

Santa Ana-Garden Grove Fixed Guideway Corridor

Appendix C

Community Impact Assessment



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List of Abbreviations

ACS	American Community Survey
BRT	Bus Rapid Transit
CDC	California Department of Conservation
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CIA	Community Impact Assessment
FAR	Floor Area Ratio
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
HCPs	Habitat Conservation Plans
IOS	Initial Operable Segment
LEP	Limited English Proficiency
LESA	Land Evaluation and Site Assessment
LRTP	Long-Range Transportation Plan
MPO	Metropolitan Planning Organization
NCCP	Natural Communities Conservation Plan
NEPA	National Environmental Policy Act
NRCS	National Resource Conservation Service
O & M	Operations and Maintenance Facility
OCTA	Orange County Transportation Authority
PE ROW	Pacific Electric Right-of-Way
ROW	Right-of-Way
RTP	Regional Transportation Plan
SARTC	Santa Ana Regional Transportation Center
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
TMP	Traffic Management Plan
TOD	Transit-oriented development
TSM	Transportation System Management
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation

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Executive Summary

This Community Impact Assessment (CIA) has been prepared as a background technical report to support the environmental analysis for the Santa Ana-Garden Grove Fixed Guideway Project. The purpose of this CIA is to identify and assess the potential socioeconomic and community-level effects of the project, which include: land use, population and housing, community and neighborhood characteristics, community facilities and services, business, employment, economic conditions, and farmlands. Information regarding the existing conditions in the Study Area and impacts of the proposed project are described in this assessment.

The proposed project is currently undergoing environmental study and evaluation pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The alternatives addressed in the environmental study consist of a No Build Alternative, which is used as a basis for comparing the costs and benefits of a Transportation Systems Management (TSM) Alternative, and Streetcar Alternatives 1 and 2 that respond to purpose and need, study goals, and community input. The environmental study considers the environmental effects and impacts of alternatives which would operate entirely or substantially in mixed-flow traffic within the existing urban street setting:

1. TSM Alternative which would provide increased transit operations and service levels along roadways within the Study Area which currently support fixed route bus transit.
2. Streetcar Alternative 1 which would utilize the Pacific Electric Right-of-Way (PE ROW) through the western half of its alignment and generally operate along Santa Ana Boulevard and 4th Street on the way to Santa Ana Regional Transportation Center (SARTC).
3. Streetcar Alternative 2 which would utilize the PE ROW through the western half of its alignment and substantially operate along Santa Ana Boulevard, Civic Center Drive, and 5th Street along the eastern half of the alignment to SARTC.

Due to funding constraints, it may be necessary to construct Initial Operable Segments (IOS) in lieu of the full streetcar alternative. These shortened segments of Streetcar Alternatives 1 and 2 have been identified as IOS-1 (termini at Raitt and SARTC) and IOS-2 (termini at Raitt and SARTC), respectively.

The City of Santa Ana is the CEQA lead agency and the Federal Transit Administration (FTA) is the NEPA lead agency.

The Study Area encompasses 3,260 acres or five square miles within the Cities of Santa Ana and Garden Grove. The Study Area boundary generally extends west from Westminster Avenue to the SARTC following the PE ROW on Harbor Boulevard, including the neighborhoods on either side of Santa Ana Boulevard bounded by Civic Center Drive to the north and 1st Street to the south. The study corridor generally extends a quarter-mile along

the proposed alignments. All communities and neighborhoods that surround the streetcar alignments are described in the report; however, the CIA analyzes the community and neighborhood impacts within the 11 census tracts that surround the tract alignment (Study Area) as discussed in Chapter 4 of this report.

The proposed project would enhance access to employment, social services, education and other opportunities available within the Study Area to the residents of the community. The proposed project would benefit the community by adding additional transit options along the existing underutilized PE ROW to a community that is reliant on transit to carryout everyday tasks. Accessibility and livability for Santa Ana and Garden Grove residents would be greatly enhanced with additional frequent and reliable high-capacity transit service connecting surrounding residential neighborhoods with jobs, shopping and other necessary services. The project would adhere to applicable urban design principles and development standards in the development of transit stations and associated parking facilities.

The proposed project would increase access to community services and facilities resulting in a beneficial effect for local access. The proposed project could potentially increase response times of local community services (police and fire) as a result of improved traffic flow and connectivity.

As discussed in Chapter 5, the proposed project would result in tax revenue loss as a result of property acquisitions and potential job loss as businesses on acquired parcels would be permanently closed or relocated to areas outside the immediate jurisdiction. Temporary adverse impacts would occur during construction such as periodic and/or intermittent closure of roadways and sidewalks, which would result in reduced roadway capacity and restricted pedestrian travel and/or temporary blockage of driveways and limited access to businesses and residences in the immediate vicinity of active construction activities. However, after implementation of Minimization, Mitigation, and Avoidance Measures described in Chapter 7, impacts are expected to be less than significant according to CEQA.

Chapter 1 Introduction

The purpose of this CIA is to identify and assess the potential socioeconomic and community-level effects of the Santa Ana-Garden Grove Fixed Guideway Project, which include: land use, population and housing, community and neighborhood characteristics, community facilities and services, business, employment, economic conditions, and farmlands. Information regarding the existing conditions in the Study Area and impacts of the proposed project are described in this assessment.

Major transit projects can affect the social environment of neighborhoods and communities, potentially resulting in changes to the physical layout of the area, demographics, land uses, and the sense of neighborhood in local communities. Thus, the community and neighborhood impact analysis addresses community cohesion, the division of established communities, community barriers, removal or displacement of community assets or special buildings, removal of parking, access to community assets, and economic development. As such, this analysis relates closely to the discussions of land use, environmental justice, traffic, and displacement as presented within those reports.

1.1 Background

The Cities of Santa Ana and Garden Grove are considering a fixed guideway project to provide high frequency transit service between SARTC and a new multi-modal transportation center in the City of Garden Grove. The system would provide “last mile” transit service for commuters traveling from SARTC to employment and activity centers in the heart of Orange County, California; function as an urban circulator throughout Downtown Santa Ana and the Civic Center; and serve schools, businesses, and densely populated neighborhoods throughout the Study Area. In addition to maximizing the effectiveness of the regional commuter rail network, the fixed guideway system would reduce automobile trips and related greenhouse gas emissions, promote livability, and support economic development, land use, and community goals.

1.2 Study Area Definition

The Study Area encompasses 3,260 acres, or five square miles within the Cities of Santa Ana and Garden Grove. The Study Area boundary generally extends west from Westminster Avenue to SARTC following the PE ROW on Harbor Boulevard, including the neighborhoods on either side of Santa Ana Boulevard bounded by Civic Center Drive to the north and 1st Street to the south. The study corridor generally extends a quarter-mile along the proposed alignments. All communities and neighborhoods that surround the streetcar alignments are described in the report; however, the CIA analyzes the community and neighborhood impacts within the 11 census tracts that surround the tract alignment (Study Area) as discussed in Chapter 4 of this report.

1.3 Community/Public Outreach

Public outreach efforts included scoping meetings, community update meetings, key stakeholder meetings, and elected officials briefings, as well as development and dissemination of informational materials, a project website, a project information line, and media relations. The public outreach program was initiated in order to raise public awareness for the project and the environmental process.

Between June 8 and June 14, 2010, the City of Santa Ana and the OCTA conducted four public scoping meetings for the Santa Ana-Garden Grove Fixed Guideway Project as part of the CEQA environmental review process. The scoping meetings provided stakeholders with the opportunity to officially provide their input on the potential environmental impacts and potential issues that should be evaluated, as well as provide feedback on the technology alternatives and alternative alignments that are being proposed for the project. Stakeholder participation in the public scoping meetings was generally low, but those who participated had numerous questions that focused on how the project would impact their immediate neighborhood. Each of the public scoping meetings allowed stakeholders to voice their concerns about the proposed project. Concerns and comments identified are as follows:

- How the project would impact resident's immediate neighborhood
- Strong desire to connect the core of Downtown Santa Ana with other important destinations in the City
- It was suggested that 4th Street be the main route for the system
- Strong preference for development of light rail system as opposed to bus system due to the socio-economic stigma that would inhibit a bus project to be successful
- Concern with the type of technology that would be utilized for the project
- A Lacy Neighborhood stop was suggested
- Concern over potential noise disturbances and other inconveniences
- Alignment preference

Chapter 2 Project Description

The alternatives addressed in this EA/DEIR consist of a No Build Alternative, which is used as a basis for comparing the costs and benefits of the three alternatives, TSM, Streetcar 1 and Streetcar 2, each of which responds to purpose and need, study goals, and community input. Additional details are provided below.

2.1 Project Location

The Study Area is located in the Cities of Santa Ana and Garden Grove, in Orange County, California. The transit corridor is regionally located in central Orange County, California and directly accesses both the Los Angeles-San Diego (LOSSAN) rail corridor and the Pacific Electric Right-of-Way (PE ROW) rail corridor. The Study Area is generally bounded by Harbor Boulevard to the west, 17th Street/Westminster Avenue to the north, Grand Avenue to the east, and 1st Street to the south. The approximate four-mile transit corridor extends from the Harbor Boulevard/Westminster Avenue intersection in the City of Garden Grove at its western terminus to the Santa Ana Regional Transportation Center (SARTC) in the City of Santa Ana at its eastern terminus. **Figures 2-1** and **2-2** provide the Regional Location and Study Area maps, respectively

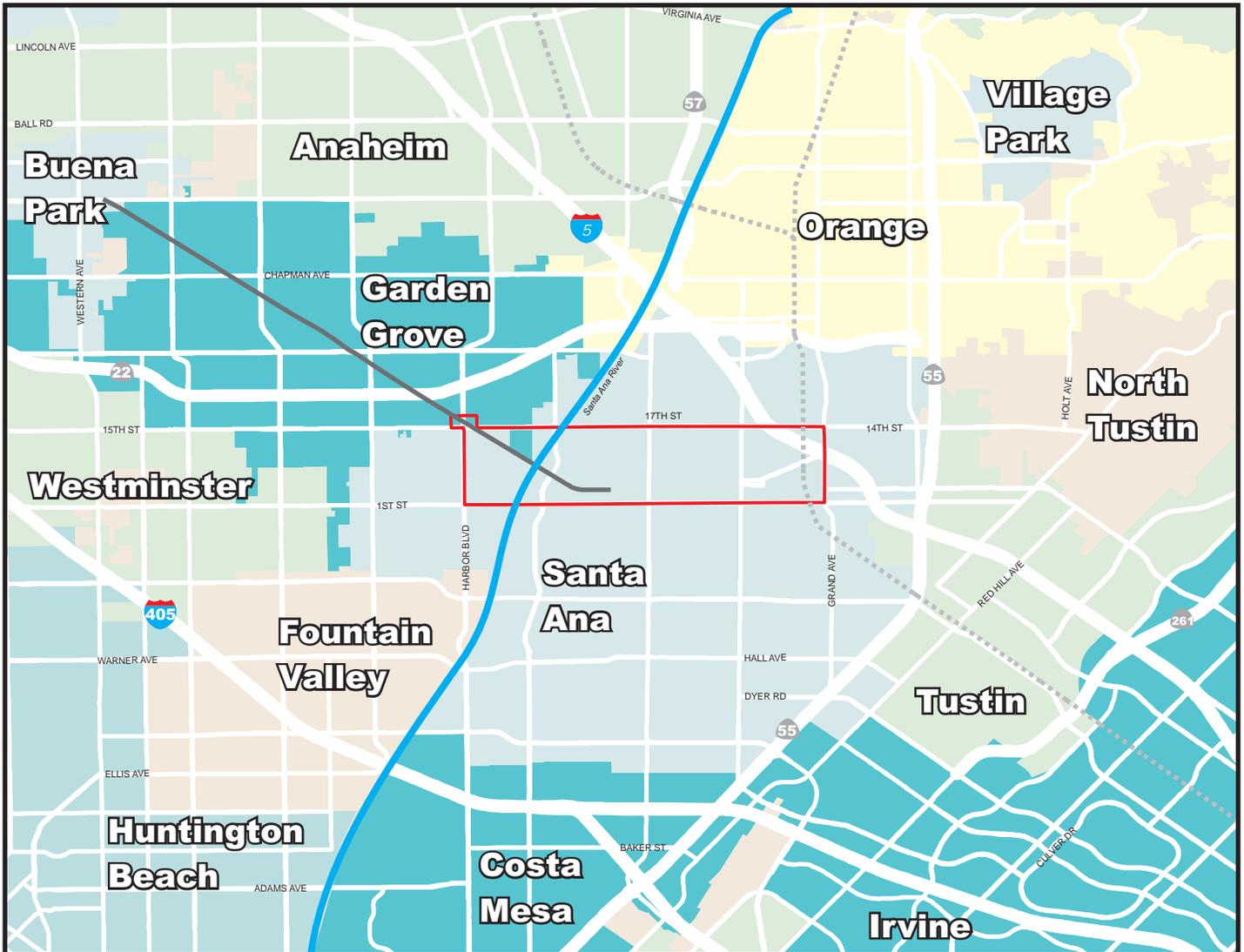
2.2 No Build Alternative

The No Build Alternative includes existing conditions, as well as conditions that would be reasonably expected to occur in the foreseeable future without implementation of any of the build alternatives. The No Build Alternative provides the basis for comparing future conditions resulting from other alternatives. Conditions in the foreseeable future (through planning horizon year 2035) include projects that (1) have environmental analysis approved by an implementing agency and (2) have a funding source identified for implementation.

Other projects in the foreseeable future include:

- Implementation of the Transit Zoning Code (SD 84A and SD 84B), both project-level and program-level components, that are anticipated for build-out by 2028
- Implementation of the Station District Development Projects, which consist of a variety of residential develop projects, community open space and some limited neighborhood-serving commercial development
- Transit improvements including modest adjustments to existing local bus routes; and expanded Metrolink service
- Three, new bus rapid transit routes: (1) Harbor Boulevard Bus Rapid Transit Corridor [Costa Mesa to Fullerton, 10-minute headways, peak period]; (2) Westminster/17th Street Bus Rapid Transit Corridor [Santa Ana to Long Beach, 10-minute headways, peak period]; and (3) Bristol Street Bus Rapid Transit Corridor [Irvine Transportation Center to Brea Mall, 10-minute headways, peak period]
- Roadway improvements including the Bristol Street Widening project, which will widen Bristol Street from four to six lanes between Warner Avenue and Memory Lane, and the

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LEGEND:

- Study Area
- PE ROW
- Metrolink/Amtrak Rail Line

0 1.1 2.2
MILES

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LEGEND:

- Study Area
- Activity Center
- PE ROW
- Metrolink/Amtrak Rail Line
- Boundary of City of Garden Grove

NORTH



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- Grand Avenue Widening project, which will widen Grand Avenue from four to six lanes between 1st Street and 17th Street

2.3 TSM Alternative

The TSM Alternative enhances the mobility of existing transportation facilities and transit network without construction of major new transportation facilities or significantly, costly physical capacity improvements. Consistent with FTA guidelines, the TSM Alternative emphasizes low cost (i.e., small physical) improvements and operational efficiencies such as focused traffic engineering actions, expanded bus service, and improved access to transit services. Included within the TSM Alternative are modifications and enhancements to selected bus routes in the Study Area including:

- Skip-stop overlay service on 1st Street (Route 64) which includes access to SARTC
- A new route between SARTC and Harbor Boulevard/Westminster Avenue via Civic Center Drive, Bristol Street and 17th Street/Westminster Avenue, providing 10-minute peak and 20-minute off-peak service
- Expanded service span for StationLink service (Route 462) between SARTC and the Civic Center, providing 15-minute service during both peak and off-peak hours.

Figure 2-3 is a map of the proposed routes for the TSM bus network enhancements.

In addition, the following system operational improvements are included in the TSM Alternative:

- Traffic signal timing improvements at select congested locations along Santa Ana Boulevard and Civic Center Drive to provide for enhanced east-west bus flow, potential including but not limited to:
 - Main Street at Civic Center Drive
 - Broadway at Civic Center Drive
 - Flower Street at Civic Center Drive
 - Fairview Street at Civic Center Drive
 - Santa Ana Boulevard at Santiago Street
 - Santa Ana Boulevard at Lacy Street (install traffic signal)
- Real-time bus schedule information at high-volume transit stops (e.g., Flower Street and 6th Street, Santa Ana Boulevard and Main Street)
- Improvements to transit stop amenities (benches, shelters, kiosks, sidewalk connections, etc.) along the Santa Ana Boulevard and Main Street corridors
- Improvements to bicycle and pedestrian circulation to promote safe, convenient and attractive connectivity between the transit system and surrounding neighborhoods and activity centers , including accommodating bicycles on all buses, providing real time bus arrival information via internet and mobile devices, installing bicycle storage facilities at SARTC and the Harbor/Westminster stop, and providing study area maps/walking guides on all buses

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Santa Ana-Garden Grove Fixed Guideway Project

Transportation Systems Management (TSM) Alternative



LEGEND:

- Study Area
- Proposed Stop
- PE ROW

- TSM 1st Street Alignment (OCTA Route 64)
- TSM Civic Center Alignment
- Skip Stop Overlay to/from SARTC
- TSM Station Link Enhancement (OCTA BRT Route 462)

0 1500 3000 FEET

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2.4 Streetcar Alternative 1

Streetcar Alternative 1 would utilize the PE ROW through the western half of its alignment and generally operate along Santa Ana Boulevard and 4th Street on the way to SARTC. The 4.1-mile alignment for Streetcar Alternative 1 would include 12 stations. It is anticipated that the streetcar system would operate seven days a week with 10-minute headways during peak periods and 15-minute headways during off-peak periods. The streetcars would be electrically powered using an overhead contact system and a series of TPSS located intermittently along the alignment. Although the specific vehicle has not been selected at this preliminary stage, streetcars generally have a capacity of 30 to 40 seated passengers and 80 to 90 standing passengers for a total of 120 to 130 passengers. **Table 2-1** provides a summary description of the key physical and operational attributes of Streetcar Alternative 1 (PE ROW with Santa Ana Boulevard and 4th Street Couplet). **Figure 2-4** provides a conceptual illustration of the alignment for Streetcar Alternative 1 relative to the existing street network within the Study Area.

2.4.1 Sasser Park Alignment

In Streetcar Alternative 1, the Downtown Santa Ana segment features couplet operations with the westbound streetcar alignment on Santa Ana Boulevard and the eastbound streetcar alignment on 4th Street. For the eastbound transition from Santa Ana Boulevard to 4th Street, a direct route from Santa Ana Boulevard along a public easement on the southern edge of Sasser Park to 4th Street has been identified in **Figure 2-5**.

2.5 Streetcar Alternative 2

Streetcar Alternative 2 would utilize the PE ROW through the western half of its alignment and substantially operate along Santa Ana Boulevard, Civic Center Drive, and 5th Street along the eastern half of the alignment to SARTC. The operational characteristic of this alternative are identical to Streetcar Alternative 1. The differences between the two streetcar alternatives are the alignment and the fact that Streetcar 2 would have one additional station for a total of 13. **Table 2-2** provides a summary description of the key physical and operational attributes of Streetcar Alternative 2 (PE ROW with Santa Ana Boulevard and 5th Street/Civic Center Drive Couplet). This table also includes station locations for comparison to station locations for Streetcar Alternative 1 shown in Table 2-1, above. **Figure 2-6** provides a conceptual illustration of the alignment for Streetcar Alternative 2 relative to the existing street network within the Study Area.

2.5.1 Civic Center Bike Lane

The Streetcar Alternative 2 alignment travels westbound through the Civic Center along Civic Center Drive between Spurgeon and Flower Streets. As part of the City of Santa Ana's Complete Streets Program, and not as part of the SA-GG Fixed Guideway, the City plans to construct bicycle lanes along Civic Center Drive. Streetcar Alternative 2 would acquire additional ROW (**Figure 2-7**) in order not to preclude the westbound bike lane.

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TABLE 2-1: KEY PHYSICAL AND OPERATIONAL ATTRIBUTES OF STREETCAR ALTERNATIVE 1

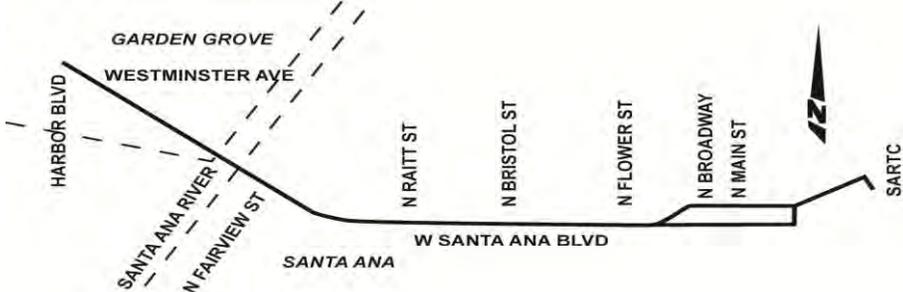
Key Attributes	Descriptions											
Transmit Mode	Streetcar											
Termini	Western Terminus: Harbor Blvd. Eastern Terminus: SARTC											
Alignment Description	<p><u>Routing by Segment:</u></p> <ul style="list-style-type: none"> • PE ROW, from Harbor Blvd. to Raitt St.: streetcars operate at-grade, bi-directionally, in exclusive ROW. • Santa Ana Blvd., from Raitt St. to Ross St.: streetcars operate in the street, at-grade, bi-directionally, along with mixed-flow traffic. • 4th St./Santa Ana Blvd. Couplet, from Ross St. to Mortimer St.: streetcars operate in the street, at-grade, one-way, along with mixed-flow traffic. • Santa Ana Blvd., from Mortimer St. to SARTC: streetcars operate in the street, at-grade, bi-directionally, along with mixed-flow traffic. 											
Length of Alignment	4.1 miles (Harbor Blvd. to SARTC)											
Stations (12 Stations)	<p><u>Station Locations:</u></p> <ol style="list-style-type: none"> 1. Harbor Blvd. and Westminister Ave. 2. Willowick 3. Fairview St. and PE ROW 4. Raitt St. and Santa Ana Blvd. 5. Bristol St. and Santa Ana Blvd. 6. Flower St. and Santa Ana Blvd. <table border="0" data-bbox="527 1182 1955 1356"> <tr> <td data-bbox="527 1182 1241 1214"><i>Couplet Section (Eastbound)</i></td> <td data-bbox="1247 1182 1955 1214"><i>Couplet Section (Westbound)</i></td> </tr> <tr> <td data-bbox="527 1219 1241 1252">7E. Sasser Park</td> <td data-bbox="1247 1219 1955 1252">7W. Ross St. and Santa Ana Blvd.</td> </tr> <tr> <td data-bbox="527 1256 1241 1289">8E. Broadway and 4th St.</td> <td data-bbox="1247 1256 1955 1289">8W. Broadway and Santa Ana Blvd.</td> </tr> <tr> <td data-bbox="527 1294 1241 1326">9E. Main St. and 4th St.</td> <td data-bbox="1247 1294 1955 1326">9W. Main St. and Santa Ana Blvd.</td> </tr> <tr> <td data-bbox="527 1331 1241 1364">10E. French St. and 4th St.</td> <td data-bbox="1247 1331 1955 1364">10W. French St. and Santa Ana Blvd.</td> </tr> </table> <ol style="list-style-type: none"> 11. Lacy St. and Santa Ana Blvd. 12. SARTC 		<i>Couplet Section (Eastbound)</i>	<i>Couplet Section (Westbound)</i>	7E. Sasser Park	7W. Ross St. and Santa Ana Blvd.	8E. Broadway and 4 th St.	8W. Broadway and Santa Ana Blvd.	9E. Main St. and 4 th St.	9W. Main St. and Santa Ana Blvd.	10E. French St. and 4 th St.	10W. French St. and Santa Ana Blvd.
<i>Couplet Section (Eastbound)</i>	<i>Couplet Section (Westbound)</i>											
7E. Sasser Park	7W. Ross St. and Santa Ana Blvd.											
8E. Broadway and 4 th St.	8W. Broadway and Santa Ana Blvd.											
9E. Main St. and 4 th St.	9W. Main St. and Santa Ana Blvd.											
10E. French St. and 4 th St.	10W. French St. and Santa Ana Blvd.											

TABLE 2-1: KEY PHYSICAL AND OPERATIONAL ATTRIBUTES OF STREETCAR ALTERNATIVE 1

Key Attributes	Descriptions
Design Options Carried Forward	Santa Ana River Crossing: <ul style="list-style-type: none"> • Adjacent Single Track Bridge Option 4 th Street Parking Scenarios: <ul style="list-style-type: none"> • Scenario A: South side parallel • Scenario B: South side removal • Scenario C: South side and north side removal
Headways	Peak: 10 minutes (6:00 a.m. to 6:00 p.m.) Off-Peak: 15 minutes (after 6:00 p.m.)
Hours of Operation (in revenue service)	Monday – Thursday: 6:00 a.m. to 11:00 p.m. (17 hours) Friday and Saturday: 6:00 a.m. to 1:00 a.m. (19 hours) Sunday: 7:00 a.m. to 10:00 p.m. (15 hours)
Transit Vehicle	Streetcar – Vehicle type selection has yet to be determined. The two classifications under consideration include: <ul style="list-style-type: none"> • Classic Modern Streetcar (e.g., Portland, Oregon) • CPUC Compliant Streetcar (e.g., San Diego, California)
Power Source	Electric, Overhead Contact System, Traction Power Substations (TPSS) <u>TPSS Locations:</u> <ol style="list-style-type: none"> a. Northwest of Harbor Boulevard and Westminster Avenue b. Along PE ROW, west of Susan Street c. Along PE ROW, east of Santa Ana River d. North on Santa Ana Boulevard. East of Bristol Street e. North of 5th Street, east of Main Street
Operations and Maintenance Facility Sites	Two Candidate Sites: <ul style="list-style-type: none"> • Site A: South of SARTC, bordered by 4th St., 6th St., Poinsettia St., and Metrolink tracks. • Site B: West of Raitt St., between the PE ROW and 5th Street
Major Bicycle and Pedestrian Features	<ul style="list-style-type: none"> • Sidewalk and pedestrian improvements in the vicinity of proposed station platforms. • 4th St.: In conjunction with on-street parking modifications, widen sidewalks on 4th St. between Ross St. and French St.: <ul style="list-style-type: none"> – Scenario A: On south side by 8 ft. for a total width of 20 ft. – Scenario B: On south side by 16 ft. for a total width of 28 ft. – Scenario C: On both sides by 16 ft. for a total width of 28 ft.

Source: Cordoba Corporation, Conceptual Design Plan Set, August 2011.



Santa Ana-Garden Grove Fixed Guideway Project

Streetcar Alternative 1 Alignment



LEGEND:

- Study Area
- Proposed Stop
- Streetcar Alternative 1

0 1500 3000 FEET

Source: Cordoba Corporation, *Draft Alternatives Analysis Report for the Santa Ana-Garden Grove Fixed Guideway Corridor Study*, July 11, 2012; updated by Terry A. Hayes Associates Inc., August 2012.

Note: Termini for Initial Operable Segment 1 (IOS-1) are located at Raitt Street and SARTC.

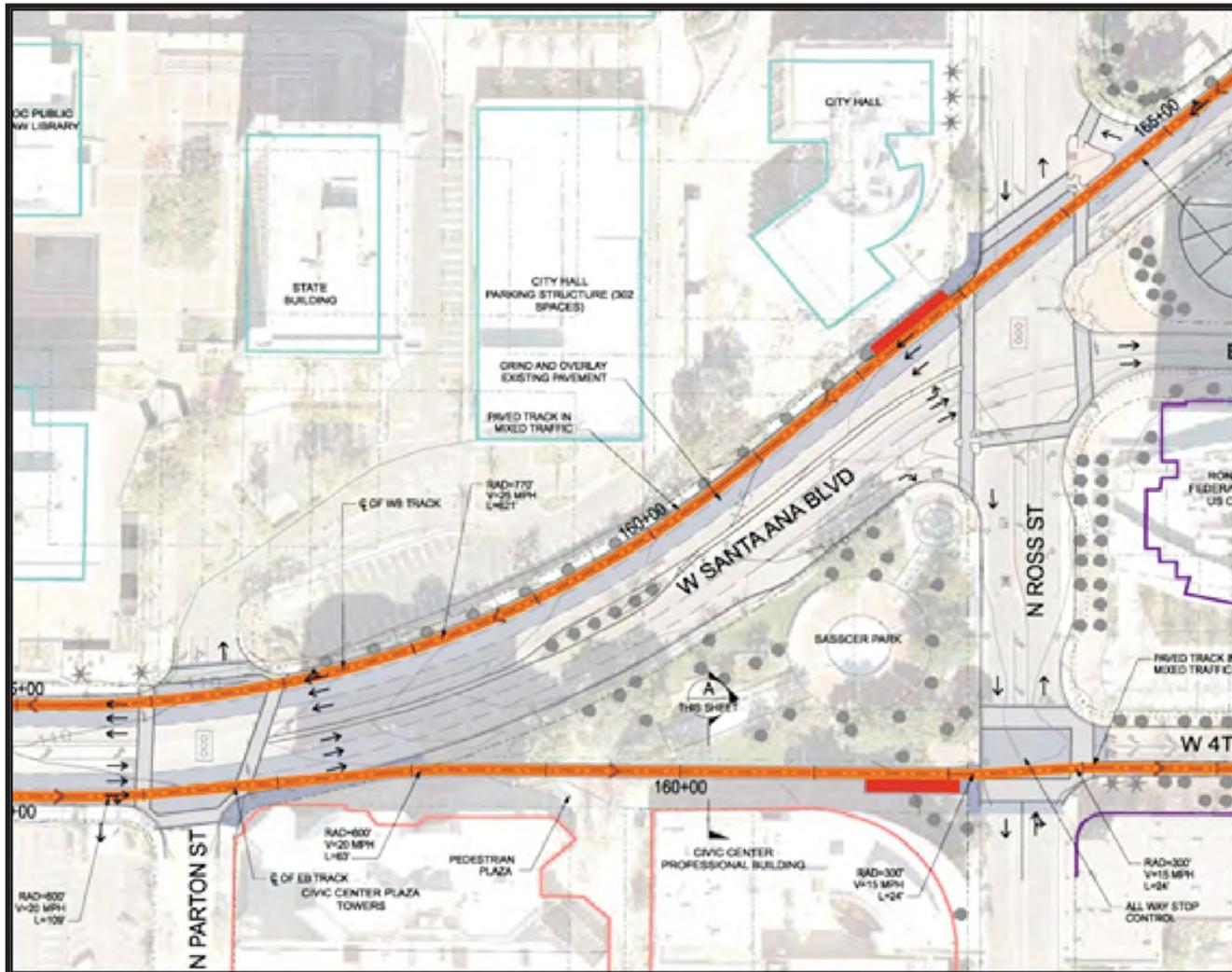


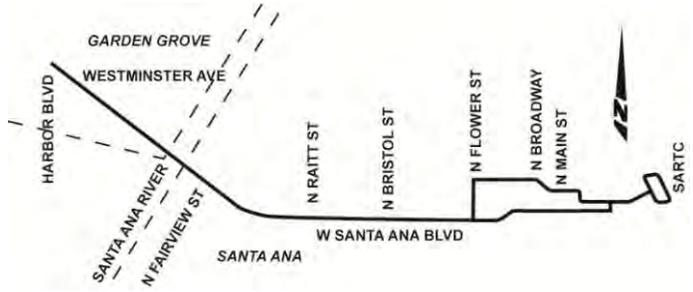
TABLE 2-2: KEY PHYSICAL AND OPERATIONAL ATTRIBUTES OF STREETCAR ALTERNATIVE 2			
Key Attributes	Descriptions		
Transit Mode	Streetcar		
Termini	Western Terminus: Harbor Blvd. Eastern Terminus: SARTC		
Alignment Description	<p><u>Routing by Segment:</u></p> <ul style="list-style-type: none"> • PE ROW, from Harbor Blvd. to Raitt St.: streetcars operate at-grade, bi-directionally, in exclusive ROW. • Santa Ana Blvd., from Raitt St. to Flower St.: streetcars operate in the street, at grade, bi-directionally, along with mixed-flow traffic. • Santa Ana Blvd./5th St. and Civic Center Dr. Couplet, from Flower St. to Minter St.: streetcars operate in the street, at-grade, one-way, along with mixed-flow traffic. • 6th St./Brown St., from Minter St. to Poinsettia St.: streetcars operate in the street, at-grade, bi-directionally, along with mixed-flow traffic. • Poinsettia St./Santa Ana Blvd./Santiago St./6th St. (SARTC Loop): streetcars operate in a one-way loop, in the street, at-grade, along with mixed-flow traffic. 		
Length of Alignment	4.5 miles (Harbor Boulevard to SARTC)		
Stations(13 Stations)	<p><u>Station Locations:</u></p> <ol style="list-style-type: none"> 1. Harbor Blvd. and Westminister Ave. 2. Willowick 3. Fairview St. and PE ROW 4. Raitt St. and Santa Ana Blvd. 5. Bristol St. and Santa Ana Blvd. <table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Couplet Section(Eastbound)</i></p> <ol style="list-style-type: none"> 6E. Flower St. and Santa Ana Blvd. 7E. ----- 8E. Ross St. and Santa Ana Blvd. 9E. Broadway and 5th St. 10E. Main St. and 5th St. 11E. French St. and 5th St. </td> <td style="width: 50%; vertical-align: top;"> <p><i>Couplet Section(Westbound)</i></p> <ol style="list-style-type: none"> 6W. Flower St. and 6th St. 7W. Flower St. and Civic Center Dr. 8W. Van Ness Ave. and Civic Center Dr. 9W. Broadway and Civic Center Dr. 10W. Main St. and Civic Center Dr. 11W. French St. and Santa Ana Blvd. </td> </tr> </table> <ol style="list-style-type: none"> 12. Brown St. and Lacy St. 	<p><i>Couplet Section(Eastbound)</i></p> <ol style="list-style-type: none"> 6E. Flower St. and Santa Ana Blvd. 7E. ----- 8E. Ross St. and Santa Ana Blvd. 9E. Broadway and 5th St. 10E. Main St. and 5th St. 11E. French St. and 5th St. 	<p><i>Couplet Section(Westbound)</i></p> <ol style="list-style-type: none"> 6W. Flower St. and 6th St. 7W. Flower St. and Civic Center Dr. 8W. Van Ness Ave. and Civic Center Dr. 9W. Broadway and Civic Center Dr. 10W. Main St. and Civic Center Dr. 11W. French St. and Santa Ana Blvd.
<p><i>Couplet Section(Eastbound)</i></p> <ol style="list-style-type: none"> 6E. Flower St. and Santa Ana Blvd. 7E. ----- 8E. Ross St. and Santa Ana Blvd. 9E. Broadway and 5th St. 10E. Main St. and 5th St. 11E. French St. and 5th St. 	<p><i>Couplet Section(Westbound)</i></p> <ol style="list-style-type: none"> 6W. Flower St. and 6th St. 7W. Flower St. and Civic Center Dr. 8W. Van Ness Ave. and Civic Center Dr. 9W. Broadway and Civic Center Dr. 10W. Main St. and Civic Center Dr. 11W. French St. and Santa Ana Blvd. 		

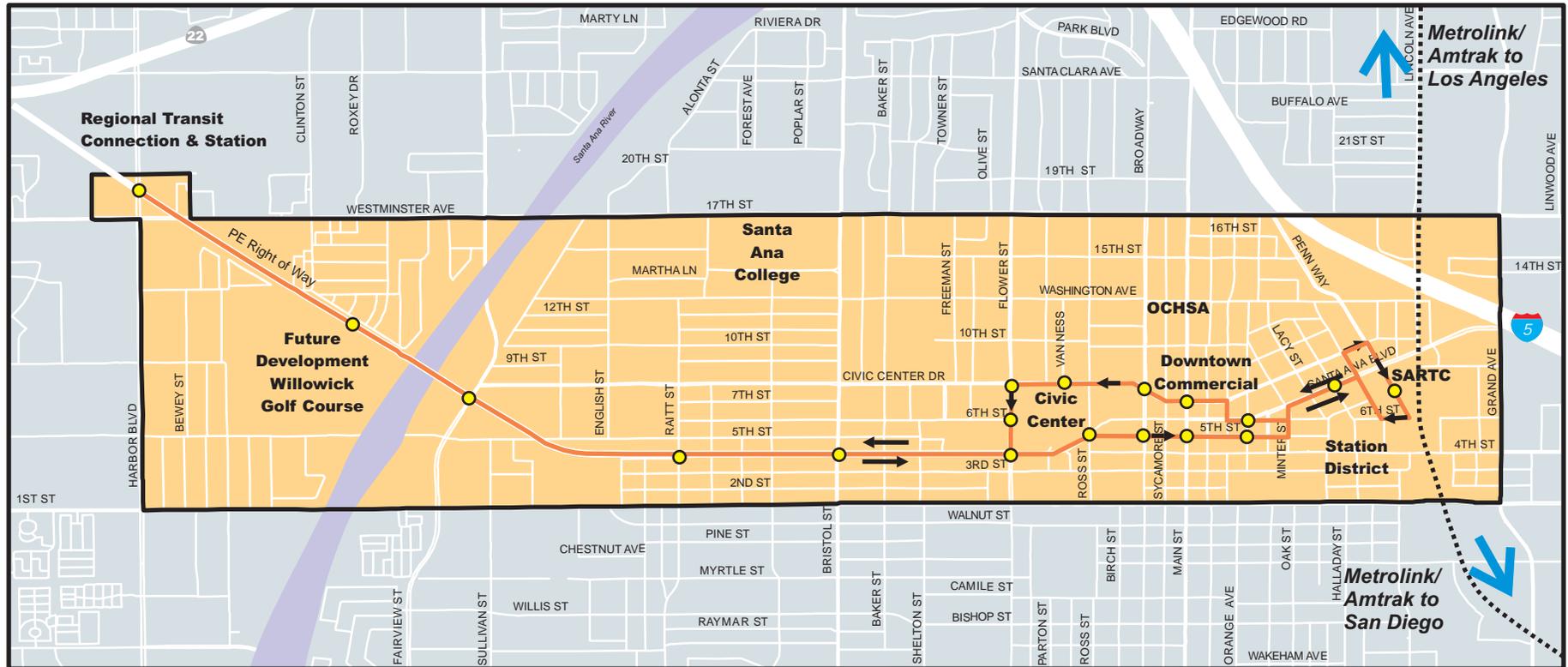
TABLE 2-2: KEY PHYSICAL AND OPERATIONAL ATTRIBUTES OF STREETCAR ALTERNATIVE 2	
Key Attributes	Descriptions
	13. SARTC
Design Options Carried Forward	<u>Santa Ana River Crossing:</u> Adjacent Single Track Bridge
Headways	Peak: 10 minutes (6:00 a.m. to 6:00 p.m.) Off-Peak: 15 minutes (after 6:00 p.m.)
Hours of Operation (in revenue service)	Monday – Thursday: 6:00 a.m. to 11:00 p.m. (17 hours) Friday and Saturday: 6:00 a.m. to 1:00 a.m. (19 hours) Sunday: 7:00 a.m. to 10:00 p.m. (15 hours)
Transit Vehicle	Streetcar – Vehicle type selection has yet to be determined. The two classifications under consideration include: <ul style="list-style-type: none"> • Classic Modern Streetcar (e.g., Portland, Oregon) • CPUC Compliant Streetcar (e.g., San Diego, California)
Power Source	Electric, Overhead Contact System, Traction Power Substations(TPSS) <u>TPSS Locations:</u> <ol style="list-style-type: none"> a. Northwest of Harbor Boulevard and Westminster Avenue b. Along PE ROW, west of Susan Street c. Along PE ROW, east of Santa Ana River d. North on Santa Ana Boulevard, east of Bristol Street e. North of 5th Street, east of Main Street
Operations and Maintenance Facility Sites	Two Candidate Sites: <ul style="list-style-type: none"> • Site A: South of SARTC, bordered by 4th St., 6th St., Poinsettia St., and the Metrolink tracks. • Site B: West of Raitt St., between the PE ROW and 5th St.
Major Bicycle and Pedestrian Features	<ul style="list-style-type: none"> • Sidewalk and pedestrian improvements in the vicinity of proposed station platforms. • Civic Center Drive: Provide sufficient street width on Civic Center Drive between Flower Street and Spurgeon Street to support the City’s planned development of a striped bike lane on each side of the street.

Source: Cordoba Corporation, Conceptual Design Plan Set, August 2011.



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Streetcar Alternative 2 Alignment



LEGEND:

- Study Area
- Proposed Stop
- Streetcar Alternative 2

0 1500 3000 FEET

Source: Cordoba Corporation, *Draft Alternatives Analysis Report for the Santa Ana-Garden Grove Fixed Guideway Corridor Study*, July 11, 2012; updated by Terry A. Hayes Associates Inc., August 2012.
 Note: Termini for Initial Operable Segment 2 (IOS-2) are located at Raitt Street and SARTC.

2.6 Streetcar Alternatives Initial Operable Segments

In response to funding and phasing issues raised by fiscal constraints identified during OCTA's long-range transportation planning process, IOSs which are shorter segments of Streetcar Alternatives 1 and 2 were developed for the SA-GG Fixed Guideway Project. The intent of the IOSs was to identify starter segments that could be constructed and operated until funding is assembled to complete the projects. Both IOS-1 and IOS-2 would terminate at Raitt Station (Raitt Street and Santa Ana Boulevard) rather than Harbor Station (Harbor Boulevard and Westminster Avenue). Both would include the same project features and design options as their respective full alignment build alternatives between Raitt Street and SARTC. These tracks would extend another hundred feet west within the PE ROW to reach the O & M Facility Site B should this site ultimately be selected for either IOS-1 or IOS-2.

The configuration of Raitt as an interim terminus station is the same for IOS-1 and IOS-2. Just over 50 spaces would be provided for station parking at Raitt within the PE ROW on an interim basis to be replaced by parking at Harbor Station upon completion of the full Project. Vehicular access to Raitt Station parking would be via Daisy Avenue.

IOS-1 (Santa Ana Boulevard and 4th Street Couplet). IOS-1 follows the same alignment as Streetcar Alternative 1, but terminates at Raitt Station rather than extending to Harbor Station (**Figures 2-8** through **2-10**). The IOS-1 streetcar alignment is about 2.2 miles in length. IOS-1 includes the same project features, design options, and parking scenarios as Streetcar Alternative 1 between Raitt Street and SARTC (**Table 2-3**).

IOS-2 (Santa Ana Boulevard/5th Street and Civic Center Drive Couplet). IOS-2 follows the same alignment as Streetcar Alternative 2, but terminates at Raitt Station rather than extending to Harbor Station (**Figures 2-8** through **2-10**). The IOS-2 streetcar alignment is about 2.6 miles in length. IOS-2 includes the same project features and design options as Streetcar Alternative 2 between Raitt Street and SARTC (**Table 2-3**).

2.7 Key Attributes

2.7.1 Western Terminus Elevated Crossing

The western terminus for both of the streetcar alternatives is located at the northeast corner of Harbor Boulevard and Westminster Avenue; the transition from the PE ROW to the western terminus site will include an elevated crossing. This crossing is illustrated in **Figure 2-11**.

2.7.2 Streetcar Stations

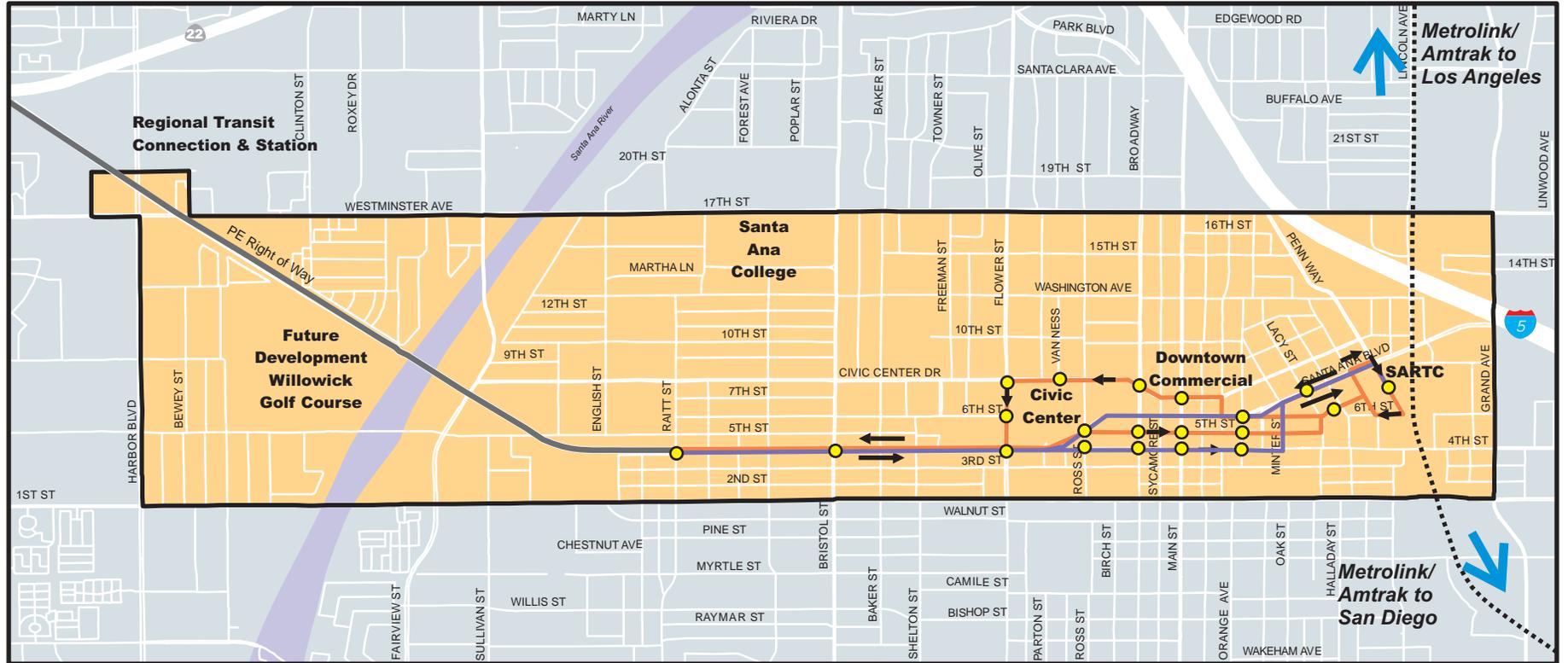
The stations for each streetcar alternative alignment are located curbside adjacent to the platforms within the public ROW. They will consist of a shelter constructed substantially of transparent materials. In addition to seating, the stations will provide traveler information such as estimates of next train arrival time. The two terminus stations will include parking (approximately 52 spaces at the western terminus station; shared-use of SARTC parking for the eastern terminus station). The terminus stations and one inline station in the Downtown

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Santa Ana-Garden Grove Fixed Guideway Project

IOS-1 and IOS-2 Alignments



LEGEND:

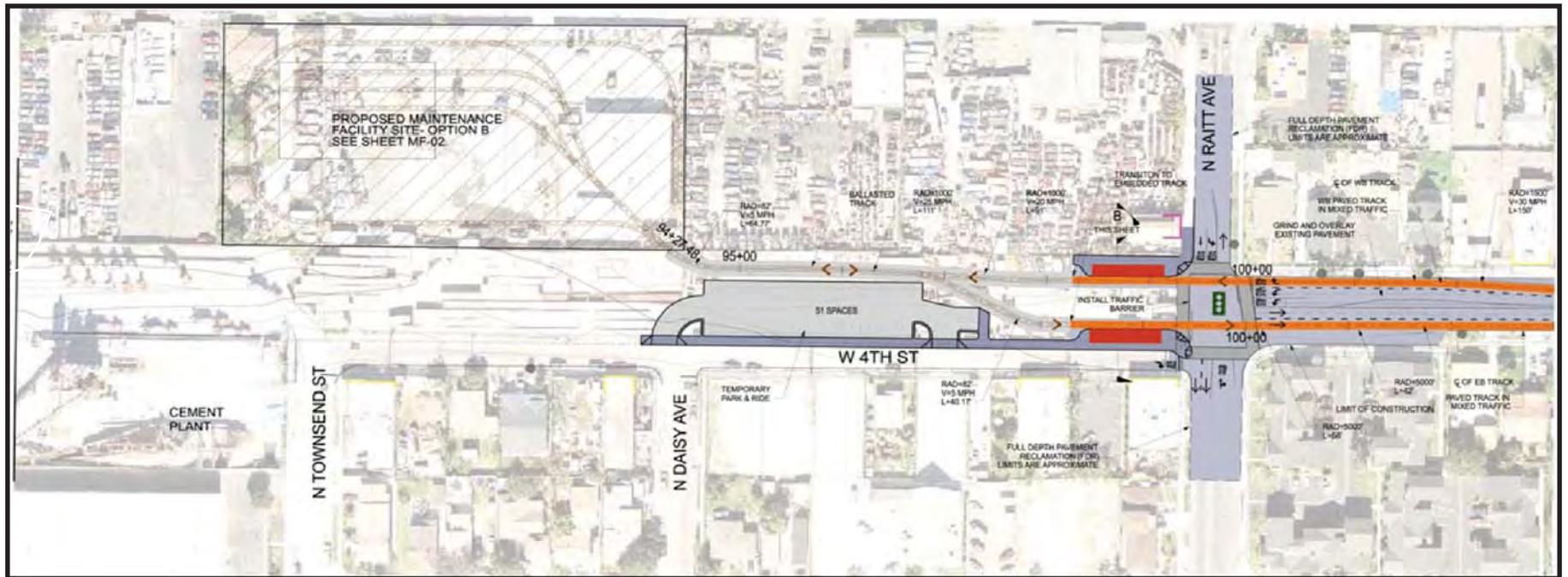
- Study Area
- Proposed Stop
- Streetcar Alternative 1
- Streetcar Alternative 2

0 1500 3000 FEET



Santa Ana-Garden Grove Fixed Guideway Project

IOS-1 and IOS-2 Raitt Street Terminus Configuration with O & M Facility





Santa Ana-Garden Grove Fixed Guideway Project

IOS-1 and IOS-2 - Raitt Street Terminus Configuration without O & M Facility

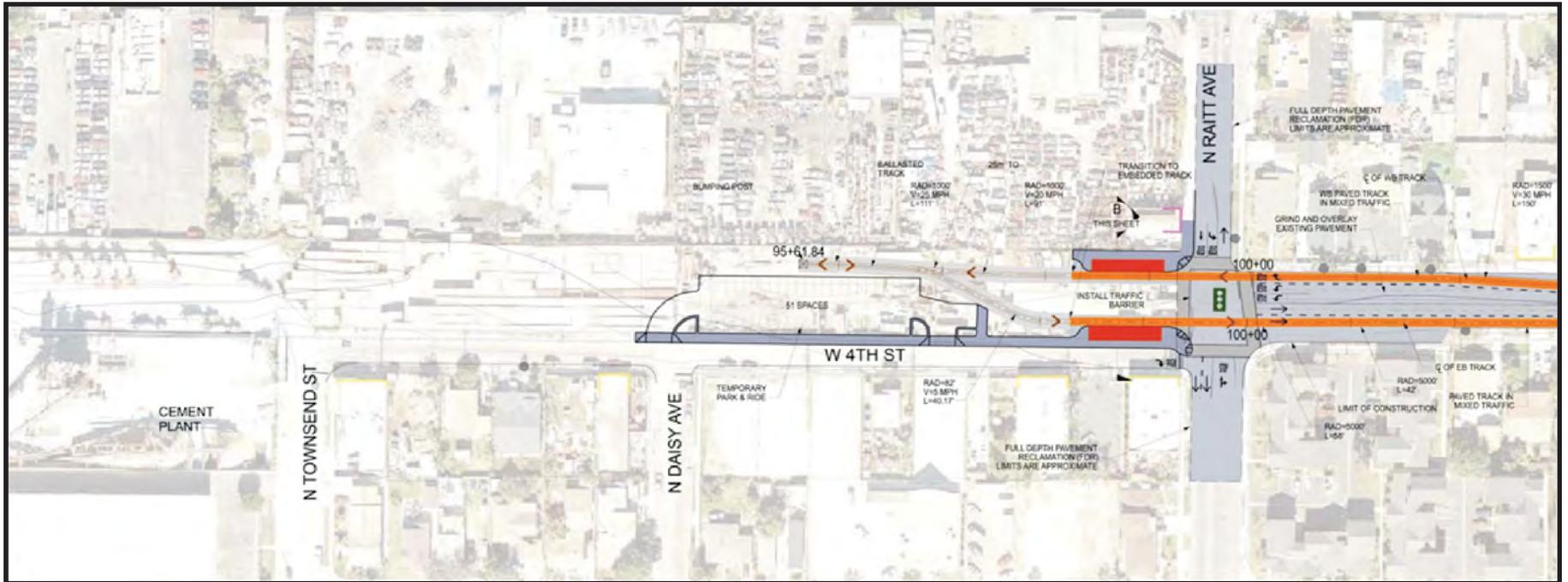


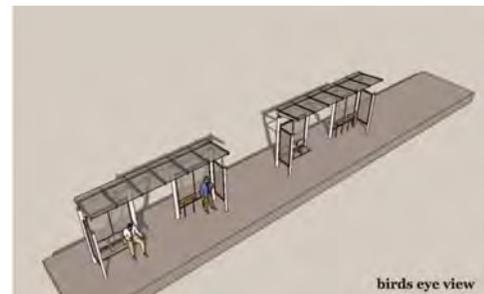
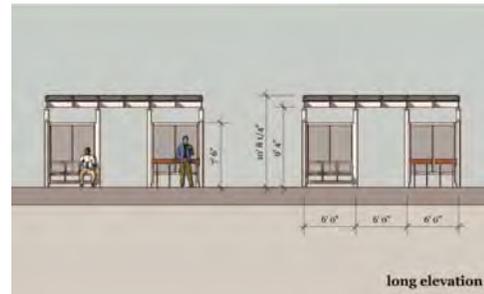
TABLE 2-3: KEY PHYSICAL AND OPERATIONAL ATTRIBUTES OF STREETCAR IOS-1 AND IOS-2				
Key Attributes	IOS-1		IOS-2	
Termini	Western Terminus: Raitt St. Eastern Terminus: SARTC			
Alignment Description	<u>Routing by Segment:</u> <ul style="list-style-type: none"> • Santa Ana Blvd., from Raitt St. to Ross St.: streetcars operate in the street, at grade, bi-directionally, along with mixed-flow traffic. • 4th St./Santa Ana Blvd. Couplet, from Ross St. to Mortimer St.: streetcars operate in the street, at grade, one-way, along with mixed-flow traffic. • Santa Ana Blvd., from Mortimer St. to SARTC: streetcars operate in the street, at grade, bi-directionally, along with mixed-flow traffic. 		<u>Routing by Segment:</u> <ul style="list-style-type: none"> • Santa Ana Blvd., from Raitt St. to Flower St.: streetcars operate in the street, at grade, bi-directionally, along with mixed-flow traffic. • Santa Ana Blvd./5th St. and Civic Center Dr. Couplet, from Flower St. to Minter St.: streetcars operate in the street, at-grade, one-way, along with mixed-flow traffic. • 6th St./Brown Street, from Minter St. to Poinsettia St.: streetcars operate in the street, at-grade, bi-directionally, along with mixed-flow traffic. • Poinsettia St./Santa Ana Blvd./Santiago St./6th St. (SARTC Loop): streetcars operate in a one-way loop, in the street, at-grade, along with mixed-flow traffic. 	
Length of Alignment	2.2 miles (Raitt St. to SARTC)		2.6 miles (Raitt St. to SARTC)	
Stations	<u>Station Locations:</u> 4. Raitt St. and Santa Ana Blvd. 5. Bristol St. and Santa Ana Blvd. 6. Flower St. and Santa Ana Blvd.		<u>Station Locations:</u> 4. Raitt St. and Santa Ana Blvd. 5. Bristol St. and Santa Ana Blvd.	
	<i>Couplet Section (Eastbound)</i> 7E. Sasser Park 8E. Broadway and 4 th St. 9E. Main St. and 4 th St. 10E. French St. and 4 th St.	<i>Couplet Section (Westbound)</i> 7W. Ross St. and Santa Ana Blvd. 8W. Broadway and Santa Ana Blvd. 9W. Main St. and Santa Ana Blvd. 10W. French St. and Santa Ana Blvd.	<i>Couplet Section (Eastbound)</i> 6E. Flower St. and Santa Ana Blvd. 7E. ----- 8E. Ross St. and Santa Ana Blvd. 9E. Broadway and 5 th St. 10E. Main St. and 5 th St. 11E. French St. and 5 th St.	<i>Couplet Section (Westbound)</i> 6W. Flower St. and 6 th St. 7W. Flower St. and Civic Center Dr. 8W. Van Ness Ave.* and Civic Center Dr. 9W. Broadway and Civic Center Dr. 10W. Main St. and Civic Center Dr. 11W. French St. and Santa Ana Blvd.
	11. Lacy St. and Santa Ana Blvd. 12. SARTC		12. Lacy St. and Santa Ana Blvd. 13. SARTC	
Headways	Peak: 10 minutes (6:00 a.m. to 6:00 p.m.) Off-Peak: 15 minutes (after 6:00 p.m.)			
Hours of Operation (in revenue service)	Monday – Thursday: 6:00 a.m. to 11:00 p.m. (17 hours) Friday and Saturday: 6:00 a.m. to 1:00 a.m. (19 hours) Sunday: 7:00 a.m. to 10:00 p.m. (16 hours)			
Power Source	Electric, Overhead Contact System, Traction Power Substations (TPSS) TPSS Locations: d. North on Santa Ana Boulevard. East of Bristol Street e. North of 5 th Street, east of Main			
Operations and Maintenance Facility Sites	Two Candidate Sites: <ul style="list-style-type: none"> • Site A: South of SARTC, bordered by 4th St., 6th St., Poinsettia St. and Metrolink tracks. • Site B: West of Raitt St., between the PE ROW and 5th St. 			

Source: Cordoba Corporation, Conceptual Design Plan Set, August 2011.

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area will also include ticketing machines for the convenience of passengers who may want an alternative to the on-vehicle ticketing during busy peak periods.

Streetcar Alternative 1 includes 12 stations along its 4.1-mile long alignment. Streetcar Alternative 2 includes 13 stations along its 4.5-mile long alignment. An additional station is included in Streetcar Alternative 2 compared to Streetcar Alternative 1. It is located at Flower Street and 6th Street for the westbound streetcar couplet. This is because of the distance between the directional Flower Street stations in Streetcar Alternative 2, with the eastbound stop at Santa Ana Boulevard and the corresponding westbound stop at Civic Center Drive. Additionally, Flower Street, at 6th Street, is a gateway to the Civic Center Plaza with City, County, State and federal offices, as well as the Orange County Sheriff's Department and jail, and the Santa Ana Police Department.



Views of typical streetcar station structure and platform.

Source: Cordoba Corporation

Streetcar Vehicles



Views of typical streetcar vehicles.

Source: Cordoba Corporation

Two types of streetcar vehicles have been identified for use: classic European style streetcar, and the CPUC-compliant vehicle. The former would be similar to the vehicles currently in service in Portland, Oregon and Tucson, Arizona, manufactured by Oregon Ironworks. Neither the Portland vehicle nor the Tucson vehicle meet all CPUC structural requirements, and would therefore require either a waiver from the CPUC or a revision of the CPUC regulations that specifically acknowledge streetcars operating in mixed flow traffic at lower speed. The CPUC-compliant vehicle is derived from a light rail vehicle design. Light rail vehicles are typically CPUC-compliant and do not require CPUC waivers. The Siemens built "S70 short" is a CPUC-compliant vehicle. Both the Oregon Ironworks vehicle and the Siemens vehicle comply with Section 165: "Buy America" provisions of the Surface Transportation Assistance Act of 1982.

Santa Ana River Crossing

Both streetcar alternatives would utilize the PE ROW and cross over the Santa Ana River. This alignment was once used for the Pacific Electric Railway red car system and the Old

Pacific Electric Santa Ana River Bridge still remains. However, it has long been closed for use and not utilized by vehicles or pedestrians since 1950. The historic bridge is inadequate to accommodate the proposed project due to its age, size, (it was constructed as a single-track bridge), disrepair, undetermined structural integrity (both superstructure and foundation) and non-compliance with current building and safety requirements. Four design options were developed for Streetcar Alternatives 1 and 2 at the Santa Ana River Crossing.

These design options were evaluated against identified criteria (cost, feasibility, and potential impacts) to determine which were to be carried forward for evaluation in the EA/DEIR. As detailed in the Section 4(f) Resources Technical Report, Appendix D, and Bridge Design Options Technical Memorandum, Appendix N, four design options were developed for Streetcar Alternatives 1 and 2 at the Santa Ana River Crossing. One was determined feasible for carrying forward for analysis in the EA/DEIR, as illustrated in **Figure 2-12**.

The existing bridge would remain in its current location and condition. A new single-track bridge would be constructed immediately south of the existing bridge for the fixed guideway. Through the use of gates and signaling, the single-track bridge would accommodate bi-directional fixed guideway traffic.

2.8 Design Options

During detailed evaluation, design options were developed to avoid identified constraints or to take advantage of specific opportunities presented along the alignments. In most cases the design options are the same for Streetcar Alternatives 1 and 2. However, where the design option is unique to a specific alternative, it is identified in the discussion. The full results of the analysis of the design options are provided in the Detailed Evaluation of Alternatives Technical Report, March 2012. Based on this technical report, the design options that have been carried into the environmental assessment are described below:

2.8.1 Operations and Maintenance (O & M) Facility Site Options

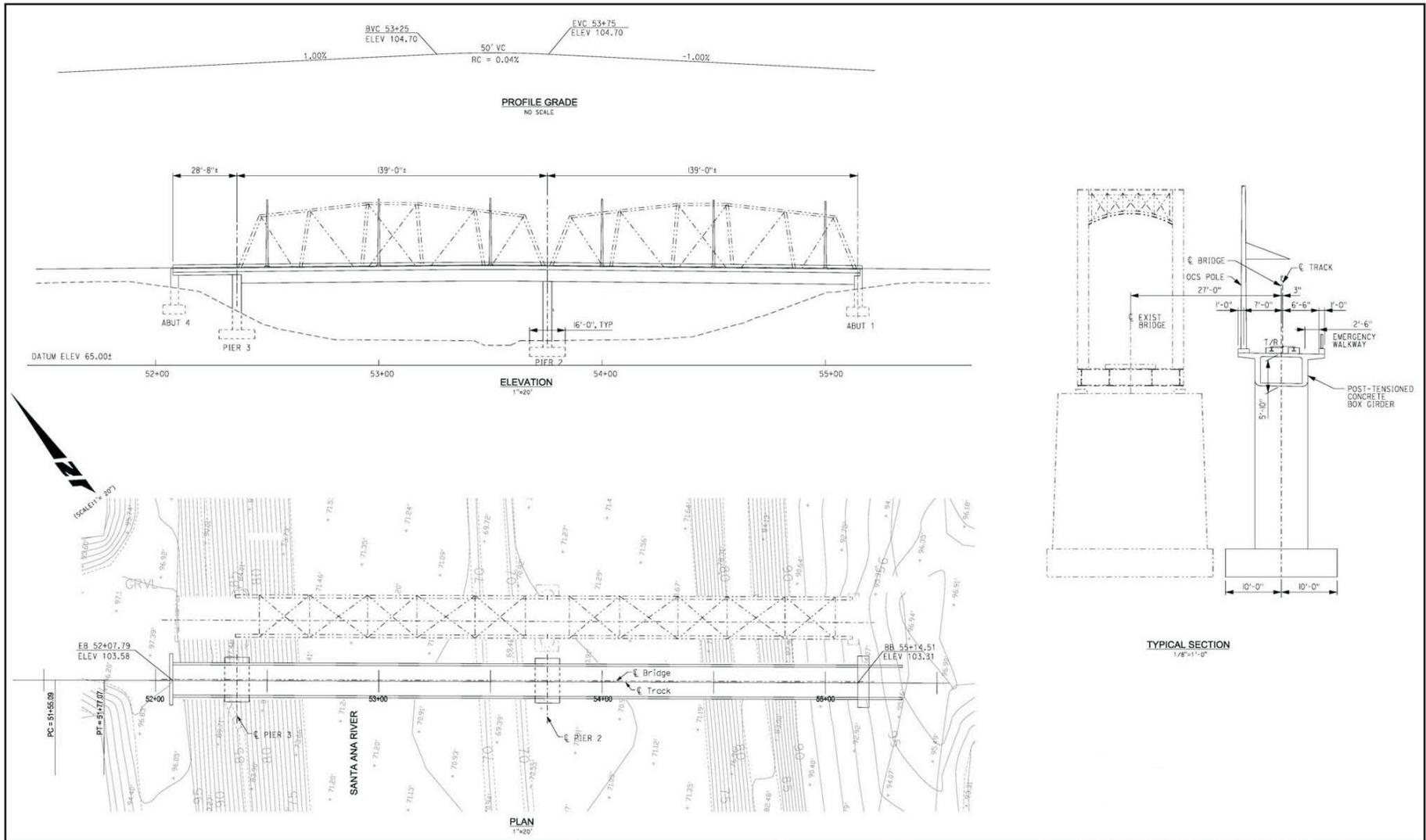
Both Streetcar Alternatives 1 and 2 would require the construction of an O & M Facility for streetcar operations. An O & M Facility is a stand-alone building which would meet the maintenance, repair, operational and storage needs of the proposed streetcar system. The O & M Facility accommodates daily and routine vehicle inspections, interior/exterior cleaning of the streetcars, preventative (scheduled) maintenance, unscheduled maintenance, and component change-outs. The proposed facility would also provide a venue for parking vehicles that are not in use and for rebuilding components.

The site for the O & M Facility would need to accommodate a building that houses both maintenance and administrative functions; provides for off-street employee parking; and provides for various functions such as outside storage of system components, vehicle washing, and local requirements for landscaping and screening. Currently, two candidates O & M Facility sites have been identified for either Streetcar Alternative 1 or 2. See **Figure 2-13** for the approximate locations of these sites.



Santa Ana-Garden Grove Fixed Guideway Project

Santa Ana River Crossing

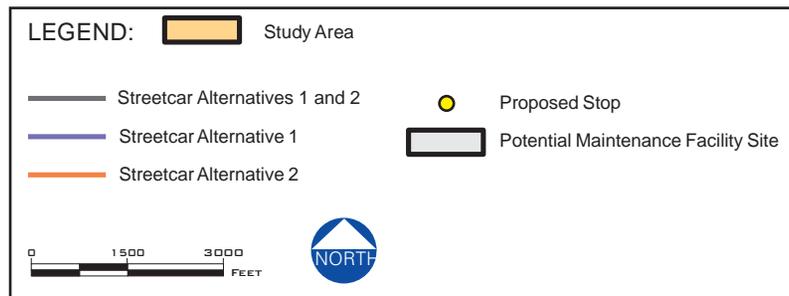
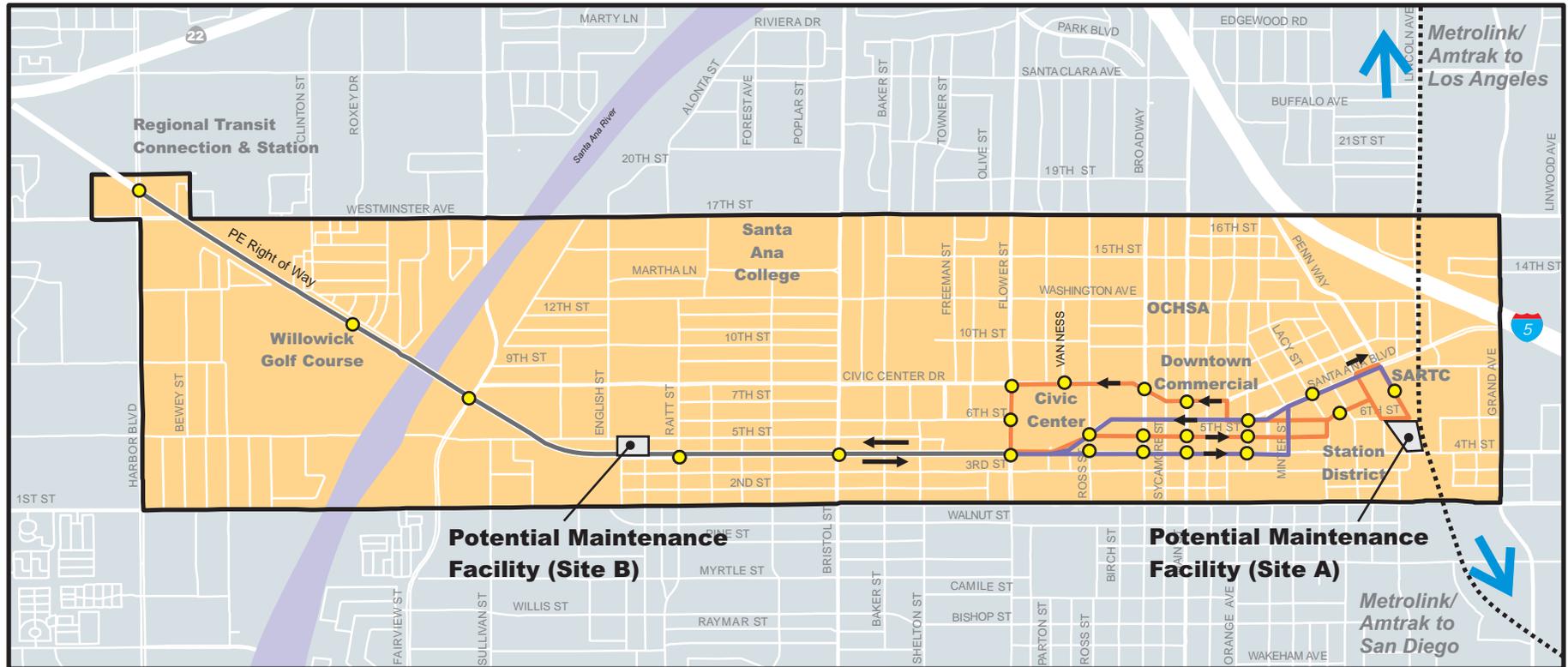


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Santa Ana-Garden Grove Fixed Guideway Project

Candidate Sites of Operations and Maintenance Facilities



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O & M Facility Site A (near SARTC). O & M Facility Site A is an irregularly shaped parcel slightly larger than 2.2 acres, and bordered by 6th Street to the north, 4th Street to the south, the Metrolink tracks to the east, and various industrial and commercial businesses to the west. Currently used as a waste transfer and recycling center, this site contains one primary structure with the remainder of the site used for receiving and sorting recycling materials, and parking. **Figure 2-14** shows the proposed location of Site A and **Figure 2-15** shows a conceptual layout of Site A. This site connects to either Streetcar Alternative 1 or 2 via a nonrevenue extension of track on Santiago Street for the equivalent of approximately two city blocks.

O & M Facility Site B (near Raitt Street). O & M Facility Site B is a rectangular site slightly larger than 2.4 acres. It is located west of Raitt Street and is bordered by 5th Street to the north and the PE ROW to the south. Located in an area zoned for industrial and commercial uses, this site is comprised of three parcels, two of which contain existing businesses and a combination of industrial buildings. The third parcel contains several residences. **Figure 2-16** shows the proposed location of Site B and **Figure 2-17** shows a conceptual layout of Site B. This site connects to the streetcar alignment for Streetcar Alternative 1 or 2 from the PE ROW. Motor vehicle access to the site would be to and from 5th Street.

2.8.2 Fourth Street Parking Scenarios

The Streetcar Alternative 1 alignment would utilize 4th Street between Ross Street and Mortimer Street in the westbound direction. From east of Ross Street to French Street, 4th Street has one travel lane in each direction with head-in diagonal parking along each side of the roadway. The diagonal parking, with vehicles exiting parking spaces by backing into the travel lane, is incompatible with reliable streetcar operations. Three design scenarios were identified to address the diagonal parking on 4th Street as described below and shown on **Figure 2-18**.

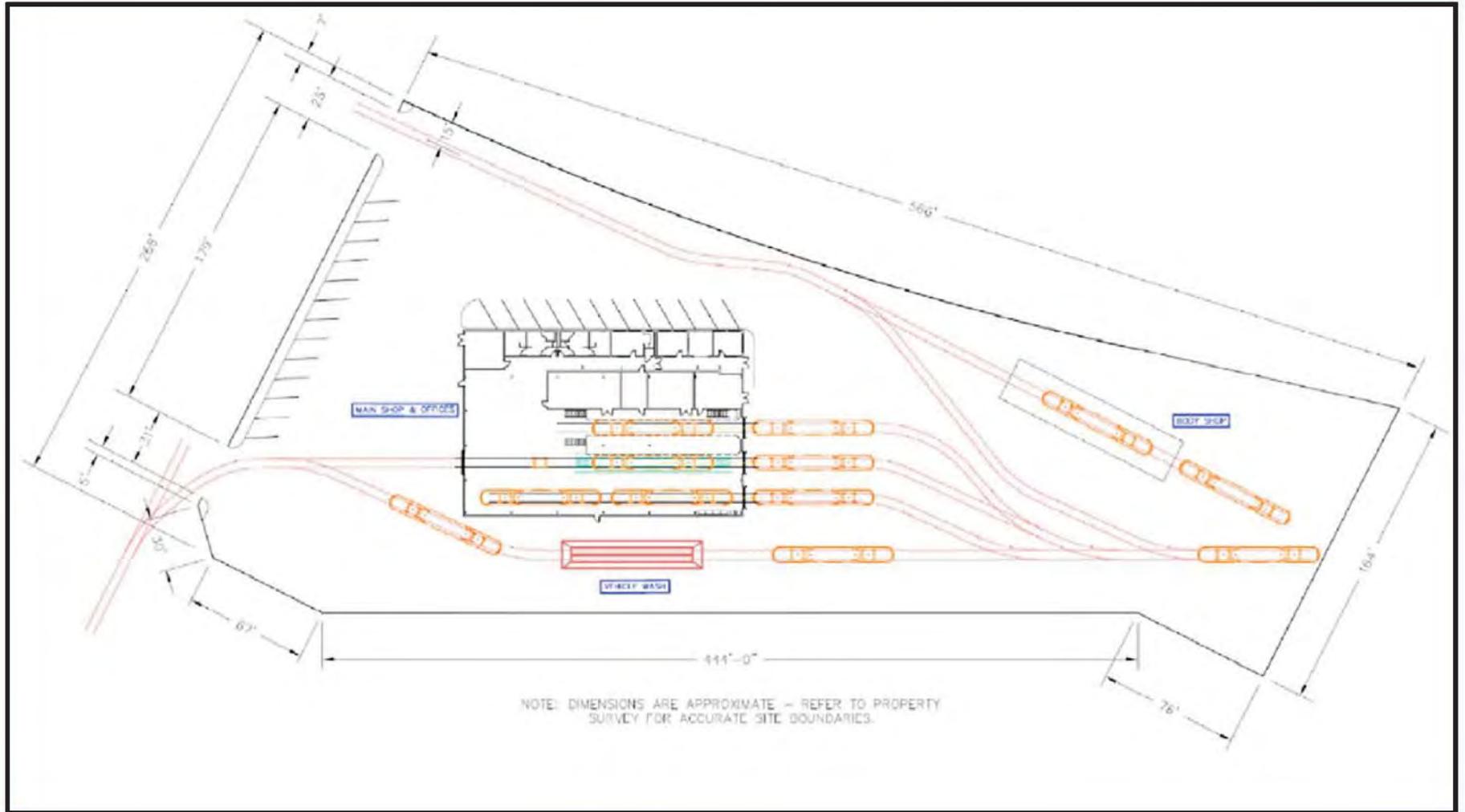
Scenario A: Convert the diagonal parking along the south side of 4th Street, between Ross Street and French Street, to parallel parking and widen the sidewalk along the south side from 12 feet to 20 feet, and replace streetlights and landscaping. A total of 26 on-street parking spaces would be removed under this scenario.

Scenario B: Remove the diagonal parking along the south side of 4th Street, between Ross Street and French Street, and widen the sidewalk along the south side from 12 feet to 28 feet, and replace streetlights and landscaping. A total of 77 on-street parking spaces would be removed under this scenario.

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Operations and Maintenance Facility Site A - Conceptual Layout





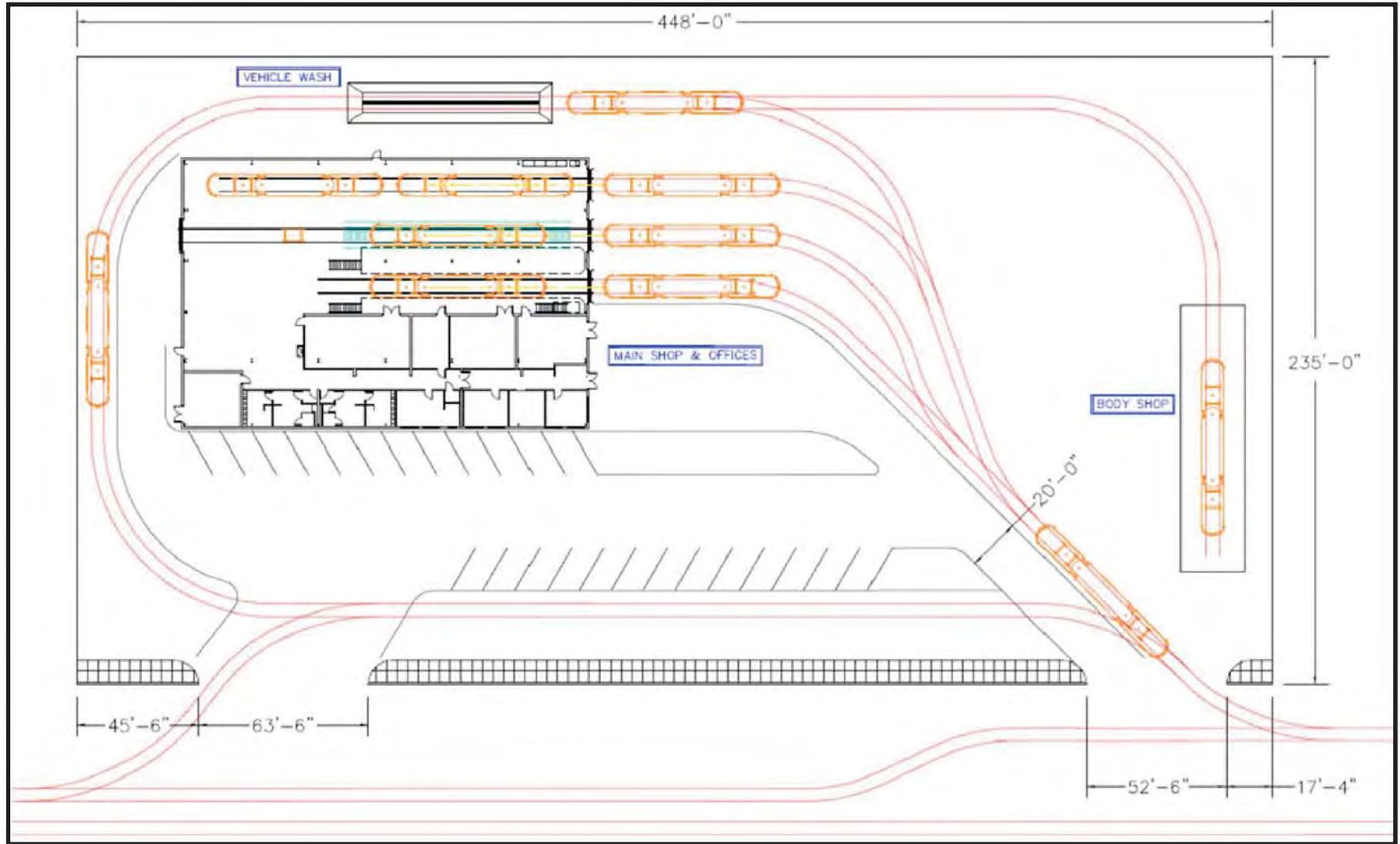
Operations and Maintenance Facility Site B - Location and Configuration



Source: Cordoba Corporation, *Draft Alternatives Analysis Report for the Santa Ana-Garden Grove Fixed Guideway Corridor Study*, July 11, 2012.

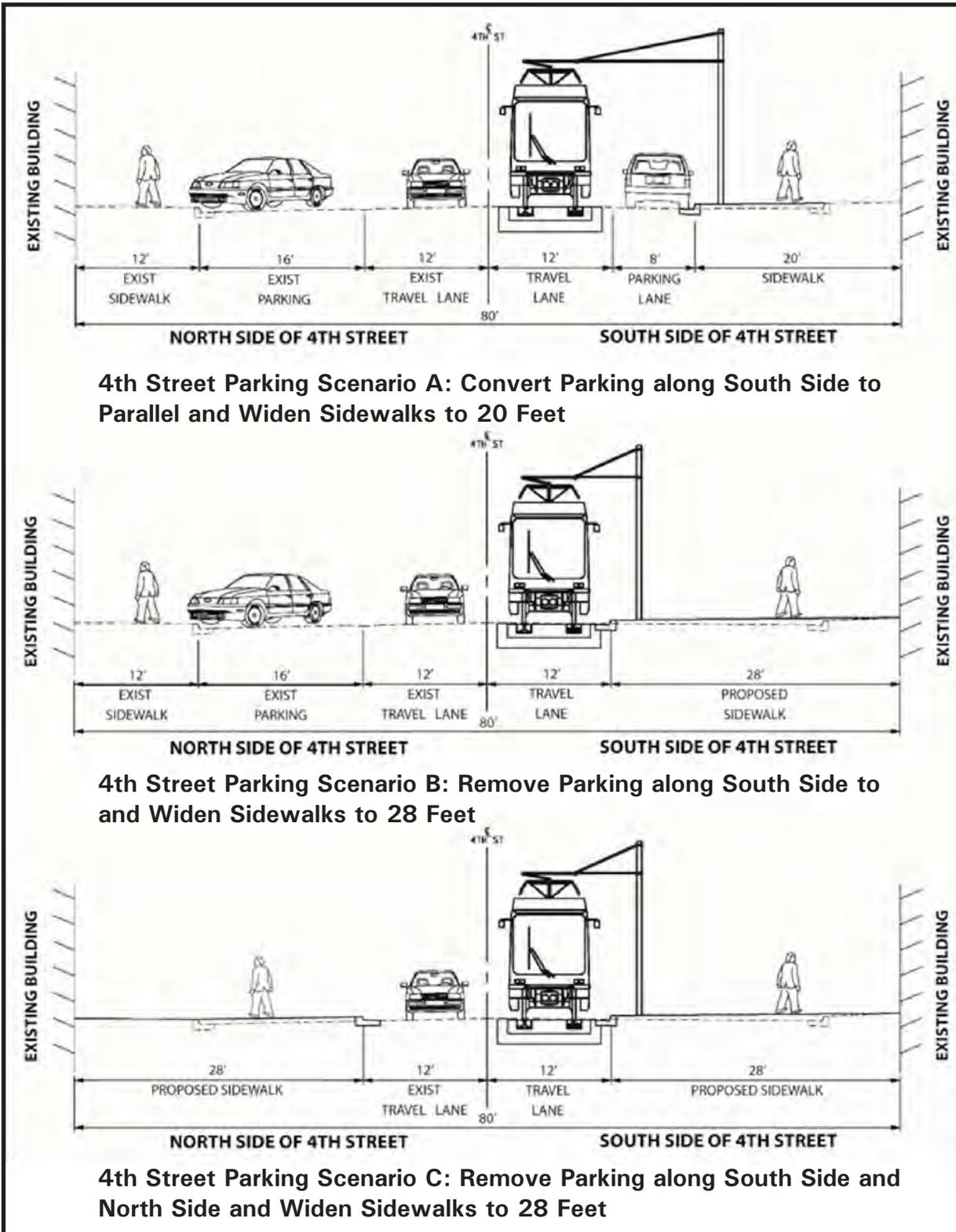


Operations and Maintenance Facility Site B - Concept Layout





4th Street Parking Scenarios



Scenario C: Remove the diagonal parking along both sides of 4th Street, between Ross Street and French Street, widen the sidewalks along both sides from 12 feet to 28 feet. In this scenario, only the parking removal and sidewalk widening along the south side would be included in the cost of the project. The City of Santa Ana would pursue alternative funding to construct the improvements to the north side.

2.9 Construction

Construction of either Streetcar Alternative 1 or 2 would take place on a segment-by-segment basis along the streetcar alignment, with the exception of the bridge structures and the O & M Facility. The duration of concentrated construction activities would be no more than six months at one location along the alignment. The construction approach would be the same for Streetcar Alternatives 1 and 2. Construction activities would include, but would not be limited to, site preparation, bridge structure construction, roadway and sidewalk reconstruction, laying streetcar track and embedded trackwork, and construction of an O & M Facility.

Construction hours would generally occur between 7:00 a.m. and 6:00 p.m., Monday through Friday. There are some exceptions, such as nighttime construction, where temporary street lane closures and utility work would be required. Project construction would follow the applicable local, State, and federal laws for building and safety. In addition, standard conditions would be included in project construction contracts to ensure consistency with applicable laws for traffic, noise, vibration, and dust control.

The following description summarizes the construction approach and methods that have been defined for the project at this preliminary stage of conceptual design:

- In general, all construction of tracks would be within the existing PE ROW, existing streets, or proposed future streets;
- Construction of the O & M Facility would be within one of the designated sites along the alignment, as defined in the project description as O & M Facility Sites A and B;
- The construction period is anticipated to be approximately 30 months, with major activities to be completed within the first 24-month period;
- It is anticipated that the construction activities would be staged and sequenced based on location and types of construction. The likely staging of the proposed project would include four to five segments to allow for construction crews to work in sequence, moving one team to a new location, while the next team takes over the next set of activities; and
- Two potential areas are identified as construction staging and track laydown areas:
 - The east end of the PE ROW at Raitt Street would be used as a temporary construction and welding plant and material storage sites. This location would serve as the midpoint of distribution to both east and west directions of the alignment. The welding plant would be a combined operation of flash butt welding and laydown storage to produce designated length of rail ribbons to be dragged or truck-hauled into position for embedment or attachment to ties; and

- The second area is identified as land owned by the City of Santa Ana, located at the corner of 6th and Santiago Streets. Some special trackwork and pre-curved rails could be stored at this location;
- Construction of the proposed project would require the relocation of one catch basin under Alternative 2 at Flower Street and Civic Center Drive in addition to the installations of approximately 50 new catch basins to improve drainage along the alignment.

Construction Scenario

The project would use conventional construction techniques and equipment typical to the Southern California region and follow all applicable federal, State, and local laws for building and safety. Working hours would be varied to meet special circumstances and restrictions. Customary local practices consistent with all applicable laws would be used to control traffic, noise, vibration, erosion, and dust during construction. Design and construction would include mitigation commitments. Generally, construction would be divided into a series of often overlapping activities to minimize the construction duration and associated impacts. **Table 2-4** depicts a typical construction activities sequencing for an LRT project of similar scope and complexity.

TABLE 2-4: TYPICAL CONSTRUCTION SEQUENCE AND AVERAGE CONSTRUCTION TIME		
Activity/a/	Tasks	Average Time Required (months)
Preconstruction	Locate utilities; establish right-of-way and project control points and centerlines; establish and relocate survey monuments	2 – 4
Site Preparation	Establish environmental controls and install soil and erosion-control measures; relocate utilities and clear and grub right-of-way (demolition); establish detours and haul routes; erect safety devices and mobilize special construction equipment; prepare construction equipment yards, and stockpile materials	3 – 6
Heavy Construction	Construct aerial structure, retaining walls, trackbed drainage, at-grade guideway, soil stabilization, pile caps/foundations, abutments, bents, and dispose of excess material	12 – 16
Medium Construction	Lay track, construct stations, install off-site drainage, and construct elevated station enclosures	6 – 12
Light Construction	Finish work, install systems elements (electrical, signals, and communication), street lighting where applicable, traffic signals, signing and striping, landscaping, close/remove detours, and clean up and test system	3 – 9
Pre-Revenue Service	Test vehicles, power, communication, signaling, train operators and maintenance personnel	1 – 3

/a/ Some of these activities would be conducted in parallel.
 Source: Terry A. Hayes Associates Inc., 2012.

- Some profile grade leveling, clearing, and grubbing of the PE ROW would take place during the early stages to establish grade for the ballast track sections. The duration of this activity would be two to three months;

Construction equipment would include graders, bulldozers, cranes, drill rigs, excavators, concrete-batching equipment, pumping equipment, concrete trucks, flat bed trucks, dump trucks, and rail-mounted equipment. While the final construction approach, including methods, staging, and sequencing coordination, will be determined in detail with the construction contractor, who has yet to be selected, the following describes the likely sequencing of the major construction activities. It should be noted that most of these activities overlap.

- Early work activities would include relocation of some of the private and public underground utilities identified as being in conflict with the track alignment;
- Work on the new bridge structure at Westminster Avenue and for the new Santa Ana River bridge structure would also begin early in the construction period;
- Demolition and clearing of the selected O & M Facility site would begin in the early phase of construction in order to be available for receipt and testing of the vehicles. Construction of the maintenance facility yard would also likely commence at this time;
-
- Prior to initiating work on the ballast track, overhead contact wire pole foundations and station foundations would be constructed to grade level. In addition, structure approach slabs, underground utilities, or subsurface structures would be constructed prior to the laying of the ballasted sections;
- Track construction would begin next for the in-street and the non-structure ballasted sections of the streetcar trackway. The steps would involve setting up the reinforcement for the concrete slab, placing the rail, boots, and ties and finally pouring track slab concrete. The following construction activities would also occur during the same 24-month timeframe as track construction:
 - Preparation for substation sites and installation of conduits, grounding mats, and substation foundations.
 - Track construction activity, including installation of special trackwork, field welds, installation of insulated joints and other special trackwork material.
 - Sidewalk improvements, platforms, pavement grading and resurfacing to the limits of the project between Raitt Street and SARTC.
 - Foundation work for new traffic signal, lighting, and overhead contact wire poles.
 - Roadway grinding and overlay operations beginning at Raitt Street and advancing eastward along the alignment; and
- The final steps of the construction work would include pavement striping, reestablishing ROW temporarily impacted by construction, landscaping, system testing, lining and surfacing of the ballasted track, and other miscellaneous finishing.

Chapter 3 Regulatory Setting

This chapter outlines the regulatory setting of the proposed project as a background for describing the project conditions and defining the impacts analysis and mitigation minimization and avoidance measures in subsequent chapters.

3.1 Land Use

3.1.1 Federal

3.1.1.1 National Environmental Policy Act (NEPA)

NEPA was enacted by Congress in 1969 to create mechanisms to restore and maintain environmental quality. NEPA is the basic national charter for the protection of the environment. NEPA requires that the federal government, in cooperation with local and State governments, use practicable measures to maintain and protect the social, economic, and environmental conditions for overall welfare of the public.

3.1.1.2 Uniform Relocation Assistance and Real Property Acquisition Policies Act

The Uniform Relocation Assistance and Real Property Acquisition Policies of 1970 and implementing regulation (49 CFR 24) outline minimum standards for federally funded projects that acquire real property or displace persons from their homes or businesses. The purpose of this Act is to provide fair and equitable treatment and relocation assistance to those whose property is acquired or who have been displaced. The proposed project would comply with this Act in the event that properties must be acquired or any persons are displaced.

3.1.1.3 Habitat Conservation Plans (HCPs)

HCPs under Section 10(a)(1)(B) of the Endangered Species Act of 1973 provide for partnerships with non-federal parties to conserve the ecosystems upon which listed species depend, ultimately contributing to their recovery. Based on the Appendix B, Biological Technical Report, of the EA/DEIR there are no HCPs within the Study Area.

3.1.2 State

3.1.2.1 California Environmental Quality Act (CEQA)

Adopted in 1970, the purpose of the CEQA is to: 1) inform decision-makers and the public of the potential significant environmental effects of a proposed project; 2) identify the ways in which environmental damage can be avoided or reduced; 3) require changes in projects through the use of less damaging alternatives or mitigation measures when feasible; and 4) disclose to the public the reasons why a governmental agency approved the project if significant environmental effects were involved. Pursuant to CEQA, the focus of the environmental analysis is on the physical change resulting from a project. Social or economic

effects of a project are typically not treated as significant effects on the environment. However, environmental analysis “may trace a chain of cause and effects from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes” (CEQA Guidelines Section 15131(a)). Economic or social effects of a project may be used to determine the significance of physical changes caused by the project (CEQA Guidelines Section 15131(b)). Also, economic, social, and particularly housing factors would be considered together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the identified significant effects on the environment (CEQA Guidelines Section 15131(c)).

3.1.2.2 California State Government Code

California State Law (Government Code Section 65300) requires that a city prepare and adopt a comprehensive, long-term General Plan to guide its development. The land use element has the broadest scope of the State-required elements, since it regulates how land is to be utilized. Government Code Section 65302(a) requires a land use element to designate the proposed general distribution, and general location and extent of the following land uses: housing, business, industry, open space, agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid waste disposal facilities, and other categories of public and private land uses. Applicable General Plans have been listed in subsequent sections.

3.1.3 Regional

3.1.3.1 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP)

SCAG is the largest of nearly 700 councils of government in the United States, functioning as the Metropolitan Planning Organization (MPO) for six Southern California counties including Orange County. The region encompasses a population exceeding 18 million persons in an area of more than 38,000 square miles. The City of Santa Ana is located within the SCAG planning area. As the designated MPO, SCAG is mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality.

SCAG is federally mandated to develop and update the RTP on a three-year cycle to provide a basic policy and program framework for the long-term investment in the regional transportation system in a coordinated, cooperative, and continuous manner. The proposed project has been identified in the SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

Through its RTP/SCS, SCAG provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that extend out over a 20-year period, the RTP/SCS considers the role of transportation in the broader context of economic,

environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address the community's mobility needs. The RTP establishes goals and policies for the region. SCAG prepares an update to its RTP every four years.

According to the 2012-2035 RTP/SCS, SCAG has adopted a set of advisory land use policies and strategies for future regional planning efforts and for localities to consider as they accommodate future growth. The following policies and strategies are applicable to the proposed project:

- Develop nodes on a corridor. Intensify nodes along corridors with people-scaled, mixed-use developments. Many existing corridors lack the residential and commercial concentration to adequately support non-auto transit uses, without which the existing transit system cannot fully realize its potential for accommodating additional trips and relieving the transportation system. These nodes along the corridor also create vibrant, walkable communities with localized access to amenities, further reducing reliance on the automobile for a variety of trips.
- Plan for additional housing and jobs near transit. Pedestrian-friendly environments and more compact development patterns in close proximity to transit serve to support and improve transit use and ridership. Focusing housing and employment growth in transit-accessible locations through this transit-oriented development (TOD) approach would serve to reduce auto use and support more multimodal travel behavior; and
- Ensure access to open space and habitat preservation despite competing quality-of-life demands driven by growth, housing and employment needs, and traditional development patterns. Development patterns that focus growth in centers and corridors make the most efficient use of developed land and minimize encroachment on public open space and natural habitat. This approach would ensure improved access to existing large-scale and neighborhood-scale open space.

The proposed project transportation investment is intended to support economic vitality and foster redevelopment opportunities within the Study Area by improving access and connectivity within the Study Area, and between the Study Area and the surrounding region. In combination with the City of Santa Ana Transit Zoning Code (described in Section 3.1.4.5 below), the proposed project would foster redevelopment of mixed-use areas. Upon implementation, the proposed project would also reduce the dependency on the automobile as the primary form of transportation. As such, the project is intended to increase walkability within the Study Area as well, and, therefore, would be consistent with regional transportation policies.

2012-2035 RTP/SCS provides a planning tool to analyze impact of Senate Bill 375 goals, including different land use scenarios on vehicle ownership, vehicle miles traveled, mode-use, and alternative land use scenarios. Senate Bill 375 requires the development of regional reduction targets for greenhouse gas emissions, and prompts the creation of regional plans to reduce emissions from vehicle use throughout the State. The plan provides basic planning

tools to reduce greenhouse gas emissions from automobiles and light trucks through integration of transportation, land use, housing, and environmental planning.

3.1.3.2 Orange County Long-Range Transportation Plan (LRTP)

The 2010 LRTP is the OCTA's vision of how people, goods, and services would use the transportation system for work, commerce, school, and recreational travel. Goals and objectives are developed to address travel needs and challenges associated with providing a balanced transportation system that meets the future needs of the residents, workers, and visitors. The LRTP is updated every four years to coincide with the OCTA input into the SCAG 2012-2035 RTP/SCS and to Orange County's 2011 SCS. The proposed project would be consistent with the relevant goals and objectives of the 2010 LRTP. It would expand transportation choices for the end user and it would improve transportation system performance by improving travel time and increase person throughput. The LRTP provides goals and objectives on how the vision would be carried out.

Goal 1 – Expand Transportation System Choices. The proposed project would add to the transportation choices of the community to meet their transportation needs by providing convenient travel to and from jobs and from other activities, improving access to the transportation system across and between travel modes, providing access to an integrated multimodal transportation system. The project is consistent with achieving the objectives below intended to enhance the versatility and accessibility of the future transportation system.

Objectives

- Expand travel options across modes including transit, driving, bicycling, walking, and ridesharing opportunities;
- Improve connectivity to/from employment and regional destinations; and
- Ensure multimodal integration throughout the transportation system.

Goal 2 – Improve Transportation System Performance. The project would improve the efficient movement of people and goods by providing economic, environmental, and social benefits for the residents and workers in the Cities of Santa Ana and Garden Grove. The project would comply with the following objectives below, intended to improve transportation system performance and make better use of existing infrastructure.

Objectives

- Improve travel speeds by reducing congestion by cars and passenger travel methods;
- Improve travel time by increasing speed and reducing congestion;
- Increase person throughput through a mass transit system that can support mass movement of people; and
- Improve roadway and transit level of service by alleviating passenger traffic.

3.1.4 Local

Assessment of the compatibility and consistency of the proposed project with future land use and community characteristics is based upon the following locally adopted plans.

3.1.4.1 City of Garden Grove General Plan

The City of Garden Grove General Plan is a policy document designed to guide the future of Garden Grove. The General Plan describes the goals and policies of resources within the city such as land use, community design, economic development, transportation, housing, parks, recreation and open space. Along with the goals and policies are implementation programs geared towards carrying out these goals and policies.

The City of Garden Grove General Plan Land Use Element goals include entering into a cooperative agreement with OCTA and the City of Santa Ana to develop a “Go Local” transit extension from Harbor Boulevard and Westminster Avenue in Garden Grove to SARTC. The goals of the City of Garden Grove Circulation Element include continued fostering and coordination with adjoining cities and regional agencies as well as utility companies and transportation agencies with ROWs within the City, in order to facilitate transit opportunities (CIR-IMP-10B Circulation Element) and increase the awareness and use of alternative forms of transportation generated in and traveling through the City of Garden Grove (Goal CIR-5, Circulation Element).

The following General Plan Elements are key areas of concern for the proposed project; therefore, corresponding policies relative to each topic will be discussed and evaluated for consistency:

Land Use

- Encourage active and inviting pedestrian-friendly street environments that include a variety of uses within commercial and mixed use areas (Policy LU-1.4).
- Prohibit uses that lead to deterioration of residential neighborhoods, or adversely impact the safety or the residential character of a residential neighborhood (Policy LU-2.3).
- Work with OCTA to ensure the proper maintenance of the right-of-way until beneficial interim uses are developed on the right-of-way (Policy LU-8.1).

Air Quality

- Encourage “walkable” neighborhoods with pedestrian walkways and bicycle paths in residential and other types of developments to encourage pedestrian rather than vehicular travel (Policy AQ-4.3).

Circulation

- Maintain a citywide circulation system that is balanced with the future land use development anticipated in the General Plan Land Use Element (Policy CIR-1.1).
- Coordinate with OCTA to facilitate the potential development of an alternative transportation system along the OCTA right-of-way. The City shall support such a use while recognizing that any impacts to the community must be appropriately mitigated (Policy CIR-13.1).

Community Design

- Create gateways that not only identify an area; but portray the character of the area (Policy CD-3.2).

3.1.4.2 *The City of Garden Grove Land Use Code*

According to Section 9.04.010, the purpose of the City of Garden Grove Municipal Code, Land Use section, is to provide an orderly set of standards and regulations to ensure the appropriate use of land in the city. The City of Garden Grove Land Use section of the Municipal Code provides for the development of appropriate patterns, distribution and mixtures of land uses that generally:

- Retain and enhance established residential neighborhoods, commercial and industrial districts, recreational facilities, other amenities and region-serving uses;
- Allow for the infill and recycling of areas at their prevailing scale and character;
- Allow for the intensification of commercial and industrial uses;
- Accommodate expansion of development into vacant and low-use lands within environmental and infrastructure constraints;
- Maintain and enhance significant environmental resources;
- Provide a diversity of areas characterized by differing land use activities, scale and intensity; and
- Establish an environment that provides the City's residences and businesses with a high quality of life that is both aesthetic and secure.

3.1.4.3 *City of Santa Ana General Plan*

The City of Santa Ana General Plan guides the future development of the City and consists of several elements including land use, circulation, conservation, economic development, education, housing, noise, public facilities, and open space and recreation elements. The goals and policies included within the General Plan provide for a uniform vision for the future development of the City. The 2010 General Plan is implemented by the decision of the City's Commissions and City Council, by the zoning and subdivision ordinances, and by the community and specific plans.

The following General Plan Elements are key areas of concern for the proposed project; therefore, corresponding policies relative to each topic will be discussed and evaluated for consistency:

Land Use

- Maintain and foster a variety of residential land uses in the City (Policy 1.5).
- Support the location of regional governmental facilities in the Downtown and Civic Center areas (Policy 1.11).
- Support pedestrian access between commercial uses and residential neighborhoods which are in close proximity (Policy 2.4).

- Support projects that contribute to the redevelopment and revitalization of the central city urban areas (Policy 2.7).
- Support regulations that encourage large and growing commercial and industrial employers to remain in Santa Ana (Policy 2.13).
- Support development which provides a positive contribution to the neighborhood character and identity (Policy 3.1).
- Encourage the retention and reuse of historical buildings and sites (Policy 4.2).
- Encourage the development of projects which promote the City's image as a regional activity center (Policy 4.4).
- Promote development which has a net community benefit and enhances the quality of life (Policy 5.1).
- Encourage development which is compatible with and supportive of surrounding land uses (Policy 5.5).
- Encourage development which provides a clean and safe environment for the City's residents, workers, and visitors (Policy 5.9).
- Support a circulation system which is responsive to the needs of pedestrians and vehicular traffic (Policy 5.10).
- Encourage development that does not generate obnoxious fumes, toxins or hazardous materials (Policy 5.11).

Circulation

- Program future use of the Pacific Electric Railroad right-of-way as a transportation corridor (Policy 1.9).
- Support programs which complement bus and rail services for specialized transit needs (Policy 3.2).
- Encourage the development of multi-modal transit opportunities within major development areas (Policy 3.4).
- Enhance sidewalks and pedestrian systems to promote their use as a means of travel (Policy 3.5).
- Program and prioritize transportation improvements to stimulate growth in major development areas (Policy 4.1).
- Coordinate with rail service providers to improve the aesthetics of rail corridors (Policy 5.4).
- Maintain compliance with regional, State, and federal programs which provide funding for transportation improvements (Policy 8.2).

Urban Design

- On- and off-site improvements must be pedestrian friendly (Policy 1.7).
- Visual and physical links between districts, nodes, significant sites, landmarks, and other points of interest, are to be provided in all public and private projects (Policy 1.11).
- Projects must acknowledge and improve upon their surroundings with the use of creative architectural design, streetscape treatments, and landscaping (Policy 2.1).

- Development in nodes must support the City’s vision of becoming the dynamic urban center of Orange County (Policy 4.1).
- New development that will lead to the creation of new landmarks in the City will be encouraged (Policy 6.3).
- Improve the rail corridor as an entry point to the City (Policy 7.5).

The Study Area is located within the planning boundaries of three of the City of Santa Ana’s Specific and Community Plans areas. These Plans are listed below.

North Harbor Specific Plan

The mission of the North Harbor Specific Plan is to create a strong and viable commercial district supported by safe and well-maintained supporting neighborhoods. The Specific Plan contains the broad policy implications typically found in a general plan as well as detailed development and design standards found in a zoning ordinance. The goals of the plan are listed below:

- To retain and upgrade the area's commercial character while improving and expanding its role as a significant regional commercial district;
- To enhance and support the residential neighborhoods surrounding Harbor Boulevard;
- To improve vehicular and pedestrian circulation in and around the Harbor Boulevard area;
- To achieve an aesthetic visual consistency throughout the Harbor Boulevard area while improving and upgrading the visual image of the adjacent areas;
- To enhance the economic viability of the Harbor Boulevard area; and
- To create a secure atmosphere within which business and residential communities can thrive.

This plan promotes quality commercial development, and land use compatibility along Harbor Boulevard within a 426-acre planning area, and is located at the western terminus of the proposed Study Area. It is bounded to the north by Westminster Avenue, Fountain Valley city limits on the south and approximately 500 feet east and west from Harbor Boulevard.

Selection of the Streetcar Alternatives would be consistent with the goals and policies contained in the North Harbor Specific Plan.

Bristol Street Corridor Specific Plan

The Bristol Street Corridor Specific Plan has been determined by the City of Santa Ana as the appropriate planning mechanism to guide long-range redevelopment of the Bristol Street Corridor. This Specific Plan is a mechanism for addressing, in a more detailed fashion, the goals and objectives set forth in the Bristol Street Redevelopment Plan. The following goals have been outlined in the Bristol Street Corridor Specific Plan:

- Reduce and prevent blight conditions;
- Widen and improve Bristol Street;

- Promote new and continuing private sector investment;
- Establish a higher quality urban design character;
- Retain and expand as many existing businesses as possible;
- Provide for increased revenues to the City;
- Preserve the existing employment base and create new job opportunities;
- Re-plan, re-design, and re-develop areas which are stagnant or underutilized;
- Eliminate or ameliorate environmental deficiencies;
- Expand the community's supply of housing, including low- and moderate-income units;
- Reduce City costs for providing services to the area; and
- Protect existing neighborhoods and housing from adverse impacts associated with new development and/or redevelopment.

This plan applies to a 3.9 mile section of Bristol Street in the central portion of Downtown Santa Ana, and goes through the mid-portion of the proposed Study Area on Santa Ana Boulevard. The selection of the Streetcar Alternatives would be consistent with the goals and policies contained in the Bristol Street Corridor Specific Plan.

Midtown Specific Plan

The Midtown Specific Plan falls in the areas north of Downtown and east of Civic Center, and is near the eastern terminus of the proposed Study Area. This Specific Plan does not explicitly identify goals for the planning area; however, the following key ideals were expressed in the visioning statement for the Midtown Specific Plan:

- Restore and redevelop Midtown as a vibrant and thriving urban place;
- Increase walkability within Midtown;
- Enhance parking facilities within Midtown to be easily accessible, attractive and safe; and
- Create work sites close to shopping, day care, transit, and cultural opportunities.

Selection of the Streetcar Alternatives would be consistent with the key ideals contained in the visioning statement.

3.1.4.4 Santa Ana Municipal Code

Section 41-1 of the Santa Ana Municipal Code summarizes the purpose of zoning in the six points listed below:

- Encourage the most appropriate use of land;
- Conserve and stabilize property value;
- Provide adequate open spaces for light and air and to prevent and fight fires;
- Prevent the undue concentration of population;
- Lessen congestion on streets and highways; and
- Promote the health, safety and the general welfare of the people, all as part of the general plan of the city.

Santa Ana is currently recognized as the fourth most densely populated city in the United States and is expected to continue experiencing growth over the next 25 years. As such, roadways are heavily congested during peak periods with more than 100,000 trips, to and from central Santa Ana, on a daily basis. In anticipation of population growth, and recognizing that many residents are dependent on public transportation, it is important for the City to provide more transit options.

3.1.4.5 City of Santa Ana Transit Zoning Code

The Transit Zoning Code (Specific Development No. 84A and 84B [City of Santa Ana 1998e]) establishing land use regulations and standards, would guide physical development and provide zoning integration of new infill development into existing neighborhoods, allow for reuse of existing structures, provide for a range of housing options, include affordable housing, and provide a transit-supportive, pedestrian-oriented development framework to support the addition of new transit infrastructure.

Within the Purpose and Intent section of the Transit Zoning Code, rules on infill development are provided to allow for the integration of new development and rehabilitation of existing structures with new and existing public transit infrastructure. The following are encouraged:

- A mixture of development and open spaces that situate commerce, work places, residences, and civic buildings within walking distance of transit and one another
- Streets that meet the needs of many transit modes including public transit, pedestrians, cyclists and automobiles
- Development that is maximally transit-supportive. Selection of the Streetcar Alternatives would be consistent with the framework provided by the Transit Zoning Code

3.1.4.6 Santa Ana Regional Transportation Center (SARTC) Master Plan

The SARTC Master Plan serves as a tool to guide the development of the SARTC and its facilities. The goals of the Master Plan are to accommodate increased public transit options and to increase pedestrian and bike accessibility through linkages to the SARTC and other transportation hubs. The following objectives of the SARTC Master Plan would be applicable to the proposed project:

- Provide a transportation center where people can easily transfer between services;
- Fit in well with the surrounding community;
- Provide parking and support facilities for each service offered at SARTC;
- Include support commercial, retail and/or residential uses, if feasible;
- Ensure that passenger safety and security are adequately addressed; and
- Support and encourage pedestrian and bicycle use.

The proposed project would be consistent with the objectives from the SARTC Master Plan.

3.2 Population and Housing

3.2.1 Federal

3.2.1.1 40 CFR 1508.8 (Growth Inducement)

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with NEPA, requires evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations, 40 CFR 1508.8, refer to these consequences as secondary impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

3.2.1.2 Executive Order 12898 (Environmental Justice)

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. As a result of Executive Order 12898, NEPA requires projects that receive federal funding to engage in an analysis of environmental justice concerns.

3.2.1.3 U.S. Department of Transportation (USDOT) Order on Environmental Justice

In response to Executive Order 12898, USDOT issued the Order to Address Environmental Justice in Minority Populations and Low-Income Populations (Federal Register Volume 62, Number 72). This order, issued in April 1995, sets guidelines to ensure that all federally-funded transportation-related programs, policies, or activities that have the potential to adversely affect human health or the environment involve a planning and programming process that explicitly considers effects on minority and low-income populations.

3.2.1.4 Executive Order 13166 (LEP Communities)

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency signed by President Clinton on August 11, 2000. Executive Order 13166 requires federal agencies to examine the services they provide, identify any need for services to those with limited English proficiency (LEP) and develop and implement a system to provide those services so LEP persons can have meaningful access to them. Meaningful access can include availability of vital documents, printed and internet-based information in one or more

languages, and translation services during public meetings that can be part of an official language assistance plan.

3.2.1.5 Federal Uniform Relocation Assistance and Real Property Acquisition Policies (Uniform Act)

Projects involving acquisition of residential property must conform with the Uniform Act as amended and Title 49 CFR Part 24. The Uniform Act ensures that those displaced are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S.C. 2000d, et seq.).

3.2.1.6 Age Discrimination Act

The Age Discrimination Act of 1975 prohibits discrimination based on age in programs or activities that receive federal financial assistance.

3.2.2 State

3.2.2.1 CEQA Guidelines Section 15126.2(d) (Growth Inducement)

CEQA also requires the analysis of a project's potential to induce growth. CEQA Guidelines Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

3.3 Community and Neighborhood Characteristics

3.3.1 Federal 2.3.1.1 42 U.S.C. 4331(B)(2) (Community Character)

NEPA established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331[b][2]).

3.4 Community Facilities and Services

3.4.1 Federal

3.4.1.1 Section 4(f) of the Department of Transportation Act of 1966 (includes Parks and Recreational Facilities)

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). The procedures for complying with 49 U.S.C. 303, commonly known as "Section 4(f)," are set forth in part 774 of Title 23 of the CFR.

3.5 Businesses, Employment, and Economic Conditions

3.5.1 Federal

3.5.1.1 Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act)

Projects involving acquisition of business property must conform with the Uniform Act (as amended) and Title 49 CFR Part 24. The Uniform Act ensures displaced are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S.C. 2000d, et seq.).

3.6 Farmlands

3.6.1 Federal

3.6.1.1 Farmland Protection Policy Act (FPPA)

FPPA is national legislation designed to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses (7 U.S.C. § 4201 et seq., CFR 658). Administered by the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS), the FPPA requires an examination of the effects of any federal action that could result in the conversion of farmland to nonagricultural uses using the criteria set forth in the Act, and, if there are adverse effects, to consider alternatives to minimize them.

The FPPA applies to projects and programs sponsored or financed, in whole or in part, by the federal government that require acquisition of farmland, as defined by the regulation. The FPPA does not apply to private construction projects subject to federal permitting and licensing, projects planned and completed without assistance from a federal agency, federal projects related to national defense during a national emergency, or projects proposed on land already committed to urban development.

Farmland, as defined by the FPPA, includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can also include forest land and pastureland. Water and urban built-up land are excluded.

Land Evaluation and Site Assessment (LESA) and Form AD-1006

The NRCS developed the LESA rating system in 1981 to measure the quality of farmland and rate the relative impact of projects on sites subject to the FPPA. The LESA system consists of the Land Evaluation component, which rates soil quality, and the Site Assessment component, which measures other factors such as water conditions, proximity to other rural and urban land uses, and the size of the parcel(s). A Farmland Conversion Impact Rating Form, Form AD-1006, is used to determine if a project site is subject to the FPPA and to measure the relative value of the site as farmland.

3.6.2 State

3.6.2.1 Farmland Mapping and Monitoring Program (FMMP)

The California State Legislature established the FMMP, a statewide land use inventory administered by the California Department of Conservation (CDC) in 1982, to track and report the conversion of farmland and grazing land. The CDC maintains an automated map and database system to record changes in the use of agricultural lands. Farmland resources are classified and defined pursuant to the USDA land inventory and monitoring criteria, as modified for California, and include the following categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, and Urban and Built-up Land.

3.6.2.2 California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, commonly known as the Williamson Act, is the State's principal policy for the preservation of agricultural and open-space land while allowing efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses. Williamson Act lands are classified as prime or non-prime, which differs from the FPPA definition for prime farmland. Within the Williamson Act, farmland need not be considered "prime" as defined above by the NRCS, and can qualify as "prime agricultural land" if it meets any of the requirements listed in the California Government Code Section 51201 of the Williamson Act.

Chapter 4 Community Profile

4.1 Local Planning Policies

The following chapter discusses several community profile elements of the Study Area, which include: land use, population and housing, community and neighborhood characteristics, community facilities and services, business, employment, economic conditions, and farmlands. The Study Area begins at the western terminus of the proposed project, which is located in the southeast portion of the City of Garden Grove. It continues east through the City of Santa Ana along portions of the existing PE ROW, and ends immediately south of the intersection of Santa Ana Boulevard and Santiago Street at SARTC.

Garden Grove

Within the City of Garden Grove limits, mostly low-density residential land uses tend to dominate. The intersection of Garden Grove Boulevard and Euclid appears to be the most concentrated portion of the City, including a variety of uses such as industrial/residential mixed-use, heavy commercial and civic center mixed use. Within the Study Area, medium-density residential, industrial, and heavy commercial land uses are the most prevalent land uses. Civic/institutional uses as well as low to medium residential uses have also been identified in the immediate vicinity surrounding the Study Area.

Santa Ana

Most of the proposed project falls within the incorporated limits of the City of Santa Ana. The City has a variety of zoning designations and land uses including residential, commercial, institutional, civic and open space. Low-density residential is the most prevalent land use within the City. General Commercial uses are generally located along major arterials such as Bristol Street and Main Street. Industrial uses tend to be grouped around the outskirts of the City boundaries while open spaces are scattered throughout Santa Ana. Consistent with land use patterns throughout the City, most uses within the Study Area tend to be low-density residential, a low-intensity land use, within Santa Ana as well. The area surrounding the eastern terminus at SARTC has a generally higher land use intensity of residential and nonresidential uses. Land use designation characteristics are described above, in Section 3.2.

As part of the proposed project design, several of the stations have been placed within the existing PE ROW, and away from sensitive receptors, to minimize disruption to these land uses. In addition, many of the stations have been proposed near public use areas and activity centers such as parks and the Downtown Santa Ana area, in an effort to provide increased access to these areas and ease of accessibility to transit. The routes of the streetcars would provide efficient modes of transit in highly-urbanized areas without exacerbating existing land use conditions.

4.1.1 City of Santa Ana General Plan

The City of Santa Ana General Plan provides long-term guidance and policies for maintaining and improving the quality of life in, and the resources of, the community, both manmade and natural. The General Plan provides direction for the City's growth and development. As a policy document, the General Plan serves as a guide for the adoption of laws necessary to execute its intent.

The proposed project would enhance access to employment, social services, education and other opportunities available within the Study Area (including those in the Civic Center and Downtown) to the residents of the community. The proposed project would benefit the community by adding additional transit options along the existing underutilized PE ROW to a community that is reliant on transit to carryout everyday tasks. Accessibility and livability for Santa Ana residents would be greatly enhanced with additional frequent and reliable high-capacity transit service connecting surrounding residential neighborhoods with jobs, shopping and other necessary services. It should be noted that implementation includes sidewalk and pedestrian improvements in the vicinity of the proposed station platforms, that would encourage walking as a mode of transportation, in addition to transit.

The proposed project is consistent with Policies 1.9, 3.2, 3.4, 5.4, and 8.2 in the City's General Plan, Circulation Element (City of Santa Ana 1998a). The proposed project would support the City of Santa Ana's General Plan in the transit development zone, a major development area and it would utilize the PE ROW as a transportation corridor and add to the aesthetics of the corridor by adding landscaped improvements along Santa Ana Boulevard. Adding landscape improvements would enhance the visual character of the street, improve the walkability, and enhance the perceived sense of safety to the communities and neighborhoods within the Study Area.

Selection of both Streetcar Alternatives 1 and 2 would comply with the City of Santa Ana's goals as stated above by allowing residents and visitors the opportunity to choose a multi-modal transit opportunity that enhances movement within the city and regionally. Community residents would benefit from increased choices in transportation and transit service, since most of the residents either use their own automobile or use the bus service for their transportation needs. Having a streetcar option would enhance their movement and accessibility by providing connections to other transportation and transit options within the city (bus, taxi cab) and regionally (Metrolink and Amtrak rail services and regional and interstate bus service).

In combination with the Transit Zoning Code, the proposed project would support planned TOD. TOD neighborhoods rely on a variety of housing options to be successful, including mixed use, a housing type which is relatively scarce in Santa Ana. Adaptive re-use is a popular form of redevelopment in highly urban areas. The proposed project would make reuse of abandoned structures more desirable.

The proposed project would consist of 12 to 13 stations, strategically located to provide linkage to sites of significance, districts, nodes and landmarks, as illustrated in Exhibit 3 of the City of Santa Ana General Plan, Urban Design Element. The project would adhere to applicable urban design principles and development standards in the development of transit stations and associated parking facilities.

4.1.2 City of Santa Ana Zoning Code

The City of Santa Ana Zoning Code outlines development standards for buildings, site size, height, setbacks, lot coverage, minimum unit sizes, landscaping, parking, signs, fences, and other features. The zoning observed for the land uses in the Study Area includes: Urban Neighborhood (UN), District Center (DC), Industrial (I), Low-Density Residential (LR-7), and Professional and Administrative Office (PAO). The City's zoning regulations are a primary tool for implementing the Land Use Plan.

The City's Zoning Code includes a recently adopted amendment known as the Transit Zoning Code, which encompasses an area roughly bounded by Civic Center on the north, 1st Street on the South, Grand Avenue on the east and Flower Street on the west, where the eastern segment of the proposed project is located. The Transit Zoning Code establishes land use regulations and standards to guide physical development, and provide zoning integration to allow for new infill development to occur in nine distinct zoning designations: Corridor (CDR), Downtown (DT), Government Center (GC), Open Space (O), Transit Village (TV), Urban Center (UC), Industrial Overlay (I-OZ), Urban Neighborhood (UN-1), and Urban Neighborhood (UN-2). The Transit Zoning Code also contains designated provisions for reuse of existing structures, provides for a range of housing options, including affordable housing, and supports the addition of new transit infrastructure in the central urban core of Santa Ana.

4.1.3 Santa Ana Regional Transportation Center (SARTC) Master Plan

The SARTC Master Plan serves as a tool to guide the development of the SARTC and its facilities. The goals of the SARTC are to accommodate increased public transit options and integrate them within the community, enhance bike and pedestrian linkages to the station, and allow for TOD.

The proposed project would provide linkages from Garden Grove to SARTC. Furthermore, the proposed project is identified in the Santa Ana Transit Vision as a means to relieve street congestion, meet the needs of the transit-dependent, provide an alternative to automobile travel, and create jobs.

4.1.4 City of Garden Grove General Plan

The City of Garden Grove General Plan was last updated in 1995 with a 20-year planning horizon. The 2008 General Plan, which replaces the 1995 General Plan, is currently undergoing public review. The City of Garden Grove General Plan provides goals, policies, and implementation strategies concerning future land use within the City of Garden Grove. The General Plan is used by the City Council to make funding and budget decisions and to

evaluate specific development proposals. The Planning Commission uses the General Plan to evaluate development decisions and to make recommendations to the City Council.

In addition to the mixed use zones proposed to be added to the City of Garden Grove Municipal Code, Land Use, the proposed project would result in a reduction of automobile trips, which would enhance the pedestrian experience within the Study Area. Communities with successful transit systems typically tend to have higher pedestrian activity as well. Accessibility and livability for residents would be greatly enhanced with reliable, high-capacity transit service to connect surrounding residential neighborhoods with jobs, shopping, and other necessary services.

As mentioned previously, the proposed project would provide access to various transit stations positioned along the PE ROW, currently owned by OCTA. The expanded use of these stations would benefit the transit-dependent community by providing additional transit options which would allow residents, employees and visitors of the Study Area to circulate throughout the Study Area more efficiently without the use of a car.

4.1.5 The City of Garden Grove Land Use

Title 9 of the City of Garden Grove Municipal Code, Land Use, is the primary tool for implementing the goals, objectives and policies of the Garden Grove General Plan, pursuant to the mandated provisions of the State Planning and Zoning Law (Government Code Section 65000 et seq.), State Subdivision Map Act (Government Code Section 66410 et seq.), CEQA (Public Resources Code Section 21000 et seq.), and other applicable State and local requirements. All development within the city's incorporated area shall be consistent with the Garden Grove General Plan. The western terminus of the proposed project is located within the City of Garden Grove's incorporated boundaries.

4.1.6 Specific and Area Plans

There are no Specific Plans in the City of Garden Grove that are applicable to the proposed project. The Study Area lies within the planning boundaries of three separate City of Santa Ana Specific Plans: North Harbor Boulevard Specific Plan, Bristol Corridor Specific Plan, and Midtown Specific Plan. Goals and objectives from each of these plans as they relate to the proposed project are described briefly below.

4.1.6.1 North Harbor Specific Plan

The North Harbor Specific Plan aims to provide a mix of high-quality development by integrating existing and future land uses into distinct and coherent nodes of commercial activity, while striving to minimize incompatibility with adjacent residential uses. The western terminus of the Build Alternatives would be located within the North Harbor Specific Plan. The proposed project would include at least one transit stop within the vicinity of the North Harbor Boulevard Specific Plan. The proposed project would align with the PE ROW located along Santa Ana Boulevard to provide an alternative mode of transportation to employment

and shopping areas to and throughout the City of Santa Ana. This additional transit mode is expected to relieve traffic along Harbor Boulevard.

4.1.6.2 Bristol Corridor Specific Plan

The Bristol Corridor Specific Plan applies to a 3.9-mile section of Bristol Street in the central portion of the City. The plan encourages commercial activity at major intersections and encourages the rehabilitation and possible expansion of existing businesses within these focal areas along the Bristol Corridor. The proposed project would be within the Bristol Corridor Specific Plan near the area surrounding the intersection of Santa Ana Boulevard and Bristol Street. The proposed project would include at least one transit stop within the vicinity of the Bristol Corridor Specific Plan. The proposed project would charge a nominal fee for ridership which would benefit the City directly.

4.1.6.3 Midtown Specific Plan

The Midtown Specific Plan is located north of Downtown and east of the Civic Center near the eastern terminus of the Study Area. This plan establishes principles to help guide land use, design, parking and circulation, and development, throughout the specific planning area. The proposed project would include at least one transit stop within the vicinity of the Midtown Specific Plan. The proposed project would align with the PE ROW to provide an alternative mode of transportation to employment and shopping areas to and throughout the City of Santa Ana.

4.2 Land Use Designations

4.2.1 City of Santa Ana Existing General Plan Land Use Designations

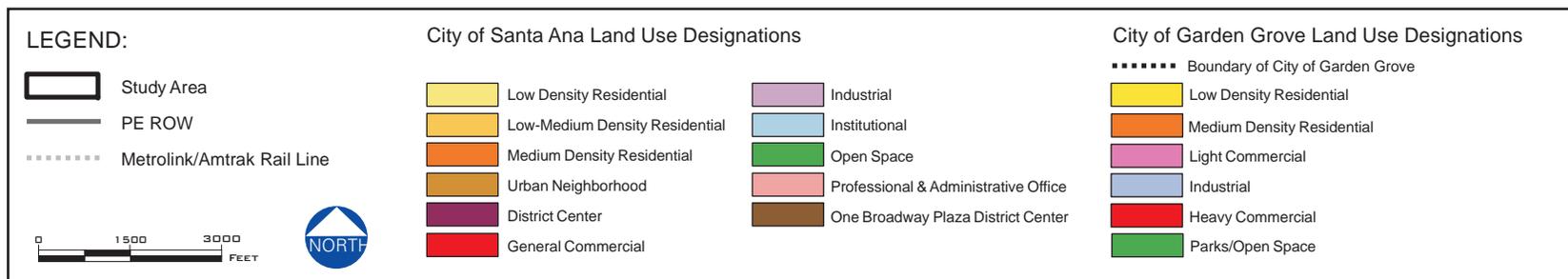
The current land use designations applicable to the Study Area include District Center (DC), Industrial (I), Low-Density Residential (LR-7), Low- to Medium-Density Residential (LMR-11), Medium-Density Residential (MR-15), General Commercial (GP), Government Center (GC), Institutional, Open Space (O), Professional and Administrative Office (PAO), and Urban Neighborhood (UN) (See **Figure 4-1**). The following is a description of each of the aforementioned land uses within the City of Santa Ana Study Area:

- **District Center (DC).** This designation allows for mixed-use development with an emphasis on linkage to transportation options, and is designed to serve as an anchor to the City's commercial corridors, and to accommodate major development activities. This designation includes high-rise office, commercial, and residential uses with shopping. Downtown, the Museum District, and the Transit Village District Centers are examples of uses under the DC designation;
- **Industrial (I).** The Industrial designation applies to areas developed with manufacturing and light-to-heavy product manufacturing and assembly. This designation also includes commercial uses ancillary to industrial uses;

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Study Area Land Use Designations



Source: City of Santa Ana General Plan Land Use Map and the City of Garden Grove GIS maps; updated by Terry A. Hayes Associates Inc. August 2012.

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- **Low-Density Residential (LR-7).** Applies to lower density residential land uses with an allowable maximum development intensity of seven units per acre. Development in this category is characterized primarily by single-family homes;
- **Low-Medium-Density Residential (LMR-11).** This designation allows land uses at permitted densities of up to eleven units per acre. Most of these lands are located in the westerly portion of the City, north and south of 1st Street. Properties include mobile home parks, mixture of duplexes and single-family residences, and small lot subdivisions;
- **Medium-Density Residential (MR-15).** Land use included in this designation would allow densities of up to 15 units per acre. Development is characterized by duplexes and apartments. This designation applies to areas located in the vicinity of Downtown and established multi-family development projects;
- **Government Center (GC).** This district applies to commercial corridors along Main Street, Harbor Boulevard, and other major arterial roadways in the City. The applicable Floor Area Ratio (FAR) is 0.5-1.0. The General Plan land uses provide neighborhood facilities, including shopping, recreation, cultural and entertainment activities, employment, and education. Industrial areas include office, retail, and restaurants;
- **Institutional.** The Institutional designation includes the Civic Center, other governmental facilities, and public institutions, such as schools with a floor area ratio of (FAR) of 0.5;
- **Open Space (O).** The Open Space designation applies to parks, water channels, golf courses, and other open space uses;
- **Professional and Administrative Office (PAO).** Typical uses allowable under the PAO district include professional and administrative offices, service activities (copy centers, agencies, and restaurants, as part of a planned office development), and professional uses (accountants, doctors, and insurance brokers); and
- **Urban Neighborhood (UN).** The UN land use designation applies to primarily residential areas with pedestrian oriented commercial uses, schools and small parks. The UN designation allows for a mix of residential uses and housing types, such as mid to low rise multi-family, townhouses and single-family dwellings; with some opportunities for live-work, neighborhood serving retail and service, public spaces and use, and other amenities. Either vertical or horizontal integration of uses is permitted based on zoning standards, with an emphasis on tying together the uses with pedestrian linkages and street frontages. Street connectivity is desirable, allowing for a high degree of walkability, transit options, and other forms of transportation including pedestrian and bicycle travel.

With the exception of minor inconsistencies throughout the Study Area, General Plan land use designation is generally consistent with Chapter 41 of the City of Santa Ana Municipal Code outlining Zoning. Examples of inconsistencies include two parcels located in the southwest portion of the Study Area, east of the Santa Ana River designated for industrial; however, both parcels currently contain mobile home parks.

4.2.2 City of Garden Grove General Plan Land Use Designations

The City of Garden Grove has outlined six major land use designation categories, Residential, Mixed Use, Commercial, Office Professional, Industrial or Other, in its Draft 2030 General Plan. These six major land uses are further classified into sub-categories, for a total of 19 separate land uses.

The applicable land uses immediately adjacent to the Study Area include Low-Density Residential (LDR), Medium-Density Residential (MDR), Light Commercial (LC), Heavy Commercial (HC), Industrial (I), and Parks/Open Space (OS). The following is a description of each of the aforementioned land uses within the City of Garden Grove portion of the Study Area:

- **Low-Density Residential (LDR).** LDR designation is intended to create, maintain, and enhance residential areas characterized by detached, single unit structures, and single-family residential neighborhoods that provide a high-quality architectural design, an excellent environment for family life and access to schools, parks, and other community services while preserving residential property values. Future development within the LDR designation should remain residential in character with a single unit on a parcel, and allow for compatible uses, such as schools or other small-scale civic or institutional uses. Densities for LDR range from one to nine dwelling units per acre with detached units each on their own parcel. Most of the housing in the City of Garden Grove is in this land use designation;
- **Medium-Density Residential (MDR).** The MDR designation is intended for the development of mainly multi-family residential neighborhoods that, like the LDR, aim to provide access to schools, parks and other community services and an excellent environment for family life, but also provide a variety of housing types, common spaces, recreation areas and services convenient to residents. Also like the LDR, land use designation, the MDR focuses on preserving residential property values, and providing high-quality architectural design that preserves privacy. The MDR designation is intended to create, maintain, and enhance residential areas characterized by mostly traditional multi-family apartments, condominiums, townhomes, and single-family small-lot subdivisions. Densities for Medium-Density Residential range from 18.1 to 32 dwelling units per acre;
- **Light Commercial (LC).** The LC designation is intended to allow a range of commercial activities that serve local residential neighborhoods and the larger community. The LC designation includes a variety of retail services such as markets, drug stores, retail shops, financial institutions, service establishments, and restaurants. Commercial uses shall be located so they are compatible with the surrounding area and in particular with any abutting residential uses. The LC designation allows an FAR ranging from 0.40 to 0.55;
- **Heavy Commercial (HC).** The HC designation is intended to provide for a variety of more intensive commercial uses, some of which may be incompatible with residential neighborhoods. HC designation includes automotive repair, sales, and services; wholesaling; automotive body work, or contractors' storage yards. The Heavy Commercial designation allows for an FAR ranging from 0.55 to 0.60;

- **Industrial (I).** The I designation is intended to encourage general industrial uses, such as warehousing and distribution or business parks, and more intensive industrial uses, such as manufacturing, fabrication, assembly, processing, trucking, warehousing and distribution, and servicing. The I designation is intended to create, maintain, and enhance industrial areas characterized by uses that include industrial research, assembly, and testing of electronics, instruments, office and related machinery, wholesaling, warehousing, administrative offices, and regional or home offices of industry. The Industrial designation allows for an FAR of 1.0; and
- **Parks and Open Space (OS).** The OS designation is intended to provide for land within the City that meets the passive and active recreational needs of its citizens, and that promotes and preserves the health and general welfare of citizens. Parks and open space and the activities they offer, help to sustain the high quality of life in the City. Park and open space areas provide amenities in the community for individual and group activities. Uses appropriate within this designation include traditional parks, bicycle and pedestrian paths/trails, gardens, and golf courses. Both public and private land can be designated as parks and open space. Public lands can include areas that are specifically identified for park use, and utility, rail, and flood rights-of-way.

Similar to the City of Santa Ana, uses within the City of Garden Grove portion of the Study Area tend to be generally consistent with City of Garden Grove General Plan land use designations, and with Title 9 of the Garden Grove Municipal Code outlining Land Use.

4.2.3 Future Land Use

The area surrounding each of the 12 proposed stations along the project alignment are ideal to support TOD, particularly in those areas within the boundaries of the City of Santa Ana Transit Zoning Code. Moderate- to high-density development is planned or observed within walking distance of the proposed station locations, including apartment complexes and structures that combine residential living with commercial and retail functions.

4.2.4 Developable Lands

As previously indicated, the Study Area is currently a developed urban setting with very few developable lands. Several vacant parcels are located within the Study Area, as shown in **Figure 4-1** and are generally zoned to allow residential development.

4.3 Study Area Population, Housing, and Employment

Fourteen neighborhoods were identified within the Study Area, and evaluated for community character and environmental justice. Eleven of these neighborhoods are defined by the City of Santa Ana. The remaining three neighborhoods are defined as Garden Grove Southeast, Santa Ana River East, and SARTC East based on census blocks within the Study Area. Data from the 2010 Census Bureau and 2010 American Community Survey (ACS) were used to characterize the socioeconomic demographics for the 14 neighborhoods. The neighborhoods consisted of 428 census blocks and 12 census tracts.

Figure 4-2 illustrates the neighborhoods, census blocks, and census tracts boundaries within the Study Area. The specific demographic information provided in this section relates to population, housing, age, race, and household income characteristics.

4.3.1 Population

In 2010, the Study Area's population was 61,649, which included 58,286 persons in the City of Santa Ana and 3,363 persons in the City of Garden Grove. This represented approximately 18 percent of the City of Santa Ana's total population and 2 percent of the City of Garden Grove's total population. The population density in the Study Area is approximately 15,238 persons per square mile. **Figure 4-3** illustrates the 2010 housing and population densities in the Study Area. The Study Area contains a racially and ethnically diverse population, with 92.2 percent of the population identified as a racial or ethnic minority. The Study Area population is 36.2 percent over the age of five with LEP, 5.4 percent elderly (age 65 and older), 33.3 percent children, 16.9 percent disabled, and 1.5 percent veterans.

4.3.2 Housing

In 2010, the Study Area contained approximately 58,499 housing units, which represented 14.3 percent of the combined Cities of Santa Ana's and Garden Grove's housing stock. Housing data indicate that 30.7 percent of the population own their home and 61.6 percent of the population have lived in the same residence for seven or more years. The median income of the Study Area is \$45,191 and 42.4 percent of persons living in the Study Area are transit dependent.

4.3.3 Employment

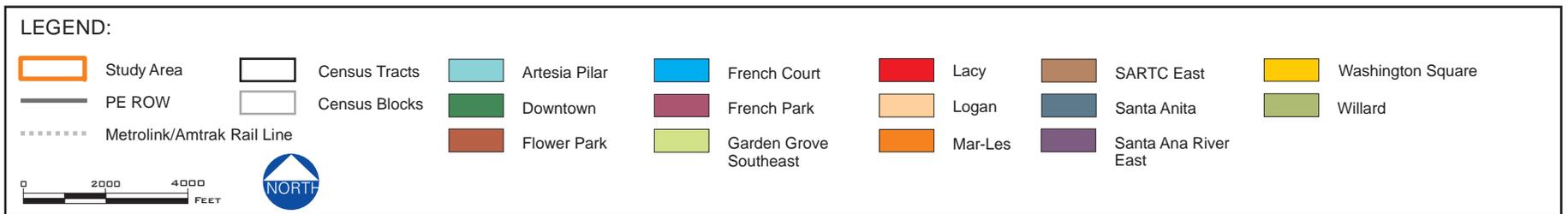
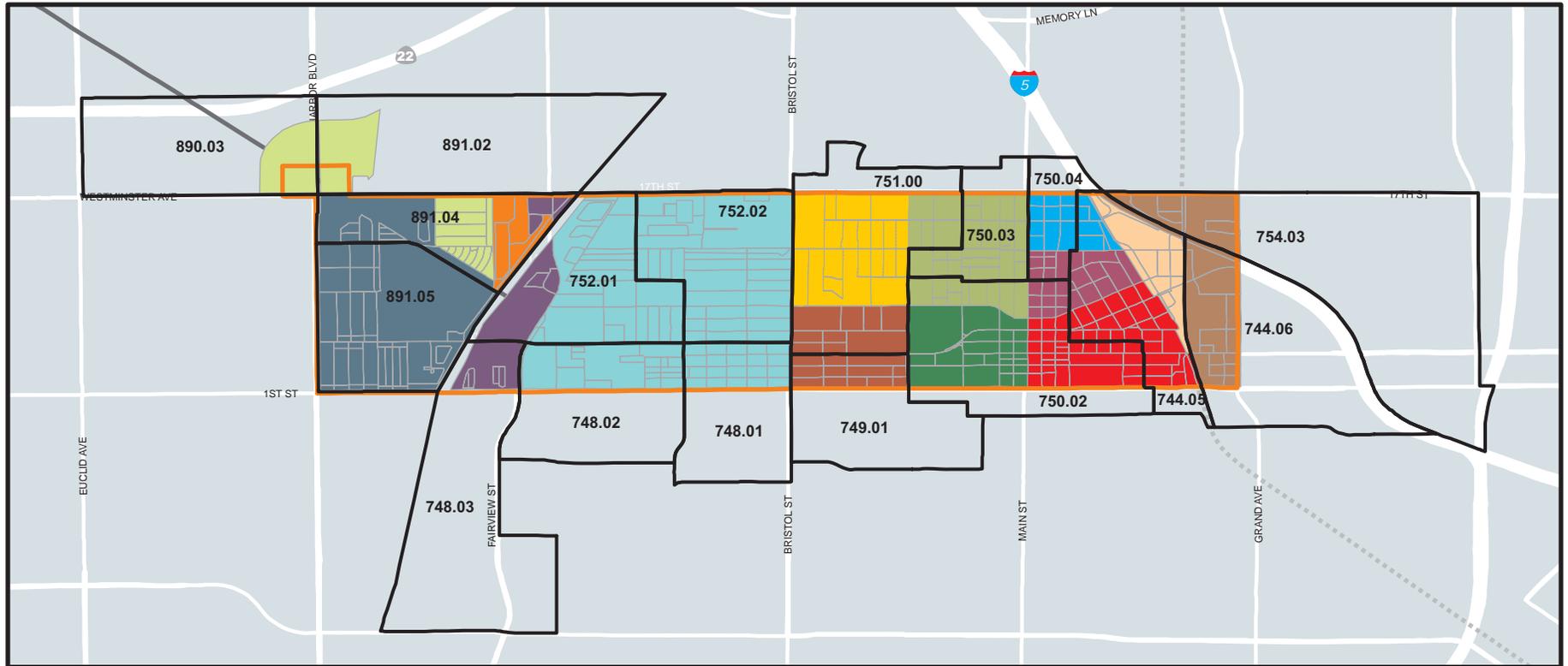
In 2008, the Study Area's employment was 38,632 which included 37,643 jobs in the City of Santa Ana and 989 jobs in the City of Garden Grove. This represented 25.7 percent of Santa Ana's total employment and 1.2 percent of Garden Grove's total employment.

4.4 Community and Neighborhood Characteristics

A neighborhood can be described as an area in which the land use is residential, although there may be a considerable number of primarily non-residential areas such as commercial corridors. The proposed alignment would be within one-half mile of the 14 neighborhoods: Artesia Pilar, Downtown Santa Ana, Flower Park, French Court, French Park, Garden Grove Southeast, Lacy, Logan, Mar-Les, Santa Ana River East, Santa Anita, SARTC East, Washington Square, and Willard. Each neighborhood includes its own set of local attractions or activity centers, referred to as "community assets" in the individual neighborhood analyses. The community assets discussed in this analysis are located adjacent or within one half-mile of the proposed alignments. The neighborhoods are discussed in terms of community, demographic, and socioeconomic character. Where data were not available at the census block level, census tracts were used to obtain data. Census tracts were incorporated as part of a neighborhood if 30 percent or more of the area were within the Study Area. **Table 4-1** shows a summary of demographics for the communities within the Study Area.



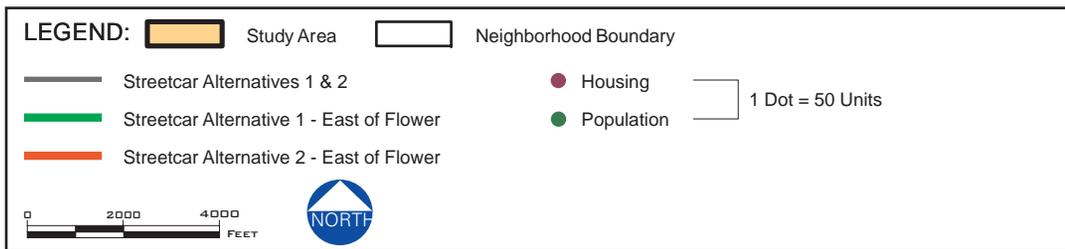
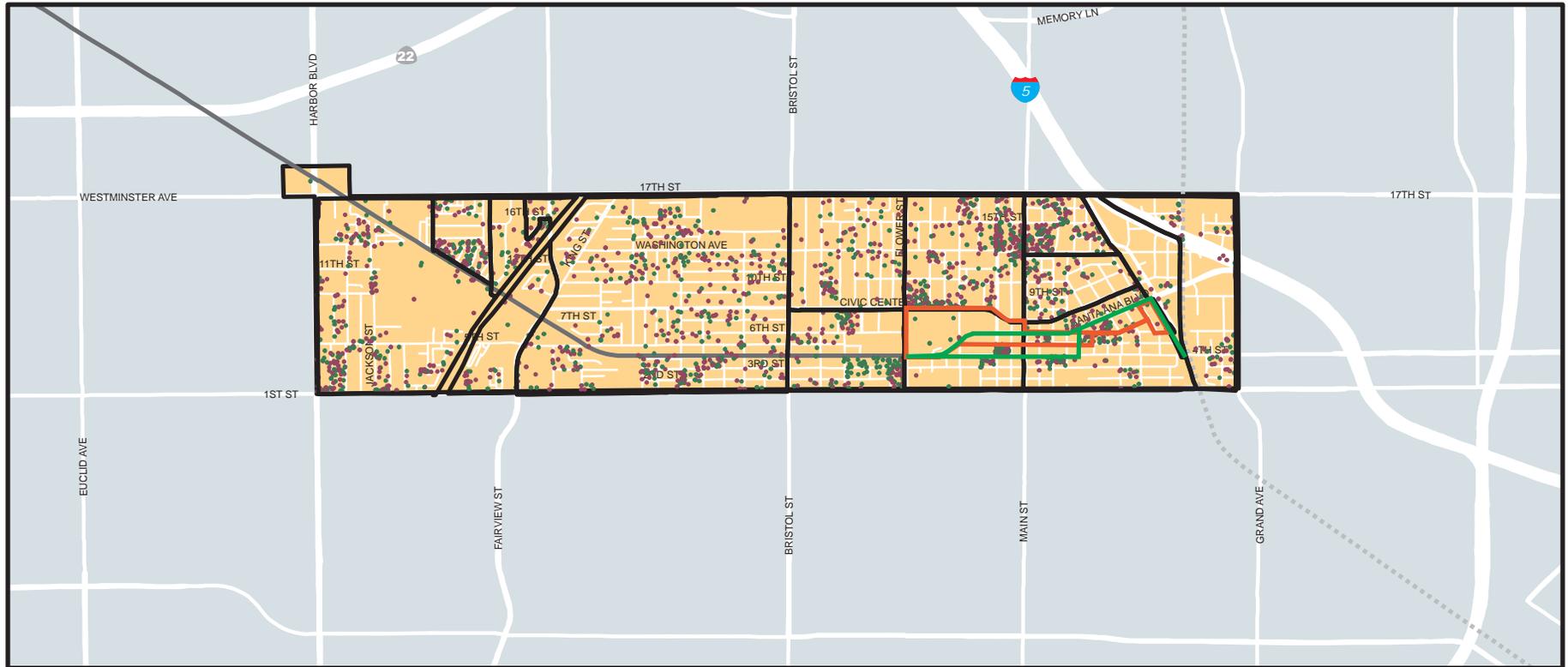
Neighborhood and Census Boundaries



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Population and Housing Density



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Table 4-1. Neighborhood Demographic and Socioeconomic Characteristics

Neighborhoods	Housing (Units)	Median Household Income (\$)	Population (Persons)	Percent							
				Under 18 Years Old	Between 18-64 Years Old	65 & Over Years Old	Home Owners More Than Seven Years	Disabled	Veterans	Limited English Proficiency /a/	Transit Dependent /b/
SARTC East	1,749	57,254	1,871	31.4	64.9	3.7	59.4	23.7	0.9	51.2	45.0
Logan	466	42,637	468	32.3	63.0	4.7	44.9	19.2	1.0	63.1	41.3
French Court	4,649	45,819	4,691	40.0	58.2	1.8	47.2	25.4	0.6	68.1	54.5
French Park	2,041	36,161	2,176	30.9	62.7	6.4	56.3	27.7	1.0	70.7	63.4
Lacy	4,774	42,637	4,823	35.3	62.1	2.6	44.9	19.2	1.0	63.1	41.3
Willard	9,825	37,843	9,871	39.9	56.1	4.0	42.6	18.4	0.8	65.2	61.6
Downtown Santa Ana	1,941	36,161	2,184	23.6	64.2	12	56.3	27.7	1.0	70.7	63.4
Washington Square	2,863	41,277	2,870	28.7	64.3	7.0	62.8	26.2	2.6	49.7	43.4
Flower Park	4,042	41,277	6,261	21.7	72.7	5.6	62.8	26.2	2.6	49.7	43.4
Artesia Pilar	13,099	61,752	13,260	32.4	60.8	6.8	75.1	25.3	1.8	59.5	24.9
Santa Ana River East	1,139	61,752	1,150	29.5	59.6	11	75.1	25.3	1.8	59.5	24.9
Mar-Les	1,146	38,981	1,146	32.5	61.8	5.7	62.4	24.2	2.5	42.8	47.3
Santa Anita	7,462	50,142	7,515	36.4	59.3	4.3	55.7	23.0	0.2	63.9	41.8
Garden Grove Southeast	3,303	38,981	3,363	34.9	57.4	7.7	62.4	24.2	2.5	42.8	47.3

Source: U.S. Census Bureau, 2010, and 2006-2010 American Community Survey.

/a/ LEP percentages are based on total population who speak English less than “very well” over total population over 5 years of age.

/b/ Transit dependent percentages are based on total of persons who own 1 or no vehicles over total population.

4.4.1 Study Area Characteristics

4.4.1.1 Community Cohesion

Neighborhood cohesion can be characterized when inter-community interaction among persons and groups exists, and where social relationships and patterns are present in distinct communities. It also refers to how members of a community relate and provide help for one another (Gapen et. al. 2011). Cohesive neighborhoods typically would engage in cultural activities together, form community interest groups, contain neighborhood associations, and organize community events during special events and holidays. Community and neighborhood cohesion can also be formed when families have resided in certain neighborhoods for a long time, have family and friends located in distinct neighborhoods within the community, and have a long-established sense of place and belonging to their city and/or neighborhood in which they live. Cohesive neighborhoods are also characterized by a mix of land uses where neighborhoods congregate for special events and cultural activities, share significant nodes (i.e., large shopping centers, entertainment centers, community centers, educational facilities and cultural facilities such as museums, art galleries, performing arts, theatres, etc.). Based on the observed trends, it is probable that community cohesion exists within the Study Area. The proposed project would occur completely within existing road or rail ROW; therefore, it would not introduce any new divisions within the community.

4.4.1.2 Local Access and Circulation

The City of Santa Ana General Plan Circulation Element provides classifications for roadways within the Study Area, which include major arterials, primary arterials, secondary arterials, and commuter streets.

Major arterials are typically six-lane divided roadways with a ROW width of 120 feet. Westminster Avenue/17th Street, Santa Ana Boulevard from Raitt Street to Ross Street, 1st Street, Fairview Street, and Bristol Street are classified as major arterials within the Study Area.

Primary arterials are typically four-lane divided roadways with a ROW width of 100 feet. Santa Ana Boulevard from Ross Street to Grand Avenue is classified as a primary arterial within the Study Area.

Secondary arterials are typically four-lane undivided roadways with a ROW width of 80 feet. Civic Center Drive, 5th Street between Ross Street and French Street, and Flower Street, Broadway, and Main Street are classified as secondary arterials within the Study Area.

Commuter streets are typically two-lane undivided roadways with a ROW width of 60 feet. 5th Street between Fairview Street and Bristol Street, Raitt Street, Ross Street, French Street, and 4th Street are classified as commuter streets within the Study Area.

The City of Garden Grove's circulation system is provided primarily by a grid-pattern system made up of four different types of functionally categorized roads, Principal (8 lanes), Major (6 lanes), Primary (4 lanes) and Secondary (4 lanes, no median). The streets where the streetcar alignment borders the City of Garden Grove are major arterials. These arterials are primarily intended to serve through, non-local traffic. Furthermore, these streets are designed with up to a 120-foot ROW and may include bike lanes. At Level of Service E, major arterials, such as the Westminster Avenue/Harbor Boulevard intersection, can accommodate up to 56,300 vehicles per day.

4.4.1.3 Parking

Street parking is currently allowed on 4th Street and Civic Center Drive in designated areas. There are currently approximately 130 angled street parking spaces available along 4th Street between North Ross Street and North French Street. Currently, approximately 58 spaces for street parking are also allowed on Civic Center Drive from Raitt Avenue to Shelton Street along designated areas (i.e., fronting residential areas). Other parking facilities in the area include the courthouse parking structure with 550 available spaces, the old courthouse surface parking lot with 25 spaces, park and ride facility along Santiago Street, OCTA park and ride parking structure along West 5th Street, and public parking structures along East and West 5th Street.

4.4.2 Neighborhood Characteristics

4.4.2.1 SARTC East

The SARTC East Neighborhood is bounded by 17th Street on the north, 1st Street on the south, Lincoln Avenue and the I-5 on the west, and Grand Avenue on the east. It includes a mix of residential, commercial, and industrial land uses. There are no schools, parks, or other community assets within the SARTC East portion of the Study Area.

The SARTC East Neighborhood is comprised of 1,749 housing units and a median household income of approximately \$57,254. The total population is approximately 1,871, and the population density is 6,737 persons per square mile. The majority of the population (64.9 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 31.4 percent and the group 65 years of age and over comprises 3.7 percent. The percentage of persons who own their homes and have lived there for more than seven years is 59.4. Disabled, veterans, and LEP constitute 23.7, 0.9, and 31.3 percent of the population, respectively. Transit-dependent patrons within the SARTC East Neighborhood comprise 45.0 percent of the population.

4.4.2.2 Logan

The Logan Neighborhood is bounded by I-5 on the north, Penn Way and Santiago Street on the west, Lincoln Avenue on the east, and Santa Ana Boulevard on the south. It includes industrial, residential, and institutional land uses. The only community asset within Logan that falls within the Study Area is Logan Recreational Center, at 1009 Custer Street.

The Logan Neighborhood is comprised of 466 housing units and a median household income of approximately \$42,637. The total population is approximately 468, and the population density is 4,162 persons per square mile. The majority of the population (63.0 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 32.3 percent and the group 65 years of age and over comprises 4.7 percent. The percentage of persons who own their homes and have lived there for more than seven years is 44.9. Disabled, veterans, and LEP constitute 19.2, 1.0, and 63.1 percent of the population, respectively. Transit-dependent patrons within the Logan Neighborhood comprise 41.3 percent of the population.

4.4.2.3 French Court

The French Court Neighborhood is bounded by 17th Street on the north, 20th Street on the south, Penn Way on the west, and Main Street on the east. It includes a mix of residential and commercial land uses, with few industrial uses. There are no schools, parks, or other community assets within the French Court portion of the Study Area.

The French Court Neighborhood is comprised of 4,649 housing units and a median household income of approximately \$45,819. The total population is approximately 4,691, and the population density is 48,536 persons per square mile. The majority of the population (58.2 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 40.0 percent and the group 65 years of age and over comprises 1.8 percent. The percentage of persons who own their homes and have lived there for more than seven years is 47.2. Disabled, veterans, and LEP constitute 25.4, 0.6, and 45.0 percent of the population, respectively. Transit-dependent patrons within the French Court Neighborhood comprise 54.5 percent of the population.

4.4.2.4 French Park

The French Park Neighborhood, also known as the French Park Historic District, is a 20-square-block historical neighborhood, bounded by Washington Avenue on the north, Civic Center Drive on the south, Poinsettia Street on the east, and Bush Street on the west. It includes a mix of residential, commercial and industrial land uses. The neighborhood includes homes built between the late 1890s and 1920s, ranging in various architectural styles, including Craftsman, Colonial Revival, Victorian and Neo-Classical, Craftsman Bungalow, Spanish Colonial, and Spanish Eclectic Revival. The historic Dr. Howe-Waffle House is located in French Park. Historic French Park was officially listed on the National Register of Historic Places in 1999. The only community asset within the Historic French Park portion of the Study Area is French Park located at 901 French Street.

The French Park Neighborhood is comprised of 2,041 housing units and a median household income of approximately \$36,161. The total population is approximately 2,176, and the population density is 17,086 persons per square mile. The majority of the population (62.7 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 30.9 percent and the group 65 years of age and over comprises 6.4 percent. The

percentage of persons who own their homes and have lived there for more than seven years is 56.3. Disabled, veterans, and LEP constitute 27.7, 1.0, and 41.0 percent of the population, respectively. Transit-dependent patrons within the French Park Neighborhood comprise 63.4 percent of the population.

4.4.2.5 *Lacy*

The Lacy Neighborhood is bounded by Civic Center Drive on the north, 1st Street on the south, Santiago Avenue on the east, and Main Street on the west. It includes a mix of residential, industrial, commercial, and institutional land uses. Community assets within the Lacy portion of the Study Area include the following:

- St. Joseph Church located at 727 Minter Street
- Garfield Elementary School located at 1601 East Chestnut Avenue

The Lacy Neighborhood is comprised of 4,744 housing units and a median household income of approximately \$42,637. The total population is approximately 4,823, and the population density is 16,891 persons per square mile. The majority of the population (62.1 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 35.3 percent and the group 65 years of age and over comprises 2.6 percent. The percentage of persons who own their homes and have lived there for more than seven years is 44.9. Disabled, veterans, and LEP constitute 19.2, 1.0, and 38.1 percent of the population, respectively. Transit-dependent patrons within the Lacy Neighborhood comprise 41.3 percent of the population.

4.4.2.6 *Willard*

The Willard Neighborhood is bounded by 17th Street on the north, Civic Center Drive on the south, Broadway Street on the east, and Flower Street on the west. It includes a mix residential and commercial land uses. Community assets within the Willard portion of the Study Area include the following:

- Willard Intermediate School located at 1342 Ross Street
- Story Book Preschool located at 1032 Ross Street

The Willard Neighborhood is comprised of 9,825 housing units and a median household income of approximately \$37,843. The total population is approximately 9,871, and the population density is 32,379 persons per square mile. The majority of the population (56.1 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 39.9 percent and the group 65 years of age and over comprises 4.0 percent. The percentage of persons who own their homes and have lived there for more than seven years is 42.6. Disabled, veterans, and LEP constitute 18.4, 0.8, and 42.9 percent of the population, respectively. Transit-dependent patrons within the Willard Neighborhood comprise 61.6 percent of the population.

4.4.2.7 *Downtown Santa Ana*

The Downtown Santa Ana Neighborhood is bounded by Civic Center Drive on the north, 1st Street on the south, Main Street on the east, and Flower Street on the west. It includes commercial land uses, with some residential, institutional and parkland uses. Community assets within the Downtown Santa Ana portion of the Study Area include the following:

- Sasscer Park located at 502 Santa Ana Boulevard
- Birch Park located at 210 Birch Street

The Downtown Santa Ana Neighborhood is comprised of 1,941 housing units and a median household income of approximately \$36,161. The total population is approximately 2,184, and the population density is 10,663 persons per square mile. The majority of the population (64.2 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 23.6 percent and the group 65 years of age and over comprises 12.2 percent. The percentage of persons who own their homes and have lived there for more than seven years is 56.3. Disabled, veterans, and LEP constitute 27.7, 1.0, and 41.0 percent of the population, respectively. Transit-dependent patrons within the Downtown Santa Ana Neighborhood comprise 63.4 percent of the population.

4.4.2.8 *Washington Square*

The Washington Square Neighborhood is bounded by 17th Street on the north, Civic Center Drive on the south, Bristol Street on the west, and Flower Street on the east. It includes residential land uses, with a few commercial uses. Community assets within the Washington Square portion of the Study Area include the following:

- Wilson Elementary School located at 1317 Baker Street
- Heroes Elementary School located at 1111 Civic Center Drive

The Washington Square Neighborhood is comprised of 2,863 housing units and a median household income of approximately \$41,277. The total population is approximately 2,870, and the population density is 9,883 persons per square mile. The majority of the population (64.3 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 28.7 percent and the group 65 years of age and over comprises 7.0 percent. The percentage of persons who own their homes and have lived there for more than seven years is 62.8. Disabled, veterans, and LEP constitute 26.2, 2.6, and 27.8 percent of the population, respectively. Transit-dependent patrons within the Washington Square Neighborhood comprise 43.4 percent of the population.

4.4.2.9 *Flower Park*

The Flower Park Neighborhood is bounded by Civic Center Drive on the north, 1st Street on the south, Flower Street on the east, and Bristol Street on the west. It includes a mix of residential, commercial and parkland land uses. Community assets within the Flower Park portion of the Study Area include the following:

- Angels Community Park located at 914 3rd Street
- Santa Ana Stadium located on the corner of Civic Center Drive and North Flower Street

The Flower Park Neighborhood is comprised of 4,042 housing units and a median household income of approximately \$41,277. The total population is approximately 6,261, and the population density is 30,457 persons per square mile. The majority of the population (72.7 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 21.7 percent and the group 65 years of age and over comprises 5.6 percent. The percentage of persons who own their homes and have lived there for more than seven years is 62.8. Disabled, veterans, and LEP constitute 26.2, 2.6, and 2.8 percent of the population, respectively. Transit-dependent patrons within the Flower Park Neighborhood comprise 43.4 percent of the population.

4.4.2.10 Artesia Pilar

The Artesia Pilar Neighborhood is bounded by 17th Street on the north, 1st Street on the south, Fairview Street on the west, and Bristol Street on the east. It includes a mix of residential, commercial, industrial and parkland uses. The most prominent landmarks in Artesia Pilar are El Salvador Park, at 1825 Civic Center Drive, and Santa Ana College, at 1530 17th Street. Additional community assets within the Artesia Pilar portion of the Study Area include the following:

- Spurgeon Intermediate School located at 2701 5th Street
- Nova Academy Secondary Charter School located at 609 5th Street
- Cruz Romero Elementary School located at 1512 Santa Ana Boulevard
- George Washington Carver Elementary School located at 1401 Santa Ana Boulevard
- Santa Ana College located at 1530 17th Street
- Freemont Elementary School located at 1930 10th Street
- Our Lady of the Pillar School located at 1622 6th Street

The Artesia Pilar Neighborhood is comprised of 13,099 housing units and a median household income of approximately \$61,752. The total population is approximately 13,260, and the population density is 12,610 persons per square mile. The majority of the population (60.8 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 32.4 percent and the group 65 years of age and over comprises 6.8 percent. The percentage of persons who own their homes and have lived there for more than seven years is 75.1. Disabled, veterans, and LEP constitute 25.3, 1.8, and 34.8 percent of the population, respectively. Transit-dependent patrons within the Artesia Pilar Neighborhood comprise 24.9 percent of the population.

4.4.2.11 Santa Ana River East

The Santa Ana River East Neighborhood is bounded by 17th Street on the north, 1st Street on the south, Fairview Street on the east, and the Santa Ana River and Huron Drive on the west.

It includes a mix of residential, commercial, and industrial land uses. Community assets within the Santa Ana River East portion of the Study Area include the following:

- PE ROW Trail
- Santa Ana River Trail
- Spurgeon Intermediate School/Joint-Use Recreational Area at 2701 5th Street

The Santa Ana River East Neighborhood is comprised of 1,139 housing units and a median household income of approximately \$61,751. The total population is approximately 1,150, and the population density is 6,742 persons per square mile. The majority of the population (59.6 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 29.5 percent and the group 65 years of age and over comprises 10.9 percent. The percentage of persons who own their homes and have lived there for more than seven years is 75.1. Disabled, veterans, and LEP constitute 25.3, 1.8, and 34.8 percent of the population, respectively. Transit-dependent patrons within the Santa Ana River East Neighborhood comprise 24.9 percent of the population.

4.4.2.12 Mar-Les

The Mar-Les Neighborhood is bounded by Westminster Avenue on the north, the Santa Ana River on the south, Huron Drive on the east, and Buena Street on the west. It includes residential land uses, with a few commercial uses. There are no schools, parks, or other community assets within the Mar-Les portion of the Study Area.

The Mar-Les Neighborhood is comprised of 1,146 housing units and a median household income of approximately \$38,981. The total population is approximately 1,146, and the population density is 15,760 persons per square mile. The majority of the population (61.8 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 32.5 percent and the group 65 years of age and over comprises 5.7 percent. The percentage of persons who own their homes and have lived there for more than seven years is 62.4. Disabled, veterans, and LEP constitute 24.2, 2.5, and 28.8 percent of the population, respectively. Transit-dependent patrons within the Mar-Les Neighborhood comprise 47.3 percent of the population.

4.4.2.13 Santa Anita

The Santa Anita Neighborhood is bounded by 17th Street on the north, McFadden Street on the south, the Santa Ana River on the east, and Harbor Boulevard on the west. It includes a mix of residential, commercial, and parkland land uses. Community assets within the Santa Anita portion of the Study Area include the following:

- Doctor Edward Russell Elementary School located at 600 Jackson Street
- Campesino Park located at 3311 5th Street
- Santa Anita Park located at 2302 Raitt Street

The Santa Anita Neighborhood is comprised of 7,462 housing units and a median household income of approximately \$50,142. The total population is approximately 7,515, and the

population density is 12,546 persons per square mile. The majority of the population (59.3 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 36.4 percent and the group 65 years of age and over comprises 4.3 percent. The percentage of persons who own their homes and have lived there for more than seven years is 55.7. Disabled, veterans, and LEP constitute 23.0, 0.2, and 63.9 percent of the population, respectively. Transit-dependent patrons within the Santa Anita Neighborhood comprise 41.8 percent of the population.

4.4.2.14 Garden Grove Southeast

The Garden Grove Southeast Neighborhood consists of two areas, the area west of Mar-Les and the area northwest of Santa Anita. The first area is bounded by 17th Street on the north, Redwood on the south, Clinton Street on the west, and Mar Les on the east. The second area is bounded by Nautilus Drive on the east, Quatro Avenue on the North, Seaboard Circle on the west, and Westminster Avenue on the south. It includes a mix of residential, industrial, and commercial land uses. There are no schools, parks, or other community assets within the Garden Grove Southeast portion of the Study Area.

The Garden Grove Southeast Neighborhood is comprised of 3,303 housing units and a median household income of approximately \$38,981. The total population is approximately 3,363, and the population density is 13,647 persons per square mile. The majority of the population (57.4 percent) belongs to the age group between 18 and 64. The age group 18 and younger comprises 34.9 percent and the group 65 years of age and over comprises 7.7 percent. The percentage of persons who own their homes and have lived there for more than seven years is 62.4. Disabled, veterans, and LEP constitute 24.2, 2.5, and 28.8 percent of the population, respectively. Transit-dependent patrons within the Garden Grove Southeast Neighborhood comprise 47.3 percent of the population.

4.5 Businesses, Employment, and Economic Conditions

Within the Study Area, local commercial and retail activities are generally located east of Bristol Street. These commercial facilities provide a range of services from professional, scientific, technical services to food, art and entertainment services and serve residents of the proposed Study Area and those employed and visiting the area.

4.5.1 Orange County Economic Statistics

According to the 2007 Economic Census, most businesses in the County were categorized as Professional, Scientific, and Technical Services. **Table 4-2** lists County data for the number of each type of business, sales or receipts, annual payroll, and number of employees based on the 2007 Economic Census.

Table 4-2. County of Orange Economic Statistics

Business Type	Number of Businesses	Sales or Receipts (\$1,000)	Annual Payroll (\$1,000)	Number of Employees
Manufacturing	5,351	49,131,942	8,641,374	177,115
Retail Trade	9,991	45,022,513	4,304,263	159,810
Information	1,611	N/A	2,637,914	40,147
Real Estate, Rental, and Leasing	5,566	10,688,193	2,161,574	43,366
Professional, Scientific, and Technical Services	14,047	20,906,606	7,991,194	114,452
Administrative and Support	4,803	11,357,159	4,922,519	158,729
Educational Service	848	662,049	221,054	8,270
Health Care and Social Assistance	9,967	16,300,406	5,914,985	133,174
Arts, Entertainment, and Recreation	974	3,513,821	1,038,543	37,151
Accommodation and Food Service	6,854	8,247,828	2,366,656	141,702
Other Services (except Public Administration)	5,111	3,635,969	967,358	34,627

Source: U.S. Bureau of the Census, 2007 Economic Census.

4.5.2 Study Area Employment Statistics

Table 4-3 shows the major industries in the Study Area. Retail employment in the Study Area was lower than the County and either City. Construction employment in the Study Area was higher than the County and Garden Grove, but the same as Santa Ana.

Table 4-3. Employment by Industry

Industry Type	County of Orange	%	Santa Ana	%	Garden Grove	%	Study Area CTs/a/	%
Total Working Population Surveyed	1,442,008	100%	146,520	100	76,208	100%	32,540	100%
Agriculture and Forestry	6,973	< 1%	2,105	1%	349	< 1%	633	2%
Construction	94,741	7%	14,001	10%	5,684	7%	3,569	11%
Manufacturing	198,211	14%	27,076	18%	13,118	17%	5,953	18%
Wholesale Trade	59,029	4%	4,748	3%	2,275	3%	1196	4%
Retail Trade	156,167	11%	15,637	11%	9,370	12%	2,941	9%
Transportation, Warehousing, Utilities	50,084	3%	4,518	3%	3,100	4%	852	3%
Information	31,618	2%	2,659	2%	1,348	2%	631	2%
Finance, Insurance, Real Estate and Rental and Leasing	134,143	9%	7,922	5%	4,878	6%	1,512	5%
Professional, Scientific, Technical	197,402	14%	20,214	14%	7,881	10%	4,566	14%
Educational, Health and Social Services	257,397	18%	17,391	12%	12,346	16%	3,544	11%
Arts, Entertainment, Recreation,	136,603	9%	17,149	12%	7,628	10%	4,180	13%
Other Services (Except Public Administration)	75,353	5%	10,208	7%	5,441	7%	2,544	8%
Public Administration	44,287	3%	2,892	2%	2,790	4%	419	1%

Source: U.S. Census Bureau. 2010 American Community Survey, Table S2405, Industry by Occupation. Available at: <http://factfinder.census.gov>.

/a/ Combined totals and averaged percentages of the six census block groups within the population and housing Study Area. Data based on a sample, not on 100% data counts.

4.5.3 Local Employment Growth

According to the California Employment Development Department, which prepares labor force and employment estimates for California counties, Orange County’s civilian labor force averaged 1,561,500 in 2010, of which 157,600 resided in Santa Ana (10 percent) and 83,100 in Garden Grove (5.3 percent). Unemployment rates in Santa Ana and Garden Grove as of May 2011, are estimated to be 13.4 percent and 10.6 percent, respectively.

Employment by industries located in Santa Ana include (listed in order of dominance): Professional and Management (19.8 percent), education and health (17.7 percent), manufacturing (13.8 percent), retail trade (8.0 percent), leisure and hospitality (7.2 percent), public administration (5.7 percent), wholesale (5.6 percent), construction (4.9 percent), transportation (3.9 percent) and others. Major Employers include TTM Technologies Inc, Tenet Healthsystem Medical Inc, DMS - Services LLC, Freedom Communications Inc, Ponderosa Builders Inc, Alan B Whitson Company Inc, Aluminum Precision Products Inc, and Brasstech Inc. (City of Santa Ana, Community Development Agency, 02/17/2010). The average annual salary for workers in Santa Ana is \$50,737.

In Garden Grove, the major employment sectors are education and health (25 percent), professional management (14.1 percent), leisure and hospitality (7.2 percent), manufacturing (12.3 percent), and retail trade (10.8 percent). Major employers in Garden Grove include Air Industries Corp, Prime Health Care Services, Driessen Aircraft Interior Systems, St. Gobain Performance Plastics, OfficeMAX Inc, and the Hyatt Regency of Orange County (City of Garden Grove website). The average annual salary for Garden Grove employees is \$43,139.00. Recent employment figures for Santa Ana and Garden Grove are presented in **Table 4-4**.

Table 4-4. Summary of Employment Growth in Cities within the Study Area

City	Year 2010
Garden Grove	47,028
Santa Ana	154,189

Sources: California Employment Development Department, 2010; InfoUSA; and SCAG

4.6 Farmlands

The project alignment is predominately located within the existing ROW. In areas where acquisition of land is required for the proposed project, the land targeted for acquisition is clearly urbanized and does not meet the definition of farmland as defined in the FPPA. Farmland resources would not be acquired for this project and it would not indirectly convert farmland in the project vicinity to another use. Therefore, the FPPA does not apply to this project. The completion and processing of Form AD-1006 is not necessary.

The Study Area consists of land designated by the FMMP as Urban and Built-up Land. Per the FMMP, there is no Prime Farmland, Farmland of Statewide Importance, Unique Farmland,

or Farmland of Local Importance within the Cities of Santa Ana or Garden Grove. Furthermore, there are no Williamson Act contracts lands within the Study Area.

The Study Area is located within a fully developed, urban setting in the Cities of Santa Ana and Garden Grove. Land uses within the Study Area consist of a mix of general commercial/retail development, institutional/community uses, and residential land uses. A review of the general plans for the Cities of Santa Ana and Garden Grove has determined that there are no agricultural land uses currently in place or planned within the Study Area. There are no policies contained in the general plans for the Cities of Santa Ana and Garden Grove that pertain to the preservation of agricultural land.

Chapter 5 Environmental Consequences

This chapter will discuss the impacts of the four proposed project alternatives: No Build, TSM, Streetcar Alternatives 1 and 2 along with the IOS-1 and IOS-2 options.

The Study Area is located within a fully developed, urban setting within the Cities of Santa Ana and Garden Grove. Land uses within the Study Area consist of a mix of general commercial development, institutional/community uses, and residential land uses. Specific land uses directly fronting the proposed project that are subject to project acquisition can be characterized as general commercial boulevard development, with a number of specialty commercial uses, parcels currently used for parking and industrial uses including a recycling center. Effects resulting from acquisition and relocation of properties and businesses are discussed in further detail below, including economic effects and community effects as a result of the proposed project.

5.1 Acquisition and Relocation

5.1.1 No Build Alternative

The No Build Alternative includes existing conditions within the Study Area and adds future planned and funded transit and roadway improvement projects. Each of these future projects will be environmentally cleared through separate project-specific environmental documentation. The proposed project would not operate under this alternative and there would not be project-related land acquisitions and displacement. Therefore, the No Build Alternative would not result in adverse effects related to land acquisitions and displacement.

5.1.2 TSM Alternative

The TSM Alternative emphasizes low-cost improvements and operational efficiencies, such as focused traffic engineering actions, expanded bus service, and improved access to transit services. It may include some minor physical enhancements, such as improvements to transit stop amenities (e.g., bus benches). These minor improvements would have no impacts to land acquisitions and would have no or negligible impacts to displacement. Therefore, the TSM Alternative would not result in adverse effects related to land acquisitions and displacement.

5.1.3 Streetcar Alternatives 1 and 2

Full Land Acquisition and Displacement

All full parcel acquisitions under Streetcar Alternative 1 or 2 would be related to the O & M Facility Sites except for one location. Implementation of Streetcar Alternative 2 would require the full acquisition of a Burger King fast food restaurant located at 701 Main Street in the City of Santa Ana. This parcel would be used for a station platform and additional ROW. Streetcar Alternative 1 would not result in any full parcel acquisitions unrelated to the O & M Facility Sites. The selection of O & M Facility Site A would require full acquisition of one existing recycling facility located at 1035 4th Street in the City of Santa Ana. The selection of O & M Facility Site B would require full acquisition of one existing recycling facility located at

2006 5th Street in Santa Ana and one residential parcel also located at 2006 5th Street containing six multi-family housing structures. **Figures 5-1** through **5-4** show the locations of both the full and partial parcel acquisitions listed in **Table 5-1**. The full parcel acquisitions are summarized below:

- One commercial parcel located at 701 Main Street – Streetcar Alternative 2
- One industrial parcel located at 1035 4th Street – O & M Facility Site A
- One industrial parcel located at 2006 5th Street – O & M Facility Site B
- One residential parcel located at 2006 5th Street – O & M Facility Site B

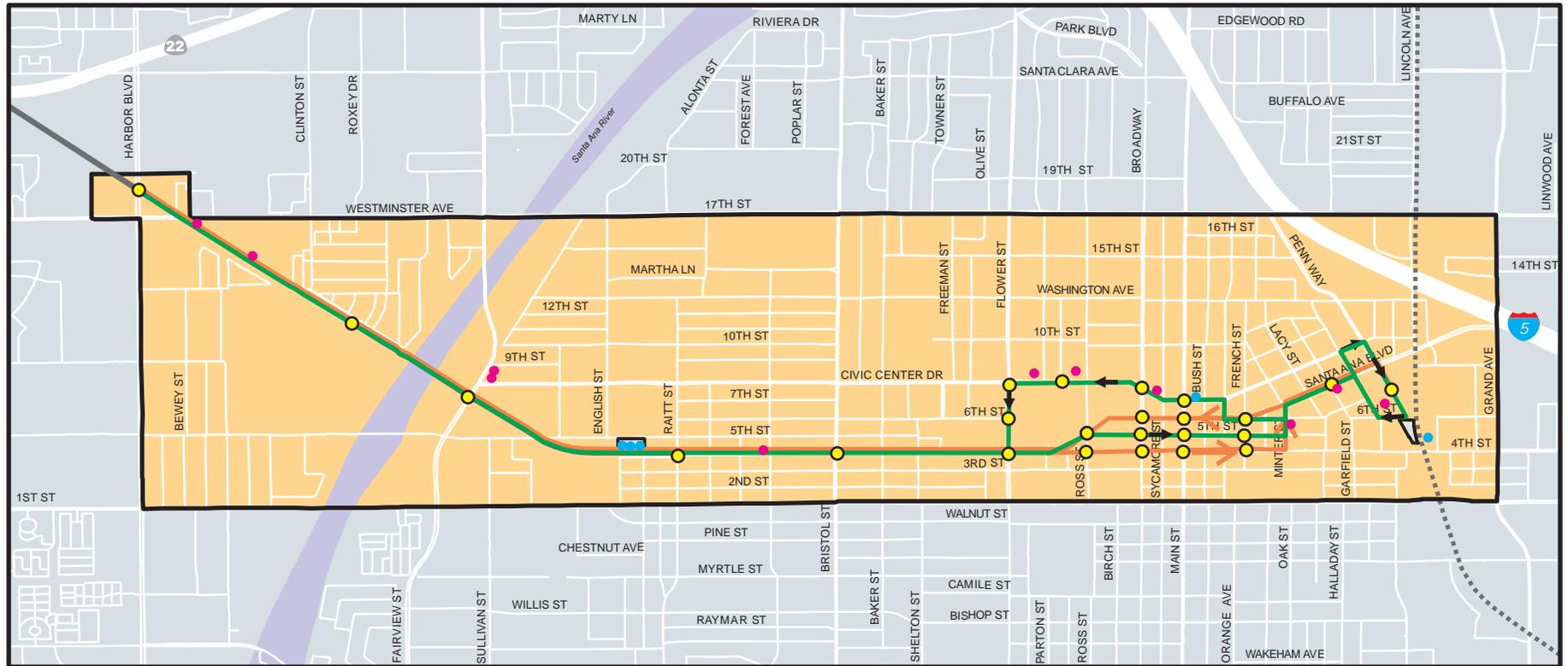
Acquisitions requiring the displacement of existing residential uses or businesses would comply with the Uniform Act. All relocations would include relocation assistance and compensation to displaced residences and businesses per the Uniform Act, pursuant to 49 CFR Part 24 and the California Relocation Act to minimize adverse effects to the businesses and residences. All real property acquired would be appraised to determine its fair market value. Just compensation, which shall not be less than the approved appraisal made to each property owner, would be offered. Each homeowner, renter, business, or nonprofit organization displaced as a result of the project would be given advanced written notice and would be informed of the eligibility requirements for relocation assistance and payments. Relocation resources shall be available to all those displaced in compliance with Title VI regulations and policies. Therefore, Streetcar Alternatives 1 and 2 would not have an adverse effect related to full land acquisitions and displacement.

The termination or non-renewal of an existing lease within the PE ROW would not entail property acquisition. However, business displacements may result where all or a majority of business operations occur on the leased property. Business displacements may also occur at those locations where the leased property is used for ancillary or support operations, such as access or parking, and the loss of such property would have a substantial impact on the associated business operation.

Streetcar Alternatives 1 and 2 would result in OCTA's terminating the lease with an auto dealership at the eastern terminus and would displace parking for a church that occurs in the PE ROW. OCTA leases a portion of the ROW to Itamex Motors (located at 12071 Westminster Avenue in Garden Grove) to operate an automobile dealership, which would be terminated upon implementation of Streetcar Alternatives 1 and 2. Itamex Motors would be served with a 30-day "notice to vacate," per the terms of their lease with OCTA. Additionally, OCTA allows Templo Calvario Church (located at 501 5th Street in Santa Ana) to park within the PE ROW on a temporary basis with a 30-day "notice to vacate" provision. The Conditional Use Permits granted to Templo Calvario Church by the City of Santa Ana indicate that overflow parking should use street parking, as well as available parking at nearby facilities. It is anticipated that these facilities would be able to accommodate the church's parking volumes. As discussed above, all of the displaced uses located within the ROW would be given a 30-day "notice to vacate." Therefore, displacement of these uses would not have an adverse effect related to displacement of leased properties.



Land Acquisitions - Streetcar Alternatives 1 and 2: Study Area



LEGEND:

Study Area	Streetcar Alternative 1	Full Acquisition Site
PE ROW	Streetcar Alternative 2	Partial Acquisition Site
Metrolink/Amtrak Rail Line	Potential Maintenance Facility Site	Station Locations

0 1500 3000 FEET

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Land Acquisitions - Streetcar Alternatives 1 and 2: PE ROW



LEGEND:

- Streetcar Alternative 1 and 2
- ▬ Station Locations - Streetcar Alternative 1 and 2
- ▭ Potential Facility (Site B)
- ▲ Partial Acquisition Site - Streetcar Alternative 1
- ▲ Full Acquisition Site - Streetcar Alternative 1
- Partial Acquisition Site - Streetcar Alternative 2
- Full Acquisition Site - Streetcar Alternative 2
- # Acquisition Site Assessor Parcel Number

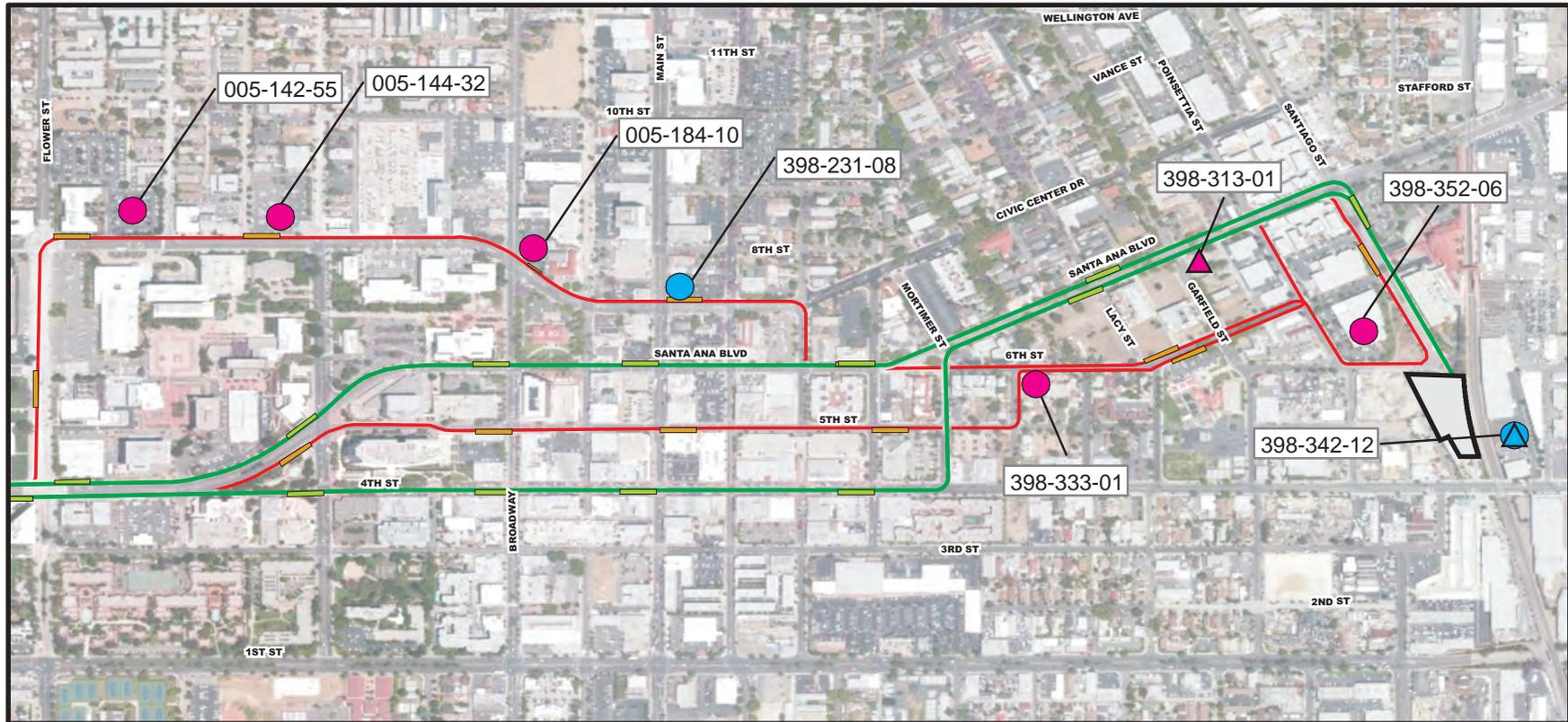
APPROX. SCALE: 0 350 700 FEET

Source: 2010 US Census, ESRI & Terry A. Hayes Associates Inc. August 2012.

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Land Acquisitions - Streetcar Alternatives 1 and 2: East of Flower



LEGEND:

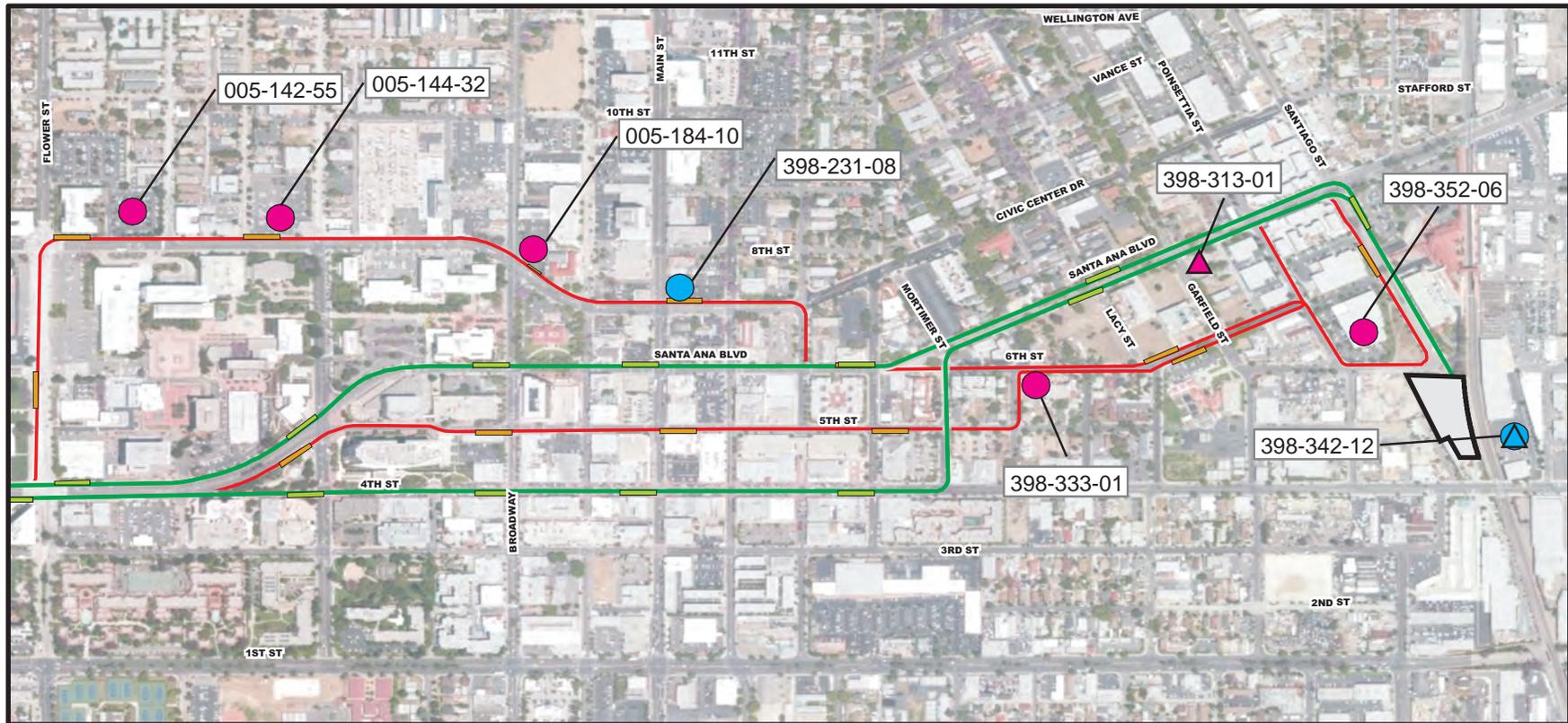
Streetcar Alternative 1	Station Locations - Streetcar Alternative 1
Streetcar Alternative 2	Station Locations - Streetcar Alternative 2
Potential Maintenance Facility (Site A)	Partial Acquisition Site - Streetcar Alternative 1
Acquisition Site Assessor Parcel Number	Full Acquisition Site - Streetcar Alternative 1
APPROX. SCALE 0 350 700 FEET	Partial Acquisition Site - Streetcar Alternative 2
NORTH	Full Acquisition Site - Streetcar Alternative 2

Source: 2010 US Census, ESRI & Terry A. Hayes Associates Inc. August 2012.

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Land Acquisitions - Streetcar Alternatives 1 and 2: East of Flower



LEGEND:

Streetcar Alternative 1	Station Locations - Streetcar Alternative 1
Streetcar Alternative 2	Station Locations - Streetcar Alternative 2
Potential Maintenance Facility (Site A)	Partial Acquisition Site - Streetcar Alternative 1
Acquisition Site Assessor Parcel Number	Full Acquisition Site - Streetcar Alternative 1
APPROX. SCALE 0 350 700 FEET	Partial Acquisition Site - Streetcar Alternative 2
NORTH	Full Acquisition Site - Streetcar Alternative 2

Source: 2010 US Census, ESRI & Terry A. Hayes Associates Inc. August 2012.

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Table 5-1. Required Land Acquisitions

Street Address	APN	Type of Acquisition	Current Use	Property Value /a/	Assessed Tax /b/
STREETCAR ALTERNATIVE 1					
1035 E. 4 th St., SA (O & M Site A Only)	398-342-12	Full	Recycling Facility	\$2,627,614.00	\$29,077.96
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-110-17	Full	Multi-Family Residential	\$68,007.00	\$752.59
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-100-04	Full	Recycling Center	\$480,492.00	\$5,317.27
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-100-05	Full	Recycling Center	\$580,148.00	\$6,420.09
3526 Westminster Ave., SA	198-091-55	Partial	Chief Eagle Building Materials	\$1,196,000.00	\$13,237.09
1424 N. Susan St., SA	198-211-01	Partial	Simis Precision Machining	\$471,106.00	\$5,213.40
2234 W. 9 th St., SA	004-153-01	Partial	Single-Family Residential	\$273,000.00	\$3,021.10
811 N. Fairview St., SA	004-153-18	Partial	Commercial	\$1,005,222.00	\$11,125.60
1503 W. Santa Ana Blvd., SA	405-062-05	Partial	Commercial	\$101,967.00	EXEMPT
625 N. Garfield St., SA	398-313-01	Partial	Vacant Lot	\$175,153.00	\$1,938.30
STREETCAR ALTERNATIVE 2					
701 N. Main St., SA	398-231-08	Full	Burger King	\$1,175,916.00	\$13,013.04
1035 E. 4 th St., SA (O & M Site A Only)	398-342-12	Full	Recycling Facility	\$2,627,614.00	\$29,077.96
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-110-17	Full	Multi-Family Residential	\$68,007.00	\$752.59
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-100-04	Full	Recycling Center	\$480,492.00	\$5,317.27
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-100-05	Full	Recycling Center	\$580,148.00	\$6,420.09
3526 Westminster Ave., SA	198-091-55	Partial	Chief Eagle Building Materials	\$1,196,000.00	\$13,237.09
1424 N. Susan St., SA	198-211-01	Partial	Simis Precision Machining	\$471,106.00	\$5,213.40
2234 W. 9 th St., SA	004-153-01	Partial	Single-Family Residential	\$273,000.00	\$3,021.10
811 N. Fairview St., SA	004-153-18	Partial	Commercial	\$1,005,222.00	\$11,125.60
1503 W. Santa Ana Blvd., SA	405-062-05	Partial	Commercial	\$101,967.00	EXEMPT
801 W. Civic Center Dr., SA	005-142-55	Partial	Office	\$18,173,919.00	\$201,118.04
821 N. Van Ness Ave., SA	005-144-32	Partial	Parking Lot	\$700,393.00	\$7,750.76
801 N. Broadway, SA	005-184-10	Partial	School/Office	\$352,068.00	EXEMPT
602 E. 6 th St., SA	398-333-01	Partial	Vacant Lot	\$659,882.00	\$7,302.45
610 N. Santiago St., SA	398-352-06	Partial	Austin Hardwoods and Hardware	\$4,185,700.00	\$46,320.21

Table 5-1. Required Land Acquisitions

Street Address	APN	Type of Acquisition	Current Use	Property Value /a/	Assessed Tax /b/
IOS-1					
1035 E. 4 th St., SA (O & M Site A Only)	398-342-12	Full	Recycling Facility	\$2,627,614.00	\$29,077.96
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-110-17	Full	Multi-Family Residential	\$68,007.00	\$752.59
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-100-04	Full	Recycling Center	\$480,492.00	\$5,317.27
2006 5 th St., SA (Mailing Address) (O & M Site B Only)	007-100-05	Full	Recycling Center	\$580,148.00	\$6,420.09
1503 W. Santa Ana Blvd., SA	405-062-05	Partial	Commercial	\$101,967.00	EXEMPT
625 N. Garfield St., SA	398-313-01	Partial	Vacant Lot	\$175,153.00	\$1,938.30
IOS-2					
701 Main St., SA	398-231-08	Full	Burger King	\$1,175,916.00	\$13,013.04
1035 4 th St., SA (O & M Site A Only)	398-342-12	Full	Recycling Facility	\$2,627,614.00	\$29,077.96
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-110-17	Full	Multi-Family Residential	\$68,007.00	\$752.59
2006 W. 5 th St., SA (Mailing Address) (O & M Site B Only)	007-100-04	Full	Recycling Center	\$480,492.00	\$5,317.27
2006 5 th St., SA (Mailing Address) (O & M Site B Only)	007-100-05	Full	Recycling Center	\$580,148.00	\$6,420.09
1503 Santa Ana Blvd., SA	405-062-05	Partial	Commercial	\$101,967.00	EXEMPT
801 Civic Center Dr., SA	005-142-55	Partial	Office	\$18,173,919.00	\$201,118.04
821 Van Ness Ave., SA	005-144-32	Partial	Parking Lot	\$700,393.00	\$7,750.76
801 Broadway, SA	005-184-10	Partial	School/Office	\$352,068.00	EXEMPT
602 6 th St., SA	398-333-01	Partial	Vacant Lot	\$659,882.00	\$7,302.45
610 Santiago St., SA	398-352-06	Partial	Austin Hardwoods and Hardware	\$4,185,700.00	\$46,320.21

Source: Cordoba Corporation, 2012

/a/ Values derived from the Orange County Assessor 2011-2012 Secured Assessment Roll.

/b/ Calculated using 1.10663 (2011-2012 Property Tax Rate).

Partial Parcel Acquisitions

Implementation of Streetcar Alternatives 1 and 2 would require partial acquisitions associated with minor street improvements, installation of electrical substations, and refinements consisting of roadway modifications to allow for the provision of the streetcars and driveway, bus bay, and sidewalk modifications, where the alignment would conflict with auto, bus, and/or pedestrian traffic. **Figures 5-1** through **5-4**, above, show the locations of the partial parcel acquisitions listed in **Table 5-1**. Partial acquisitions under both alternatives include portions of the following land uses and parcels in the City of Santa Ana:

- One commercial parcel located at 1503 West Santa Ana Boulevard
- One commercial parcel located at 3526 Westminster Avenue
- One commercial parcel located at 811 North Fairview Street
- One industrial parcel located at 1424 North Susan Avenue
- One single-family residential parcel located at 2234 West 9th Street

Streetcar Alternative 1 would require the partial acquisition of a vacant lot land use and parcel located at 625 North Garfield Street in the City of Santa Ana. Streetcar Alternative 2 would require partial acquisitions of the following land uses and parcels in the City of Santa Ana:

- One office located at 801 West Civic Center Drive
- One parking lot located at 821 North Van Ness Avenue
- One school and office building located at 801 North Broadway Avenue
- One vacant lot located at 602 East 6th Street
- One lumber and hardware store located at 610 North Santiago Street

5.1.4 IOS-1 and IOS-2

Parcels and their associated land uses identified for acquisition have been inventoried and are listed in **Table 5-1**, above. Under IOS-1, property acquisitions would be similar to those identified under Streetcar Alternative 1, except for parcels with Reference Nos. A1-1 through A1-6, which would not be acquired. Under IOS-1, a maximum of two partial and three full acquisitions would be required.

Under IOS-2, property acquisitions would be similar to those identified under Streetcar Alternative 2, except for parcels with Reference Nos. A2-1 through A2-6, which would not be acquired. Under IOS-2, a maximum of six partial and three full acquisitions would be required.

Acquisitions requiring the displacement of existing residential uses or businesses would comply with the Uniform Act to ensure that the adverse effects to displaced residences and businesses are minimized. Therefore, IOS-1 and IOS-2 would not have an adverse effect related to full land acquisitions and displacement.

5.2 Economic Effects

The analysis of economic effects includes the discussion of potential effects of the property acquisitions on the fiscal conditions and employment of the County and Cities of Santa Ana and Garden Grove within the proposed Study Area.

5.2.1 No Build Alternative

The No Build Alternative includes existing conditions within the Study Area and adds future planned and funded transit and roadway improvement projects. Each of these future projects will be environmentally cleared through separate project-specific environmental documentation. The proposed project would not operate under this alternative and there would not be project-related economic impacts. Therefore, the No Build Alternative would not result in adverse effects related to the local and regional economy.

5.2.2 TSM Alternative

The TSM Alternative emphasizes low-cost improvements and operational efficiencies, such as focused traffic engineering actions, expanded bus service, and improved access to transit services. It may include some minor physical enhancements, such as improvements to transit stop amenities (e.g., bus benches). These minor improvements would have negligible impacts to the local and regional economy. Therefore, the TSM Alternative would not result in adverse effects related to the local and regional economy.

5.2.3 Build Alternatives

Economic Effects

Compared to the total amount of property tax revenue for the County of Orange and the Cities of Santa Ana and Garden Grove, property acquisitions for ROW required by the project would lead to relatively minimal property tax revenue loss. Property tax estimates for parcels that have been identified for possible full or partial acquisitions under each build alternative are provided in **Table 5-1**, above. These estimates were calculated using 2011-2012 property values taken from the Orange County Assessor's Secured Assessment Roll. Minimum and maximum revenue losses for each alternative are calculated and summarized in **Table 5-2**. Based on the 2011-2012 property tax estimates, Streetcar Alternatives 1 and 2 would not result in property tax losses in excess of less than 0.1 percent of the County of Orange's tax base, which is approximately \$476 million in property tax revenues during the 2010-2011 fiscal year. Therefore, the estimated property tax losses are not expected to have an adverse effect on Orange County or the affected Cities of Santa Ana and Garden Grove.

Table 5-2. Property Tax Revenue Losses

Build Alternative	Total Revenue Losses /a/	
	Minimum Loss /b/	Maximum Loss/ c/
Streetcar 1	\$63,293.87	\$79,881.89
IOS-1	\$14,428.24	\$31,016.26
Streetcar 2	\$336,109.07	\$353,448.08
IOS-2	\$66,112.61	\$304,582.47

Source: Cordoba Corporation, 2012

/a/ Based on parcel reference numbers and assessed tax values.

/b/ Minimum revenue loss reflects the design option selections that would require acquisition of parcels with the lowest estimated tax assessments.

/c/ Maximum revenue loss reflects the design option selections that would require acquisition of parcels with the highest estimated tax assessments.

As the total amount of privately-owned parcels identified as full or partial acquisitions is considered relatively small to the property inventory in the Study Area, the resulting loss of property tax revenues currently being generated by these properties for the Cities, County, and other local agencies would be considered minimal and short-term.

Streetcar Alternative 1 or 2 construction activities would have temporary economic effects in the Study Area and the region. One temporary effect would be the increase in economic activity due to project-related spending (i.e., purchases of goods and services required for construction and employment of workers needed for construction). The increased economic activity would prompt secondary economic activity as a portion of the construction-related revenue and employee compensation is re-spent in sectors throughout the local and regional economy. The extent of the economic effect of construction-related expenditures on the local and regional economy would depend largely on the proportion of construction expenditures that would occur in the local and regional area and on the residential location of persons employed by the construction contractors. It is anticipated, that the capital expenditure for the project would yield approximately 1,900 annual jobs throughout the region. Of these there would be approximately 100 annual construction jobs directly associated with the proposed project.

The purchase of materials and supplies would include gravel, asphalt, concrete, track rails, and architectural materials for the station structures, and signage. Most of these materials and supplies would be expected to be purchased within Orange County, and where not, most likely within the Southern California region. The purchase of these materials and supplies would include the payment of sales tax, which would be revenue distributed to the State and local governments. The amount of materials and supplies required for the proposed project, however, is relatively small compared to all construction projects that would be ongoing in the region. As such, it is unlikely that the State or local governments would see a substantial increase in sales tax revenues.

For business owners and commercial property owners, the disruption of construction activities would similarly involve multiple construction crews operating along the corridor

simultaneously. Construction activities would inconvenience and disturb area employees, business operations, and business customers. Temporary construction effects would include:

- Presence of construction workers, heavy construction equipment, and materials
- Use of short-term reduction in number of roadway travel lanes, road closures, traffic diversions, and modified access to properties
- Loss of parking, especially on-street parking
- Increase in airborne dust
- Increase in noise and vibration from construction equipment and vehicles
- Decreased visibility and change in customer access to businesses

Access to businesses would be maintained during business operating hours and signage would be posted alerting nearby businesses of temporary closures and/or detours. Temporary economic effects in the Study Area and the region during construction of Streetcar Alternative 1 or 2 would not be considered adverse. Therefore, Streetcar Alternatives 1 and 2 construction activities would not result in adverse effects related to economic effects.

Employment Effects

It is expected that the size of the regional labor force would be sufficient to construct Streetcar Alternative 1 or 2 and the regional labor force would likely benefit. State and local governments would benefit from income taxes paid on the project construction force wages. However, the magnitude of the construction activities is relatively small compared to regional construction activities and so it is not expected that the labor expenditures would result in net new expenditures for construction labor. Therefore, it is unlikely that State and local governments would see a substantial increase in income tax revenues.

Job loss may occur within the Study Area to businesses on the acquired parcels that are permanently closed or relocated beyond the local jurisdictions. Streetcar Alternative 1 could result in a worst-case loss of approximately 30 to 35 jobs depending on whether O & M Facility Site A or B is selected. Streetcar Alternative 2 could result in a worst-case loss of approximately 45 to 50 jobs depending on whether O & M Facility Site A or B is selected. This added job loss between Streetcar Alternatives 1 and 2 results from the inclusion of the Burger King site on Main Street in Streetcar Alternative 2. As discussed under Full Land Acquisitions and Displacement, acquired businesses would be provided relocation benefits which include assisting the business owners with finding a similar facility as close to their existing business as possible. There are several similar business properties that are available and employment opportunities in the community where the affected businesses and workers could relocate. Therefore, Streetcar Alternatives 1 and 2 would not have adverse effects related to employment.

5.2.4 IOS-1 and IOS-2

IOS-1 and IOS-2 would also affect property taxes and employment. Minimum and maximum revenue losses for each alternative are calculated and summarized in **Table 5-2**, above. Based on the 2011-2012 property tax estimates, IOS-1 and IOS-2 would not result in property tax

losses in excess of 0.1 percent of the County of Orange's tax base. In addition, it is not anticipated that implementation of the proposed project would substantially affect employment. Therefore, IOS-1 and IOS-2 would not have adverse effects related to property taxes and employment.

5.3 Community Effects

The analysis of the potential effects of the Build Alternatives on community cohesion includes a combination of several aspects: the creation of physical, social, or psychological barriers within an established community or neighborhood; the disruption of access to community assets; and the displacement of community assets or institutions. The analysis below addresses the potential effects of each of the alternatives, as well as the proposed O & M facilities, based on the cohesion of the local established communities identified above.

Both short-term (temporary) and long-term (permanent) effects from the construction and operation of the proposed alignments on each of the local established communities are assessed. Qualitative effects associated with potential changes to these communities are evaluated. Additionally, neighborhood effects are assessed for the communities affected by the proposed project.

5.3.1 No Build Alternative

The No Build Alternative takes existing conditions within the Study Area and adds future planned and funded transit and roadway improvement projects. Each of these future projects will be environmentally cleared through separate project-specific environmental documentation. The No Build Alternative would not involve construction of transit infrastructure that would physically divide an established community or adversely affect neighborhoods and community cohesion. As such, no adverse effects to community character and cohesion would occur. However, this alternative would not enhance transit linkages between the Cities of Santa Ana and Garden Grove, or improve accessibility within the Study Area communities.

Under the No Build Alternative, the communities within the Study Area would be expected to continue to change and grow over time, but changes would not occur as a result of the proposed project. Transit service would be similar to existing conditions, and no substantial transit infrastructure investment is anticipated in the Study Area. Given the high percentage of minority and low-income populations in the Study Area, and the high number of households with no vehicles, these communities would continue to have limited mobility under the No Build Alternative. There are no funded and environmentally cleared major transit infrastructure projects in other communities in the County of Orange, so it is logical to conclude that limited mobility would be experienced by all County residents, not just the Study Area residents. Therefore, the No Build Alternative would not result in adverse effects related to the character or environmental justice populations of the communities within the Study Area.

5.3.2 TSM Alternative

The TSM Alternative emphasizes low-cost improvements and operational efficiencies, such as focused traffic engineering actions, expanded bus service, and improved access to transit services. It may include some minor physical enhancements, such as improvements to transit stop amenities (e.g., bus benches). These improvements would require minimal construction and would not displace properties or cause substantial visual or noise effects during operations. Furthermore, these minimal changes would not be enough to have an adverse effect on the neighborhoods and communities and the environmental justice populations that reside in these communities within the Study Area. The improvements made under the TSM Alternative would not divide an existing residential neighborhood or community as the new bus service would operate on streets and all improvements would be located in existing right-of-way. The TSM Alternative would not permanently limit existing connectivity within the Study Area. Therefore, the TSM Alternative would not result in adverse effects related to the character or environmental justice populations of the communities within the Study Area.

5.3.3 Build Alternatives

The following discussion describes the environmental effects of the Streetcar Alternatives to communities within the Study Area and to the environmental justice populations that reside in those neighborhoods. Similar adverse effects would occur during construction to traffic, air quality and noise that would occur in all neighborhoods adjacent to the alignment and are not discussed individually within each neighborhood. The traffic control plans will be designed to avoid detours that would encourage drivers to travel through the interior of adjacent communities and neighborhoods. A comprehensive community outreach program would be developed prior to the start of construction activities. Construction equipment would be concentrated near staging areas, away from sensitive receptors. Haul trucks would be concentrated in the western portion of the alignment along the PE ROW where the movement of soil would be required for the construction of bridges across Westminster Avenue and the Santa Ana River. The haul routes would primarily use Westminster Avenue and Harbor Boulevard, before accessing the State Route 22 and would not travel within residential neighborhoods or disrupt community access. These Construction effects would be short-term and of temporary duration. Therefore, Streetcar Alternatives 1 and 2 construction activities would not result in disproportionate adverse effects related to community cohesion and character.

Logan Neighborhood. Streetcar Alternatives 1 and 2 would enter the Logan Neighborhood at Santiago Street. Within the Logan Neighborhood, land uses immediately adjacent to the proposed alignments include transportation and industrial uses. One full parcel acquisition containing an industrial use would be required for the O & M Facility Site A. The extent of this limited acquisition would not alter the character or cohesion of the existing neighborhood. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise

and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Logan Neighborhood.

Lacy Neighborhood. Streetcar Alternatives 1 and 2 would enter the Lacy Neighborhood at Main Street. Land uses adjacent to the Streetcar Alternative 1 alignment include commercial and public facilities. Land uses adjacent to the Streetcar Alternative 2 alignment include medium- to high-density residential, industrial, and public facilities uses. Streetcar Alternative 1 would require one partial parcel acquisition and Streetcar Alternative 2 would require two partial parcel acquisitions which contain industrial and parking uses. The extent of this limited acquisition that would occur in environmental justice populations would not alter the character or cohesion of the existing neighborhood. Construction of Streetcar Alternatives 1 and 2 would result in vibration effects to two residential receptors in close proximity to the alignment; however, these effects would be temporary and not adverse.

For Streetcar Alternative 1, the removal of a portion of the existing 70 parking spaces along 4th Street would be required. 4th Street Parking Scenario A (conversion to parallel parking) would remove 10 parking spaces. 4th Street Parking Scenario B (no south side parking) would remove 33 parking spaces. 4th Street Parking Scenario C (no south or north side parking) would remove 66 parking spaces. The Traffic and Parking Technical Report found that there was sufficient off-street parking to offset this removal in parking spaces and satisfy parking demand. Regardless, an adverse effect could occur to environmental justice populations within this segment if the lost parking disproportionately affected businesses that relied on short-term parking durations and a subsequent high volume of traffic. Such businesses would include newsstands, convenience stores, dry cleaners, coffee shops, and banks. A business inventory was conducted along 4th and 5th Streets to see if these land uses along 4th and 5th Streets are disproportionately reliant on short-term uses. Along 4th Street, three of the approximate 49 ground floor businesses contain short-term uses. Along 5th Street, one of the four businesses contained short-term uses. This proportion of short-term uses indicates that the removal of on-street parking would not result in adverse effects to this neighborhood.

At Brown and Garfield Streets, James Garfield Elementary School is located adjacent to the Streetcar Alternative 2 alignment. The streetcars would be traveling on embedded tracks in front of the school, where parents would pick-up/drop-off their children. A station would also be located in front of the pick-up/drop-off area. Mitigation measures are identified in the Safety and Security (Section 3.15.3) of the EA/DEIR to minimize potential pedestrian and vehicle conflicts to not adverse. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, noise and vibration, air quality and greenhouse gases determined that no adverse effects

would occur to this community. No adverse environmental effects would occur which would divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Lacy Neighborhood and the environmental justice populations within the neighborhood.

Washington Square Neighborhood. Streetcar Alternatives 1 and 2 would be located within one-quarter mile of the Washington Square Neighborhood, located north of Civic Center Drive from Bristol to Flower Streets. Land uses are primarily low-density residential with institutional uses along Civic Center Drive. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Washington Square Neighborhood.

Flower Park Neighborhood. Streetcar Alternatives 1 and 2 would enter the Flower Park Neighborhood from Bristol Street to Flower Street. Within the Flower Park Neighborhood, land uses adjacent to the alignments include residential, commercial, and public facilities uses. Twenty-two of the existing 52 on-street parking spaces would be removed in this neighborhood for Streetcar Alternatives 1 and 2. Every residential unit along this segment has on-site parking capacity consistent with the City of Santa Ana's occupancy entitlements. Therefore, the loss of on-street parking would not adversely affect this neighborhood or the environmental justice populations within the neighborhood. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Flower Park Neighborhood.

Artesia Pilar Neighborhood. Streetcar Alternatives 1 and 2 would enter the Artesia Pilar Neighborhood east of Fairview Street. Adjacent land uses include residential, commercial, and industrial uses. Three partial acquisitions of two commercial uses and a single-family residence, and three full parcel acquisitions of two industrial uses and a six-unit multi-family residence would be required for O & M Facility Site B. Given that the residential parcel is zoned for industrial use, and these structures may have been allowed to remain with a variance, it is unlikely that they were designated as affordable housing units. Therefore,

removal of these units would not reduce the affordable housing stock of the City of Santa Ana. Furthermore, these acquisitions would not alter the character or cohesion of the existing neighborhood.

Two schools would be adjacent to the proposed alignments within the Artesia Pilar Neighborhood: Romero Cruz Elementary School (located south of Santa Ana Boulevard between Forest Street and Pacific Avenue), and George Washington Carver Elementary School (located north of Santa Ana Boulevard between Pacific Avenue and Bristol Street). The streetcar would travel on embedded track in front of Romero Cruz School. The pick-up/drop-off area is accessed from both Santa Ana Boulevard and Forest Avenue. A potential safety concern would be related to passenger vehicles accessing Santa Ana Boulevard from the school. A 21.5-foot pick-up/drop-up area would be designated between the George Washington Carver School and the tracks. The potential safety concern would be related to passenger vehicles accessing Santa Ana Boulevard from the school pick-up/drop-up area. Construction of O & M Facility Site B would require the demolition of existing industrial uses. This construction activity would not export soil which would require haul trucks but could result in exposure to hazardous materials and temporary construction noise effects to the neighborhood or the environmental justice populations within the neighborhood.

Fifty-one of the existing 91 on-street parking spaces would be removed in this neighborhood under Streetcar Alternatives 1 and 2. Every residential unit along this segment has on-site parking capacity consistent with the City of Santa Ana's occupancy entitlements. Therefore, the loss of parking would not adversely affect this neighborhood. Four adverse noise effects would occur to residential receivers within this neighborhood from noise associated with warning horns and O & M Facility Site B; however, these effects would be mitigated to not adverse. Technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Artesia Pilar Neighborhood.

Willard Neighborhood. Streetcar Alternatives 1 and 2 would be located within one-quarter mile of the Willard Neighborhood which is located north of Civic Center Drive from Flower to Main Streets. Land uses are primarily multi-family residential and office uses. Alternative 2 would require three partial parcel acquisitions consisting of office and parking uses. The extent of this limited acquisition would not alter the character or cohesion of the existing neighborhood. The analysis in Sections 5.1 and 5.2, above, determined that no additional adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no

adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Willard Neighborhood.

Santa Anita Neighborhood. Streetcar Alternatives 1 and 2 would cross Westminster Avenue on an elevated guideway and return to grade, traveling in the median of the PE ROW. Residential uses in this neighborhood are located south of Westminster Avenue. One partial acquisition would be required from an industrial use for a traction power substation. The extent of this limited acquisition would not alter the character or cohesion of the existing neighborhood. The elevated guideway would be visible from the rear of approximately five residences along Bewley Street. There is an existing six-foot wall along the PE ROW that partially blocks the view to the north. The view to the north is of the Westminster Avenue commercial street corridor. A 17-foot retaining wall associated with the elevated alignment would block the view of commercial buildings (not typically considered a scenic resource) to the north for these residences. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Santa Anita Neighborhood.

Downtown Santa Ana Neighborhood. Streetcar Alternatives 1 and 2 would enter the Downtown Santa Ana Neighborhood at Flower Street. Within the Downtown Neighborhood, land uses immediately adjacent to the proposed alignments include primarily commercial and public facilities. Sasser Park is located directly adjacent to the proposed alignments along Santa Ana Boulevard at Ross Street. Access to the park would not be affected by the implementation of Streetcar Alternatives 1 and 2.

Streetcar Alternative 1 includes three parking scenarios. 4th Street Parking Scenario A would reconfigure south side parking from diagonal to parallel, resulting in the loss of approximately 21 percent of spaces (47 parking spaces). 4th Street Parking Scenario B would remove south side parking, resulting in the loss of approximately 57 percent of spaces (77 parking spaces). 4th Street Parking Scenario C would remove the majority of south and north side parking, resulting in the loss of approximately 97 percent of spaces (132 parking spaces). The parking analysis found that there was sufficient off-street parking to offset this removal in parking spaces and satisfy parking demand. Regardless, an adverse effect could occur to environmental justice populations within this segment if the lost parking disproportionately affected businesses that relied on short-term parking durations and a subsequent high volume of traffic. Such

businesses would include newsstands, convenience stores, dry cleaners, coffee shops, and banks. A business inventory was conducted along 4th and 5th Streets to see if these land uses along 4th and 5th Streets are disproportionately reliant on short-term uses. Along 4th Street, 4 of the approximate 54 ground floor businesses contain short term uses. Along 5th Street, two of the twelve businesses contained short term uses. This proportion of short-term uses indicates that the removal of on-street parking and sufficient off-street parking inventory would not result in adverse effects to this neighborhood. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Downtown Santa Ana Neighborhood.

Mar-Les Neighborhood. Streetcar Alternatives 1 and 2 would enter the southern border of the Mar-Les Neighborhood as it approaches the Santa Ana River to the east, adjacent to low-density residences. Near these residences, the alignment would be at-grade within the PE ROW. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Mar-Les Neighborhood.

French Park Neighborhood. Streetcar Alternatives 1 and 2 would be located within one-quarter mile of the French Park Neighborhood which is located north of Civic Center Drive from Main to Santiago Streets. Land uses are primarily multi-family residential with some industrial along Santiago Street. One full parcel acquisition containing a fast food restaurant would be required for Streetcar Alternative 2. The extent of this limited acquisition would not alter the character or cohesion of the existing neighborhood. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which

contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the French Park Neighborhood.

French Court Neighborhood. Streetcar Alternatives 1 and 2 would be located within one-quarter mile of the French Court Neighborhood which is located north of Washington Street from Main to Santiago Streets. Land uses are primarily medium- and high-density residential. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the French Court Neighborhood.

SARTC East Neighborhood. Streetcar Alternatives 1 and 2 would be located within one-quarter mile of the SARTC East Neighborhood which is located east of Santiago Street. Land uses are primarily industrial and residential. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the SARTC East Neighborhood.

Santa Ana River East Neighborhood. Streetcar Alternatives 1 and 2 would travel through the Santa Ana River East Neighborhood as it travels east across the Santa Ana River. The Santa Ana River Trail, Spurgeon School, and the Santa Ana Unified School District offices are adjacent to the alignment. Single-family residences are located to the north of the school district offices. Access to the river trail would continue to occur with implementation of Streetcar Alternatives 1 and 2. Construction of the single-track adjacent bridge would require the installation of foundations. This construction activity would export some soil and require haul trucks. Construction activity would also result in temporary visual and noise effects. An adverse noise effect from warning horns would occur to the athletic field at Spurgeon School. In front of Spurgeon School, a potential safety concern would be related to streetcar riders being picked-up or dropped-off along Fairview Street, which does not have a parking lane. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this

community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Santa Ana River East Neighborhood.

Garden Grove Southeast Neighborhood. Streetcar Alternatives 1 and 2 would begin in a primarily commercial/industrial area at the Harbor Boulevard/Westminster Avenue intersection. Two auto-related businesses are located with the PE ROW and their leases would be terminated by OCTA. This would not alter the character or cohesion of the existing neighborhood. Approximately 50 parking spaces would be provided to reduce potential spillover parking spaces at the western terminus of the line. The alignment would cross Westminster Avenue on an elevated guideway and return to grade in the median of the PE ROW. Construction of the aerial guideway would require the excavation and hauling of dirt to construct the foundation and retaining walls. Haul trucks would travel along Westminster Avenue and Harbor Boulevard and would not affect sensitive receptors on adjacent streets. Residential uses, including a mobile home park and multi-family housing, are located in this area north of the PE ROW between Clinton and Buena Streets. Near these residences, the alignment would be at-grade within the PE ROW and no adverse environmental effects would occur. The analysis in Sections 5.1 and 5.2, above, determined that no adverse health and environmental effects from land use, displacement and economic effects would occur in this community. In addition, technical reports prepared for recreational resources, visual quality, cultural resources, geotechnical and hazardous materials, hydrology, traffic and parking, noise and vibration, air quality and greenhouse gases determined that no adverse effects would occur to this community. Because no adverse health and environmental effects would occur to these residences, which contain environmental justice populations, Streetcar Alternatives 1 and 2 would not divide the community or disrupt community character and cohesion. Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the Garden Grove Southeast Neighborhood.

Summary of Effects to Communities and environmental justice Populations

Streetcar Alternatives 1 and 2 would be located along or within existing transportation right-of-way, including the PE ROW, 4th and 5th Streets, Civic Center Drive, and Santa Ana Boulevard, mirroring the existing transportation corridor character and would not divide communities within the Study Area. Station design would be consistent with the surrounding community and neighborhood character, and would support existing development. Planned or future development and redevelopment near project stations would adhere to local land use plans and zoning designations and ordinances.

Streetcar Alternatives 1 and 2 would result in property acquisition, reduction of on-street parking spaces, and the potential to slightly alter the appearance of the existing setting. The

reduction of on-street parking spaces is not considered an adverse impact since it is offset by adequate, easily accessible parking is available in City-owned parking structures. Visual effects are minimized with project design features which include lighting fixtures architecturally integrated with the character of the surrounding environment.

Although Streetcar Alternatives 1 and 2 would provide improved mobility and access to communities in accordance with adopted transportation and land use plans, it would not introduce a new population to these areas to increase demand for parks, schools, hospitals/medical facilities, libraries, or affect community response times for fire, ambulance, and police services. In addition, the project alignment would not disrupt or impair access to community facilities and services. Streetcar Alternatives 1 and 2 would cross the Santa Ana River and recreational trail and may require the river placement of bridge support columns. The bridge placement would not diminish the Santa Ana River area function and enjoyment.

Streetcar Alternatives 1 and 2 would increase connectivity among all of these communities their proposed alignments would traverse. These alternatives result in the addition of a pedestrian bridge at Green Drive, a pedestrian easement at Jackson Street, sidewalk and pedestrian walkway improvements in the vicinity of the proposed stations. Streetcar Alternatives 1 and 2 would also provide transit linkage to a number of public use areas and activity centers (e.g., Santa Ana Civic Center, the City Library, Santa Ana Stadium, and Downtown Santa Ana buildings) through the provision of a transit system which connects existing land uses in the area, and provides improved transportation access options to public use areas and activity centers.

Therefore, Streetcar Alternatives 1 and 2 would not result in adverse effects to the community character or cohesion and environmental justice populations within these neighborhoods. Furthermore, beneficial effects related to community connectivity and increased mobility would occur, as described below.

Beneficial Effects

Benefits common to Streetcar Alternatives 1 and 2 would include increased accessibility and decreased congestion on many local streets, improved air quality, and potential for economic development around the proposed stations. Streetcar Alternatives 1 and 2 would increase connectivity and improve travel times between neighborhoods and businesses within the Study Area, as well as develop linkages with neighborhoods and employment locations system-wide. This is particularly important to the Study Area neighborhoods, which are minority- and low-income, containing more transit-dependent populations compared to the County in general.

Public Outreach

Extensive public outreach during the planning process has occurred in the Study Area and included specific outreach for communities of environmental justice concern, particularly LEP communities. The following activities were conducted specifically to ensure participation

from communities of environmental justice concern, per requirements under Executive Orders 12898 and 13166:

- Identifying and meeting with environmental justice stakeholders, including Templo Calvario, neighborhood associations, labor union members and senior centers.
- Establishing a project information hotline with outgoing messages in English and Spanish.
- Translating and submitting notices for publication in the following local Spanish language newspapers:
 - Excelsior (Spanish language weekly of the Orange County Register on May 24, 2010)
 - *Miniondas* (June 3, 2010)
- Making notices and information available in the Public Law Center's website. The Public Law Center is a pro-bono law firm serving low-income communities in the City of Santa Ana and in the County of Orange ([http://www.publiclawcenter.org/news.php?headline= More + Public + Transportation + Coming + to + Santa + Ana](http://www.publiclawcenter.org/news.php?headline=More+Public+Transportation+Coming+to+Santa+Ana)).
- Translating presentation boards during scoping meetings, which followed an open house format. Exhibit 7, in the Community Impact Assessment included as Appendix C, provides samples of these boards.
- Making available City of Santa Ana and subconsultant staff who were fluent in Spanish and were familiar with the proposed project and its stakeholders at the scoping meetings. Given the open house format of these scoping meetings, no real-time translation services were required as no formal presentations were given. However, Spanish-speaking staff was on hand to assist LEP community members.
- Translating comment forms on which community members could submit any comments, in English or Spanish.

The outreach to environmental justice populations will continue throughout the environmental process in the format presented above.

5.3.4 IOS-1 and IOS-2

The alignments associated with IOS-1 and IOS-2 would terminate at Raitt Street and Santa Ana Boulevard. With the exception of the Garden Grove, Santa Anita, Mar-Les, and Santa Ana River East Neighborhoods, the proposed alignments under IOS-1 and IOS-2 would traverse the same neighborhoods as the proposed alignments under Streetcar Alternatives 1 and 2.

Since the IOS options do not involve development of the PE ROW, visual, construction, and acquisition effects of the IOS-1 and IOS-2 that occur to the Garden Grove Southeast, Santa Anita, Mar Les, and Santa Ana River East Neighborhoods would not occur. Acquisition of full parcels remains the same under option IOS-1 and IOS-2. Parking, circulation, noise, access, and air quality effects would be similar to those identified for Streetcar Alternatives 1 and 2.

5.4 Cumulative Impacts

Implementation of the proposed project would contribute to minor adverse cumulative effects within the proposed Study Area. Implementation of both of these alternatives and other projects in the vicinity of the proposed project would not require conversion of any existing land uses or create any new land uses that could, in combination with current and reasonably foreseeable related actions, generate conflicts with land uses adjacent to the alignment, or result in inconsistency or conflict with local land use plans, policies, and regulations. Additionally, it is not anticipated that implementation of the streetcar system or other projects in the vicinity would create physical barriers, affect community cohesion and interaction, or affect the quality of life. It is not anticipated that the implementation of cumulative projects, in combination with the proposed project would result in adverse economic effects, impaired mobility and access, and displacement to the community. However, the proposed project in combination with the past, present and reasonably foreseeable projects could result in social and psychological effects (changes in population) and visual environment effects (change in community character), but these adverse effects are expected to be minor. Present, future and reasonably foreseeable projects within the Study Area with the potential to cause adverse cumulative effects are identified on **Table 5-3**.

Specific projects include the following:

- Full implementation of the Santa Ana Master Plan, which includes physical improvements to the SARTC would induce increases in transportation services to be provided thus, increasing the amount of people using local roads, increasing traffic congestion.
First Cabrillo Towers, a residential condo development of 374 residential units currently undergoing the building permitting process, which is approximately 0.6 mile from the proposed Study Area and the SARTC is likely to increase population and transportation demand.
- Related Co. Apartments, which is comprised of approximately 138 residential units on multiple lots around the Downtown area is likely to increase population and transportation demand as well.
- Santa Ana Lofts recently completed live/work townhouses which added 16 new housing units to the Artists Village area of the Downtown.
- One Broadway Plaza, located at 1109 North Broadway, would add a 37 story, 500,000-square-foot office tower. This project is currently under review and would add jobs to the community but has the potential to add traffic congestion.
- Bristol Street Widening, the portion of widening that would affect the Study Area is from 3rd Street to Civic Center Boulevard along Bristol Street at the intersection of Santa Ana Boulevard. The proposed project has the potential to increase development around the Bristol Street/Santa Ana Boulevard intersection.

Table 5-3. Cumulative Projects

No.	Project	Description/Land Use	No. of u or square feet (sf)	Location	Primary APN
Approved					
1	Alliance Church of Orange	Church addition (gym/classroom), approved 2009	21,000 sf	2130 N. Grand Ave.	396-191-44
2	Christ Our Savior Cathedral	Sanctuary (2,800-seat), approved 2005		2001 W. McArthur Blvd.	140-061-94
3	Discovery Science Center Ph. II	IMAX theatre (275-seat), approved 2002		2032 N. Main St.	399-102-09
4	Lyon Homes	Residential (Condo), approved 2011	300 u	100-130 E. McArthur Blvd.	411-081-26
5	Promenade Point	Residential (Condo), approved 2005	194 u	200 E. First American Wy.	411-074-03
6	CVS/Sav-On Drug Store	Pharmacy, drive through, approved 2008	15,836 sf	115 N. Harbor Blvd.	198-182-22
7	Skyline Phase II	Residential (Condo), approved 2005	150 u	10 E. Hutton Ctr.	411-081-28
8	Vista Del Rio	Residential, approved 2009	41 u	1600 W. Memory Ln.	101-055-27
9	Xerox Tower II	Office, approved 2001	210,000 sf	200 N. Cabrillo Park Dr.	400-071-03
10	YMCA	Recreational Facility, approved 2007	32,000 sf	2100 W. Alton Ave.	140-061-91
11	1306 W. Santa Ana Blvd.	Medical/Office Building, approved 2011	6,000 sf	1306 W. Santa Ana Blvd.	007-183-08
12	Grand Avenue Widening NOTE: Specifically included in No Build Description	Roadway Widening		1 st St. to 4th St.	Multiple APNS
13	Broadway Reconstruction	Street Reconstruction		Civic Center Dr. to Santa Clara St.	Multiple APNS
14	Bristol Street Widening NOTE: Specifically included in No Build Description	Street Widening		Warner Ave. to Memory Ln.	Multiple APNS
15	First and Cabrillo Towers	Residential (Condo), approved 2007	374 u	1901 E. 1 st St.	400-081-08
16	Related Co. Apartments	Residential (Apartments)	74 u	611 E. Minter St.	398-301-07
A	1 st Street Widening Source: RTIP / RTP. Specifically included in No Build Description	Roadway widening from 4 to 6 Lanes		Susan St. to Fairview St.	Multiple APNS
B	Transit Zoning Code NOTE: Specifically included in No Build Description	Land Use/Zoning Overlay, approved 2010		eastern third of Study Area	Multiple APNS
Application Under Review					
17	C & C Affordable Housing Project	Residential (Apartments)	36 u	605 E. Washington Ave.	398-151-12
18	Dayton Commercial Center	Commercial	7,275 sf	W. Edinger Ave.	408-273-11
19	Dr. Bui Medical Building	Medical Office	6,500 sf	202 N. Euclid Ave.	099-223-26
20	Francis Xavier	Residential (Affordable/Special Needs)	12 u	801 E. Santa Ana Blvd.	398-303-04
21	Related Co. Apartments	Residential (Apartments)	13 u	714 E. Santa Ana Blvd.	398-312-18
22	Related Co. Apartments	Residential (Apartments)	12 u	801 E. Brown St.	398-312-09
23	Related Co. Apartments	Residential (Apartments)	12 u	806 E. Santa Ana Blvd.	398-313-02

Table 5-3. Cumulative Projects

No.	Project	Description/Land Use	No. of u or square feet (sf)	Location	Primary APN
24	Related Co. Site A	Residential (Rowhouse)	6 u	501-515 E. 5 th St.	398-332-06
25	Related Co. Site B	Residential (Rowhouse)	9 u	606-620 E. 5 th St.	398-228-02
26	Related Co. Site C1 & C2	Residential (Rowhouse and duplex)	6 u	601-607 E. 5 th St.	398-333-01
27	Related Co. Site D	Residential (Rowhouse)	4 u	615-621 E. 5 th St.	398-333-05
28	Related Co. Site E	Residential (Duplex)	2 u	712 E. 5 th St.	398-337-03
29	Santa Ana Blvd. Spec. Plan Area	Mixed-used	600 u	Santa Ana Blvd.	398-311-14
30	The MET at South Coast	Residential (Condo) (five-and six-story over parking)	TBD	200 E. First American Wy.	411-074-03
31	TAVA Homes	Residential (Single Family)	24 u	1584 E. Santa Clara Ave.	396-052-14
32	Town and Country Independent Living	Residential (Condo)	144 u	555 E. Memory Ln.	041-213-04
33	Vista Del Rio	Residential (Apartments/Special needs)	41 u	1600 W. Memory Ln.	101-055-27
34	1100 S. Grand Ave.	McDonald's with drive through	3,838 sf	1100 S. Grand Ave.	011-263-02
35	3312 W. 1 st St.	Office (two-story)	29,000 sf	3312 W. 1 st St.	144-341-07
36	630 S. Hathway St.	Industrial (two-story)	4,100 sf	630 S. Hathway	011-311-04
C	Santa Ana Blvd. Grade Separation NOTE: PSR / conceptual engineering is in process. City of Santa Ana is lead. Not included in No Build	Reconstruct Santa Ana Blvd. at Metrolink railroad tracks		north of SARTC	Multiple APNS
D	SARTC Expansion / Redevelopment NOTE: Master Planning Stage - Santa Ana is lead, funded by OCTA Go Local. Not included in No Build	Intermodal Transportation Center / Land Use Development		SARTC and surrounding parcels including east of existing Metrolink tracks	Multiple APNS
E	PE Major Arterial NOTE: RSTIS completed. OCTA to issue RFQ for PSR phase in 2011. OCTA is lead. Project is listed as part of the MPAH. Not included in No Build	New four-lane roadway in PE ROW / ramps to SR-22		PE ROW, from SR-22 to Raitt St.	Multiple APNS
F	Class II bike lane on Civic Center Dr. NOTE: City of Santa Ana is lead and planning concept for this bike lane has been identified. Not in No Build, but design for Streetcar Alternative 2 accounts	Early planning stages (per Citywide bicycle program)		TBD – on Civic Center Dr.	Multiple APNS
Under Construction					
37	Alton Court	Residential (Single Family)	38 u	3321 S. Fairview St.	414-171-01
38	Wintersburg Presbyterian Church	Classrooms, Gym, Outreach Center	24,348 sf	2000 N. Fairview St.	101-652-13
39	Audi Dealership	Commercial, addition to showroom	7,700 sf	1425 S. Auto Mall Dr.	402-101-37

Table 5-3. Cumulative Projects

No.	Project	Description/Land Use	No. of u or square feet (sf)	Location	Primary APN
40	Courtyard by Marriot Hotel	Hotel (155 rooms)	100,000 sf	8 McArthur Pl.	411-081-28
41	Downtown Artist Lofts III	Artist Live/Work Lofts	16 u	SWC Main/3 rd St.	398-601-02
42	Dr. Do Medical Office	Office (two-story)	6,000 sf	4718 W. 1 st St.	108-101-45
43	Goodwill Industries	Office/Industrial	12,000 sf	410 N. Fairview St.	405-222-04
44	Latino Health Access	Community Center	3,074 sf	602 E. 4th St.	398-481-05
45	Santa Ana Express Car Wash	Drive-through car wash		202 E. 1 st St.	398-51-401
46	Olen Properties (Parkcenter)	Office (one and two-story)	29,170 sf	601 N. Park Center Dr.	400-042-04
47	One Broadway Plaza	Office (37-story)	518,000 sf	1109 N. Broadway	398-561-07

Source: City of Santa Ana Planning Department August 2011.

Notes:

Unit (u), Not Applicable (N/A)

Projects A - G are reasonably foreseeable, but note that Projects C - F are not yet funded and committed.

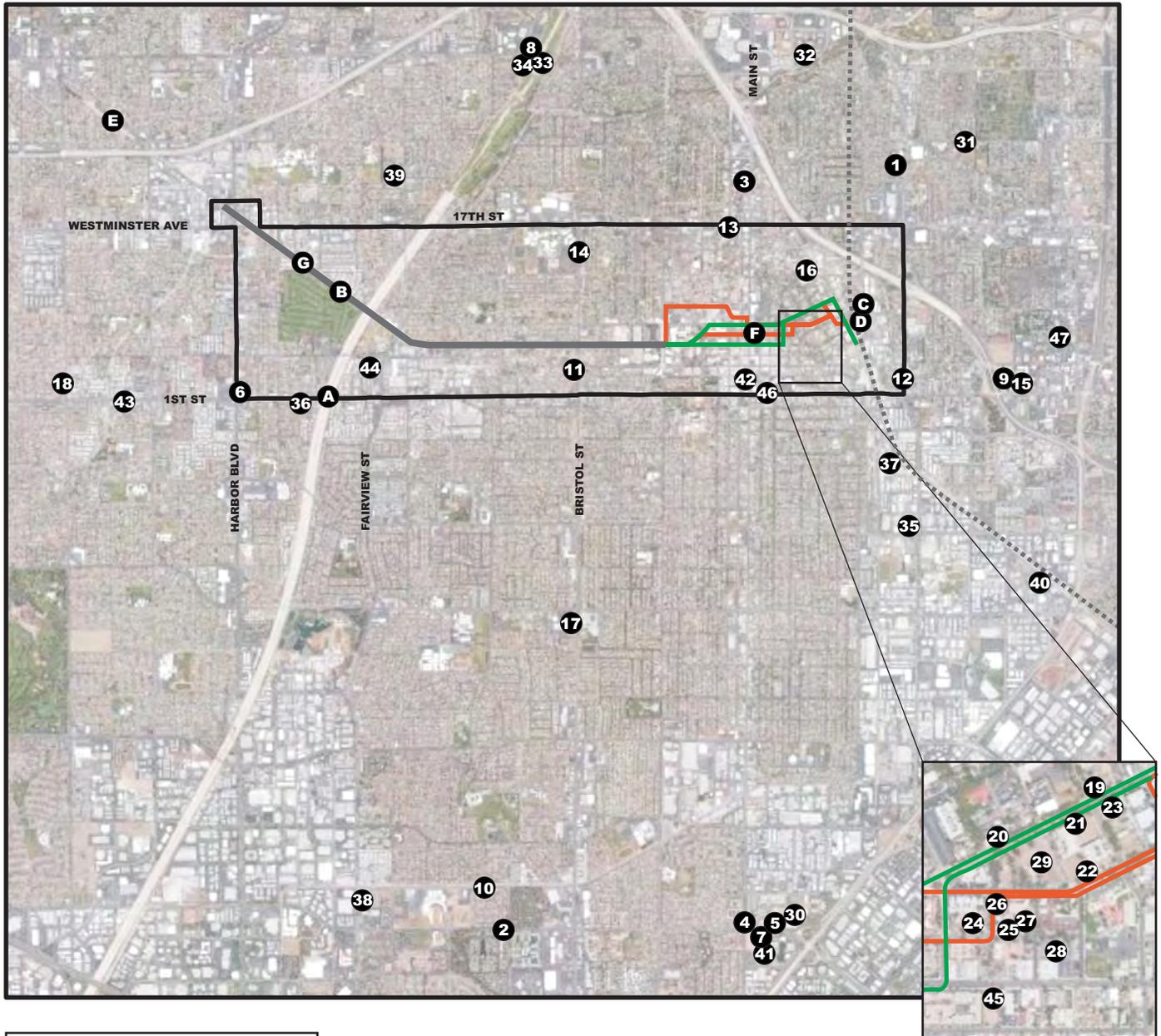
Projects A and B have been approved. Projects C - F are in various stages of early project development.

Project Number: 12-14 retrieved from City of Santa Ana Capital Improvement Program FY 09-10 CIP Projects by Category (http://www.ci.santaana.ca.us/finance/budget/1011/10-11_proposed_annual_budget.pdf)

Locations of these projects are shown in **Figure 5-5**. There would be minor cumulative impacts from the proposed (not yet approved) and the planned (approved) development projects and street improvements listed above. Many of which are being built on sites currently occupied by surface parking lots and near the proposed transit stations, and along Santa Ana Boulevard Corridor, Lacy and Logan Neighborhoods, and in Downtown and Civic Center areas. There are significant planned improvements in the downtown area with the proposed implementation of the SARTC Master Plan, the proposed streetcar alignment, and the residential developments listed above. The proposed project along with the above mentioned projects (approved or pending approval) may have adverse community and neighborhood effects in changes in population (possible increases) and visual effects (change in the communities' aesthetic character).

Additionally, the new residential developments undergoing planning review, approved or undergoing construction would add more population to the Study Area, which would also increase the demand for transportation, and housing. It is anticipated that proposed project and other transit projects, street widening and improvements, and development projects would cause cumulative temporary construction effects in regards to blocking accessibility and connectivity for residents.

However the projects currently underway or planned in the future would support increases in transit ridership, and mixed-use development within and around the proposed Study Area and improve business and employment opportunities, all of which would be positive effects, for a total net benefit for the community. The new transit service would help offset the adverse effects of these land use changes by providing alternatives to driving and improved pedestrian access. Therefore, no cumulative adverse effects would occur with the proposed project.



LEGEND:

- Study Area
- PE ROW
- Metrolink/Amtrak Rail Line
- Streetcar Alternative 1
- Streetcar Alternative 2
- Potential Cumulative Project Location

0 0.6 1.2 MILES

Source: Retrieved from City of Santa Ana Capital Improvement Program FY 09-10 CIP Projects by Category (http://www.ci.santaana.ca.us/finance/budget/1011/10-11_proposed_annual_budget.pdf); updated by Terry A. Hayes Associates Inc., August 2012.

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Chapter 6 CEQA Analysis

The criteria for determining significant impacts of the proposed project on land use were developed in accordance with Appendix G of CEQA Guidelines, except where noted. In accordance with the requirements of CEQA, and all applicable State and federal environmental laws, implementation of the proposed project would have a significant adverse impact on land use if it would result in any of the following:

- Physically divide an established community;
- Conflict with an applicable habitat conservation plan or natural community conservation plan; and/or
- Conflict with any applicable land use plan, policy or regulation of an agency having jurisdiction over the proposed project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Potential environmental impacts have been classified as follows:

- **No Impact** – Results in no change to the existing environmental conditions;
- **Less Than Significant** – Results in no substantial adverse change to existing environmental conditions;
- **Less Than Significant with Incorporated Mitigation** – Constitutes a substantial adverse change to existing environmental conditions that can be mitigated to less than significant levels by implementation of feasible mitigation measures or by the selection of an environmentally superior project alternative; and
- **Significant and Unavoidable** – Constitutes a substantial adverse change to existing environmental conditions that cannot be fully mitigated by implementation of all feasible mitigation measures or by the selection of an environmentally superior project alternative.

Will the proposed project physically divide an established community?

Dividing an established community relies significantly on creating a physical barrier that changes the connectivity between different areas of the community. Connectivity is typically provided by roadways, pedestrian paths such as sidewalks and bicycle or equestrian trails. Factors that could divide a community include the construction of a major highway or roadway, construction of storm channels, closing bridges or roadways, and construction of utility transmission lines. An established community could mean any number of things, including a neighborhood, city, county or region.

As discussed in Section 1.2, the Study Area is located within Orange County. The proposed alignment begins in the southeast portion of the City of Garden Grove and continues east through the City of Santa Ana along portions of the existing PE ROW to south of Santa Ana

Boulevard and Santiago Street the intersection. The proposed project would consist of a fixed guideway system, which is not a divisive entity.

The proposed project is intended to provide many benefits to the community that it will serve, including improving the connectivity between neighborhoods, businesses and activity centers in the Cities Santa Ana and Garden Grove. The proposed project would provide faster and more reliable transportation, support economic development and create jobs, and provide service to transit-oriented neighborhoods and busy activity centers. The potential for the proposed project to physically divide an established community is described below for each alternative.

No Build Alternative

The No Build Alternative is consistent with existing and planned improvements, including transit and roadway improvements. Furthermore, under this alternative, the proposed project does not propose any action that would physically divide an established community. Therefore, there would be no impact.

TSM Alternative

Similar to the No Build Alternative, the proposed project would be consistent with existing and planned roadway improvements intended to make the existing transit system more efficient. The TSM Alternative would include modifications and enhancements to selected bus routes in the Study Area, intersection and signal improvements, and bus stop amenity upgrades. No action under the TSM Alternative would permanently limit existing physical connectivity within the Study Area. Therefore, there would be no impact.

Streetcar Alternatives 1 and 2

The proposed project would construct the alignment for Streetcar Alternatives 1 and 2 within the existing PE ROW from Harbor Boulevard to Raitt Street, with streetcars operating at-grade, bi-directionally, in exclusive streetcar ROW. Along Santa Ana Boulevard from Raitt Street to Ross Street, Streetcar Alternative 1 would operate in the street, at-grade, bi-directionally, along with mixed-flow traffic.

Along 5th Street and Civic Center Drive/Santa Ana Boulevard, from Flower Street to Minter Street, Streetcar Alternative 2 would operate in the street, at-grade, one-way, along with mixed-flow traffic. Along 6th Street/Brown Street, from Minter Street to Poinsettia Street, Alternative 2 would operate in the street, at-grade, bi-directionally, along with mixed-flow traffic. At Poinsettia Street/Santa Ana Boulevard/Santiago Street/6th Street, Streetcar Alternative 2 would operate in a one-way loop, in the street, at-grade, along with mixed-flow traffic

Selection of this project alignment would result in the addition of a pedestrian bridge at Green Drive, pedestrian easement at Jackson Street, some property acquisitions, and reduction of parking spaces along Santa Ana Boulevard. Temporary access restrictions and acquisition impacts may occur during project construction. As the streetcar would utilize the existing PE

ROW, it is not anticipated that the physical changes would bring on significant disturbances to established communities in the proposed Study Area.

Streetcar Alternatives 1 and 2 would provide transit linkage to a number of public use areas and activity centers such as the Santa Ana Civic Center, the City Library, Santa Ana Stadium, and Downtown Santa Ana buildings through the provision of a transit system which connects existing land uses in the area, and provides improved transportation access options to public use areas and activity centers. Streetcar Alternatives 1 and 2 also provide sidewalk and pedestrian walkway improvements in the vicinity of the proposed stations. For Streetcar Alternative 1, the widening of the sidewalk from 10 to 19 feet on the south side of 4th Street between Ross Street and Mortimer Street would provide more sidewalk space for pedestrians, and for people standing at bus stops and stations. For Streetcar Alternative 2, sufficient street width would be provided between Flower Street and Spurgeon Street to support the City's planned development of a Class II bike lane on each side of Civic Center Drive. Selection of Streetcar Alternatives 1 and 2 would encourage walkability, enhance pedestrian safety, and minimize the need for an automobile.

The location of the Santa Ana River within the Study Area currently acts as a natural divider between Garden Grove/western Santa Ana and the central portion of Santa Ana. Construction activities associated with the implementation of Streetcar Alternatives 1 and 2 may cause temporary access restrictions to land uses along Santa Ana Boulevard and 4th Street. The construction period is anticipated to be approximately 30 months; however, it is anticipated that the construction activities would be phased and sequenced based on location and types of construction. The staging of the project would include four to five segments to allow for construction crews to work in sequence. Access restrictions such as road closures or movement restrictions to the community would be experienced in sequence, by different neighborhoods, throughout the 30-month period. Streetcar Alternatives 1 and 2 would not require permanent street access alterations. Given the temporary nature of these disturbances, and given the phasing of construction activities along the project route, impacts from construction would be minimal.

Selection of Streetcar Alternative 1 or 2 would not be expected to disrupt a cohesive social unit, or divide an established neighborhood. Community cohesion impacts are expected to be less than significant.

IOS-1 and IOS-2

Due to funding constraints, it may be necessary to construct Streetcar Alternative 1 or 2 as a shorter segment, identified as IOS-1 or IOS-2, which would follow the same alignments as Streetcar Alternatives 1 and 2. However, under IOS-1 and IOS-2, the western terminus would be located at Raitt Street and Santa Ana Boulevard rather than extending further west to Harbor Boulevard and Westminster Avenue. The PE ROW segment between Harbor Boulevard and Raitt Street would not be included under IOS1- and IOS-2. Thus, potential community effects west of Raitt Street, which are identified under Streetcar Alternatives 1

and 2, would not occur under IOS-1 and IOS-2. All other impacts from the implementation of IOS-1 and IOS-2 are similar to those identified for Streetcar Alternatives 1 and 2.

Will the proposed project conflict with an applicable habitat conservation plan or natural community conservation plan?

According to the California Department of Fish and Game, HCPs are long-term agreements between the applicant and the U.S. Fish and Wildlife Service. They are designated to offset any harmful effects that a proposed activity might have on federally-listed threatened and endangered species. The HCP allows development to proceed while providing a conservation basis to conserve the species and provide for incidental intake. A “No Surprises” policy provides assurances to landowners participating in HCP efforts.

The Natural Communities Conservation Planning Program of the Department of Fish and Game is an unprecedented effort by the State of California and numerous private and public partners that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. A Natural Communities Conservation Plan (NCCP) identifies and provides for the regional or areawide protection of plants, animals and their habitats, while allowing compatible and appropriate economic activity.

In each alternative, the Study Area includes the southeast portion of the City of Garden Grove and continues east through the City of Santa Ana to end at SARTC. Incorporated portions of Orange County, such as the Cities of Santa Ana and Garden Grove, are not within any designated wildlife habitat areas nor is any portion of either city within an Open Space/Conservation Program, as indicated on Figure VI-4 and Figure VI-5, respectively, of the Orange County General Plan. Both Cities are mostly developed; Garden Grove, which is 99 percent developed, has remained so for a number of years. There are no areas having particular biological sensitivity within the Study Area, and, therefore, no sensitive habitats would be placed in jeopardy with implementation of the proposed project. The potential to conflict with any HCPs or NCCPs is listed below.

No Build Alternative

The Study Area is heavily urbanized and developed. There are no ecologically sensitive areas or wildlife preserves within the Study Area. The No Build Alternative includes conditions within the Study Area combined with future planned and funded transit and roadway improvement projects (the streetcar would not operate under the No Build Alternative). Each of these future projects will be environmentally cleared through separate project-specific environmental documentation. These projects would not affect HCPs or NCCPs. Therefore, the No Build Alternative would have no impacts related to conflict with preservation plans.

TSM Alternative

The TSM Alternative emphasizes low-cost improvements and operational efficiencies, such as focused traffic engineering actions, expanded bus service, and improved access to transit services. The TSM Alternative would involve small physical improvements and operational improvements, such as focused traffic engineering actions, expanded bus service, and

improved access to transit services within the Study Area. The TSM Alternative also would include modifications and enhancements to selected bus routes in the Study Area, intersection/signal improvements, and bus stop amenity upgrades. These improvements would not affect HCPs or NCCPs. Therefore, the TSM Alternative would have no impacts related to conflicts with preservation plans.

Streetcar Alternatives 1 and 2

Implementation of Streetcar Alternatives 1 and 2 would not conflict with any local policies or ordinances protecting open space. The City of Santa Ana Conservation Element encourages establishment of mixed-use areas and the overall visual enhancement of the City, both of which will occur within the Study Area for Streetcar Alternatives 1 and 2. In addition, the Study Area is not located within any HCP Plan, Natural Community Conservation Plan (NCCP), or other approved local (including the City of Garden Grove), regional, or State HCP. Therefore, Streetcar Alternatives 1 and 2 would result in less-than-significant impacts related to conservation plans.

IOS-1 and IOS-2

The assessment of conflicts with conservation plans for IOS-1 and IOS-2 is similar to the assessment completed for Streetcar Alternatives 1 and 2 with the exception that the IOS alignments would not cross the concrete-lined Santa Ana River. Therefore, IOS-1 and IOS-2 would result in no impacts related to conflicts with preservation plans.

Will the proposed project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The assessment of land use impacts focuses on the potential for land use incompatibility, degradation, or disturbance from land use intensification and alteration of the character of a particular area. Development of transit alternatives represents an intensification of land use that may affect land use patterns and quality of life of nearby neighborhoods directly and indirectly (traffic, air quality, noise, and other secondary impacts).

No Build Alternative

The No Build Alternative is consistent with existing and planned improvements, including transit and roadway improvements. The streetcar would not operate under the No Build Alternative. This alternative would not change existing land uses or zoning in the Study Area. Therefore, the No Build Alternative would result in no impacts related to land use plans or zoning policies.

TSM Alternative

Similar to the No Build Alternative, the proposed project would be consistent with existing and planned roadway improvements intended to make the existing transit system more efficient. The TSM Alternative includes modifications and enhancements to selected bus

routes in the Study Area, intersection and signal improvements, and bus stop amenity upgrades. No changes to zoning or general plan land use plans, or any other such plans or policies currently in effect, are proposed under this alternative. Therefore, the TSM Alternative would result in no impacts related to land use plans or zoning policies.

Streetcar Alternatives 1 and 2

The proposed streetcar alignments span the jurisdiction of various regulatory agencies including the Cities of Santa Ana and Garden Grove. As mentioned in response to the previous CEQA threshold, the Build Alternatives that have been analyzed would encompass the same Study Area. Therefore each of the applicable adopted land use documents (by each regulatory agency, as discussed below) would be applicable to each alternative discussed.

City of Santa Ana

City of Santa Ana General Plan

Under Streetcar Alternatives 1 and 2, existing land uses observed in the vicinity of the proposed project are generally consistent with the General Plan land use and zoning prescribed for these land use categories. Observable land use includes residential uses, from single-family homes to multi-family units, which are consistent with the Low- to Medium-Density Land Use Designation.

Professional offices are generally observed along major arterials at the western terminus of the proposed alignment, and along 4th Street and Santa Ana Boulevard in Downtown Santa Ana, consistent with the City of Santa Ana's General Plan Land Use Designations. Institutional uses, in the forms of the courthouse, museums, schools, federal buildings, and other civic structures, are concentrated in Downtown, consistent with the Land Use Designation for Institutional Uses. No violation to the existing General Plan Land Use would occur since the proposed project is consistent with the policies of the City of Santa Ana General Plan.

As part of the project design, several of the stations have been placed within the existing PE ROW, and away from sensitive receptors, to minimize disruptions to these land uses. In addition, many of the stations have been proposed near public use areas and activity centers such as parks and the Santa Ana Downtown Civic Center areas, in an effort to provide increased access to these areas and ease of accessibility to transit. The route of the streetcars was designed to provide efficient modes of transit in highly urbanized areas while not considerably aggravating existing land use conditions. Therefore, transit operations from the proposed project would be consistent with land use goals established for the City of Santa Ana. Therefore, land use impacts related to consistency with the City of Santa Ana General Plan would be less than significant under Streetcar Alternatives 1 and 2.

North Harbor Specific Plan

The Streetcar Alternatives 1 and 2 do not propose any action that would be in direct conflict with goals outlined for the North Harbor Specific Plan area. In general, all construction of

tracks would be within the existing PE ROW, existing streets, or proposed future streets. In addition to the streetcar, the proposed project would help to improve pedestrian circulation in and around Harbor Boulevard with sidewalk and pedestrian improvements in the vicinity of proposed station platforms. The proposed project would also provide added incentives for new and existing businesses located near the transit stations, as the streetcars would encourage increased pedestrian activity within their immediate vicinity. As a result, Streetcar Alternatives 1 and 2 would be consistent with the North Harbor Specific Plan. Therefore, land use impacts related to consistency with the North Harbor Specific Plan would be less than significant under Streetcar Alternatives 1 and 2.

Bristol Corridor Specific Plan

Streetcar Alternatives 1 and 2 would add one bi-directional streetcar station at Bristol Street and Santa Ana Boulevard. Benefits from the transit system include higher density residential areas, commercial and industrial areas that represent job centers, colleges and universities, institutional facilities, medical centers, civic centers, and recreational facilities. Land uses along the proposed alignment include uses considered to benefit from transit systems. Streetcar Alternatives 1 and 2 would provide enhanced accessibility and links to these areas for the community.

Development of a transit system along Santa Ana Boulevard would encourage transit-oriented land uses along the proposed east-west route, including higher density residential development near transit stations. Selection of either Build Alternative would also allow development of transit-supportive commercial and industrial spaces, significant job centers, universities, and institutional facilities. Streetcar Alternatives 1 and 2 would improve the existing conditions within the immediate vicinity of streetcar stations and redevelop any older, declining neighborhoods present within the Bristol Corridor Specific Plan. As a result, the implementation of Streetcar Alternatives 1 and 2 would not conflict with applicable goals contained in the Bristol Corridor Specific Plan. Therefore, land use impacts related to consistency with the Bristol Corridor Specific Plan would be less than significant under Streetcar Alternatives 1 and 2.

Midtown Specific Plan

Streetcar Alternatives 1 and 2 would benefit the Midtown Specific Plan within the Study Area by increasing walkability and encouraging pedestrian activity within the Study Area. Location near transit stations is generally considered a desirable amenity to potential businesses because it would encourage restoration and redevelopment of the area. Under Streetcar Alternative 2, two streetcar stations are proposed to be constructed, in addition to the streetcar tracks. As a result, the Midtown Specific Plan area would benefit more from Streetcar Alternative 2. Implementation of Streetcar Alternatives 1 and 2 would not conflict with the Midtown Specific Plan. Therefore, land use impacts related to consistency with the Midtown Specific Plan would be less than significant under Streetcar Alternatives 1 and 2.

Santa Ana Municipal Code

Santa Ana is currently recognized as the fourth most densely-populated city in the United States and is expected to continue experiencing growth over the next 25 years. As such, roadways are heavily congested during peak periods with more than 100,000 trips occurring to and from central Santa Ana on a daily basis. In anticipation of the population growth, and recognizing that many residents are dependent on public transportation, it is important for the City to provide more transit options. The proposed project would be a key component to linking the residents and businesses of Santa Ana with employment, education, recreation and leisure activities. No violation to existing zoning codes is anticipated to occur since Streetcar Alternatives 1 and 2 are consistent with the policies of the General Plan and Specific Plans that are within the boundaries of the Study Area. Therefore, land use impacts related to consistency with the Santa Ana Municipal Code would be less than significant under Streetcar Alternatives 1 and 2.

City of Santa Ana Transit Center Zoning Code

Streetcar Alternatives 1 and 2 would be consistent with the zoning under the City of Santa Ana Transit Center Zoning Code. In combination with additional investment in public infrastructure represented by the fixed guideway, the proposed project would create an inducement to property owners to take advantage of the newly-created development opportunities provided in the Code to expand development activity, maximize use of existing buildings, and provide increased variety and affordability of housing, while promoting walkability, and minimizing the need for an automobile. Therefore, land use impacts related to consistency with the City of Santa Ana Transit Center Zoning Code would be less than significant under Streetcar Alternatives 1 and 2.

City of Garden Grove

City of Garden Grove General Plan

The City of Garden Grove General Plan Land Use Element discusses the underutilization of OCTA ROW. One program to utilize the OCTA ROW is the "Go Local," city-initiated transit extension program to OCTA's Metrolink commuter rail line. The proposed project has been identified as an ideal proposed solution to activating the OCTA ROW. Streetcar Alternatives 1 and 2 would be consistent with the City of Garden Grove General Plan, and would provide increased transit opportunities for passengers and residents through establishment of a streetcar system. Therefore, land use impacts related to consistency with the Garden Grove General Plan would be less than significant under Streetcar Alternatives 1 and 2.

The City of Garden Grove Land Use Code

None of the proposed alternatives would directly conflict with the goals of the City of Garden Grove Land Use Code beyond the existing condition. The proposed fixed guideway system would be an environmentally-friendly transportation solution that matches the character of the community and meets the travel needs of the people that live, work, shop, and go to school in the area. The proposed project aims to encourage economic development, create jobs, and

provide greater mobility for people who depend on public transit. Therefore, land use impacts related to consistency with the City of Garden Grove Land Use Code would be less than significant under Streetcar Alternatives 1 and 2.

IOS-1 and IOS-2

City of Santa Ana

City of Santa Ana General Plan

Similar to Streetcar Alternatives 1 and 2, IOS-1 and IOS-2 are within the City of Santa Ana. However, IOS-1 and IOS-2 excludes the area west of Raitt Street; therefore land uses in this area would not be impacted. IOS-1 and IOS-2 would be consistent with the land use goals contained within the General Plan and would be designed to minimize disruptions to existing land uses within the Study Area. Therefore, land use impacts related to consistency with the City of Santa Ana General Plan would be less than significant under IOS-1 and IOS-2.

North Harbor Specific Plan

IOS-1 and IOS-2 would not traverse through areas covered by the North Harbor Specific Plan. Therefore, land use impacts related to consistency with the North Harbor Specific Plan would be less than significant under IOS-1 and IOS-2.

Bristol Corridor Specific Plan

Similar to Streetcar Alternatives 1 and 2, portions of IOS-1 and IOS-2 are within the Bristol Corridor Specific Plan and would be consistent with applicable land use goals. Therefore, land use impacts related to consistency with the Bristol Corridor Specific Plan would be less than significant under IOS-1 and IOS-2.

Midtown Specific Plan

Similar to Streetcar Alternatives 1 and 2, portions of IOS-1 and IOS-2 are within the Midtown Specific Plan and would be consistent with existing land use in the specific plan area. Therefore, land use impacts related to consistency with the Midtown Specific Plan would be less than significant under IOS-1 and IOS-2.

Santa Ana Municipal Code

IOS-1 and IOS-2 follow alignments similar to Streetcar Alternatives 1 and 2, respectively, and are within the City of Santa Ana. However, IOS-1 and IOS-2 excludes the area west of Raitt Street; therefore land uses in this area would not be impacted. IOS-1 and IOS-2 would not violate existing zoning codes and would be consistent with the land use goals contained within the General Plan and Specific Plans. Therefore, land use impacts related to consistency with the Santa Ana Municipal Code would be less than significant under IOS-1 and IOS-2.

City of Santa Ana Transit Center Zoning Code

IOS-1 and IOS-2 follow alignments similar to Streetcar Alternatives 1 and 2, respectively, within the Study Area covered by the Transit Center Zoning Code. Therefore, land use impacts related to consistency with the City of Santa Ana Transit Center Zoning Code would be less than significant.

City of Garden Grove

City of Garden Grove General Plan

IOS-1 and IOS-2 would not traverse through areas within the City of Garden Grove. Therefore, land use impacts related to consistency with the Garden Grove General Plan would be less than significant under IOS-1 and IOS-2.

The City of Garden Grove Land Use Code

IOS-1 and IOS-2 would not traverse through areas within the City of Garden Grove. Therefore, land use impacts related to consistency with the City of Garden Grove Land Use Code would be less than significant under IOS-1 and IOS-2.

Overall Consistency

The proposed project has the potential to alter the appearance of the existing setting with development of streetcar tracks, an electric overhead contact system, associated stations, and an O & M facility. Sensitive receptors, such as residences and schools adjacent to the rail alignment, would experience increased noise, air pollution, and traffic as a result of transit operations. Construction activities may also affect the surrounding land uses. In particular, residential, institutional, and commercial land uses may also be impacted by noise/vibration, air quality (including fugitive dust), and light and glare impacts during the construction phases of the proposed project. However, in most cases, these land uses are not located immediately adjacent to the ROW and impacts would be less than significant. Potential impacts (noise/vibration, air quality, and light and glare) are evaluated in more detail in the, Noise, Air Quality, and Aesthetics sections, respectively.

A total of 12 streetcar stations are currently proposed under Streetcar Alternative 1, and 13 are proposed under Streetcar Alternative 2. These stations are strategically situated within each of the neighborhoods along the project alignment. Land uses surrounding the proposed streetcar alignments are densely developed, with commercial and office buildings in the Santa Ana Downtown Civic Center area and residential neighborhoods along Santa Ana Boulevard. Selection of either alternative would promote residential development around the stations or nodes, would encourage residential development around the stations, and would allow access to Downtown and other high-intensity areas of employment, commercial development, and recreational opportunities. Commercial and residential developments planned and underway in the vicinity of the Streetcar Alternative 2 alignment would be offset by the new transit infrastructure, which would bring together pedestrian and business activities through improved access to shops and retail functions.

Implementation of the proposed project would not contribute to any adverse cumulative land use effects within the Study Area. Streetcar Alternatives 1 and 2 would not convert any existing land uses or create any new land uses that could, in combination with current and reasonably-foreseeable related actions, generate conflicts with land uses adjacent to the alignment. The proposed project is consistent with applicable regional plans as previously described for SCAG, as well as local land use provisions outlined in the general plans and specific plans for the Cities of Garden Grove and Santa Ana. It is further anticipated that the proposed project would not significantly conflict with applicable policies outlined by each regulatory agency. Therefore, the proposed project would not result in impacts related to land uses.

Mitigation Measures

Mitigation is required for those CEQA thresholds that have been identified as having an adverse impact caused by implementation of the project. As outlined in Section 15370 of CEQA Statutes and Guidelines, mitigation includes avoiding the impact altogether by not taking certain actions, rectifying the impact by repairing, rehabilitating or restoring the impacted environment, minimizing impact or compensating for the impact. As discussed in the preceding section, implementation of the proposed project would not physically divide an established community; conflict with land use plans, policies, or regulations; or conflict with an HCP, or other type of approved biological habitat management plan. As a result, the proposed project would not trigger mitigation to be incorporated to rectify land use-related impacts; therefore, no mitigation is required.

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Chapter 7 Minimization, Mitigation, and Avoidance Measures

No adverse affects from acquisition, economic, and community effects would occur during the operation of the proposed project and no mitigation measures are required. The project shall require consultation and acquisition of required permits and approvals by responsible and trustee agencies that have jurisdiction over the project alignment. Construction-related effects on traffic, circulation, and parking, which are expected to be short-term and temporary, are expected to include the following:

- Periodic and/or intermittent closure of roadway travel lanes, resulting in reduced roadway capacity due to construction related activities
- Periodic and/or intermittent closure of roadway sidewalks, resulting in restricted pedestrian travel due to construction related activities
- Periodic and/or intermittent loss or reduction of parking resulting in restricted access to businesses and residences due to construction related activities
- Short term, temporary blockage of driveways and limited access to businesses and residences in the immediate vicinity of active construction activities
- Increased Truck traffic related to construction activities
- Potential for temporary diversion of traffic from primary travel routes in the construction area, into residential areas, and other secondary travel routes
- Wherever the streetcar alignment crosses a perpendicular street, operations of the entire intersection would be adversely impacted on a temporary basis

As a Standard Condition of Approval required by the City of Santa Ana, Streetcar Alternatives 1 and 2 would implement a Traffic Management Plan (TMP) that reduces construction-related effects along the alignment and at the chosen O & M Facility site. The TMP would:

- Identify potential types of traffic control that may have a real or perceived business impact such as short term lane closure, extended full street closures, detours, or sidewalk closures;
- Consider sequenced construction to reduce localized effects to the greatest extent feasible;
- Minimize lane closures during AM and PM peak hours;
- Investigate the feasibility of performing construction activities in business areas during nighttime hours to minimize impacts during regular daytime business hours;
- Minimize sidewalk closures;
- Consider bicycle and pedestrian travel;
- Maintain access to businesses at all times except for minor temporary driveway closures;
- Designate parking areas for construction personnel;
- Designate haul routes for truck traffic;
- Minimize unnecessary heavy vehicle idling in construction zones;
- Plan temporary traffic detours to minimize traffic diversion into residential areas; and

- Identify methods to expedite construction in roadway intersections to reduce instances where multiple streets are impacted simultaneously.

In addition, the City of Santa Ana requires projects to notify residents, business owners, commuters, and government agencies, and residents at least ten days prior to any parking removal, lane closure, and street closures that may affect these groups. With implementation of the TMP and the public notification process, Streetcar Alternatives 1 and 2 would not result in adverse effects.

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