increase the total market demand for multi-family housing across all income segments. The magnitude of the increase should be sufficient to attract developers and investors to each station area for a mix of product types and incomes.

#### B. Retail Market Potential

The economic analysis quantifies the demand for retail building space for three primary reasons. First, to the degree that each station area has excess retail building space, vacant and functionally obsolete retail sites would make good opportunity sites for infill development. Second, ground-floor retail is often viewed as a valuable amenity to residents who live above, but vertical

TABLE 4-6 *FIVE-YEAR POTENTIAL MARKET DEMAND FOR NEW FOR-RENT MULTI-FAMILY HOUSING UNITS (2011-2016)*

Station Area	For-Sale Housing Units	For-Rent Housing Units	Total Multi-Family Residential Development Market Potential
Garfield	508	763	1,271
Garfield/Whittier	421	625	1,046
Greenwood Avenue	348	509	857
Washington/Rosemead	516	184	700
Washington/Norwalk	498	184	682
Washington/Lambert	439	155	594
Project Area	1,570	1,480	3,050

mixed-use is not financially feasible if there is limited demand for retail space. Contrary to popular belief, there is no magic to vertical mixed-use. Having two, three, or more floors of residences overhead will not make a good retail location out of a poor one, simply because turning around the retail market demand will require many more units than will be provided in the vertical mixed-use project alone. Finally, transit stations have the potential to anchor great places, places that become community destinations. Once again, though, this only holds true if there is sufficient consumer spending to support the businesses there.

#### 1. Existing Retail Market Demand

As with the residential market assessment, the economic analysis first calculates the market demand under existing conditions. The subsequent section

considers the increase in market support that would be generated by increased spending from new households attracted to the trade area by new investment in public transit.

Table 4-7 quantifies the demand for new retail development, measured in building square footage, at each proposed station area from 2011 to 2016. The analysis has not yet incorporated data on planned or approved projects that have not been constructed. That square footage should be deducted from the supportable amount of retail building space in Table 4-7 to obtain an accurate picture of development potential.

TABLE 4-7 ***FIVE-YEAR MARKET DEMAND FOR NEW RETAIL BUILDING SPACE (SQUARE FEET) IN PROPOSED STATION AREAS (2011-2016)***

Station Area	Convenience Goods	Comparison Goods
Garfield	0	183,000
Garfield/Whittier	0	0
Greenwood Avenue	1,200	132,000
Washington/Rosemead	0	134,000
Washington/Norwalk	2,500	119,000
Washington/Lambert	0	103,000

Source: The Planning Center | DC&E, 2011, using data from Nielsen, The Urban Land Institute, US Census Bureau, and the LA County Assessor.

a. Local-Serving Retail

The convenience goods column represents the types of businesses that would most likely be attracted to vertical mixed-use buildings and the area around a transit station. The analysis shows that under current conditions, there would be no support for new retail development in four of the station areas. Indeed, the numbers indicate that these areas already have an excess amount

of retail building space, more than can be supported by the spending of neighborhood residents.

This is understandable at the Garfield Avenue and Washington/Rosemead stations, where there is substantial community-scale retail development that attracts spending from a larger trade area. Interestingly, Washington/Norwalk also has similar existing retail development, but the analysis suggests that over the next five years there could be a very small increase in market demand. There could also be a small increase in demand at the Greenwood Avenue station.

b. Community-Scale Retail

The comparison goods column represents the types of businesses that draw from and rely on a larger trade area. Typically these businesses seek to locate at major transportation nodes. The level of demand does not imply that the station area could capture all of that demand. It does, however, suggest that five of the station areas could explore the possibility of building on some of that demand to create a destination at or near the station area.

## 2. Potential Market Demand

The preceding analysis evaluated demand for additional retail building space based on current conditions. If, however, the public invests in rail transit in the project area, the residential market potential analysis showed that the area could more than triple its household growth and all of those new households would provide additional consumer spending and thus support more retail development.

To assess the potential market demand for retail development, the economic analysis assumes that each station area captures the number of households calculated in Table 4-6. The resulting potential market demand for convenience goods and services is presented in Table 4-8 along with the increase in demand generated by household growth induced by rail transit.

The analysis shows that two stations, Garfield/Whittier and Washington/Lambert could support new retail development as a result of rail transit when they would not support more retail under current conditions. Two other stations, Greenwood Avenue and Washington/Norwalk would support substantially more retail development with the introduction of rail transit.

Finally, two stations, Garfield Avenue and Rosemead would not support additional retail development, even with transit-induced household growth. This, however, should not be a troubling concern because these two stations, more than any other, already have a significant amount of retail goods and services available within walking distance from the proposed transit station.

TABLE 4-8 *POTENTIAL MARKET DEMAND (SQURE FEET) FOR RETAIL DEVELOPMENT (2011-2016)*

Station Area	Total Convenience Goods Market Demand	Net Increase with Rail Transit
Garfield	0	0
Garfield/Whittier	16,000	16,000
Greenwood Avenue	74,100	72,900
Washington/Rosemead	0	0
Washington/Norwalk	67,000	64,500
Washington/Lambert	17,900	17,900

### 3. Retail Market Potential Summary

Having retail goods and services in close proximity, especially within walking distance, is important for TOD. Surveys indicate that having basic goods, shopping, and entertainment within walking distance is even more important to attract residents than having transit within walking distance. Furthermore,

the majority of vehicle trips are for things other than the work commute. For more compact forms of development to effectively reduce greenhouse gas emissions, things like shopping and entertainment need to be within walking distance. Finally, having a grocery store is often a requirement to attract buyers and renters who can afford the housing cost required for redeveloping existing sites with higher density housing.

The economic analysis finds that in the absence of public investments in rail transit, the project area would not attract a sufficient number of new households to support new commercial development that could fundamentally alter the development patterns and level of economic activity in the project area. With rail transit however, the market conditions could exist to support community-planned efforts to re-envision the corridor, revitalize the entire area, and reduce greenhouse gas emissions.

a. Garfield Avenue Station

The proposed location of the Garfield Avenue station already supports a strip of retail uses. Furthermore, within walking distance of the station is an Albertson's supermarket at Montebello Plaza, a Smart & Final, and a variety of chain and non-chain restaurants, as well as pedestrian-scale development with restaurants and shopping along Garfield Avenue on the north side of the State Route 60 freeway. Even though household growth would not necessarily support the development of additional retail, the transit zone around the station already has a full range of shopping and entertainment opportunities. This station area is primed for TOD. Redevelopment should take care to not demolish the existing convenience goods and services that exist. Furthermore, improving the walkability of the transit zone would increase the likelihood that TOD helps decrease vehicle trips.

b. Garfield/Whittier Station

The area around the proposed Garfield/Whittier station has retail goods and services, primarily located on small lots fronting the road. Transit-induced household growth could ultimately support a small increase in the amount of retail building space. However, the lack of a supermarket within close prox-

imity to the proposed station will likely constrain the potential to fully realize demand for housing. A possible economic development strategy would be to consider promoting redevelopment of some of the existing strip development along Garfield/Whittier. Reducing the amount of retail building space would bolster the net demand for new retail development, and possibly improve the viability of attracting a grocery-store anchored retail development in the transit zone. The economic analysis finds that there is an excess amount of retail building space in this trade area, and thus, reducing the amount of retail building space would not necessarily result in a one-for-one loss of retail sales. There would still be sufficient building space to accommodate the needs of neighborhood residents and a grocery store might be a welcomed addition to the community.

c. Greenwood Avenue Station Area

The economic analysis finds that this station area could support a small amount of additional retail development under current conditions, and up to 74,000 square feet if the area captures the full demand for new housing with the addition of light rail. As with the Garfield/Whittier station, however, the lack of a super market within proximity to the station will constrain the ability to realize the full potential for new housing. There is a Wal-Mart supercenter fairly close, so this might not be a significant constraint to TOD.

Because this station area is bounded by industry on two sides and the Rio Hondo on a third, the potential market demand for retail development suggests that the transit zone around this proposed station could develop into a thriving neighborhood destination. While the Pico Rivera Towne Center clearly would compete for consumer spending, this area has the potential to create a unique destination in the project area.

d. Washington/Rosemead Station Area

Of all the station areas, the area around the Washington/Rosemead station has the most fully developed commercial offerings. The economic analysis finds that this trade area will not support additional retail development, even with the rail-induced household growth. However, no new retail develop-

ment would be needed to serve residents of TOD. Improving the walkability of the transit zone, however, would improve the area's attractiveness to potential residents. Indeed, the level of development in this area will likely translate into higher land acquisition costs than in the other station areas, and thus, housing developers will have to attract higher-income residents to afford the higher housing cost. In this sense, investments in walkability would be an incentive to TOD.

e. Washington/Norwalk Station Area

The area around the proposed Washington/Norwalk station has a full variety of retail offerings, only somewhat less extensive than the Washington/Rosemead station area. The economic analysis finds that this area could support a slight increase in retail building space under current conditions, and up to 67,000 square feet of new retail if it captures its full potential of household growth with the development of light rail transit.

This area already has a grocery, so it should be well positioned to attract redevelopment for TOD. As with the Rosemead station, however, improving the walkability and pedestrian conditions will help to attract residents and developers.

With the potential level of demand for new retail, assuming the development of rail transit, this station area could redevelop some mid-block retail buildings with multi-family housing, and increase the market support for new retail to a level that would allow the development of a new retail center, perhaps one integrated with or connected to the transit station.

f. Washington/Lambert Station Area

The area around the proposed Washington/Lambert station cannot support new retail development under current conditions. With the introduction of rail transit, however, the area could potentially support up to 17,900 square feet of new retail. This is not a large amount, and probably is insufficient on its own to induce a developer to build a stand-alone retail center. That said, it

*WASHINGTON BOULEVARD  
LIGHT RAIL TRANSIT CORRIDOR STUDY  
BASELINE REPORT  
ECONOMIC ANALYSIS*

is probably a sufficient level of demand to warrant consideration of some new commercial activity at the transit station or as part of a mixed-use TOD.

## 5 *ISSUES, CONSTRAINTS, AND OPPORTUNITIES*

This chapter presents the issues, constraints, and opportunities that were identified throughout the baseline analysis of the Washington Boulevard corridor. These are provided for the corridor as a whole, as well as for each proposed station area.

### A. Overall Issues, Constraints, and Opportunities

#### 1. Issues and Constraints

- ◆ Current development within the proposed station areas is generally low-density and the general plans and zoning codes that apply to these areas promote low-density development. Higher residential densities would be needed to support transit.
- ◆ Many of the proposed station areas lack adequate pedestrian and bicycle amenities to foster these modes of transportation.
- ◆ Many of the proposed station areas currently have traffic congestion issues and are projected to continue or worsen in the future.

#### 2. Opportunities

- ◆ The proposed station areas already include a number of everyday uses including schools, shopping centers, restaurants, parks, and employment opportunities, all of which are important components of transit-oriented development (TOD).
- ◆ Each of the proposed station areas has the potential for infill development in the future, based on an analysis of parcels ripe for infill development. These infill sites could be redeveloped with higher density uses supportive of a transit station, or redesigned to enhance the pedestrian experience within the station vicinity.
- ◆ Public investment in rail transit would increase the total market demand for multi-family housing across all income segments by nearly 50 percent for rental units and by more than triple for for-sale units compared to the existing demand without a transit investment. The magnitude of the in-

crease should be significant enough to attract developers and investors to each station area for a mix of product types and incomes.

- ◆ The significant number of new households in the study area would provide additional consumer spending and thus support new commercial development that would re-envision and revitalize the corridor.
- ◆ The proposed station areas are located along busy arterial streets that could benefit from an alternative to automobile travel.
- ◆ There are a number of major trip generators within the proposed station areas that could be accessed by a light rail system, thereby helping to reduce traffic congestion.

## B. Station-Specific Issues and Opportunities

This section presents issues, constraints, and opportunities specific to each of the proposed station areas.

In order to help identify the issues, constraints, and opportunities for each of the proposed station areas, a scorecard (Table 5-1) was used to assess the potential for TOD in the station areas. This scorecard was modified from one used for Metro station areas within the City of Los Angeles and it captures the unique characteristics of the Washington Boulevard corridor. Descriptions of each of the scoring criteria are provided in Appendix C.

As shown in Table 5-1, the six proposed station areas were ranked based on a variety of criteria related to development opportunity, market demand, and land use and urban design characteristics. The scores are based on the land use, mobility, and economic analyses presented in previous chapters, which inform the following discussion of issues, constraints, and opportunities.

WASHINGTON BOULEVARD LIGHT RAIL TRANSIT CORRIDOR STUDY  
 BASELINE REPORT  
 ISSUES, CONSTRAINTS, AND OPPORTUNITIES

TABLE 5-1 TOD READINESS SCORECARD

	Greenwood Avenue	Garfield Avenue	Washington/Norwalk	Garfield/Whittier	Washington/Rosemead	Washington/Lambert
<b>Development Opportunity</b>						
Opportunity Sites	9	5	2	1	7	7
New Retail Demand	10	0	9	3	0	3
New Multi-Family Housing Demand	4	8	2	6	2	1
Development Opportunity Average Score	7.7	4.3	4.3	3.3	3.0	3.7
<b>Land Use and Urban Design</b>						
Residential Density	5	0	5	0	5	0
Shopping Centers	0	10	10	0	10	5
Small-Scale Retail	5	10	10	10	5	0
Schools	5	10	10	5	10	5
Parks & Recreation	5	10	0	10	0	0
Street Trees/Landscaping	0	5	5	5	10	5
Intersection Density	0	10	5	10	5	5
Sidewalks	5	10	5	5	10	5
Crosswalks	5	5	5	5	10	5
Transit Connections	5	5	5	10	5	5

WASHINGTON BOULEVARD LIGHT RAIL TRANSIT CORRIDOR STUDY  
 BASELINE REPORT  
 ISSUES, CONSTRAINTS, AND OPPORTUNITIES

	Greenwood Avenue	Garfield Avenue	Washington/ Norwalk	Garfield/ Whittier	Washington/ Rosemead	Washington/ Lambert
Bicycle Network	10	5	10	10	0	10
Land Use and Urban Design Average Score	4.1	7.3	6.4	6.4	6.4	4.1
Total Average Score	11.8	11.6	10.7	9.7	9.4	7.8
Ranking	1	2	3	4	5	6

## 1. Garfield Avenue Station

### a. Issues and Constraints

- ◆ The commercial uses on Garfield Avenue on either side of the freeway are disconnected and lack continuity.
- ◆ The overall residential density is low within the station area.
- ◆ The State Route 60 (SR-60) freeway acts as a barrier between the uses on either side of it, and pedestrian connectivity between either side is poor.
- ◆ There is currently heavy traffic in the AM peak hour at the intersection of Garfield Avenue and Pomona Boulevard and SR-60.

### b. Opportunities

- ◆ There is high demand for additional multi-family housing units in the station area.
- ◆ There is very little demand for additional retail space in the station area even with transit-induced household growth; however, the station area already has a full range of shopping and entertainment opportunities within walking distance of the proposed transit station.
- ◆ The Montebello Country Club is a major attractor and could be better tied into the station area by enhancing the entrance to the Country Club and redeveloping adjacent parcels.
- ◆ The existing shopping centers on the south side of SR-60 could be repositioned to better serve a transit station and be more welcoming to pedestrians.
- ◆ The existing streetscape along Garfield Avenue is relatively pedestrian-friendly south of SR-60 and this could be extended north to better integrate the uses on either side of the freeway.

## 2. Garfield/Whittier Station

### a. Issues and Constraints

- ◆ The overall residential density is low and there are few opportunity sites for infill development within the station area.
- ◆ There is high demand for additional multi-family housing units within the station area; however, the lack of a supermarket within close proximity to the proposed station will likely constrain the potential to fully realize demand for housing.
- ◆ There is a high vacancy rate in the commercial properties lining Whittier Boulevard. Many of the buildings are in poor condition.
- ◆ The Montebello-Commerce Metrolink station is located just outside the ½-mile radius and is not easily accessible from the residential neighborhoods in this station area.

### b. Opportunities

- ◆ Transit-induced household growth could ultimately support a small increase in the amount of retail building space.
- ◆ Existing buildings along Whittier Boulevard are pedestrian-friendly in scale and design and offer opportunities for new businesses with relatively affordable lease rates.
- ◆ Redeveloping some of the existing strip development along Whittier Boulevard and reducing the amount of retail building space would bolster the net demand for new retail development and possibly improve the viability of attracting a grocery-store anchored retail development in the station area.
- ◆ The streetscape within the residential neighborhoods south of Whittier Boulevard is well-maintained and creates a pedestrian-friendly environment.

### 3. Greenwood Avenue Station

#### a. Issues and Constraints

- ◆ The lack of a supermarket within proximity to the station will constrain the ability to realize the full potential for new housing. There is a Wal-Mart supercenter which sells groceries fairly close to the station, so the lack of a supermarket might not be a significant constraint to transit-oriented development.
- ◆ The station area currently lacks sufficient pedestrian amenities and the overall streetscape, especially on the west side of Greenwood Avenue, is not welcoming to pedestrians.
- ◆ The Montebello-Commerce Metrolink station is located just outside the ½-mile radius and is not well-connected to the various uses in this station area.
- ◆ There is currently heavy traffic in the PM peak hour on Washington Boulevard, east of Bluff Road; the eastbound approach on Washington Boulevard, east of Passons Boulevard; the eastbound and westbound approaches on Washington Boulevard, east of Broadway Avenue; and at the intersection of Passons and Washington Boulevards.

#### b. Opportunities

- ◆ There is a good mix of residential densities within the station area that could be complemented with additional multi-family housing.
- ◆ This station area has the most acreage of opportunity sites for infill redevelopment and would support a substantial amount of new multi-family residential development.
- ◆ This station could support a moderate amount of new retail development, up to 74,000 square feet, if the area captures the full demand of new housing with the addition of light rail.
- ◆ There is a strong industrial base in this station area that has the potential to provide stable employment opportunities.

#### **4. Washington/Rosemead Station**

##### **a. Issues and Constraints**

- ◆ This station area is dominated by two large auto-oriented shopping centers with expansive parking lots fronting Washington Boulevard.
- ◆ There is currently moderate to heavy traffic during the PM peak hour along Rosemead Avenue and at the intersection of Rosemead and Washington Boulevards.

##### **b. Opportunities**

- ◆ This station area has a large number of opportunity sites for infill development and there is moderate demand for additional multi-family housing units within the station area.
- ◆ While this station area could not support additional retail development even with transit-induced household growth, the large shopping centers provide everyday uses within the station area, which is an important component of TOD.
- ◆ The new industrial uses in the southwest portion of the station area provide potential employment opportunities near the proposed station.
- ◆ Improving the walkability of the station area will improve the area's attractiveness to potential residents.

#### **5. Washington/Norwalk Station**

##### **a. Issues and Constraints**

- ◆ There are few opportunity sites for infill development within the station area.
- ◆ A number of older commercial and multi-family residential buildings within the station area are in need of façade improvements and/or complete redevelopment.
- ◆ There is currently heavy traffic during the PM peak hour at the intersections of Washington and Pioneer Boulevards and Washington and Norwalk Boulevards.

b. Opportunities

- ◆ There is a moderate demand for new multi-family housing, consistent with the amount of available sites for infill development.
- ◆ Existing multi-family housing could be greatly improved upon and/or redeveloped.
- ◆ There are successful neighborhood-serving commercial uses within the station area, providing everyday uses within close proximity of the proposed station.
- ◆ There is some demand for additional retail space in the station area, up to 67,000 square feet, if it captures its full potential of household growth with the development of light rail transit.
- ◆ With the potential demand for new retail, this station area could redevelop some mid-block retail buildings with multi-family housing, and increase the market support for new retail to a level that would allow the development of a new retail center, perhaps one integrated with or connected to the transit station.
- ◆ There is potential to improve the connectivity between the different uses within the station area. Improving the walkability and pedestrian conditions will help to attract residents and developers.

6. Washington/Lambert Station

a. Issues and Constraints

- ◆ There is currently heavy traffic during the AM and PM peak hours at the Washington Boulevard and Lambert Road intersection.
- ◆ There is currently moderate to heavy traffic during the AM and PM peak hours at the five-point intersection of Washington Boulevard/Whittier Boulevard/Santa Fe Springs Road/Pickering Avenue.
- ◆ There is currently heavy traffic during the PM peak hour along Whittier Boulevard, north and south of Washington Boulevard.

b. Opportunities

- ◆ There are a number of infill opportunity sites within the station area.
- ◆ There is slight demand for multifamily housing units with the availability of rail transit.
- ◆ There is some demand for new retail in the study area, up to 17,900 square feet. While this is not a large amount, it is probably sufficient to warrant consideration for some new retail activity at the transit center or as part of a mixed-use TOD.
- ◆ The Home Depot shopping center offers everyday uses and restaurants adjacent to the proposed station.
- ◆ There are excellent potential employment opportunities at the Presbyterian Intercommunity Hospital and surrounding medical office uses.