Euclid Avenue Corridor Master Plan

CITY OF SAN DIEGO

EXISTING CONDITIONS REPORT

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I. introduction

1.1 BACKGROUND

This Existing Conditions Report has been prepared as part of a corridor master plan for a specific segment of Euclid Avenue. The segment addressed ("Project Area") extends from State Route (SR)-94 south to Guymon Street in the Encanto neighborhood of the Southeastern San Diego Community Planning Area (see Appendix 1 for map). A major purpose of the Euclid Avenue Master Plan is to recommend an appropriate mix of land uses and densities, and balance the needs of all modes of travel along the corridor, resulting in a welcoming roadway that enhances connectivity to residential areas, schools, parks, recreation, shopping and other commercial activities.

The City of San Diego (City) is currently in the process of working with the community to update the 1987 Southeastern San Diego Community Plan. This urbanized and ethnically diverse planning area is bordered by I-5 on the west, I-805 on the east, SR-94 on the north, and segments of Division Street, 43rd Street, and Delta Street on the south. Downtown San Diego and Balboa Park lie to the west-northwest; National City lies to the south. The 1987 Community Plan provides detail on existing conditions and future objectives for each of the neighborhoods within the Southeastern community, including the Encanto Neighborhoods east of I-805. The community plan update process will result in two new community plans: one covering Southeastern San Diego and one for the Encanto Neighborhoods. Euclid Avenue is the boundary between Chollas View and Emerald Hills neighborhoods in the Encanto community planning area.

The current effort to update the Encanto Neighborhoods Community Plan has resulted in a draft Existing Conditions Report for that area ("Encanto ECR"). Where the maps and findings in the Encanto ECR apply to the segment of Euclid Avenue that is the focus of this report, they will be referenced here as appropriate rather than repeated. This summary report focuses on the assets, issues, and opportunities in the Project Area that inform future master planning and recommended improvements. Additional existing conditions information is presented as appendices to this summary:

- The existing planning and policy context that informs potential improvements in the Project Area
- Mobility-related issues and opportunities
- Environment and collocation issues in the Project Area

1.2 LOCATION AND STUDY AREA

This Existing Conditions Report addresses land use, urban design, mobility and other characteristics of the Project Area, which extends one block east of Euclid Avenue to one block west of Euclid Avenue from State Route-94 to Guymon Street (see Appendix 1 for map). The mobility analysis locations for the Project Area include level of service (LOS) evaluation for pedestrians, bicycles, transit, and vehicles. In general, roadway and intersection LOS is based on the facility operations, while LOS evaluations for pedestrians, bicycle, and transit facilities are evaluated based on user perception of the traveling experience on the subject facilities.

Euclid Avenue was designed to favor autos and is a busy four-lane major street that is unsafe for pedestrians and bicyclists. Although there are sidewalks along the Euclid Avenue corridor, the street appears uninviting because it lacks street trees and other pedestrian enhancements. Drivers often speed downhill from the north and the SR-94 interchange towards and through the intersection with Market Street to the south.

Euclid Avenue connects SR-94 with Imperial Avenue, through the Village at Market Creek, a 60-acre mixed use Transit Oriented Development. The Village was recently designated, along with five other sites in California, as a State Catalyst Community, Gold Rating, and is a SANDAG Regional Plan Smart Growth Area. The Village includes a vibrant retail hub, but many vacant and underutilized properties, Brownfields, deteriorated structures, and deficient infrastructure surround it. Inadequate infrastructure and outdated zoning create impediments to further economic investment, community mobility, community health, and environmental justice. The SR-94 interchange is being redesigned by the City and Caltrans (Transportation Planning Grant Application for the Southeastern Euclid Corridor Plan).

II. assets, issues, and opportunities

This report builds on assessments already conducted for the Encanto Community Plan Update, which were focused on land use, mobility, urban design, historic resources, public facilities and services, and environmental issues. The following section highlights assets, issues, and opportunities characteristic of the Euclid Avenue corridor that may be particularly relevant to recommending future improvements.

2.1 ASSETS

The Euclid Corridor exhibits several key assets that future improvements can complement (Figure 1). One of these is the presence of abundant public transit options for enhanced local and regional mobility, including light rail (San Diego Trolley Orange Line), and several San Diego Metropolitan Transit System (MTS) bus routes along Euclid. The multi-modal Euclid Transit Station at Euclid & Market is within ½-mile walk from Hilltop Drive and includes light rail access (see Encanto ECR Fig. 2-2 Access to Commercial Services).

A significant nearby asset is the emerging mixed-use Village at Market Creek near the Euclid & Market Trolley station, and very close to the Project Area. It is anchored by a retail cluster (Market Creek Plaza), including grocery store, and the Jacobs Center for Neighborhood Innovation. Another grocery store, Foodland, is along Euclid Avenue about ½-mile north of Guymon Street.

Existing assets also include nearby institutional uses, primarily schools. These include Gompers Preparatory Academy, Gompers Middle School, Millennial Tech Middle School, and Horton Elementary School. In addition, the Elementary Institute of Science, Malcolm X Library, and the Tubman Chavez Multicultural Center are nearby at the intersection of Market and Euclid Streets.

Open space and recreation assets consist of Chollas Creek, which crosses underneath Euclid Avenue just south of Guymon Street, and Gompers Neighborhood Park, located west of the Project Area. Chollas Creek is a heavily altered drainage channel that has the potential to become an outstanding environmental and recreational resource for the community, providing opportunities for walking, biking, and much needed park land. Euclid Avenue is in the 100-year floodplain of the creek at this crossing (Encanto ECR, Figure 7-2). On the west side of the Euclid Corridor, Chollas Creek is a vegetated channel with invasive plants; immediately east of the Corridor, Chollas Creek is a concrete channel. Improvements to Chollas Creek have been outlined in the 2002 Chollas Creek Enhancement Program. At the Jacobs Center for Neighborhood Innovation and Market Creek Plaza nearby, recently constructed access improvements and

creek restoration demonstrate what Chollas Creek can become as these enhancements are implemented across the community.

2.2 ISSUES AND OPPORTUNITIES

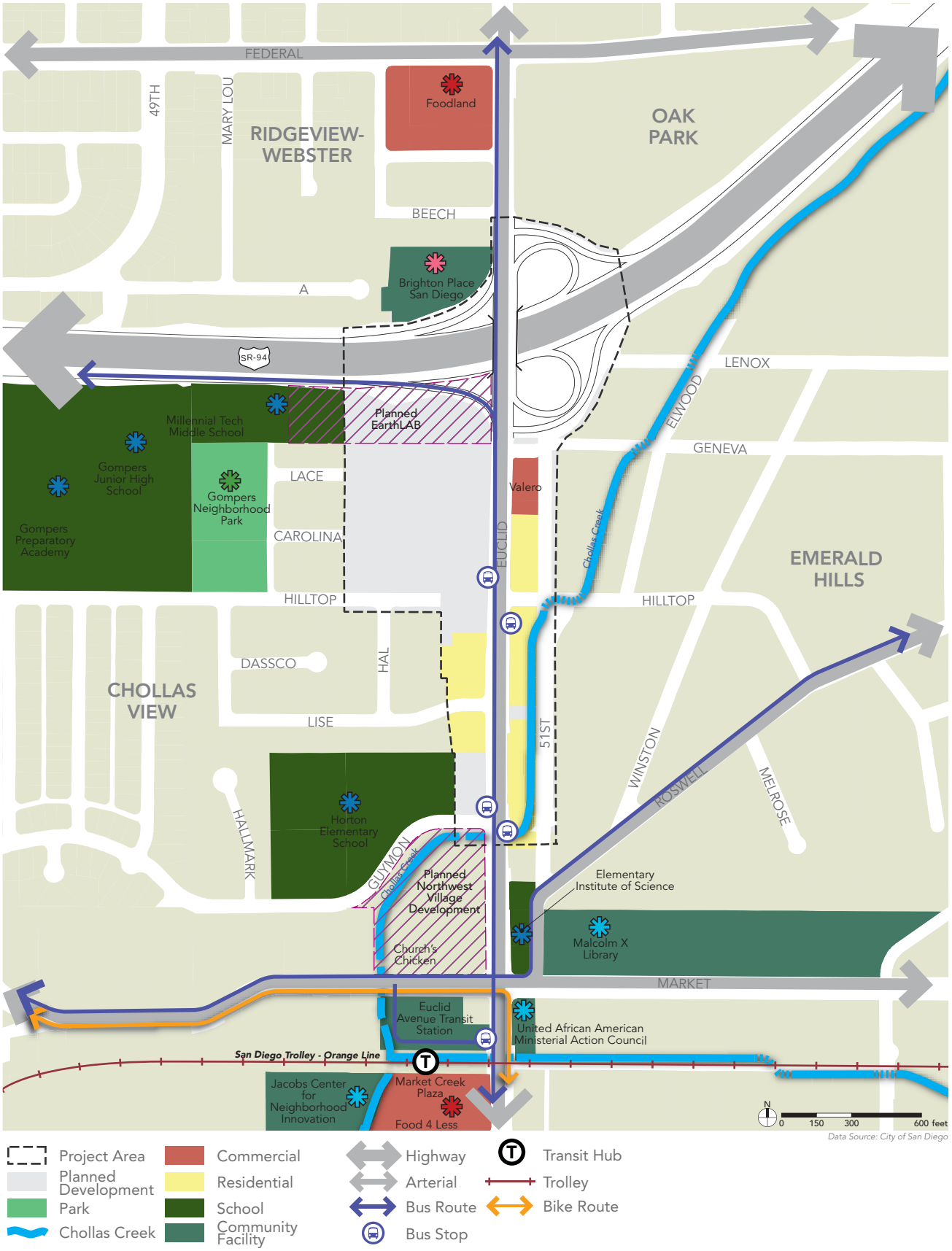
The Euclid Avenue corridor presents both issues and opportunities that inform planning efforts (Figure 2). One of the major issues along the Euclid Avenue corridor is safety for pedestrians and bicyclists along the street. Its wide right-of-way makes it difficult for safe pedestrian crossings; this is exacerbated by high traffic speeds and volumes, especially related to the SR-94 interchange at Euclid Avenue. The City of San Diego is currently evaluating options to improve safety of this interchange for motorists, bicyclists, and pedestrians (SR 94/Euclid Avenue Interchange Preliminary Traffic Engineering); these options include short-term striping and signalization, plus long-term modifications to address safety and maintain acceptable vehicle level of service. In terms of the mobility assessment for the Project Area, key findings include the following:

- Existing roadway segments along Euclid Avenue between Federal Avenue and Hilltop Drive are operating at acceptable LOS C, while existing roadway segments between Hilltop Drive and Market Street are operating at unacceptable LOS E.
- The existing intersection analysis indicates that all of the study intersections are operating at acceptable LOS (LOS D or better) during both the AM and PM peak hour, which is consistent with field observations.
- The Project Area is served by three transit routes with two bus stops in the northbound direction and three bus stops in the southbound direction. The methodology calculates a fair to good transit service (LOS D or better) for segments providing a bus stop, but the methodology reports a transit LOS F for the remaining segments that do not provide a bus stop. This is a result of the program and reflects the lack of a stop, and is not indicative of delays in bus service.
- The multi-modal LOS analysis indicates that bicycle facilities in the Project Area generally operate at acceptable and fair LOS (LOS C or D) during both the AM and PM peak hour, with the exception of one northbound segment and one southbound segment. Overall, segments of Euclid Avenue are considered a challenge for cyclists due to a lack of separate lanes, merging/diverging traffic at the interchange ramps, and higher vehicle speeds.
- The multi-modal LOS analysis indicates that pedestrians in the Project Area generally experience good levels of service (LOS C or better) when walking along both directions of Euclid Avenue during the AM and PM peak hour. Crossings of Euclid Avenue can be difficult at unsignalized intersections because of wide crossings and extended exposure of pedestrians to vehicles.

There are opportunities to improve pedestrian and bicyclist safety, along with the appearance of the Euclid Corridor, including:

- Traffic-calming for speeding vehicles
- Designation of formal bicycle facilities (e.g., bike lanes or sharrows)
- Improving safety for pedestrians crossing Euclid Avenue, especially at Hilltop Drive and Guymon Street (where crossing is needed for school and transit access)

FIG. 1: EUCLID AVENUE CORRIDOR ASSETS



- Ensuring ADA-compliant facilities
- Improving amenities at bus stops along Euclid Avenue
- Providing more shade trees along sidewalks

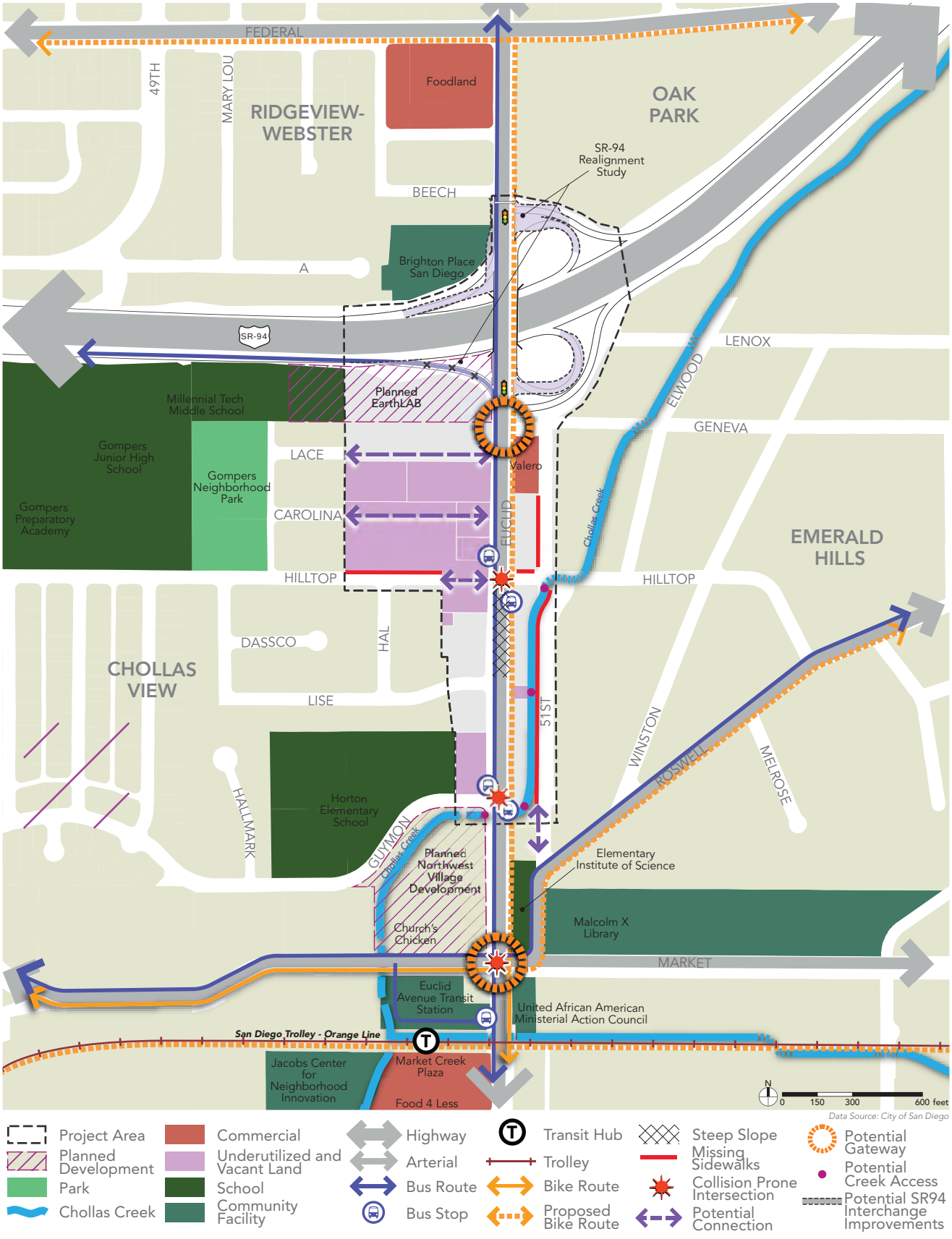
Regarding air quality and noise from stationary sources, no impacts were identified, although the service station on the east side of Euclid Avenue just south of SR-94 can potentially exceed air quality or noise standards. Severe existing noise impacts related to traffic were identified along the entire length of Euclid Avenue. No significant existing intersection air quality impacts or significant ambient air quality degradation due to traffic was indicated for the area.

There are three hazardous waste sites in the Project Area. One of these has a closed case and an open case. If redevelopment of a closed release case property is proposed, additional research into the unauthorized release case should be performed.

The Project Area includes or is near vacant and underutilized parcels which provide development opportunities to complement the Village at Market Creek and improve the public realm along the Euclid Corridor. For example, many parcels fronting Euclid are vacant, providing opportunity for compatible development that makes the Corridor more inviting. Notable among these are aggregated parcels near Hilltop Drive on the west side of the corridor. Development here can incorporate streetscape improvements and improve access from east of Euclid to Gompers Preparatory Academy, Gompers Middle School, Millennial Tech Middle School and its future EarthLAB, and Gompers Neighborhood Park. In addition, an existing gas station at the north end of the project area could be considered underutilized; redevelopment options may be considered for this parcel as well. Finally, planned residential and commercial projects just south of the Project Area between Guymon and Market Street, west of Euclid, provide opportunities to enhance Chollas Creek and improve the Euclid & Market intersection for pedestrian and bicyclist safety.

The issues identified above also have been raised by stakeholders engaged through the Encanto Community Plan Update. This input highlights the desire for increased transit service, bicycle facilities, safe pedestrian facilities, traffic calming, and narrowing roadways. Needs for improved sidewalks (repairs and construction where missing) and more street lighting, especially around bus stops have also been noted. Most participants mentioned that streets in the planning areas are in disrepair, making the area seem neglected and contributing to actual or perceived crime. Biking was identified as dangerous and bike lanes and routes as lacking. The desire for freeway crossings to be pedestrian friendly was expressed, which relates to the SR-94 overpasses at the north end of the segment of Euclid Avenue being addressed in this master plan. Several stakeholders suggested that some of the wider streets in commercial areas and around schools be narrowed to reduce vehicle speeds and make walking safer. Development opportunities were primarily identified along commercial and mixed-use corridors. Market Creek Plaza was noted as being successful but presenting the opportunity to be more pedestrian-oriented at Euclid Avenue.

FIG. 2: EUCLID AVENUE CORRIDOR ISSUES AND OPPORTUNITIES



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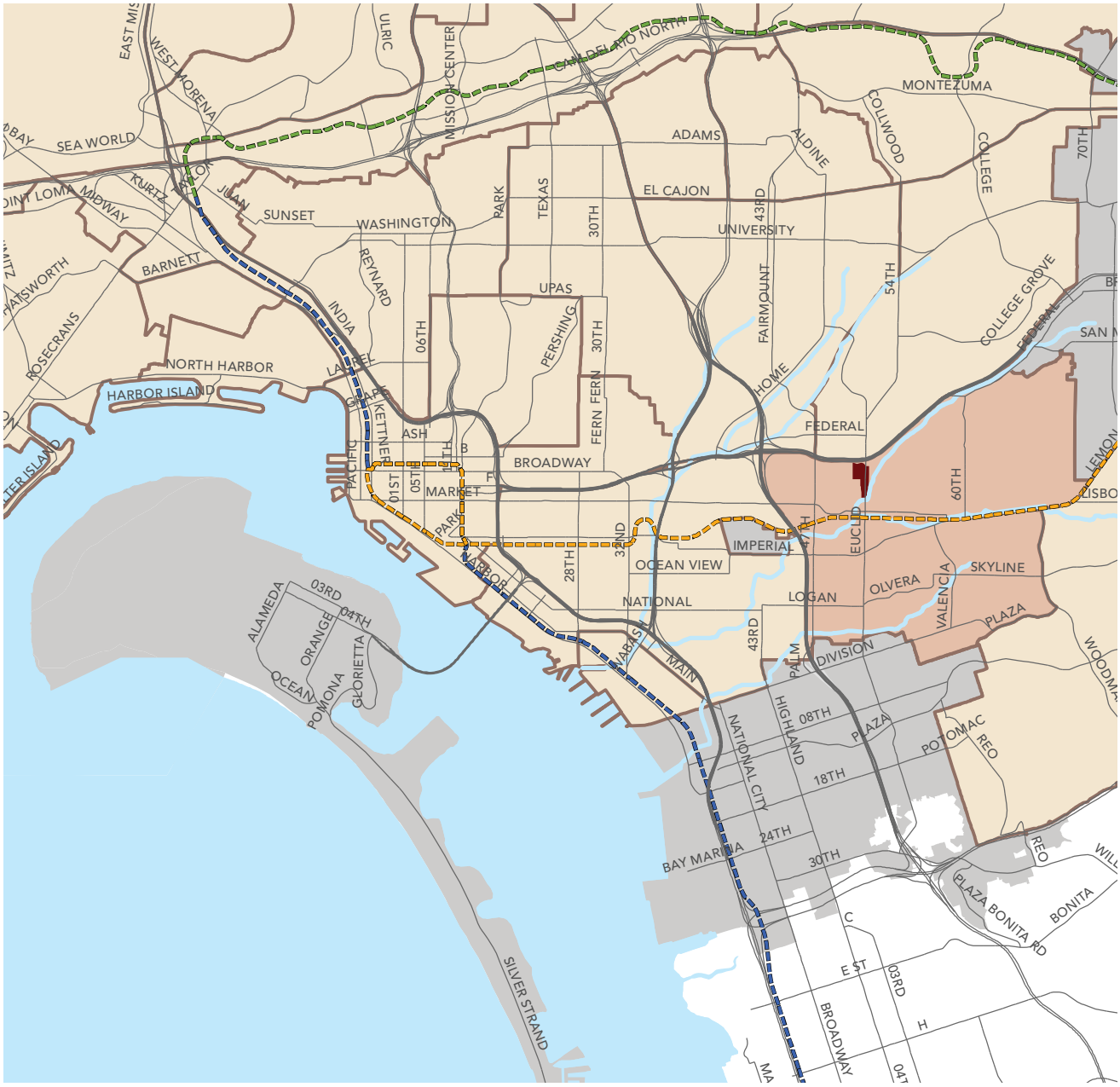
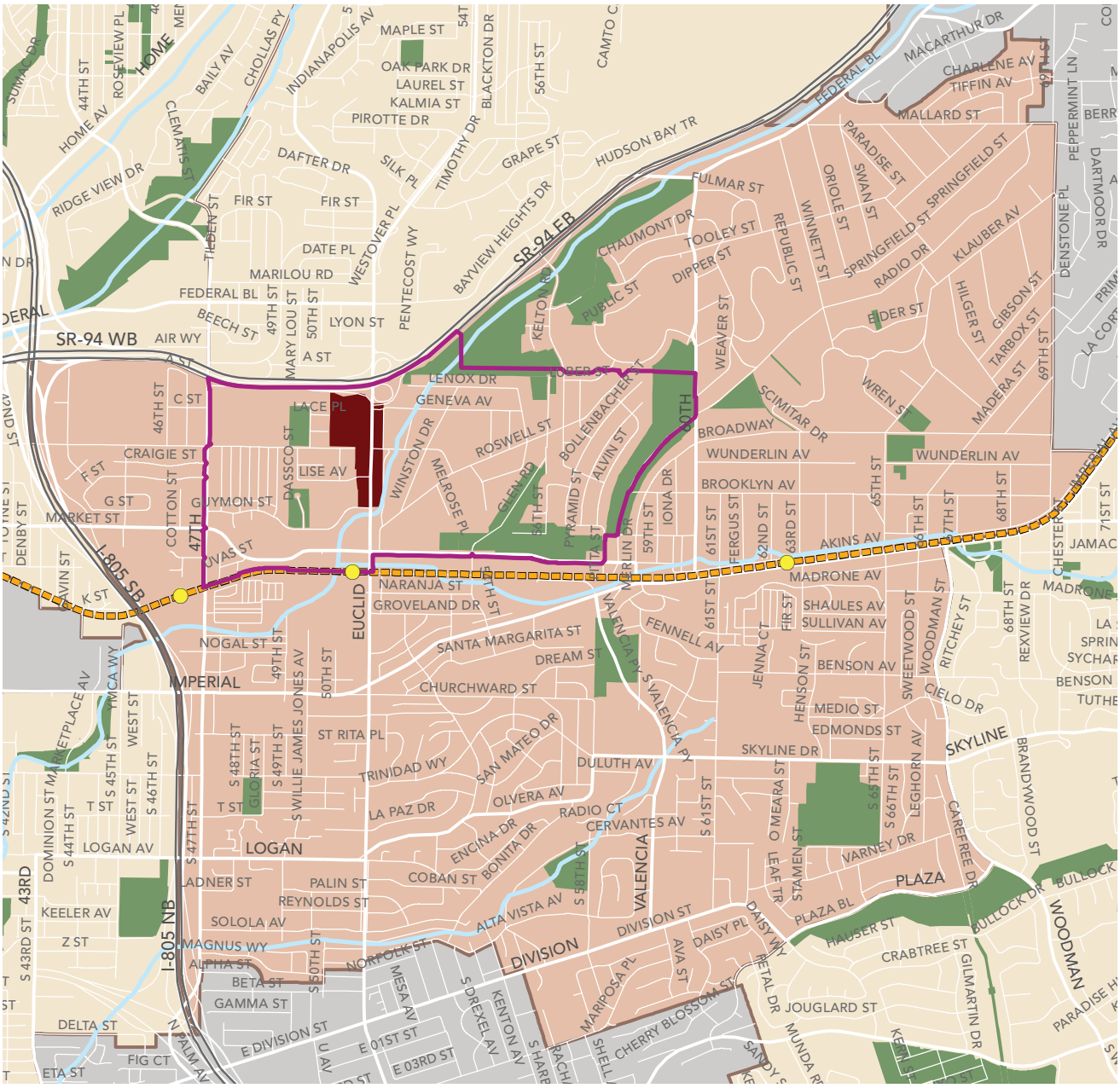


APPENDIX 1: STUDY AREA MAP



Euclid Avenue Project Area

Transportation Analysis Zones (TAZ) Study Area

Encanto Neighborhoods Community Plan Area (CPA)

Other City of San Diego CPAs

San Diego County

Trolley Stops

Orange Line Trolley

Data Source: City of San Diego

Miles
0 0.5

N

APPENDIX 2: SUMMARY OF EXISTING PLANS AND POLICIES

A variety of City plans and programs apply to the Study Area in general and the Euclid Avenue corridor in particular. These include the following:

- San Diego General Plan
- Southeastern San Diego Community Plan
- Chollas Creek Enhancement Program
- Chollas Creek South Branch Implementation Program

The City of San Diego Land Development Code also affects design of projects in the area. The Land Development Code is the citywide zoning ordinance that covers many development regulations.

San Diego General Plan

The 2008 San Diego General Plan provides goals and objectives for the entire City, and is built around the "City of Villages" strategy, which "focuses growth into mixed-use activity centers that are pedestrian-friendly districts linked to an improved regional transit system." This vision is being realized with the Village at Market Creek development near the Euclid Avenue Project Area. The General Plan is described in ten elements: Land Use and Community Planning; Mobility; Economic Prosperity; Public Facilities, Services and Safety; Urban Design; Recreation; Historic Preservation; Conservation; Noise; and Housing. The elements with the most applicable policies for the Euclid Avenue Master Plan are Land Use and Community Planning (LU), Mobility (ME), Urban Design (UD), and Noise (NE). Relevant General Plan policies include the following:

LU-C.2. Prepare community plans to address aspects of development that are specific to the community, including:...the local street and transit network...

f. Establish a mobility network to effectively move workers and residents.

LU-H.1. Promote development of balanced communities that take into account community-wide involvement, participation, and needs.

b. Invest strategically in public infrastructure and offer development incentives that are consistent with the neighborhood's vision.

d. Ensure that neighborhood development and redevelopment addresses the needs of older people, particularly those disadvantaged by age, disability, or poverty.

LU-H.6. Provide linkages among employment sites, housing, and villages via an integrated transit system and a well-defined pedestrian and bicycle network.

LU-I.8. Expand public outreach on transportation policy, projects, and operations in order to get input from ethnic minorities, low-income residents, persons with disabilities, the elderly and other under-represented communities. Ensure that people who are directly affected by a proposed action are given opportunities to provide input.

LU-1.9. Design transportation projects so that the resulting benefits and potential burdens are equitable.

LU-1.10. Improve mobility options and accessibility for the non-driving elderly, disabled, low-income and other members of the population.

ME-A.1. Design and operate sidewalks, streets, and intersections to emphasize pedestrian safety and comfort through a variety of street design and traffic management solutions.

ME-A.4. Make sidewalks and street crossings accessible to pedestrians of all abilities.

ME-A.5. Provide adequate sidewalk widths and clear path of travel as determined by street classification, adjoining land uses, and expected pedestrian usage.

ME-A.6. Work toward achieving a complete, functional and interconnected pedestrian network.

ME-A.7. Improve walkability through the pedestrian-oriented design of public and private projects in areas where higher levels of pedestrian activity are present or desired. (Features noted include street trees, benches, plazas, public art, and traffic calming measures.)

ME-C.3. Design an interconnected street network within and between communities, which includes pedestrian and bicycle access, while minimizing landform and community character impacts.

b. Use local and collector streets to form a network of connections to disperse traffic and give people a choice of routes to neighborhood destinations such as schools, parks, and village centers. This network should also be designed to control traffic volumes and speeds through residential neighborhoods.

d. Where possible, design or redesign the street network, so that wide arterial streets do not form barriers to pedestrian traffic and community cohesiveness.

UD-A.10. Design or retrofit streets to improve walkability, bicycling, and transit integration; to strengthen connectivity; and to enhance community identity. Streets are an important aspect of Urban Design.

UD-B.5. Design or retrofit streets to improve walkability, strengthen connectivity, and enhance community identity.

f. Enhance community gateways to demonstrate neighborhood pride and delineate boundaries.

g. Clarify neighborhood roadway intersections through the use of special paving and landscape.

h. Develop a hierarchy of walkways that delineate village pathways and link to regional trails.

NE-B.2. Consider traffic calming design, traffic control measures, and low-noise pavement surfaces that minimize motor vehicle traffic noise.

NE-B.3. Require noise reducing site design, and/or traffic control measures for new development in areas of high noise to ensure that the mitigated levels meet acceptable decibel limits.

NE-B.4. Require new development to provide facilities which support the use of alternative transportation modes such as walking, bicycling, carpooling and, where applicable, transit to reduce peak-hour traffic.

Southeastern San Diego Community Plan

The Southeastern San Diego Community Plan provides a framework to guide development in the Southeastern community. The plan was originally adopted by City Council in 1969, updated in 1987, and is currently being updated again. Relevant policies and objectives from the adopted 1987 Community Plan include the following:

Urban Design:

4. Enhance the community's visual image through streetscape improvements along major streets and within the neighborhoods.

6. Support the General Plan through targeting growth in the Pilot Village at the Village Center at Euclid and Market and along the transit corridors including, but not limited to Market Street, Euclid Avenue and Imperial Avenue.

Community Commercial Shopping Facilities:

In order to provide community-shopping facilities, four community commercial centers have been designated. These include: d. Market Creek Plaza (between Euclid Avenue and 47th Street, off Market Street and behind the trolley station.)

Transportation:

In the eastern subarea, access to many neighborhoods is hampered by a lack of direct north-south routes. Generally, the easternmost north-south access is provided by Euclid Avenue. Other north-south routes, such as 60th Street, 69th Street, Valencia Parkway and Woodman Street aid in providing access to Imperial Avenue for some parts of the Encanto highlands. However, many through trips are forced onto a circuitous, discontinuous and confusing pattern of local streets.

Streets that should be given the highest priority for the landscaping program include the Market Street and Euclid Avenue intersection (Trolley Station area), just south of the Project Area for this master plan.

Emerald Hills Objectives:

Emerald Hills is situated in the northeastern portion of Southeastern San Diego. It is bounded on the north by SR-94 and Federal Boulevard, on the south by Market Street, on the west by Euclid Avenue, and on the east by 60th Street and Radio Drive. The neighborhood is separated from the surrounding areas by a freeway, major streets, and a major canyon system. Much of Emerald Hills is very hilly and provides beautiful views. The neighborhood got its name from the Emerald Hills Country Club and Golf Course, which was established in 1959.

Objectives in the 1987 Community Plan include improving the appearance of Euclid Avenue, and developing the properties along Euclid Avenue at a low-medium residential density. The 1987 Community Plan further notes, "The properties along Euclid Avenue should be developed at a low-medium density of residential development (10-15 units per net acre). Courtyard designs are encouraged, with buildings grouped in small

clusters. Lot consolidations should be encouraged. Future developments should have the buildings face onto Euclid Avenue, but should be required to provide parking and gain access from 51st Street, in an effort to minimize existing traffic problems along Euclid Avenue caused by slow-moving traffic attempting to access existing driveways."

Chollas Creek Enhancement Program

The Chollas Creek Enhancement Program was adopted in 2002 to express the community's vision for Chollas Creek and provides detailed policies, funding strategies, and a phasing plan to guide the plan's implementation. The Enhancement Program envisions a linear park encompassing the system's multiple branches, bicycle and pedestrian linkages, a return to the natural state of the creek where feasible, and development that is integrated with the creek and accessible open space to create attractive sustainable spaces.

Changes to Euclid Avenue should consider the Enhancement Program design/development guideline that whenever physically feasible, the land adjacent to Chollas Creek should be planned as a linear park and trail system. When there is inadequate space, the trail system should be routed back to public sidewalks until it can be constructed along the creek, and wherever a trail has to follow a public street instead of the creek, enhanced sidewalks with street trees should be provided on both sides of the street. These guidelines would apply to the creek crossing of Euclid Avenue at Guymon Street as well as the crossing of Market Street just south of the Project area.

Chollas Creek South Branch Implementation Program

Design/Development Guidelines and management measures to achieve management and restoration of the South Branch of Chollas Creek and its associated wetlands are detailed in the Phase I Wetlands Management Plan for Chollas Creek. Segment 1 (which extends from SR-94 southward along 51st Street to Market Street) crosses under Euclid Avenue at Guymon Street. The Implementation Program notes that the northern reach of Chollas Creek is concrete encased to Euclid Avenue and that residential development immediately surrounds the channel on both sides. However, there are pockets of vacant lots occupied by ruderal vegetation that could be improved, and the recommendations for Segment 1 include habitat enhancement/ restoration or Management Actions along most of the segment with reconstruction/Arts Project along 51st Street and trail linkages to lead from the Gompers Learning Laboratory along the public sidewalks to the Chollas Creek and Euclid Avenue (at Guymon Street) convergence.

The Project Area is also located just south of the Multiple Habitat Planning Area (MHPA) of the City's Multiple Species Conservation Program (MSCP), which extends north of the northernmost study area boundary along SR-94 on both sides of the creek. At the beginning of this study in early 2000, two areas containing the last remnants of riparian habitat have since been developed: the Imperial Marketplace south of Imperial Avenue and the Market Creek Plaza of the Jacobs Family Foundation south of Market Street and the trolley station.

APPENDIX 3: ENVIRONMENTAL AND COLLOCATION ASSESSMENT

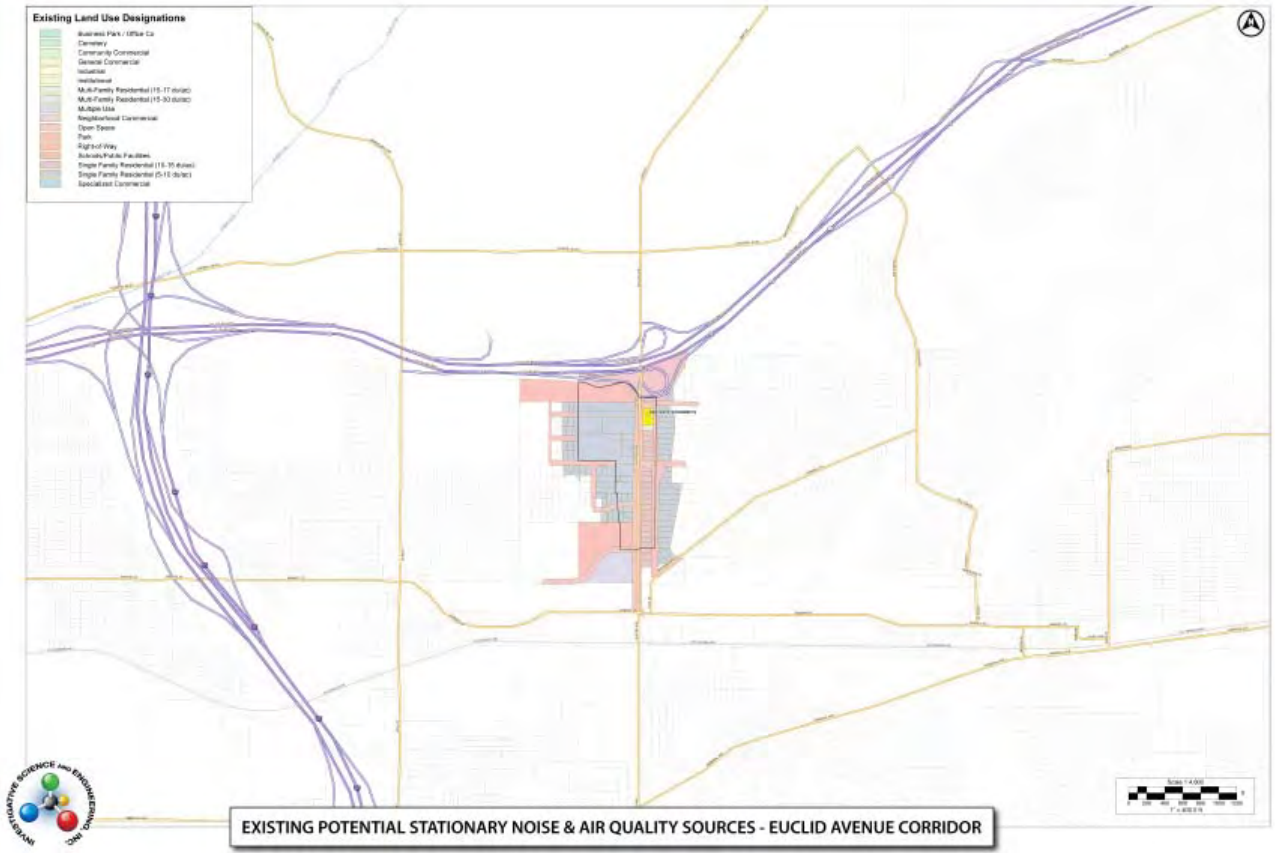
Land Use Screening for Noise and Air Quality: Fixed Sources

The study area was screened using Geographic Information System (GIS) methods for land use consistency pertaining to noise and air quality emissions from stationary onsite generators capable of producing either, 1) excessive criteria air pollutant emissions as defined under the California Ambient Air Quality Standards (CAAQS – see attachment) and permitted per the San Diego Air Pollution Control District (SDAPCD) Rules 20.1 et.al., or, 2) potential violation of the City of San Diego Noise Ordinance (City Municipal Code Section 59.5.01 – see attachment). Source data for the GIS analysis was obtained from SANDAG SANGIS data layers updated in March 2013. Stationary onsite generators with the potential to generate excessive criteria air pollutant emissions or violate noise standards are delineated as yellow polygons in the attached graphic (Existing Potential Stationary Noise & Air Quality Sources - Euclid Avenue Corridor).

Land uses that would typically exceed air quality or noise standards include businesses such as woodworking facilities, auto body paint and repair shops, and general light industrial uses. These uses are found for one parcel listed below.

APN	Adopted Zone	Land Use Description
54249135	SESDPD-CSF-2	Service Station (with food mart)

No existing stationary noise or air quality impacts were identified nor are there any records on current remedial enforcement actions on file with SDAPCD or the City of San Diego Code Enforcement department.It is recommended that future new onsite development be mindful of the areas shown when siting potential noise or air quality sensitive land uses.


Existing Land Use Designations
Business Park / Office Co
Cemetery
Community Commercial
General Commercial
Industrial
Institutional
Multi-Family Residential (15-17 du/ac)
Multi-Family Residential (17-30 du/ac)
Multiple Use
Neighborhood Commercial
Open Space
Park
Right-of-Way
Schools/Public Facilities
Single Family Residential (15-19 du/ac)
Single Family Residential (5-12 du/ac)
Specialized Commercial
A
INVESTIGATIVE SCIENCE and ENGINEERING, INC.
EXISTING POTENTIAL STATIONARY NOISE & AIR QUALITY SOURCES - EUCLID AVENUE CORRIDOR

Land Use Screening for Noise: Mobile Sources

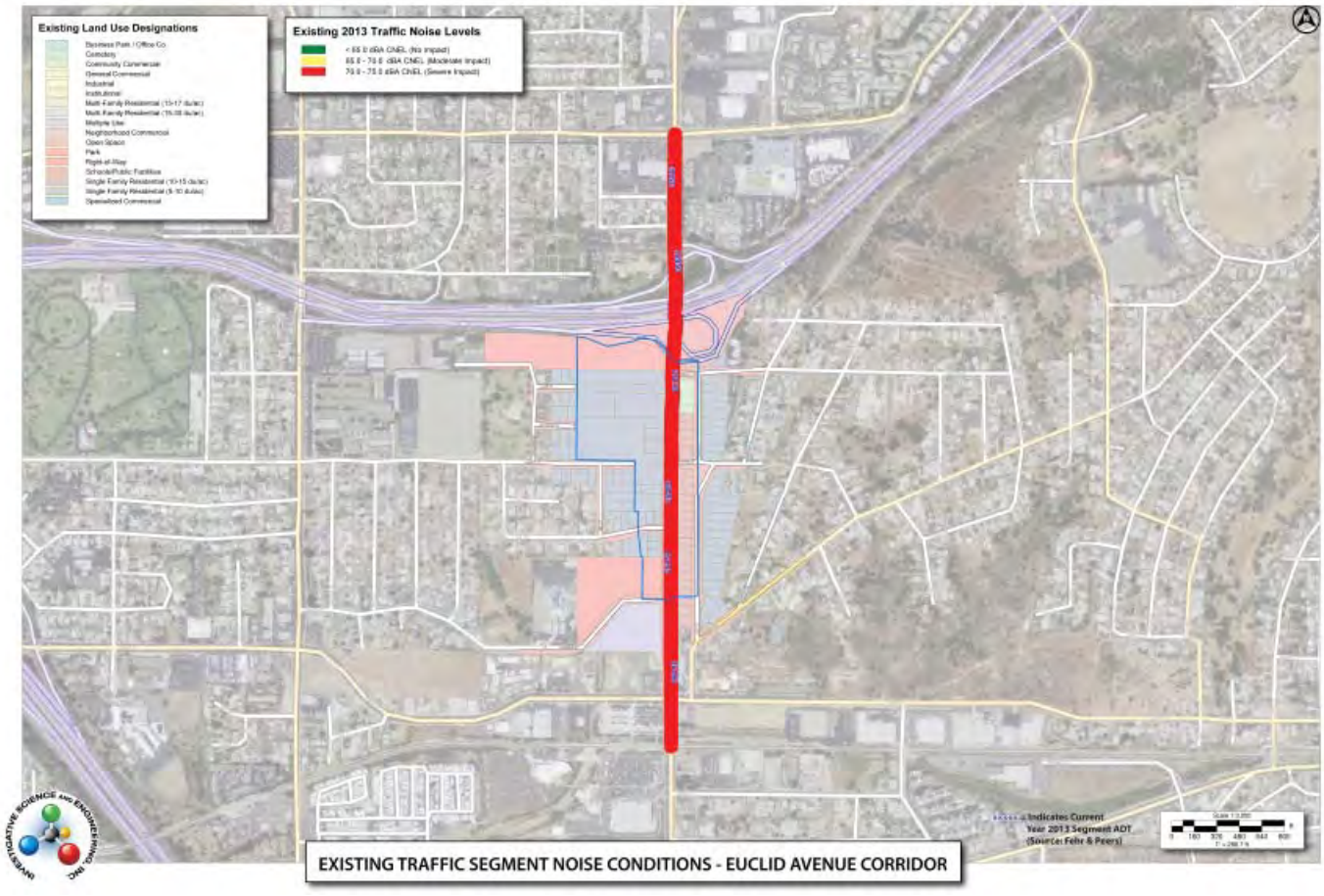
Mobile noise emissions were quantified based upon existing conditions traffic segment data provided by Fehr+Peers. The data source is the SANDAG Series 11 traffic model predictions dated 2011.

Traffic segment noise modeling utilized the ISE RoadNoise v2.4 traffic noise prediction model, which is based upon the Federal Highway Administration's RD-77-108 Noise Prediction Model with California (CALVENO, FHWA/CA/TL-87/03) noise emission factors. This model calculates the increase in vehicular traffic noise levels. The model assumed a 'hard-site' propagation rule and a 95/3/2 mix of automobiles/midsize vehicles/trucks, thereby yielding a representative worst-case noise contour set.

The noise findings were then incorporated into GIS and assigned a unique color code based upon the land use compatibility standards set forth in the City of San Diego Noise Element of the General Plan. The results are shown in the attached graphic (Existing Traffic Segment Noise Conditions - Euclid Avenue Corridor) with the delineation of:

- Areas less than the City's General Plan 65 dBA CNEL noise abatement standards (no impact – shown in green)
- Areas equal to or slightly above the City's General Plan 65 dBA CNEL noise abatement standards (moderate impact – shown in yellow), and,
- Areas far greater than the City's General Plan 65 dBA CNEL noise abatement standards (severe impact – shown in red).

Severe existing noise impacts were identified along the entire length of Euclid Avenue.


Existing Land Use Designations
Existing 2013 Traffic Noise Levels
< 65.0 dBA CNEL (No Impact)
65.0 - 70.0 dBA CNEL (Moderate Impact)
70.0 - 75.0 dBA CNEL (Severe Impact)
Indicates Current Year 2013 Segment ADT (Source: Fehr & Peers)
EXISTING TRAFFIC SEGMENT NOISE CONDITIONS - EUCLID AVENUE CORRIDOR

Land Use Screening for Air Quality: Mobile Sources

Mobile air quality emissions were quantified based upon existing conditions traffic intersection delay data provided by Fehr+Peers. The data source is the SANDAG Series 11 traffic model predictions dated 2011.

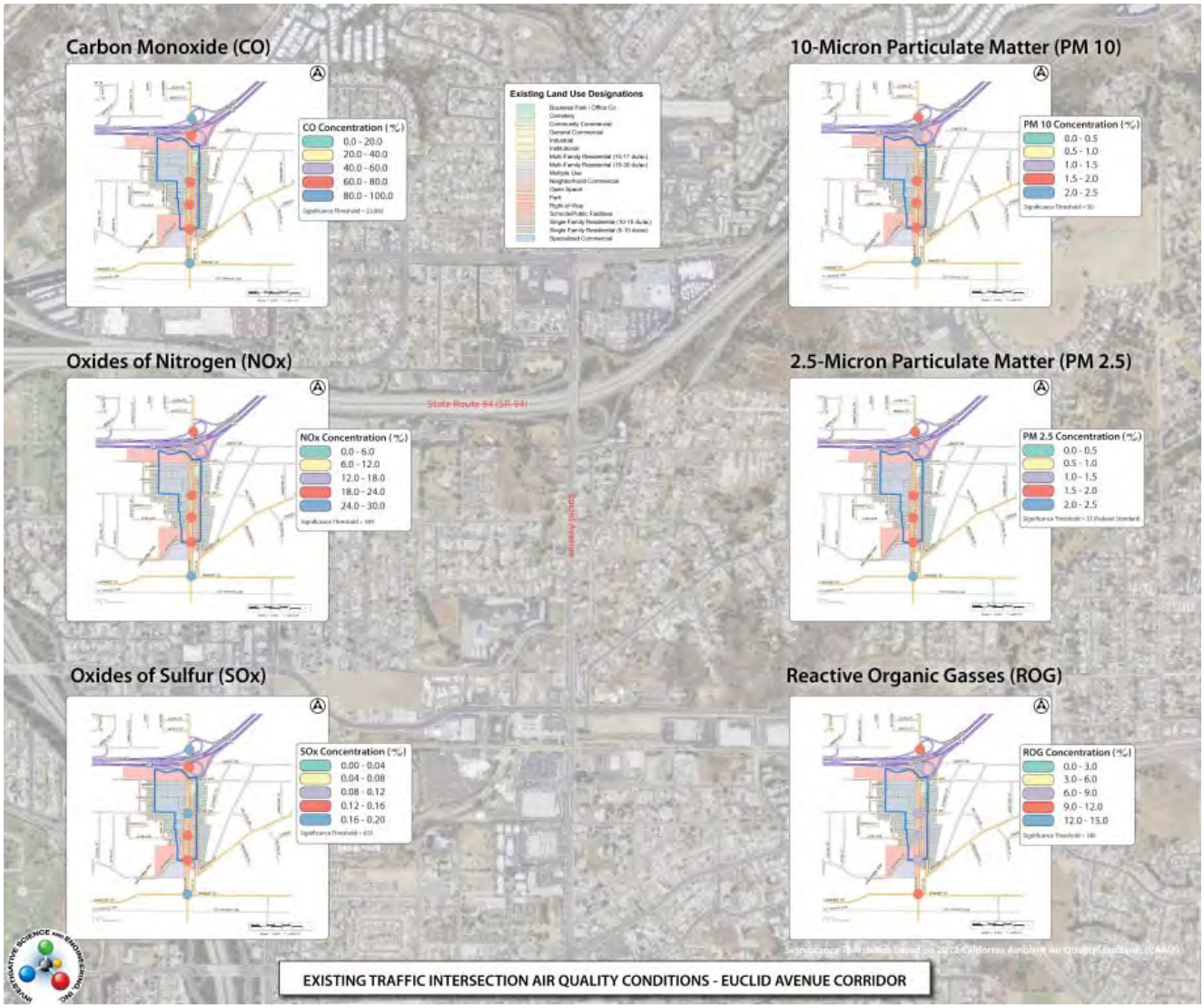
A screening risk assessment for the SDAPCD identified criteria pollutants Carbon Monoxide (CO), Oxides of Nitrogen (NOx), Oxides of Sulfur (SOx), 10- and 2.5-micron particulate matter (PM 10, PM 2.5) and reactive organic gasses (ROG). The assessment was performed using the SCREEN3 dispersion model developed by the EPA's Office of Air Quality Planning and Standards. The SCREEN3 model uses a Gaussian plume dispersion algorithm that incorporates source-related and meteorological factors to estimate pollutant concentration from continuous sources.

An area-source consistent in dimensions with the existing intersections analyzed was assumed. The pollution generating 'source' is assumed to be an area, in this case, an area equal to the square-footage of the intersection. The SCREEN3 model has different types of air pollution sources that can be modeled. They are point sources, area sources, volume sources, and line sources. In the case of analysis performed for this project, an area source was used because the 'area' of the intersection is where all the pollution is being generated while the vehicles are waiting for the light to turn green.

A simplified elevated terrain model with no building downwash[1] corrections and a worst-case wind direction was also utilized. The delineated intersections are shown for each criteria pollutant and ranked according to toxicity level at 100-feet. They are shown in the attached GIS figure (Existing Traffic Intersection Air Quality Conditions - National Avenue Corridor).

Based upon the findings, no significant existing intersection air quality impacts or significant ambient air quality degradation due to traffic was indicated for any area examined.

[1] Downwash is simply the airflow down the leeward side of a structure or building. The model assumes that there is no additional mixing of air pollutant concentrations from a higher elevation to a lower one due to a 'downdraft' from the opposite side of a structure. In short, there are no corrections to the airflow due to the presence of structures.


Carbon Monoxide (CO)
CO Concentration (%)
0.0 - 20.0
20.0 - 40.0
40.0 - 60.0
60.0 - 80.0
80.0 - 100.0
Existing Land Use Designations
10-Micron Particulate Matter (PM 10)
PM 10 Concentration (%)
0.0 - 0.5
0.5 - 1.0
1.0 - 1.5
1.5 - 2.0
2.0 - 2.5
Oxides of Nitrogen (NOx)
NOx Concentration (%)
0.0 - 6.0
6.0 - 12.0
12.0 - 18.0
18.0 - 24.0
24.0 - 30.0
State Route 94 (SR-94)
Euclid Avenue
2.5-Micron Particulate Matter (PM 2.5)
PM 2.5 Concentration (%)
0.0 - 0.5
0.5 - 1.0
1.0 - 1.5
1.5 - 2.0
2.0 - 2.5
Oxides of Sulfur (SOx)
SOx Concentration (%)
0.00 - 0.04
0.04 - 0.08
0.08 - 0.12
0.12 - 0.16
0.16 - 0.20
Reactive Organic Gasses (ROG)
ROG Concentration (%)
0.0 - 3.0
3.0 - 6.0
6.0 - 9.0
9.0 - 12.0
12.0 - 15.0
EXISTING TRAFFIC INTERSECTION AIR QUALITY CONDITIONS - EUCLID AVENUE CORRIDOR

Noise and Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)	1 Hour	0.09 ppm (180 $\mu g/m^3$)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 $\mu g/m^3$)		0.075 ppm (147 $\mu g/m^3$)		
Respirable Particulate Matter (PM10)	24 Hour	50 $\mu g/m^3$	Gravimetric or Beta Attenuation	150 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 $\mu g/m^3$		—		
Fine Particulate Matter (PM2.5)	24 Hour	—	—	35 $\mu g/m^3$	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 $\mu g/m^3$	Gravimetric or Beta Attenuation	15 $\mu g/m^3$		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[8]	1 Hour	0.18 ppm (339 $\mu g/m^3$)	Gas Phase Chemiluminescence	100 ppb (188 $\mu g/m^3$)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 $\mu g/m3$)		0.053 ppm (100 $\mu g/m^3$)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[9]	1 Hour	0.25 ppm (655 $\mu g/m^3$)	Ultraviolet Fluorescence	75 ppb (196 $\mu g/m^3$)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 $\mu g/m^3$)	
	24 Hour	0.04 ppm (105 $\mu g/m^3$)		0.14 ppm (for certain areas)[9]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[9]	—	
Lead[10,11]	30 Day Average	1.5 $\mu g/m^3$	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 $\mu g/m^3$ (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 $\mu g/m^3$		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 $\mu g/m^3$	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 $\mu g/m^3$)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 $\mu g/m^3$)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (6/7/12)

Article 9.5: Noise Abatement and Control

Division 4: Limits

("Noise Level Limits, Standards and Control" added 9-18-1973 by O-11122 N.S.) (Retitled to "Limits" on 9-22-1976 by O-11916 N.S.)

§59.5.0401 Sound Level Limits

(a) It shall be unlawful for any person to cause noise by any means to the extent that the one-hour average sound level exceeds the applicable limit given in the following table, at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced. The noise subject to these limits is that part of the total noise at the specified location that is due solely to the action of said person.

TABLE OF APPLICABLE LIMITS

Land Use	Time of Day	One-Hour Average Sound Level (decibels)
1. Single Family Residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45 40
2. Multi-Family Residential (Up to a maximum density of 1/2000)	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50 45
3. All other Residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55 50
4. Commercial	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	65 60 60
5. Industrial or Agricultural	any time	75

(b) The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts. Permissible construction noise level limits shall be governed by Sections 59.5.0404 of this article.

Hazardous Sites

A search of federal, state, and local environmental regulatory agency databases was conducted. Environmental Data Resources, Inc. assessed the significance of properties that contain documented hazardous waste impacts. The standard databases searched were consistent with those described in the ASTM International Standard for Phase I Environmental Site Assessments (ESAs) and the United States Environmental Protection Agency (EPA) All Appropriate Inquiry (AAI) regulation. Geotracker and Envirostor online databases were searched for additional information available.

The graphic below depicts the hazardous waste sites within the Project Area - the blue triangles indicate closed release sites and the red triangles indicate open release sites. Properties with open cases represent a moderate to high risk of encountering hazardous materials during potential future redevelopment. Closed release cases represent a moderate to low risk of encountering hazardous materials. Within the Project Area there are three hazardous waste sites. The Kopeecky Corp. site (Map ID# 76-9) has a closed case and an open case. For cases reported as closed, standards for closure have varied over time, and may not meet current standards. If redevelopment of a closed release case property is proposed, additional research should be performed.

The following table lists the three sites within the Euclid Avenue Master Plan Area; site 76-9 has one closed case and one open case. The table includes a unique Map ID # for each site, business name, address, case status and Federal, State and Local Hazardous Materials Lists where each site is listed. A brief description of each list is included in the notes at the end of the table.

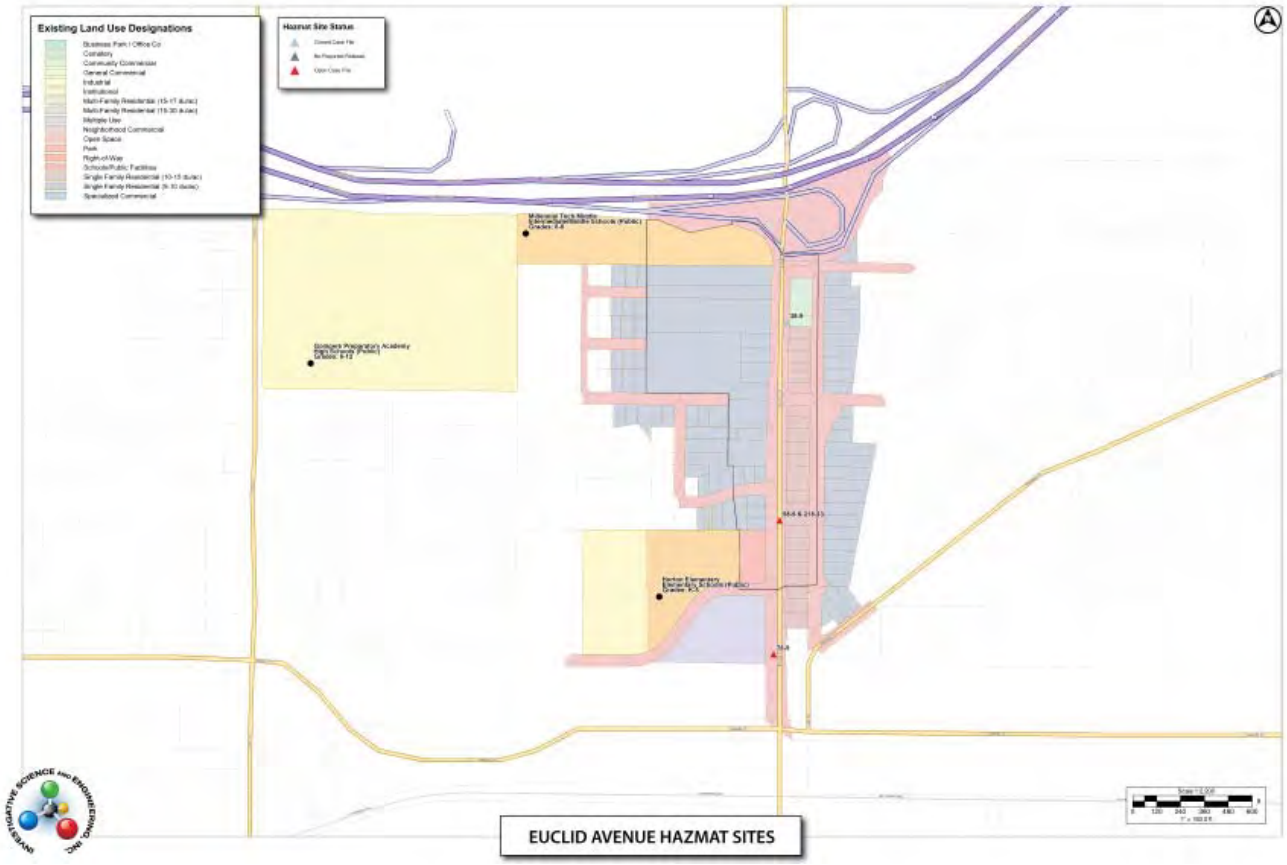


Table 1
Euclid Avenue Master Plan Area Documented Hazardous Materials Sites[a]

Map ID # - Focus Map	Business Name	Address	Case Status[b]		Federal, State and Local Hazardous Materials Lists[c, d]																		
			Closed	Open	ERNS	CA HIST CORTESE	FINDS	RCRA-SQG	RCRA-LQG	STATE & LOCAL RECORDS	RCRA-NONGEN	CA NPDES & ICIS	FTTS	CA SWRCY	CA LUST		CA SLIC	CA CHMIRS	CA AST	CA NOTIFY 65	CA HAZNET	SWEEPS UST	CA ENVIROSTOR
38-9	New West Petroleum LC #1034 (Texaco & Exxon)	1025 Euclid Ave	X												Y						Y	Y	
58-9 218-13	Peters Auto Service	799 Euclid Ave		X		Y									Y								
76-9	Kopeechy Corp (Proposed Walgreen's) Case H10503-001	606 N. Euclid	X			Y	Y	Y				Y			Y		Y						
76-9	Kopeechy Corp (Proposed Walgreen's) Case H10503-002	606 N. Euclid		X		Y	Y	Y				Y			Y		Y					Y	

Notes:

a - Ninyo & Moore, *Hazardous Materials Technical Study Southeastern San Diego Community Plan Update San Diego, CA* . November 30, 2012.

b - As identified in the *Hazardous Materials Technical Study Southeastern San Diego Community Plan Update San Diego, CA* .

c - Appendix A, Environmental Data Base for the *Hazardous Materials Technical Study Southeastern San Diego Community Plan Update San Diego, CA* .

d - **Legend** for column headings

ERNS - The Emergency Response Notification System records and stores information on reported release of oil and hazardous substances.

CA HIST CORTESE - Sites designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

FINDS - The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail.

RCRA-SQG - EPA database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste. Small quantity generators (SQGs) generate between 100 kg of hazardous waste and 1,000 kg of hazardous waste per month.

RCRA-LQG - EPA database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste. Large quantity generators (LQGs) generate over 1,000 kg of hazardous waste, or over 1 kg of acutely hazardous waste per month.

STATE & LOCAL RECORDS - This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination.

RCRA-NONGEN - EPA database with selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste. Non-Generators do not presently generate hazardous waste.

CA NPDES & ICIS - CA NPDES is a listing of NPDES permits, including stormwater. ICIS - The Integrated Compliance Information System supports the information needs of the national enforcement and compliance program as well as the unique needs of the NPDES program.

FTTS - FTTS tracks administrative cases and pesticide enforcement actions over the previous five years.

CA SWRCY - A listing of recycling facilities in California.

CA LUST - Leaking Underground Storage Tank Incident Report from State Water Resources Control Board.

CA SLIC - Slic Region comes from the California Regional Water Control Board.

CA CHMIRS - The California Hazardous Material Incident Report System contains information on Reported hazardous material incidents (i.e., accidental releases or spills)

CA AST - Above ground Storage Tank database of registered ASTs. Data from the State Water Resources Control Board.

CA NOTIFY 65 - Listings of Proposition 65 incidents report to State Water Resources Control Board and Regional Water Quality Control Board.

CA HAZNET - Data extracted from hazardous waste manifests received by the DTSC.

SWEEPS UST - The Statewide Environmental Evaluation and Planning System maintained an underground storage tank listing. This list is not longer updated or maintained.

CA ENVIROSTOR - The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further.

APPENDIX 4: MOBILITY ASSESSMENT

This Appendix presents the physical and operational conditions of the existing circulation network in the Euclid Avenue Corridor Project Area, including the evaluation of streets, non-motorized (bicycle and pedestrian) facilities, public transit, and parking. Developing a better understanding of the current state of the transportation infrastructure and its operational characteristics in the Euclid Avenue Corridor Project Area will also help to identify and prioritize future improvements.

STREETS

Euclid Avenue is a major corridor located within the Encanto Community Planning Area in the City of San Diego. The Encanto Neighborhoods are located east of Downtown, and bounded by Mid-City to the north, Southeastern San Diego Community Planning Area and the City of Lemon Grove to the west, Skyline-Paradise Hills to the southeast, and National City to the South. For the purposes of this Master Plan development and evaluation, the Project Area for this corridor is identified as Euclid Avenue between Federal Boulevard and Market Street.

GEOMETRICS AND TRAFFIC VOLUMES

This section describes the following key roadways comprising the vehicular circulation system in the Project Area, in terms of north-south roadways and east-west roadways:

- Euclid Avenue
- State Route 94 (SR-94)
- Market Street
- Guymon Street
- Lise Avenue
- Hilltop Drive
- Federal Boulevard

NORTH-SOUTH ROADWAYS

Euclid Avenue is a four- lane roadway between Market Street and SR-94 eastbound ramps, and a five-lane roadway between SR-94 eastbound Ramps and Federal Boulevard, with two southbound lanes and three northbound lanes. Between Market Street and Guymon Street, a raised center median is provided, and a two-way left turn lane is striped between Guymon Street and Hilltop Drive. No bike lanes are currently provided on Euclid Avenue, but parallel parking is available on both sides of the roadway between Market Street and Hilltop Drive and permitted on one side of the roadway between Hilltop Drive and Geneva Avenue. The right-of-way width is approximately 80 to 100 feet and the curb to curb width ranges from 65 to 70 feet. The posted speed limit along this facility is 35 mph. Within the Project Area, Euclid Avenue provides direct access to adjacent land uses, freeway access to State Route 94, and local connectivity for inter-community trips. This facility is classified as a Four Lane Major Arterial in the currently adopted Encanto Community Planning Group Existing Conditions document (City of San Diego, 2003).

EAST-WEST ROADWAYS

State Route 94 (SR-94) is an eight-lane freeway with a posted speed limit of 65 mph within the Project Area. SR-94 generally runs east-west through the City of San Diego and extends into the cities of Lemon Grove and Spring Valley. East of Spring Valley, SR-94 becomes a surface street extending southeast to the US-Mexico border. A full-access interchange is provided at Euclid

Avenue and includes direct or loop ramps.

Market Street is a four-lane roadway with a posted speed limit of 40 mph east of Euclid Avenue, and a two- to three-lane roadway east of Euclid Avenue. No bike lanes are striped on Market Street, and parallel parking is available on the north side of the street, west of Euclid Avenue, while prohibited elsewhere along the roadway. A two-way left turn lane is provided both east and west of Euclid Avenue. West of Euclid Avenue, the right-of-way width is 85 to 95 feet and the curb to curb width is approximately 70 to 80 feet. East of Euclid Avenue, the right-of-way width is 60 to 95 feet and the curb to curb width is 45 to 75 feet. 28th Street is classified as a Four-Lane Major Arterial west of Euclid Avenue and a Two-Lane Major Arterial east of Euclid Avenue in the currently adopted Encanto Community Planning Group Existing Conditions, Street Classification, Intersection Controls, and Traffic Volumes map (City of San Diego, 2003).

Guymon Street is a two-lane roadway with a posted speed limit of 25 mph within the Project Area. No bike lanes are provided, and parallel parking is available on both sides of the street. The right-of-way width is 50 feet and the curb to curb width is currently 40 feet. Guymon Street is not classified as a Circulation Element roadway in the currently adopted Encanto Community Planning Group Existing Conditions, Street Classification, Intersection Controls, and Traffic Volumes map (City of San Diego, 2003).

Lise Avenue is a two-lane roadway with a posted speed limit of 25 mph within the Project Area. No separate bicycle facilities are provided, and parallel parking is available on both sides of the street. The right-of-way width is 52 feet and the curb to curb width is currently 45 feet. Currently, a landscaped area is provided between the street and sidewalk along Lise Avenue. Lise Avenue is not classified as a Circulation Element roadway in the currently adopted Encanto Community Planning Group Existing Conditions, Street Classification, Intersection Controls, and Traffic Volumes map (City of San Diego, 2003).

Hilltop Drive is a two-lane roadway with a posted speed limit of 25 mph within the Project Area. There are no bike lanes, and parallel parking is available on both sides of the street. The Right-of-Way width is 45to 50 feet and the curb to curb width is currently 35 feet. Hilltop Drive is classified as a Local roadway in the currently adopted Encanto Community Planning Group Existing Conditions, Street Classification, Intersection Controls, and Traffic Volumes map (City of San Diego, 2003).

Federal Boulevard is a three-lane roadway with a posted speed limit of 35 mph within the Project Area. Federal Boulevard includes one travel lane in the eastbound direction and two travel lanes in the westbound direction. No bike lanes are provided on this street near Euclid Avenue, and parallel parking is available on both sides of the street. The right-of-way width is 80 to 90 feet and the curb to curb width is approximately 70 feet. Federal Boulevard is classified as a Collector roadway with a two-way left turn lane in the currently adopted Encanto Community Planning Group Existing Conditions, Street Classification, Intersection Controls, and Traffic Volumes map (City of San Diego, 2003).

ROADWAY SEGMENTS

Figure 4-1 displays both the existing Project Area roadway geometrics and daily traffic volumes. Roadway segment counts were conducted in October 2012. As shown in the figure, daily traffic volumes along Euclid Avenue range between 25,485 and 33,760 vehicles per day (vpd).

INTERSECTIONS

A total of six (6) key Project Area intersections have been identified for analysis for this project:

1. SR-94 WB Ramps/Euclid Avenue (uncontrolled)
2. SR-94 EB Ramps/Euclid Avenue (uncontrolled)
3. Hilltop Drive/Euclid Avenue (signalized)
4. Lise Avenue/Euclid Avenue (side street-stop controlled)
5. Guymon Street/Euclid Avenue (signalized)
6. Market Street/Euclid Avenue (signalized)

Figure 4-2 displays both the existing Project Area intersection geometrics and the AM/PM peak hour turning movement volumes. The intersection counts were conducted in October 2012.

SAFETY

Automobile collision data was obtained from the City of San Diego for the Project Area. The reports provide collision data over a period of five years (2008 – 2012), indicating a total of 107 vehicle-to-vehicle or vehicle-to-fixed object collisions. Figure 4-3 shows the distribution of automobile collisions and Table 4-1 provides a general summary of all vehicle-to-vehicle collisions, including location (intersection vs. mid-block), lighting (daylight vs. night), and primary cause.

TABLE 4-1: COLLISION DATA SUMMARY

Location	Lighting	Primary Cause
Intersection	Day	Unsafe Movement[1]
50	66	50
47%	62%	47%
Mid-Block	Night (Dark/Dusk/Dawn)	Ran Red Light or Stop Sign
57	41	6
53%	38%	5%
		Unsafe Speed
		36
		34%
		Violated R-O-W
		5
		5%
		Other[2]
		10
		9%

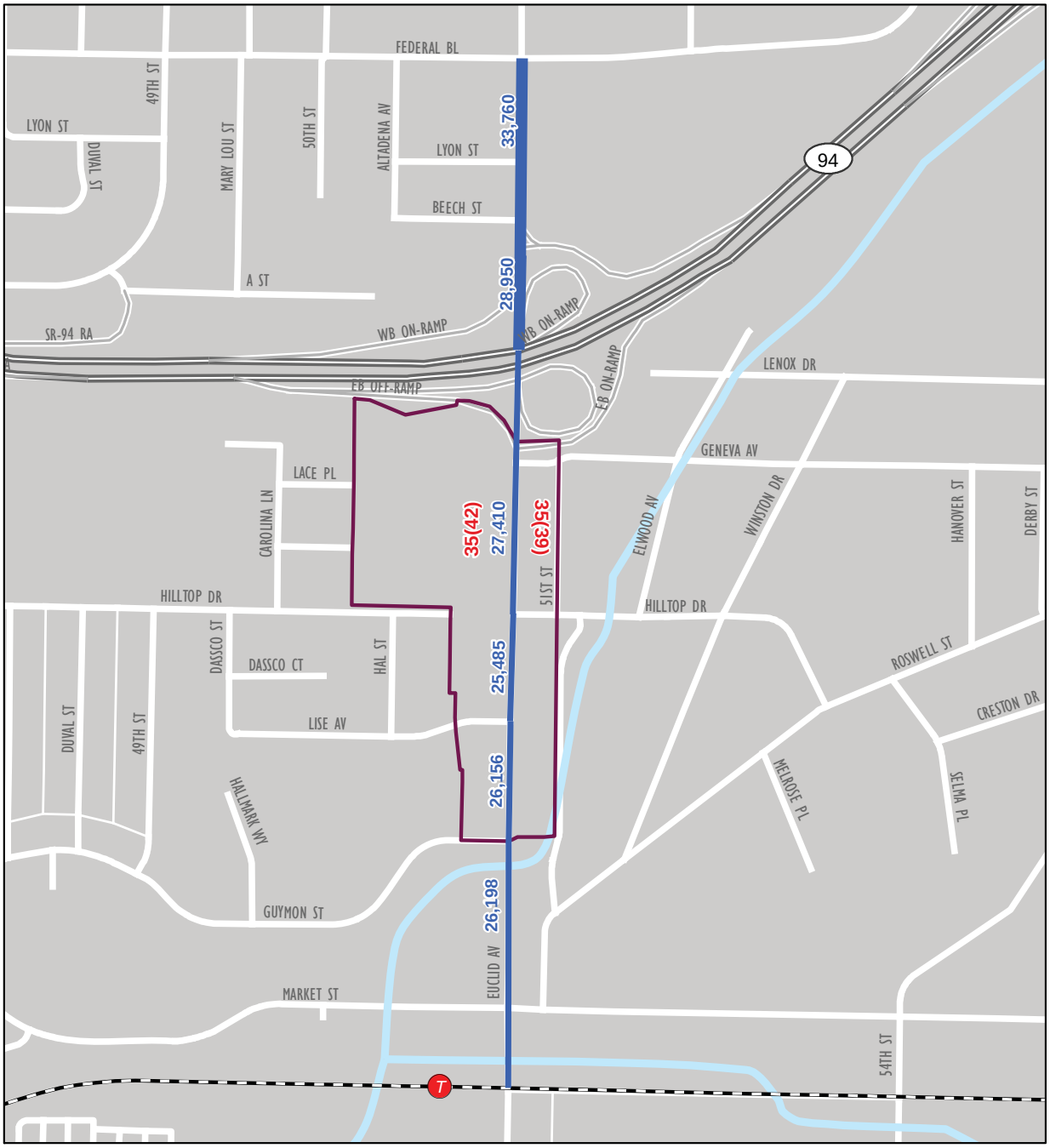
[1] "Unsafe Movement" includes improper lane changes/starts/passing/turns, unsafe backing, and other general unsafe maneuvers.

[2] "Other" includes fell asleep, not paying attention, losing control, medical conditions, open vehicle door, unsecured load, etc.

Source: 2008 through 2012 collision data from City of San Diego, March 2013. Summary by Fehr & Peers.

Figure 4-1: Existing Roadway Geometrics and Daily Traffic Volumes
Euclid Ave

April 2013

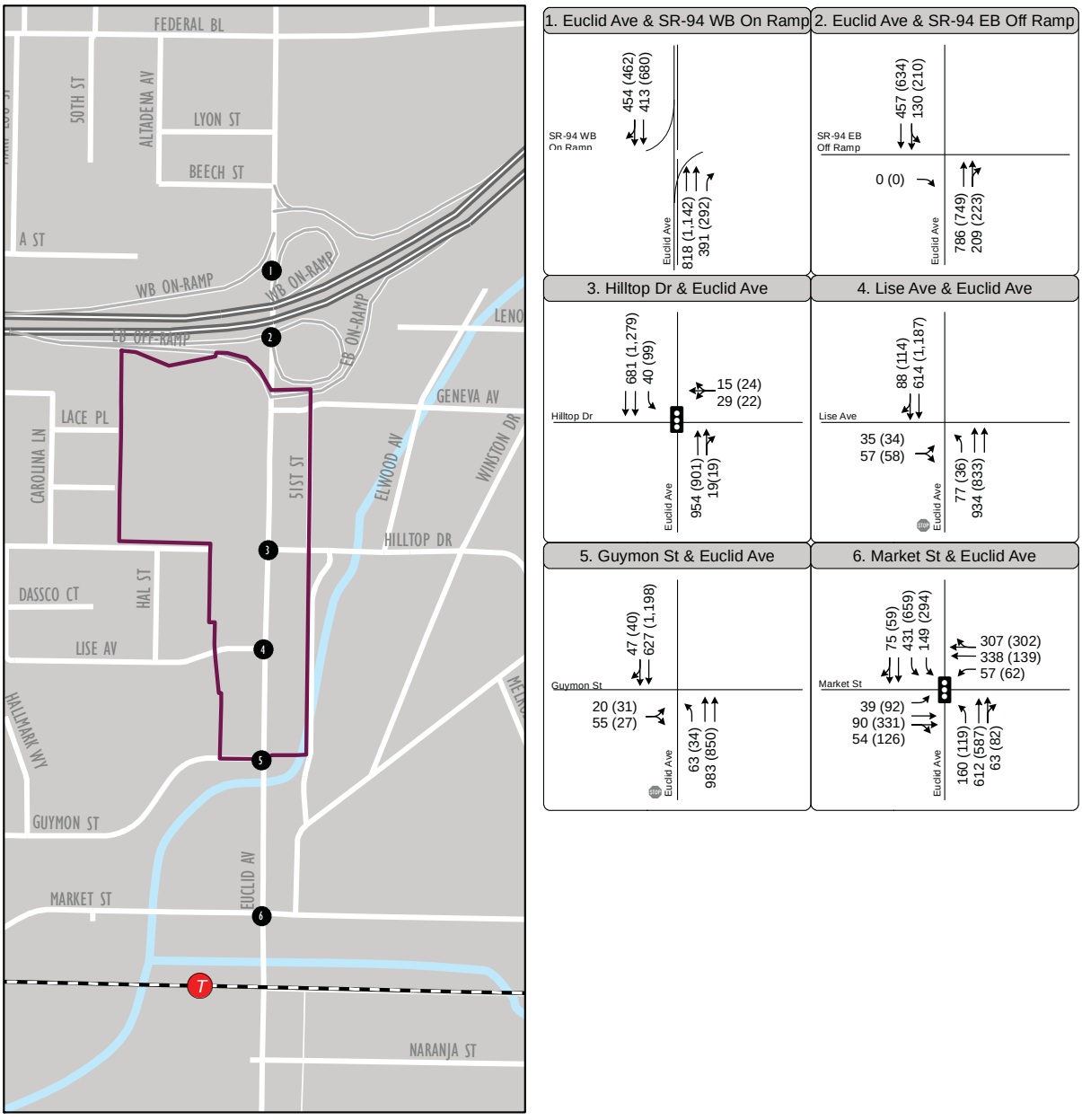


Source:
City of San Diego (2012)

Figure 4-2: Euclid Avenue Peak Hour Intersection Volumes

Euclid Ave

April 2013



Study Intersection
Turn Lane
AM (PM) **Peak Hour Traffic Volume**
Project Area
Trolley
Trolley Station

FEHR & PEERS

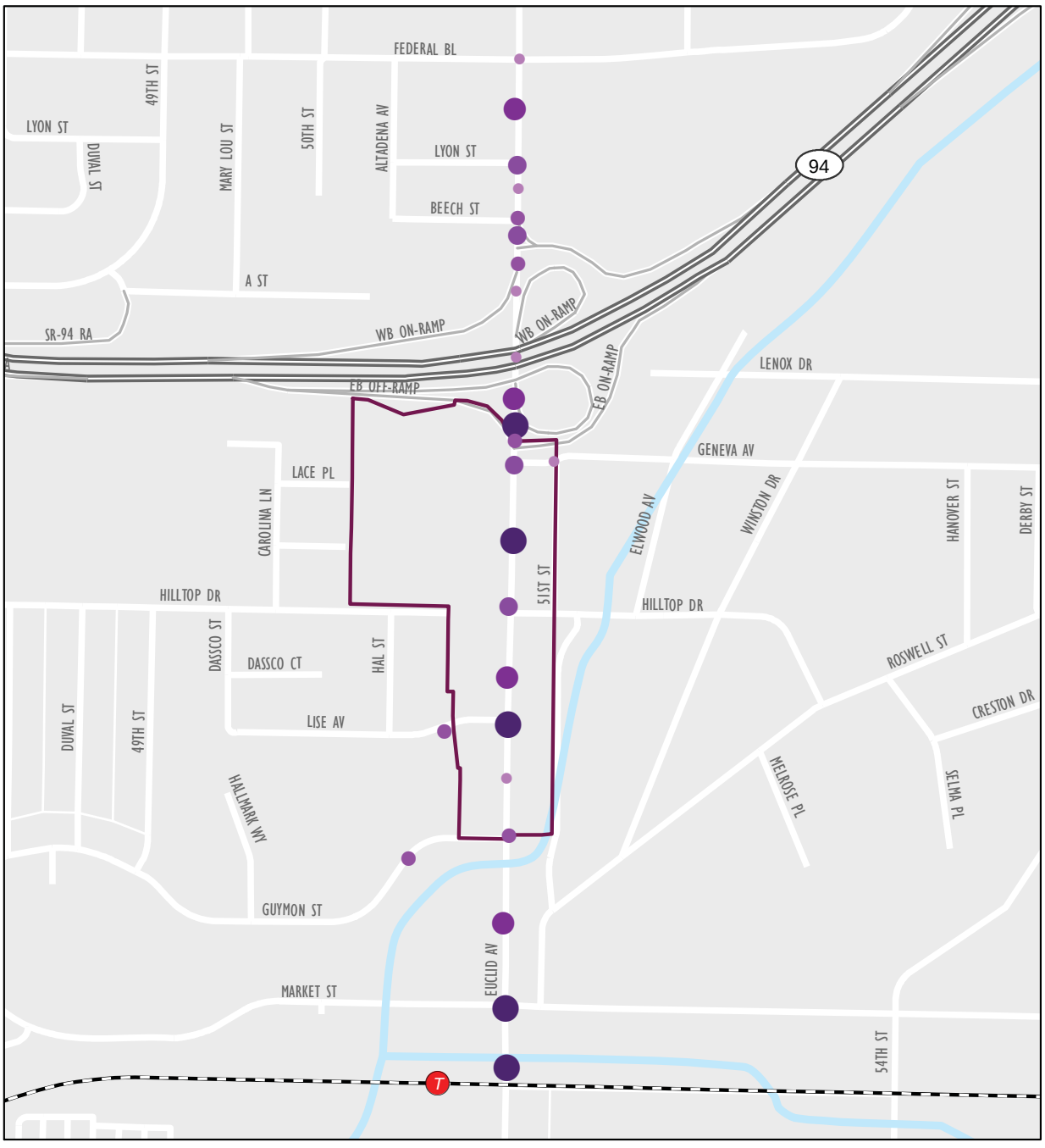
N

0 0.05 0.1 Miles

Source:
City of San Diego (2012)

Figure 4-3: Automobile Collisions Euclid Ave

April 2013



PUBLIC TRANSIT SYSTEM

Public transit for the Project Area is provided by the San Diego Metropolitan Transit System (MTS) and consists of public bus, trolley, and paratransit. Figure 4-4 displays the transit routes and stops serving the Project Area. Each transit element is described below.

BUS SYSTEM

MTS Routes 916/917 and 955 provide bus service in the Master Plan Project Area. Each route is described in detail below.

ROUTE 916/917

Route 916/917 provides service in a circular pattern between the Euclid Trolley and College Grove, with stops in Oak Park, City Heights, Lemon Grove, and North Encanto. Route 916 provides clockwise service starting at 5:22 am on weekdays, while Route 917 serves patrons in the opposite direction starting at 5:20 am on weekdays. Route 916/917 operates at 30-minute headways before 7:00 pm and at 60-minute headways thereafter. On Saturdays, Route 916/917 operates at 60–minute headways all day starting at 6:20 am, but no Sunday service is provided by these routes.

ROUTE 955

Route 955 extends between the 8th Street Trolley Station in downtown San Diego and San Diego State University with weekday service beginning at 4:55 am and weekday headways of approximately 15 minutes before 7:30 pm and 30 minutes thereafter. On Saturdays, Route 955 operates at 20- to 30-minute headways with service starting at 5:38 am. Sunday service is provided at 30-minute headways with service beginning at 5:58 am.

Along the Euclid Avenue Corridor Project Area, there are two bus stops in the northbound direction and three bus stops in the southbound direction. The list below provides the location of the bus stop (intersection and far-side or near-side) and any amenities such as a bench, shelter, or trash receptacle:

Northbound

- Euclid Avenue & Guymon Street – Near side bus stop with trash receptacle
- Euclid Avenue & Hilltop Drive – Near side bus stop with no amenities provided

Southbound

- Euclid Avenue & Federal Boulevard – Far side bus stop with shelter and trash receptacle
- Euclid Avenue & Hilltop Drive – Near side bus stop with no amenities provided
- Euclid Avenue & Guymon Street – Near side bus stop with bench

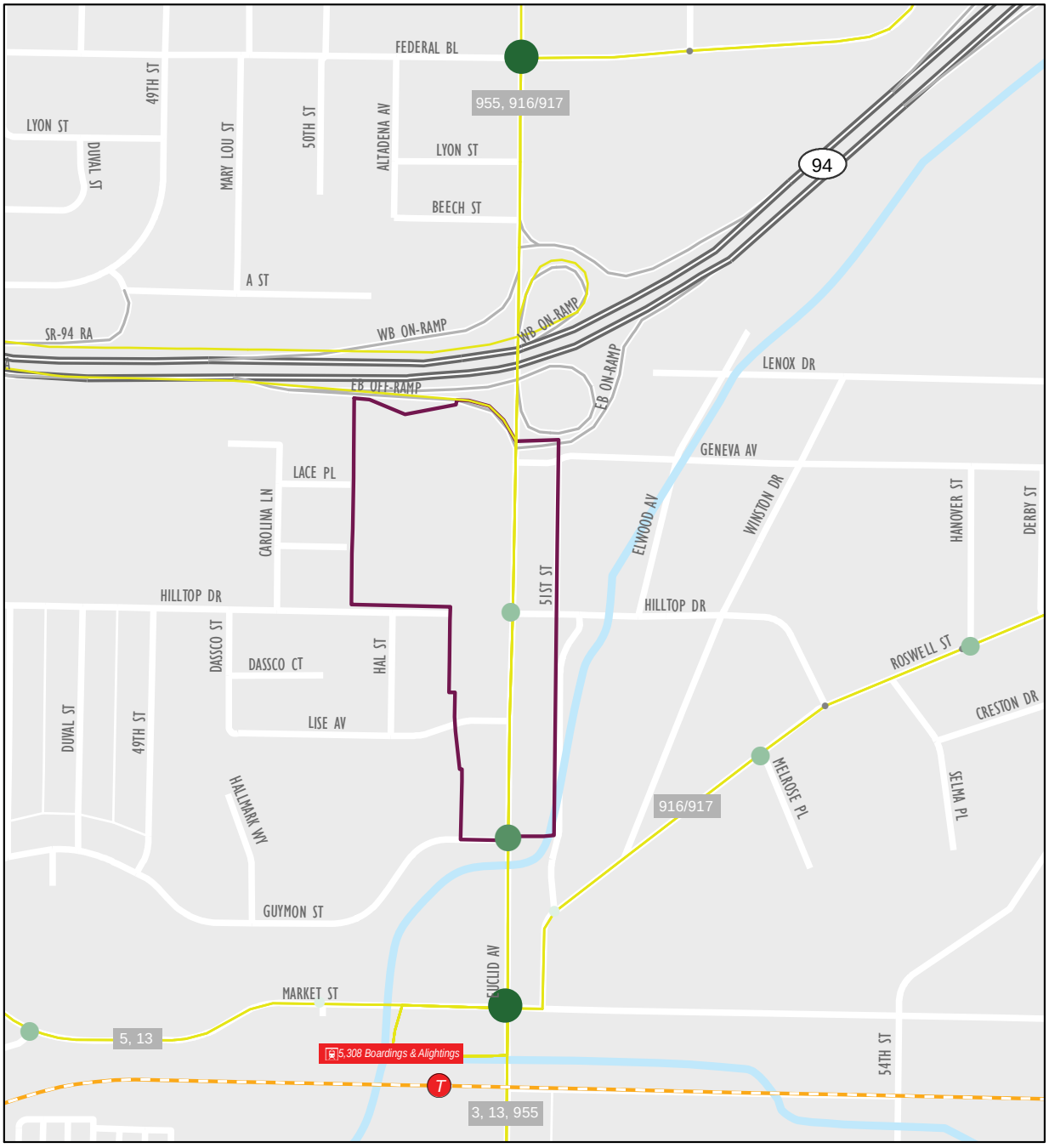
ORANGE LINE TROLLEY

The Orange Line Trolley provides light rail transit between the Santa Fe Depot in downtown San Diego and the City of El Cajon. The Orange Line Trolley operates starting at 4:06 am with headways of approximately 15 minutes before 8:30 pm and 30 minutes thereafter on weekdays. On Saturdays and Sundays, the Orange Line operates at 30-minute headways starting at 4:27 am.

The only trolley stop in the study area is located just south of Market Street and west of Euclid Avenue. The Euclid Trolley Station has shelter, benches, trash receptacles and parking. It is also a hub for bus lines in the area.

Figure 4-4: Existing Public Transit Facilities
Euclid Ave

April 2013



BOARDINGS AND ALIGHTINGS

Transit passenger load information was obtained from SANDAG for the latest year available (Year 2010). Table 4-2 summarizes the daily boardings/alightings at all bus and trolley stops within the Project Area.

As Table 4-2 shows, 2,917 boardings and 3,057 alightings occurred in 2010, for a total of 5,974 boardings/alightings at all transit stops in the Project Area. The trolley stop at Euclid Avenue & Market Street has the highest boarding and alighting activity, with 5,308 total boardings & alightings. The Euclid Avenue & Federal Boulevard bus stop has the highest passenger activity at 451 daily.

BICYCLE FACILITIES

Bicycling is considered an environmentally-friendly mode of transportation that enhances both personal and social well-being. Bicycling is recognized as an integral component of the Encanto Neigborhood Community's transportation system, currently and in the future. It is an important travel mode and a key component of a seamless multi-modal transportation system. In addition to transportation, this mode of travel provides many public access, health and economic benefits.

Safe, convenient, attractive, and well-designed bicycle facilities are essential if this mode is to be properly accommodated and encouraged. Well-designed bicycle facilities are safe, attractive, convenient, and easy to use. Inadequate facilities discourage users and unnecessary facilities waste money and resources.

TABLE 4-2: EXISTING TRANSIT DAILY BOARDINGS AND ALIGHTINGS SUMMARY

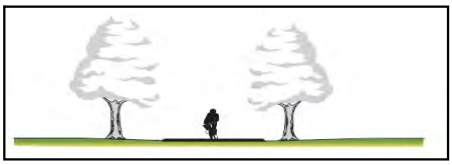
Transit Stop	Route	Boardings	Alightings	Total
Euclid Avenue & Guymon Street	916/917	6	7	69
	955	28	28	
Euclid Avenue & Hilltop Drive	916/917	12	8	146
	955	59	67	
Euclid Avenue & Federal Boulevard	916/917	57	35	451
	955	179	180	
Euclid Trolley Station	Orange Line Trolley	2,576	2,732	5,308
Total		**2,917**	**3,057**	**5,974**

Source: SANDAG 2010

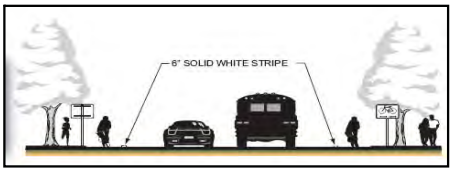
STANDARD BICYCLING TYPOLOGY

Bicycle facilities are classified based on a standard typology, which is described as follows:

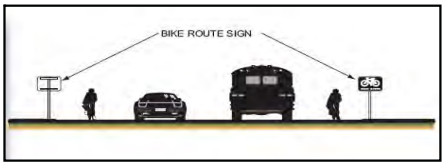
Class I Bikeway (Bike Path) provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.



Class II Bikeway (Bike Lane) provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally five feet wide. Vehicle parking and vehicle/pedestrian cross-flow are permitted.



Class III Bikeway (Bike Route) provides for a right-of-way designated by signs or pavement markings for shared use with pedestrians or motor vehicles.



BICYCLE FACILITIES AND VOLUMES

Based upon the City of San Diego's Bicycle Master Plan Update (City of San Diego, 2011), no existing bicycle facilities were identified on Euclid Avenue. However, recent fieldwork revealed bike route signage and "Share the Road" signage along Euclid Avenue between Federal Avenue and Market Street. In addition, there is a Class III bicycle route along Market Street west of Euclid Avenue. Figure 4-5 displays the locations of various existing bicycle facilities.

Existing bicycle data was collected at all of the Project Area intersections during the am/pm peak periods, and are displayed in Figure 4-6. As shown in Figure 4-6, bicycle usage along Euclid Avenue is very low, with fewer than ten bicyclists traveling along the corridor during the peak hour.

SAFETY

Bicycle-related collision data was obtained from the City of San Diego for the Project Area. The reports provide collision data over a period of five years (2008 – 2012), which indicates a total of four collisions. Figure 4-7 shows the distribution of the bicycle related collisions. Of the four recorded collisions, all four resulted in injuries, and no fatalities occurred. Seventy-five percent of the collisions occurred at intersections while the remaining 25percent occurred at mid-block locations. Approximately 75 percent occurred during daylight, while the other 25 percent occurred at night (dark/dusk/dawn).

Figure 4-5: Existing & Planned Bicycle Facilities
Euclid Ave

April 2013

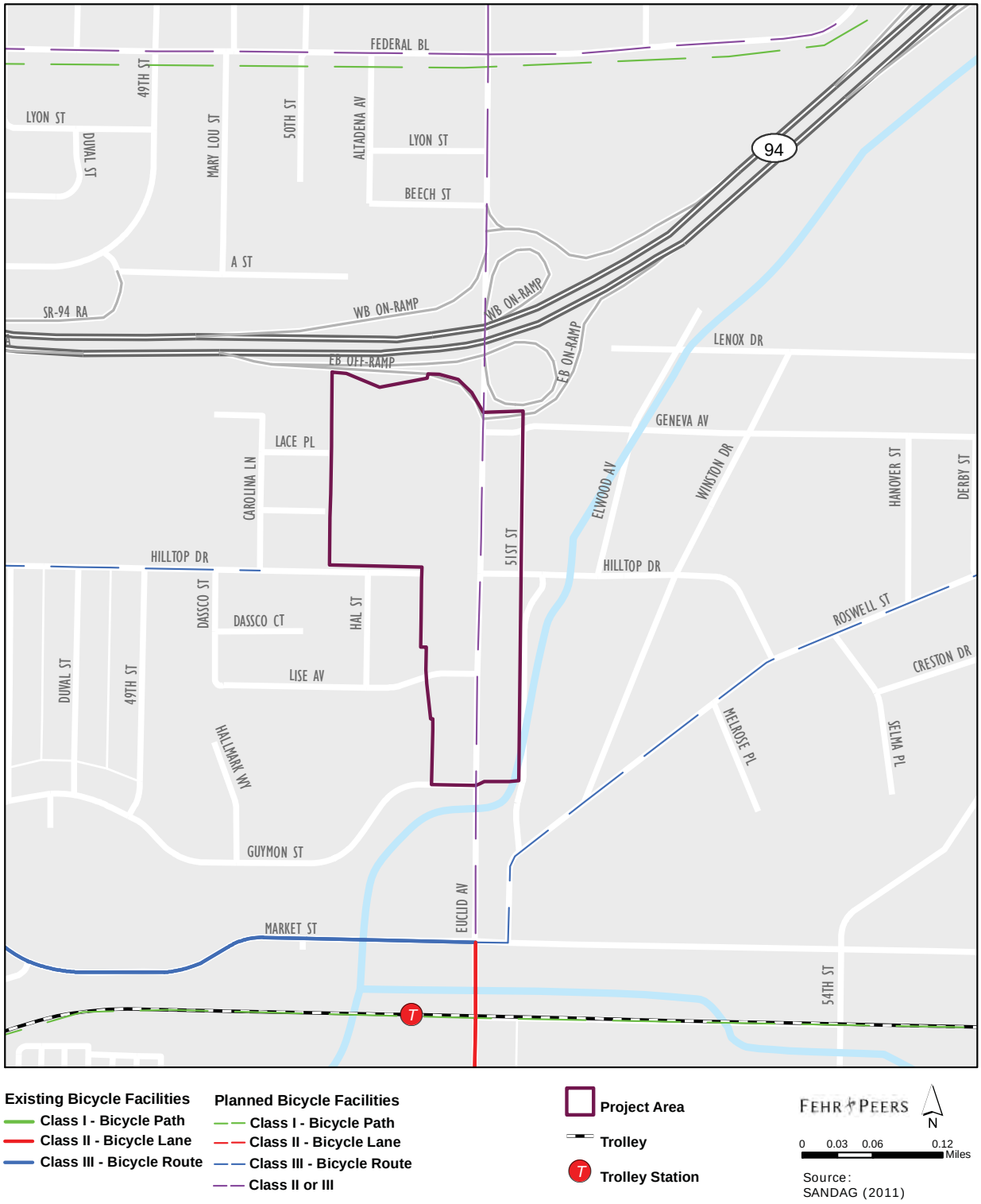


Figure 4-6: Existing Bicycle Peak Hour Volumes Euclid Ave

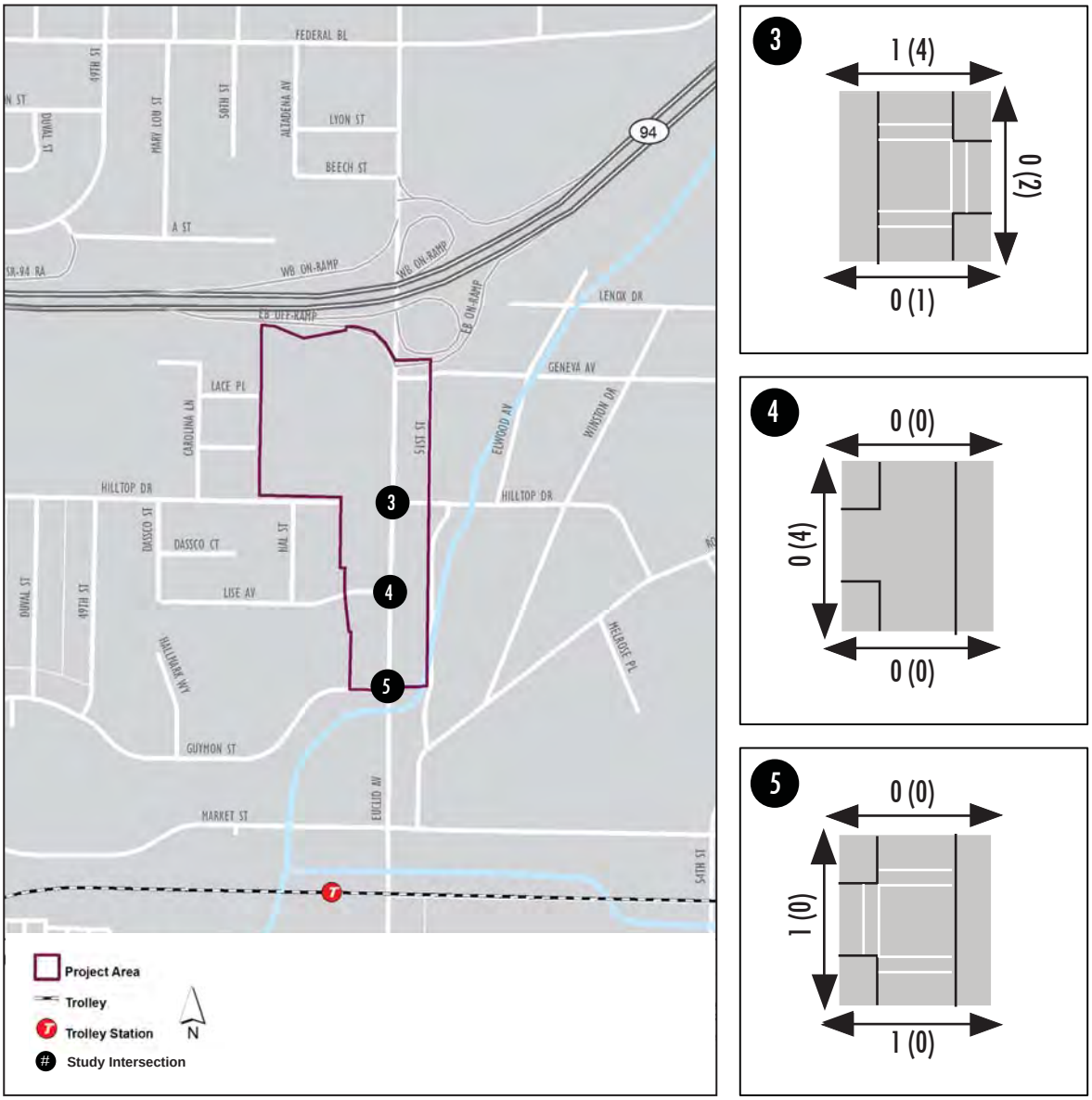
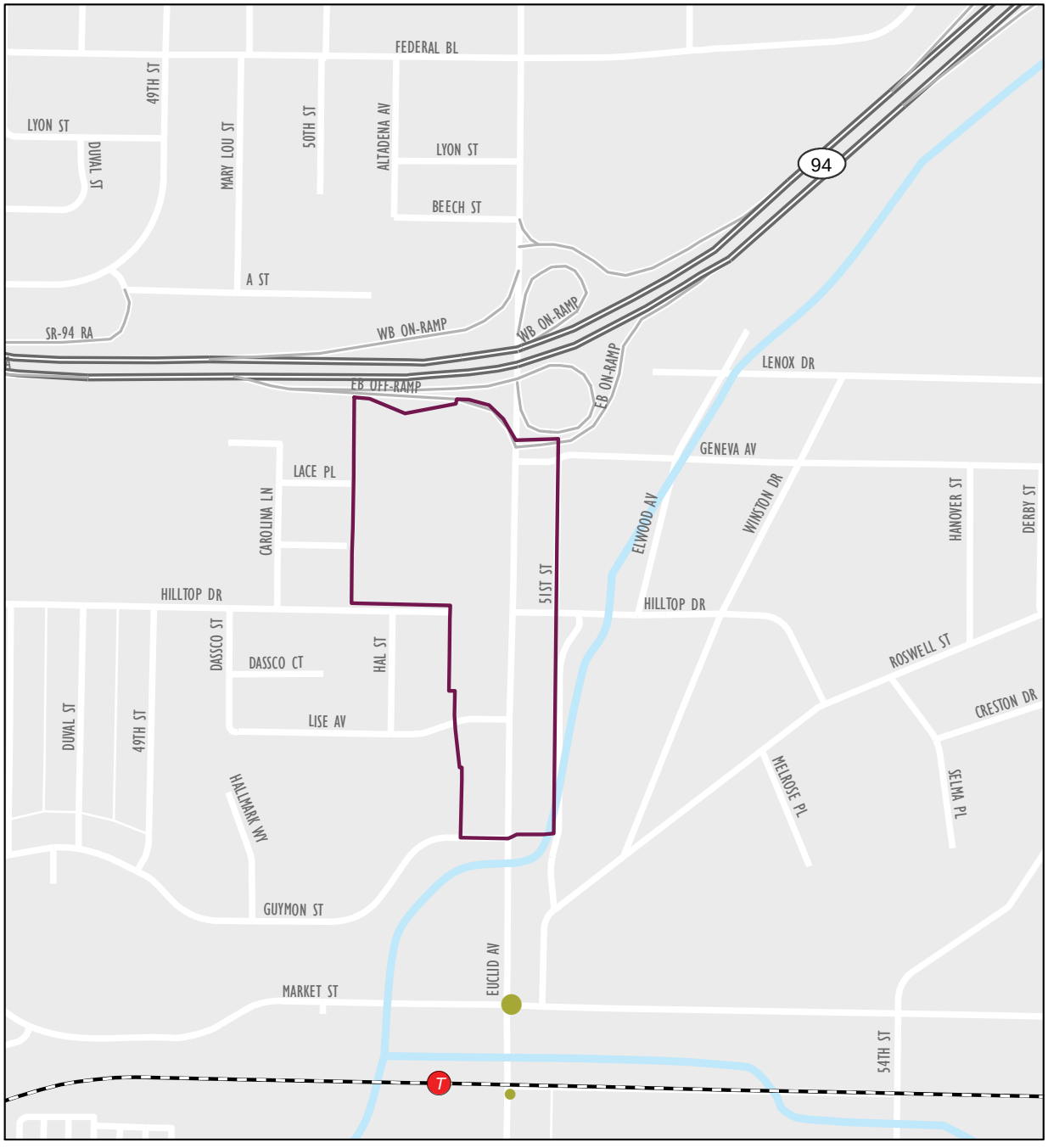


Figure 4-7: Bicycle-Related Collisions Euclid Ave

April 2013



PEDESTRIAN FACILITIES

Walking is another environmentally friendly mode of transportation that enhances both personal and social well-being. In addition to transportation, this mode of travel provides many public access, health and economic benefits. Safe, convenient, attractive, and well-designed pedestrian facilities are essential if this mode is to be properly accommodated and encouraged.

The land uses, neighborhood density and scale, as well as the street configuration along the southern portion of Euclid Avenue are conducive to pedestrian activity. This segment is near a transit hub, storefronts, and public uses, including a school. These land uses typically generate pedestrian traffic.

North of Guymon Street, Euclid Avenue has predominantly residential land uses and vacant parcels, and pedestrians must also cross a freeway to connect to Federal Boulevard, which has additional transit and commercial activity.

PEDESTRIAN FACILITIES AND VOLUMES

Figure 4-8 displays the existing pedestrian facilities map with identifications of missing sidewalks and curb ramps. Euclid Avenue south of Guymon Street generally provides an inviting streetscape with sidewalks and several amenities for pedestrians and transit patrons. Frontages along both sides of Euclid Avenue generally include active commercial and public uses with a sidewalk approximately five feet wide. North of Guymon Street, Euclid Avenue has sidewalks that are five feet wide on both sides of the street and on-street parking, providing an additional buffer. North of Hilltop Drive, there is an informal path that students use as a shortcut to access Gompers High School. Along this segment of Euclid Avenue, land uses are predominantly residential or vacant, with lower pedestrian activity.

A number of the intersections along Euclid Avenue are controlled by traffic signals or side-street stop signs. At some of these intersections, marked crosswalks are provided across all four legs. Examples include the intersection of Euclid Avenue at:

- Market Street (signalized with marked crosswalks at all approaches)
- Guymon Street (signalized with marked crosswalks at all approaches)
- Hilltop Drive (signalized with marked crosswalks at all approaches)
- Federal Boulevard (signalized with no marked crosswalks)

All of the remaining intersections on Euclid Avenue in the Project Area are side-street stop controlled, with vehicular traffic on Euclid Avenue uncontrolled, and marked crosswalks not provided across Euclid, including:

- Lise Avenue
- SR-94 Eastbound Ramps
- SR-94 Westbound Ramps

Existing pedestrian data were collected at all of the Project Area intersections during the AM/PM peak periods, and are displayed in Figure 4-9.

In the Project Area, pedestrian intersection counts are the highest at Euclid Avenue and Market Street, which is surrounded by institutional and commercial uses and is located on the northeast corner of the Euclid Trolley Station.

Figure 4-8: Missing Sidewalk & Curb Ramp Infrastructure Euclid Ave

April 2013

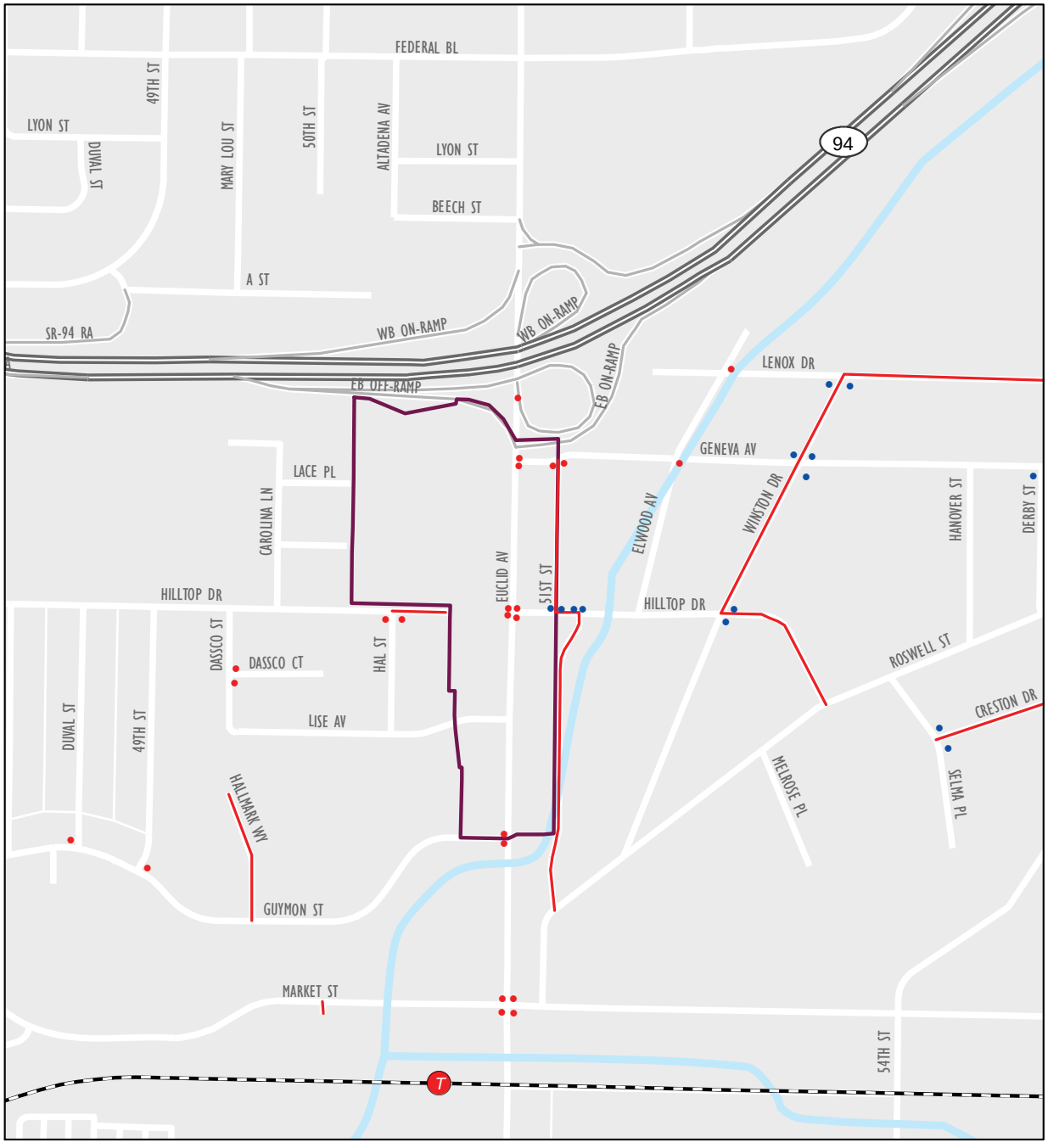
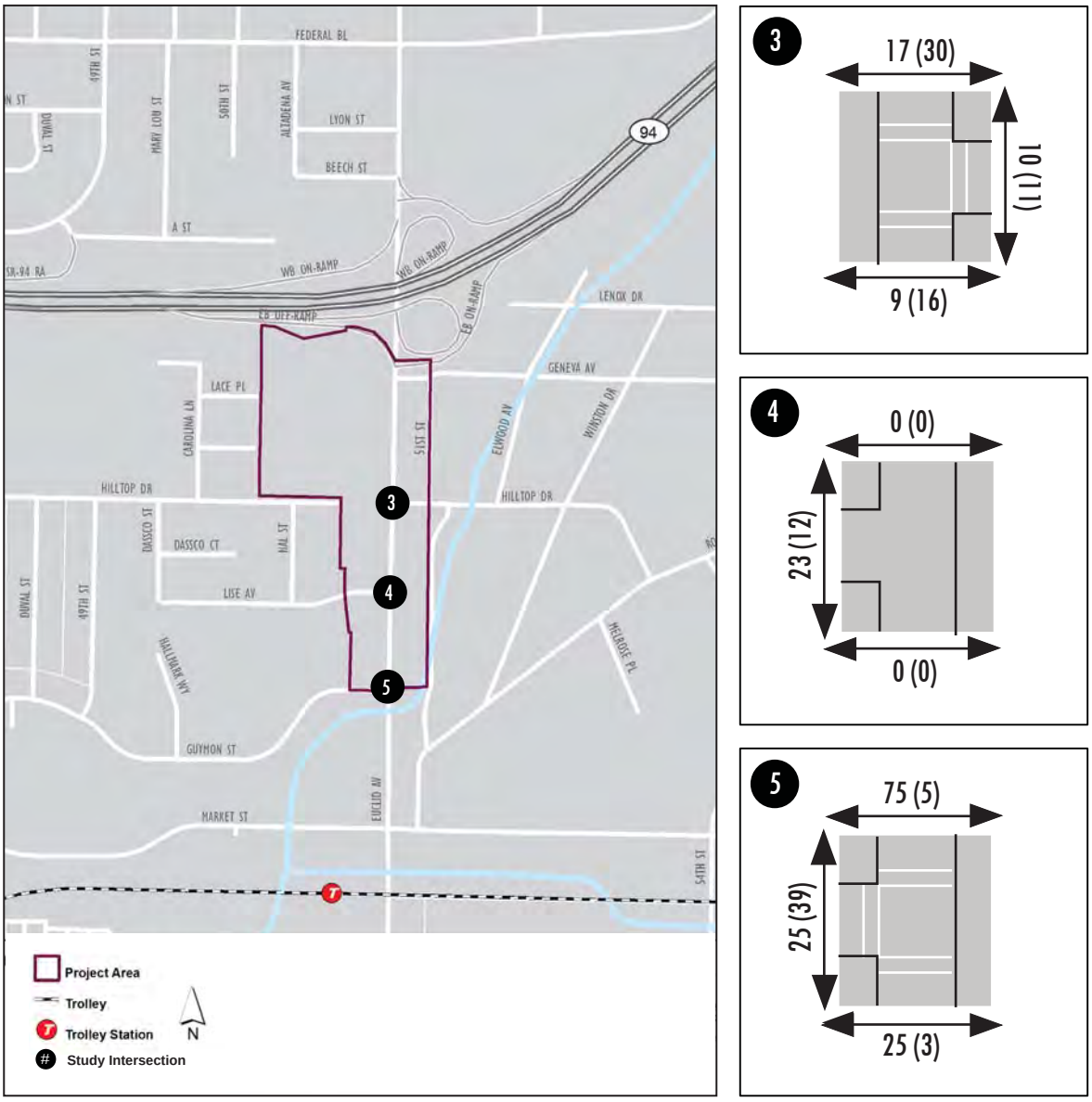


Figure 4-9: Existing Pedestrian Peak Hour Volumes Euclid Ave



SAFETY

Pedestrian related collision data was obtained from the City of San Diego for the Project Area. The reports provide collision data over a period of five years (2008 – 2012), which indicates a total of six collisions. Figure 4-10 shows the distribution of the pedestrian related collisions. Of the six recorded collisions, all six resulted in injuries, and no fatalities were reported. Approximately 83 percent of the collisions occurred at intersections, while the other 17 percent occurred at mid-block locations. Approximately 67 percent occurred during daylight while the other 33 percent occurred at night (dark/dusk/dawn).

PARKING

An inventory of all on-street parking spaces within the Project Area was conducted in April 2013. The area consisted of Euclid Avenue between Market Street and Federal Boulevard. On-street parallel parking with no time restrictions and free of charge are provided north of Market Street. There are roughly 125 on-street parking spaces in the Project Area.

On-street parking demand data was collected on April 3, 2013 during the AM and PM peak commute periods. Data was collected over the course of the day. Table 4-3 summarizes the findings of the on-street parking demand survey. As shown in the table, the percentage of on-street parking occupied during both the AM and PM peak periods is relatively low (0% to 15%), where most segments had no cars parked or at most two cars.

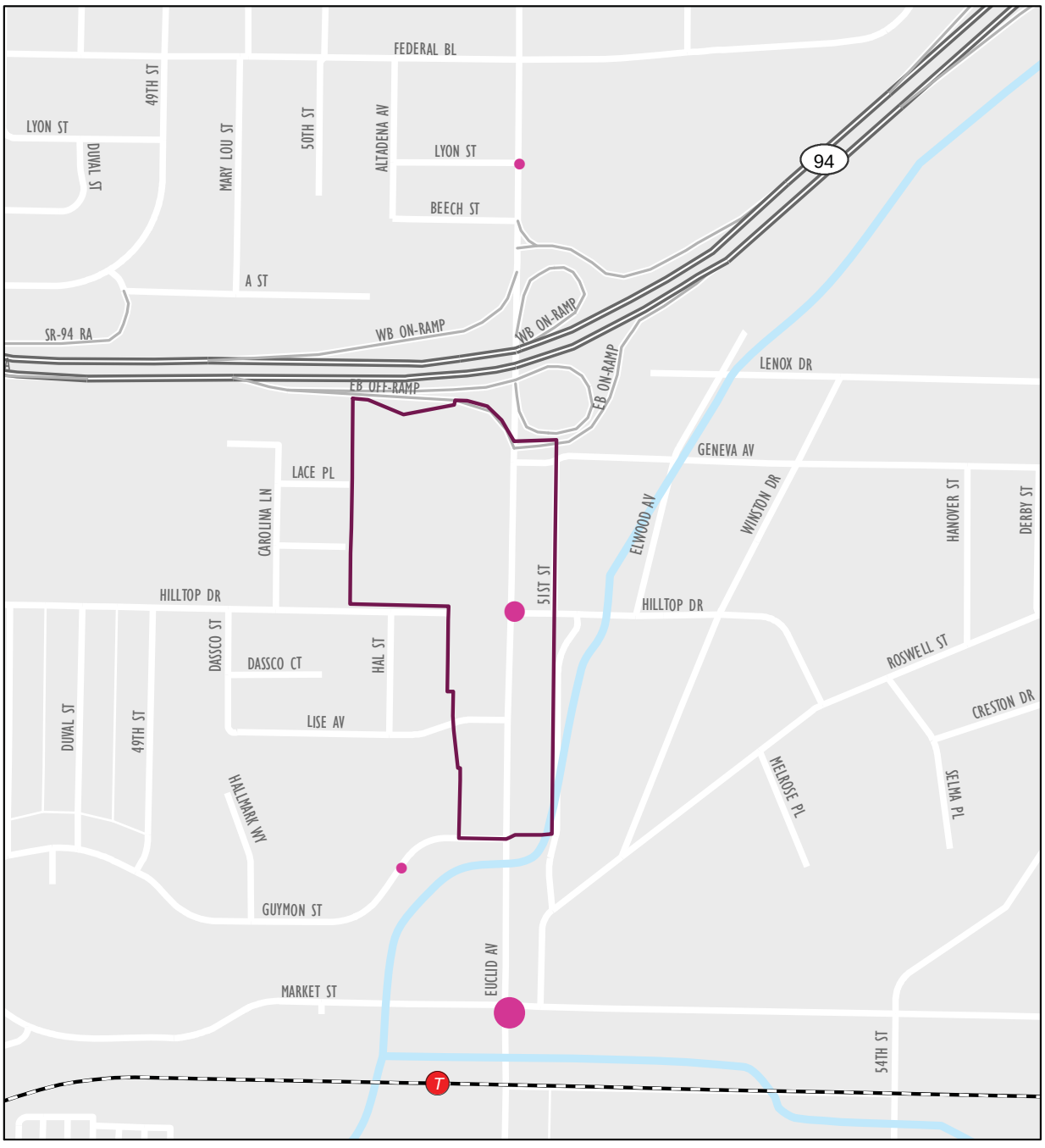
TABLE 4-3: EXISTING ON-STREET PARKING DEMAND SUMMARY

	Northbound		*Southbound*	
Euclid Avenue Roadway Segment	***AM Peak***	***PM Peak***	***AM Peak***	***PM Peak***
Federal Avenue to SR-94 WB Ramps	0%	0%	0%	0%
SR-94 WB Ramps to SR-94 EB Ramps	0%	0%	0%	0%
SR-94 EB Ramps to Hilltop Drive	5%	10%	0%	0%
Hilltop Drive to Lise Avenue	10%	10%	0%	0%
Lise Avenue to Guymon Street	0%	5%	0%	15%
Guymon Street to Market Street	0%	0%	0%	0%

Source: Fehr & Peers, April 2013.

Figure 4-10: Pedestrian-Related Collisions Euclid Ave

April 2013



MULTI-MODAL LEVEL OF SERVICE

On September 30, 2008, the State of California approved Assembly Bill 1358 – The Complete Streets Act. This act required, commencing January 1, 2011, that the legislative body of a city or county, plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan.

Demographics and observed travel patterns for the area surrounding the Euclid Avenue corridor indicate that transit, walking, and bicycling are modes of transportation used by some residents and/or employees; however, active transportation volumes could be higher with the appropriate facility enhancements and increased land use density on vacant or underutilized parcels.

METHODOLOGY

The respective analysis methodologies for each mode of travel are described in this section. In general, roadway and intersection LOS is based on facility operations, while transit, bicycle and pedestrian facilities are evaluated based on user perception of the traveling experience on the subject facilities. The multimodal LOS analysis method used herein for transit, bicycle and pedestrian was required by the City of San Diego and developed under the National Cooperative Highway Research Program (NCHRP) Project 3-70, Multimodal Level of Service for Urban Streets.

AUTOMOBILE

Level of service (LOS) is a quantitative measure describing operational conditions within a traffic stream, and the motorist's and/or passenger's perception of operations. LOS is based on these conditions in terms of such factors as delay, speed, travel time, freedom to maneuver, interruptions in traffic flow, queuing, comfort, and convenience. Table 4-4 describes generalized definitions of the various LOS categories (A, best, through F, worst) as applied to roadway operations.

Roadway Segment LOS Volume
ThresholdsRoadway segment LOS volume thresholds provide the basis for analysis of arterial roadway segment performance. The analysis of roadway segment LOS is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. Table 4-5 presents the roadway segment capacity and LOS standards utilized to analyze arterial roadways. This table was developed based on similar standards currently utilized by jurisdictions throughout the San Diego region, and has been approved for use in the City of San Diego.

These standards are generally used as long-range planning guidelines to determine the functional classification of roadways. The actual capacity of a roadway facility varies according to its physical attributes. Typically, the performance and LOS of a roadway segment is heavily influenced by the ability of the arterial intersections to accommodate peak hour volumes. For the purposes of this traffic analysis, LOS D is considered acceptable for Circulation Element roadway segments.

Intersection Level of Service Standards and Thresholds

This section presents the methodologies used to perform peak hour intersection capacity analysis, including both signalized and unsignalized intersections.

Signalized Intersection Analysis

The analysis of signalized intersections utilized the operational analysis procedure as outlined in the 2000 Highway Capacity Manual (HCM), Transportation Research Board Special Report 209. This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane (VPHPL) as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage trucks) and shared lane movements (i.e., through and right-turn movements originating from the same lane). The LOS criteria used for this technique are described in Table 4-6. The computerized analysis of intersection operations was performed utilizing the SYNCHRO 7.0 traffic analysis software.

TABLE 4-4: LEVEL OF SERVICE DEFINITIONS

LOS Category	Definition of Operation
A	This LOS represents a completely free-flow condition, where the operation of vehicles is virtually unaffected by the presence of other vehicles and only constrained by the geometric features of the highway and by driver preferences.
B	This LOS represents a relatively free-flow condition, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.
C	At this LOS the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles.
D	At this LOS, the ability to maneuver is notably restricted due to traffic congestion, and only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
E	This LOS represents operations at or near capacity. LOS E is an unstable level, with vehicles operating with minimum spacing for maintaining uniform flow. At LOS E, disruptions cannot be dissipated readily thus causing deterioration down to LOS F.
F	At this LOS, forced or breakdown of traffic flow occurs, although operations appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

Source: Highway Capacity Manual 2000.

Unsignalized Intersection Analysis

Unsignalized intersections, including two-way and all-way stop controlled intersections were analyzed using the 2000 Highway Capacity Manual (Section 10) unsignalized intersection analysis methodology. The SYNCHRO 7.0 Traffic Analysis software supports this methodology and was utilized to produce LOS results. The LOS for a two-way stop controlled (TWSC) intersection is determined by the computed control delay and is defined for each minor movement. Table 4-7 summarizes the LOS criteria for unsignalized intersections.

The City of San Diego considers LOS D or better during the AM and PM peak hours to be acceptable for intersection LOS.

TABLE 4-5: CITY OF SAN DIEGO CIRCULATION ELEMENT ROADWAY CLASSIFICATIONS AND LOS STANDARDS

Roadway Functional Classification	LOS A	LOS B	LOS C	LOS D	LOS E
Expressway (6-lane)	< 30,000	< 42,000	< 60,000	< 70,000	< 80,000
Prime Arterial (6-lane)	< 25,000	< 35,000	< 50,000	< 55,000	< 60,000
Major Arterial (6-lane, divided)	< 20,000	< 28,000	< 40,000	< 45,000	< 50,000
Major Arterial (4-lane, divided)	< 15,000	< 21,000	< 30,000	< 35,000	< 40,000
Secondary Arterial/Collector (4-lane w/ center lane)	< 10,000	< 14,000	< 20,000	< 25,000	< 30,000
Collector (4-lane w/o center lane)	< 5,000	< 7,000	< 10,000	< 13,000	< 15,000
Collector (2-lane w/continuous left-turn lane)	< 5,000	< 7,000	< 10,000	< 13,000	< 15,000
Collector (2-lane no fronting property)	< 4,000	< 5,500	< 7,500	< 9,000	< 10,000
Collector (2-lane w/commercial fronting)	< 2,500	< 3,500	< 5,000	< 6,500	< 8,000
Collector (2-lane multi-family)	< 2,500	< 3,500	< 5,000	< 6,500	< 8,000
Sub-Collector (2-lane single-family)	-	-	< 2,200	-	-

Source: SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, February 2004

TABLE 4-6 SIGNALIZED INTERSECTION LEVEL OF SERVICE CRITERIA

Average Stopped Delay Per Vehicle (seconds)	Level of Service (LOS) Characteristics
<10.0	*LOS A* describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
10.1 – 20.0	*LOS B* describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
20.1 – 35.0	*LOS C* describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
35.1 – 55.0	*LOS D* describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.
55.1 – 80.0	*LOS E* is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences.
>80.0	*LOS F* describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the LOS D capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.

Source: Highway Capacity Manual 2000, TRB Special Report 209.

TABLE 4-7: UNSIGNALIZED INTERSECTION LEVEL OF SERVICE CRITERIA

Average Control Delay (sec/veh)	Level of Service (LOS)
≤10	A
>10 and ≤15	B
>15 and ≤25	C
>25 and ≤35	D
>35 and ≤50	E
>50	F

Source: Highway Capacity Manual 2000, TRB Special Report 209.

TRANSIT

The transit LOS is based on a combination of the access experience, the waiting experience, and the ride experience. The access experience is represented by the pedestrian LOS score (to be discussed later in this section) for pedestrian access to bus stops in the direction of travel along the street. The waiting and riding experiences are combined into a transit wait/ride score. The transit wait/ride score is a function of the average headway between transit vehicles and the perceived travel time.

The following six variables are used to determine the transit LOS:

- Frequency of service
- Mean speed
- Reliability of service
- Load factors
- Quality of pedestrian access to transit stops
- Transit stop amenities

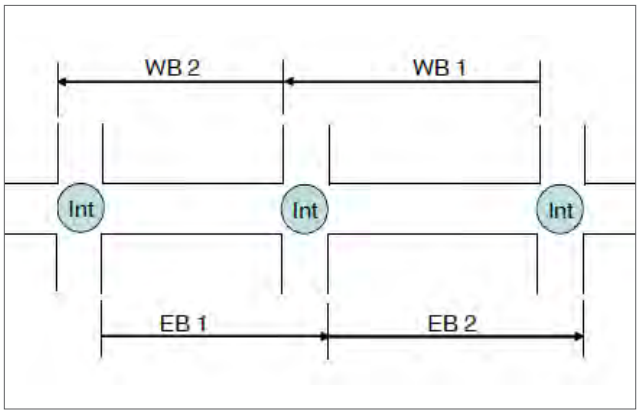
The computerized analysis of the transit LOS was performed utilizing the Complete Streets LOS, A Multimodal Level of Service Toolkit, Version 3 analysis software developed by Dowling Associates, Inc. This software outputs numerical ratings of the mode of travel, and these rating are then converted into the traditional A through F letter grade system. Complete Streets LOS (CSLOS) uses methodologies outlined in the 2010 Highway Capacity Manual (HCM) to simultaneously determine the LOS for each of the four primary modes along a street: auto, transit, pedestrian, and bicycle. Table 4-8 displays the LOS letter grade numerical equivalents for pedestrian, bicycle and transit facilities.

TABLE 4-8 LOS LETTER GRADE NUMERICAL EQUIVALENTS

LOS Model Outputs	LOS Letter Grade
Model $\leq$ 2.00	A
2.00 < Model $\leq$ 2.75	B
2.75 < Model $\leq$ 3.50	C
3.50 < Model $\leq$ 4.25	D
4.25 < Model $\leq$ 5.00	E
Model > 5.00	F

Source: Transportation Research Board NCHRP Project 3-70.

Transit, bicycle, and pedestrian LOS analysis were performed for Euclid Avenue. The corridor was divided into analysis segments, with each segment consisting of a length of street (link) plus the downstream intersection at the end of the link. An intersection is any point on the street where through traffic is subject to signal control, stop-sign control, or yield-sign control. In the case of transit analysis, a segment included one or two transit stops.



BICYCLE

The bicycle LOS is a weighted combination of the bicyclists' experiences at intersections and on street links in between the intersections. Bicycle LOS is a function of the following five variables:

- Lateral separation between bicycles and vehicular traffic
- Speed and makeup of the vehicular traffic
- Pavement conditions
- Directional vehicular traffic volumes
- Intersection crossing distance

The computerized analysis of the bicycle LOS was performed utilizing the Complete Streets LOS, A Multimodal Level of Service Toolkit, Version 3 analysis software developed by Dowling Associates, Inc.

PEDESTRIAN

The pedestrian LOS is a measure of the pedestrians' experiences walking along the roadway/sidewalk on the street segment in between the intersections. Pedestrian LOS is a function of the following number of variables:

- Lateral separation between pedestrians and vehicular traffic
- Width of sidewalk
- Speed and makeup of the vehicular traffic
- Difficulty of crossing arterial
- Directional vehicular traffic volumes
- Right-turn on red
- Left-turn during "Walk" phase
- Delay waiting to cross at signal
- Intersection crossing distance
- Cross-street vehicular traffic volume and speed
- Pedestrian density

The computerized analysis of the pedestrian LOS was performed utilizing the Complete Streets LOS, A Multimodal Level of Service Toolkit, Version 3 analysis software developed by Dowling Associates, Inc.

LEVEL OF SERVICE EVALUATION

Level of service was analyzed for each mode of travel under existing conditions and the findings are documented below.

ROADWAY LEVEL OF SERVICE

Table 4-9 displays the LOS analysis results for key Project Area roadway segments under existing conditions. As shown in the table, half of the roadway segments are currently operating at acceptable LOS C, while the other half are operating at an unacceptable LOS E. This is primarily due to the change in the cross section and the corresponding LOS D threshold along this portion of the corridor.

INTERSECTION LEVEL OF SERVICE

Table 4-10 displays intersection LOS and average vehicle delay results for the key intersections under existing conditions. As shown in the table, all of the study intersections are currently operating at acceptable LOS D or better, which is consistent with what was observed out in the field. However, during fieldwork it was observed that minor queuing does occur for vehicles traveling through southbound and making a left westbound at the Euclid and Market intersection when an Orange Line trolley traverses through the at-grade crossing located south of the intersection during the afternoon peak. Figure 4-11 displays the existing LOS for both the Project Area roadway segments and intersections.

TRANSIT LEVEL OF SERVICE

Table 4-11 and Figure 4-12 each display transit LOS in the Project Area under existing conditions during the AM and PM peak hours. As shown, Euclid Avenue segments reporting a transit LOS F is primarily caused by the lack of a bus stop facility within the particular segment direction. The CSLOS program used to calculate the transit LOS, incorporates bus stop information within a segment to estimate the transit LOS. For segments that provide bus stop facilities to transit patrons, the methodology calculates a generally fair to good transit service (LOS D or better). Table 4-12 and Figure 4-13 each display transit LOS in the Project Area under existing conditions during the PM peak hour. As shown, Euclid Avenue segments reporting a transit LOS F is primarily caused by the lack of a bus stop facility within the particular segment direction. For segments that provide bus stop facilities to transit patrons, these transit patrons will experience generally fair transit service (LOS D or better) along Euclid Avenue in both directions during the PM peak hour. Based on field observations, transit vehicles experience limited delay and patrons have good access to existing transit stops during both peak hours.

Table 4-9: EXISTING ROADWAY SEGMENT LOS RESULTS

Euclid Ave Roadway Segment	*Cross-Section*	*Average Daily Traffic (ADT)*	*LOS D Threshold*	*LOS*
Federal Avenue to SR-94 WB Ramps	4-Ln	33,760	35,000	C
SR-94 WB Ramps to SR-94 EB Ramps	4-Ln w/ raised median	28,950	35,000	C
SR-94 EB Ramps to Hilltop Drive	4-Ln	27,410	35,000	C
Hilltop Drive to Lise Avenue	4-Ln w/ Center lane	25,485	25,000	**E**[1]
Lise Avenue to Guymon Street	4-Ln w/ Center lane	26,156	25,000	**E**[1]
Guymon Street to Market Street	4-Ln w/ Center lane	26,198	25,000	**E**[1]

1. Bold letter indicates unacceptable LOS E or F.
Source: Fehr & Peer, April 2013.

Table 4-10: EXISTING INTERSECTION LOS RESULTS

Intersection	AM Peak Hour		PM Peak Hour	
	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1. Euclid Avenue & SR-94 WB Ramps [1]	0.0	N/A	0.0	N/A
2. Euclid Avenue & SR-94 EB Ramps	6.1	A	7.7	A
3. Euclid Avenue & Hilltop Drive	8.5	A	8.4	A
4. Euclid Avenue & Lise Avenue [2]	18.8	C	27.7	D
5. Euclid Avenue & Guymon Street	8.3	A	9.5	A
6. Euclid Avenue & Market Street	30.9	C	32.0	C

1. All movements are not controlled (i.e., are free movements). Therefore, no intersection analysis was conducted since no conflicting movements are present.
2. For side-street stop controlled intersections, the delay shown is the worst delay experienced by any of the approaches.

Table 4-11: EXISTING TRANSIT AM PEAK HOUR LOS RESULTS

Euclid Avenue Segment	Northbound		Southbound	
	LOS Score	Transit LOS	LOS Score	Transit LOS
Federal Avenue to SR-94 WB Ramps	6.31	**F**[1]	2.92	C
SR-94 WB Ramps to SR-94 EB Ramps	6.40	**F**[1]	6.46	**F**[1]
SR-94 EB Ramps to Hilltop Drive	6.41	**F**[1]	2.53	B
Hilltop Drive to Lise Avenue	3.10	C	6.42	**F**[1]
Lise Avenue to Guymon Street	6.45	**F**[1]	3.02	C
Guymon Street to Market Street	2.67	B	6.39	**F**[1]

1. Bold letter indicates unacceptable LOS E or F. The poor operating level is primarily a result of a lack of a bus stop on this segment.

Source: Fehr & Peers, April 2013.

Table 4-12: EXISTING TRANSIT PM PEAK HOUR LOS RESULTS

Euclid Avenue Segment	Northbound		Southbound	
	LOS Score	Transit LOS	LOS Score	Transit LOS
Federal Avenue to SR-94 WB Ramps	6.31	**F**[1]	3.09	C
SR-94 WB Ramps to SR-94 EB Ramps	6.44	**F**[1]	6.50	**F**[1]
SR-94 EB Ramps to Hilltop Drive	6.39	**F**[1]	3.04	C
Hilltop Drive to Lise Avenue	3.11	C	6.51	**F**[1]
Lise Avenue to Guymon Street	6.45	**F**[1]	3.29	C
Guymon Street to Market Street	2.74	B	6.44	**F**[1]

1. Bold letter indicates unacceptable LOS E or F. The poor operating level is primarily a result of a lack of a bus stop on this segment.

Source: Fehr & Peers, April 2013.

Figure 4-11: Existing Roadway and Intersection LOS Euclid Ave

April 2013

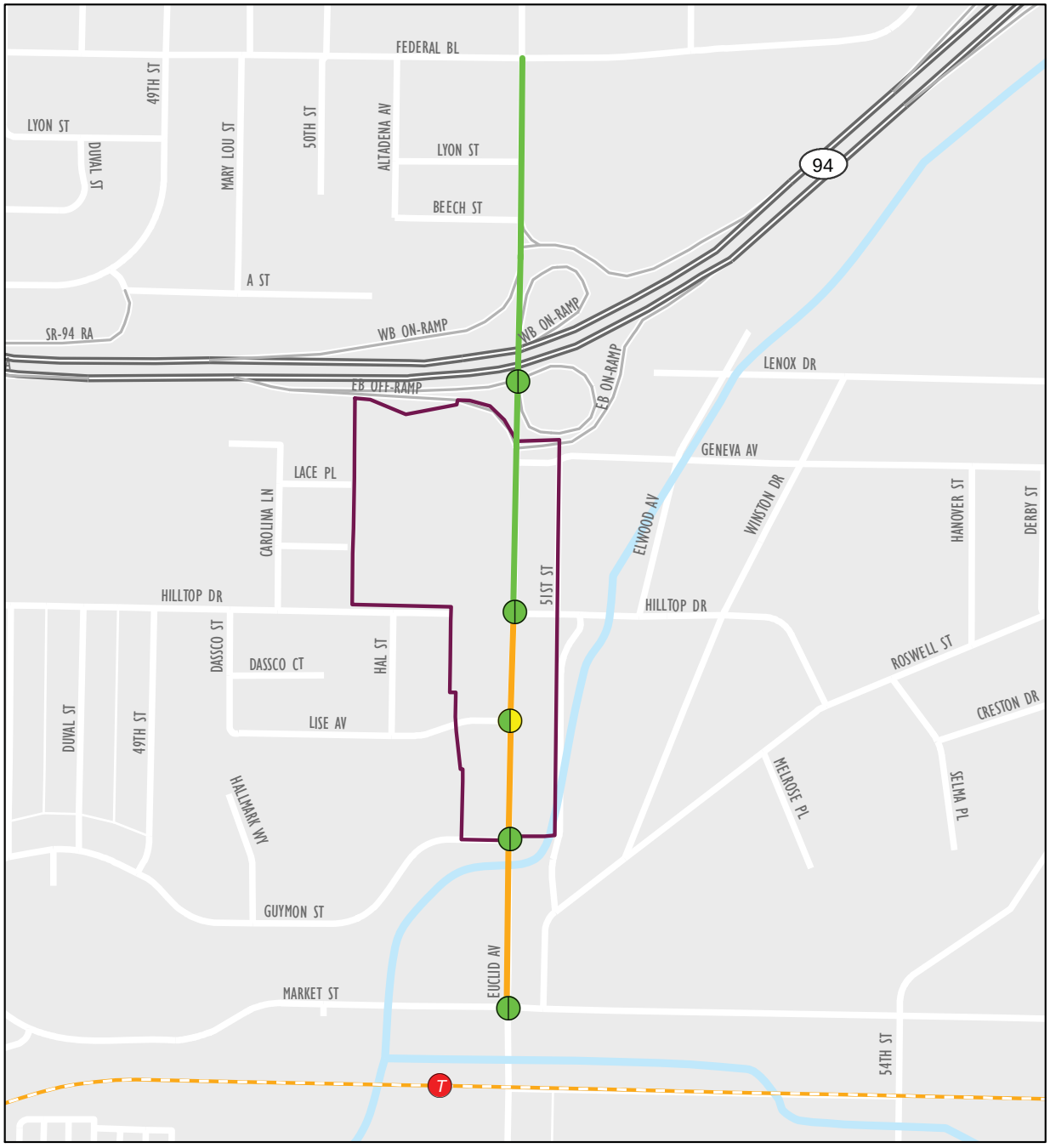


Figure 4-12: Existing Transit LOS (AM Peak) Euclid Ave

April 2013

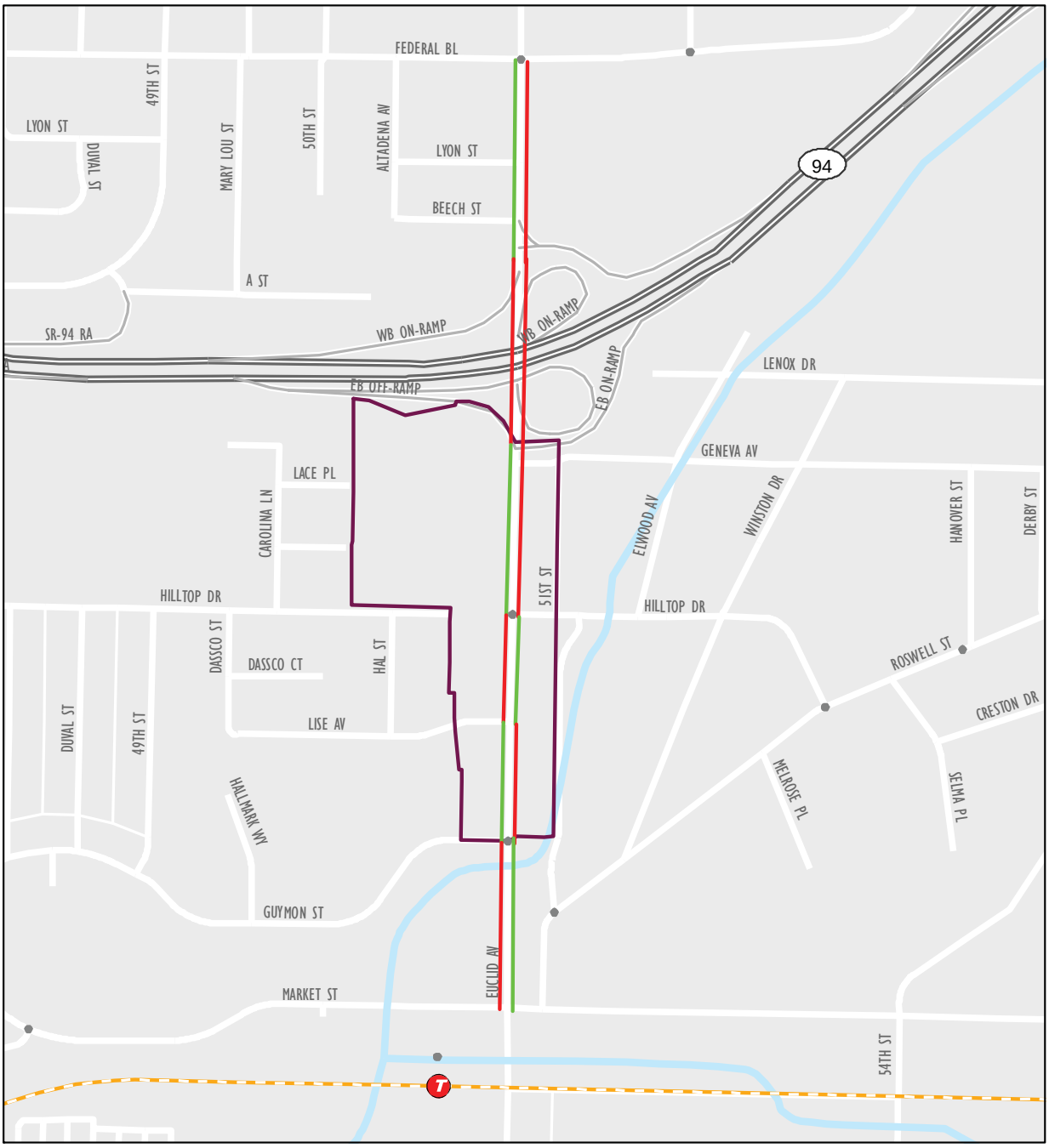
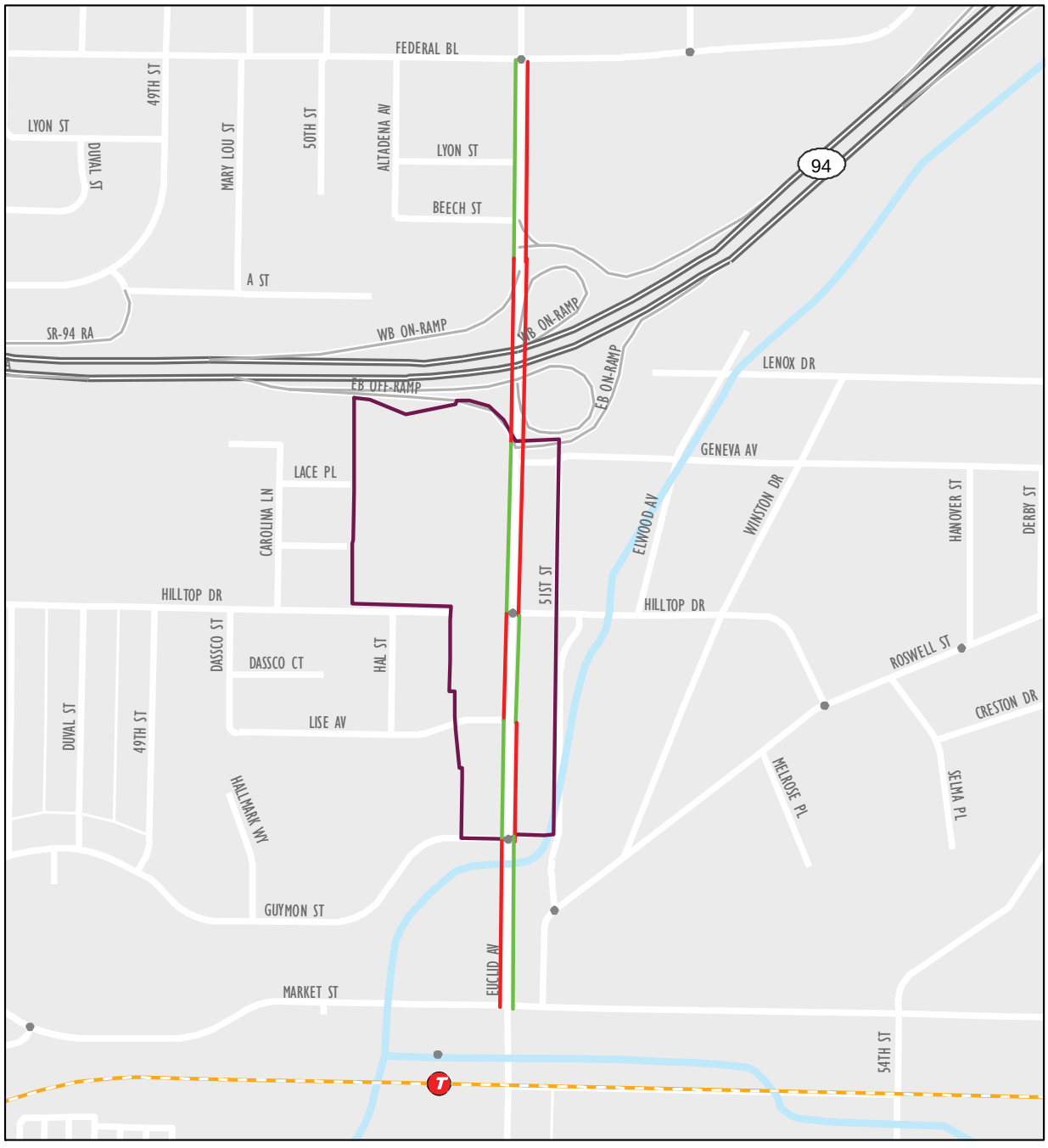


Figure 4-13: Existing Transit LOS (PM Peak) Euclid Ave

April 2013



BICYCLE LEVEL OF SERVICE

Table 4-13 displays existing Bicycle LOS during the AM peak hour. Bicyclists experience fair Levels of Service (C or D) when riding on Euclid Avenue, according to the CSLOS calculations. Bicyclists traveling northbound, between Hilltop Drive and SR-94 EB Ramps, and southbound, between Federal Avenue and SR-94 Ramps, experience poor cycling conditions (LOS E) due to the lack of designated bicycle facilities, lack of separation from traveling vehicles, relatively high vehicular traffic, uncontrolled intersection operations at the freeway ramps, and inadequate pavement conditions. In addition, on-street parking between Hilltop and the SR-94 EB ramps has also contributed to low LOS at this segment.

Table 4-14 displays existing Bicycle LOS during the PM peak hour. Bicyclists often experience fair Levels of Service (C or D) when riding on segments during this time. Bicyclists traveling northbound between Hilltop Drive and SR-94 EB Ramps and bicyclists traveling southbound along Euclid Avenue between Federal Avenue and SR-94 Ramps experience poor cycling conditions (LOS E) due to the lack of designated bicycle facilities, lack of separation from traveling vehicles, relatively high vehicular traffic, uncontrolled intersection operations at the freeway ramps, and inadequate pavement conditions. Figures 4-14 and 4-15 illustrates both the Bicycle LOS for the Master Plan corridors.

Table 4-13: EXISTING BICYCLE AM PEAK HOUR LOS RESULTS

Euclid Avenue Segment	*Northbound*		*Southbound*	
	LOS Score	*Bicycle Segment LOS*	*LOS Score*	*Bicycle Segment LOS*
Federal Avenue to SR-94 WB Ramps	3.88	D	4.50	**E**[1]
SR-94 WB Ramps to SR-94 EB Ramps	3.50	C	3.52	D
SR-94 EB Ramps to Hilltop Drive	4.76	**E**[1]	3.35	C
Hilltop Drive to Lise Avenue	3.89	D	3.24	C
Lise Avenue to Guymon Street	3.27	C	3.22	C
Guymon Street to Market Street	3.42	C	3.70	D

1. Bold letter indicates unacceptable LOS E or F.

Table 4-14: EXISTING BICYCLE PM PEAK HOUR LOS RESULTS

Euclid Avenue Segment	*Northbound*		*Southbound*	
	LOS Score	*Bicycle Segment LOS*	*LOS Score*	*Bicycle Segment LOS*
Federal Avenue to SR-94 WB Ramps	3.88	D	4.52	**E**[1]
SR-94 WB Ramps to SR-94 EB Ramps	3.52	D	3.54	D
SR-94 EB Ramps to Hilltop Drive	4.78	**E**[1]	3.41	C
Hilltop Drive to Lise Avenue	3.87	D	3.29	C
Lise Avenue to Guymon Street	3.48	C	3.86	D
Guymon Street to Market Street	3.43	C	3.76	D

1. Bold letter indicates unacceptable LOS E or F.

Source: Fehr & Peers, April 2013.

Figure 4-14: Existing Bicycle LOS (AM Peak)
Euclid Ave

April 2013

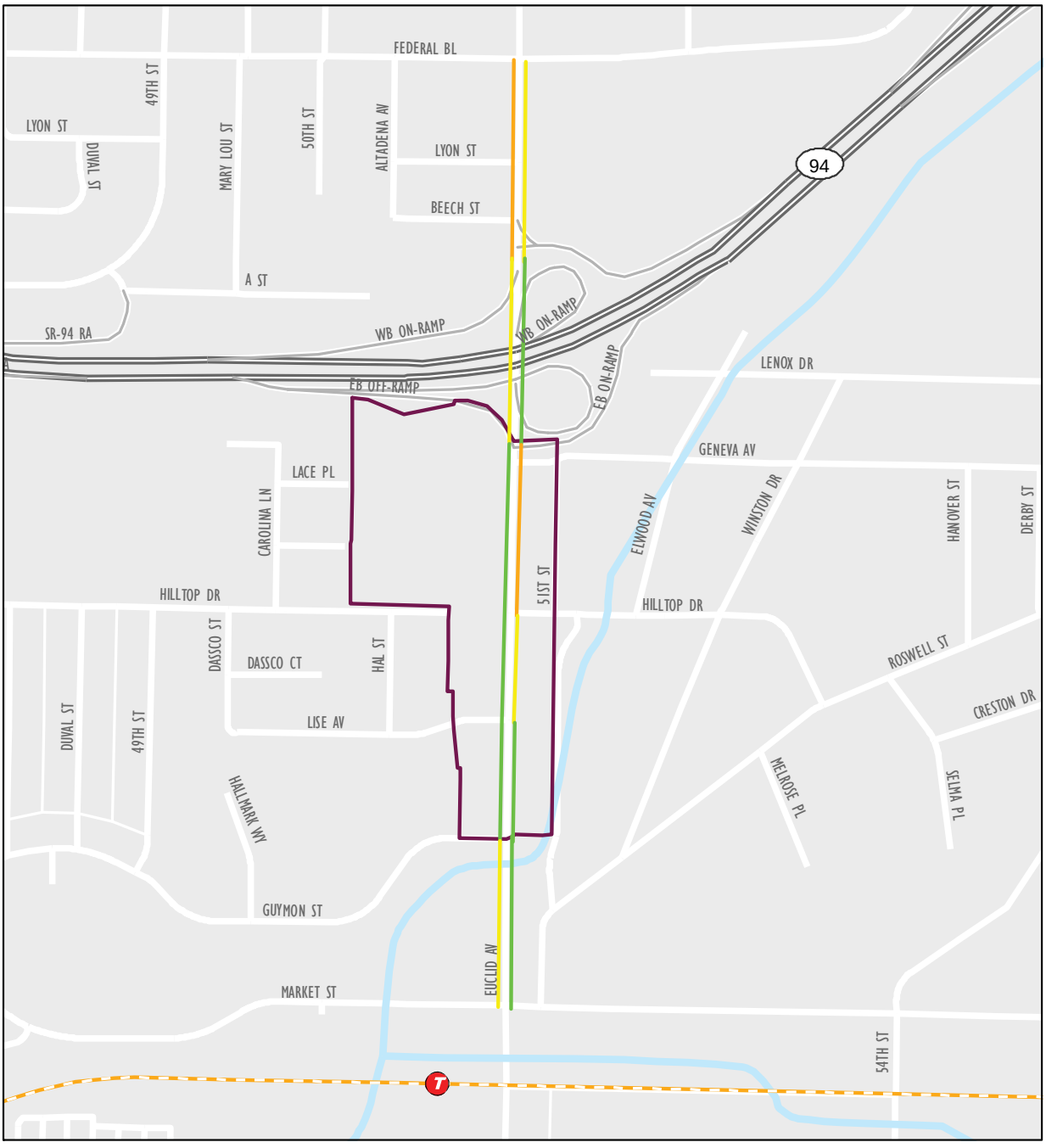
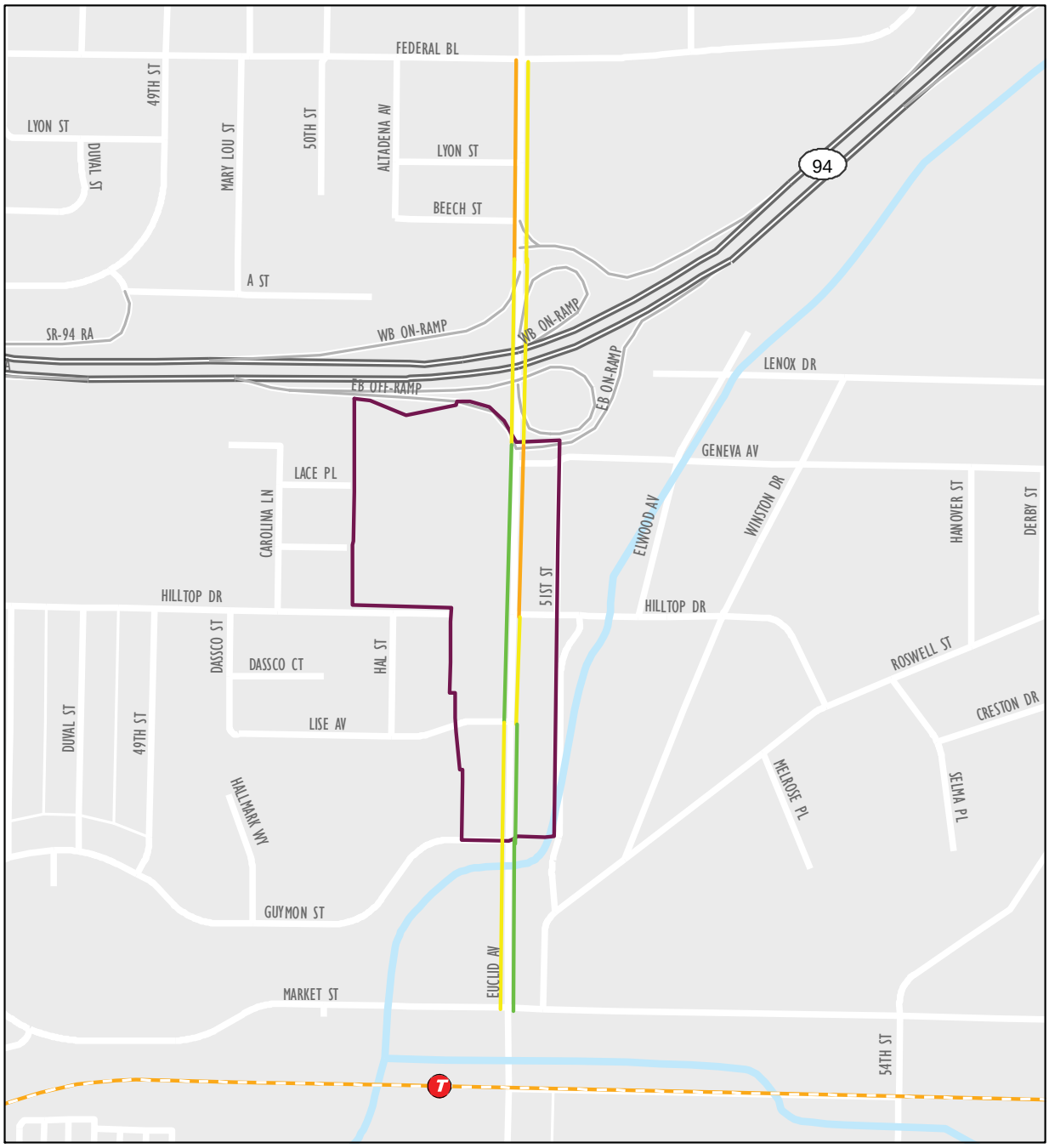


Figure 4-15: Existing Bicycle LOS (PM Peak) Euclid Ave

April 2013



Bicycle Level of Service
- A - C
- D
- E
- F

- Project Area
- Trolley Station
- Orange Line Trolley

FEHR & PEERS

N

0 0.03 0.06 0.12 Miles

Source:
City of San Diego (2012)

PEDESTRIAN LEVEL OF SERVICE

Table 4-15 displays existing Pedestrian Segment LOS in the Project Area during the AM peak hour. Figure 4-16 illustrates the Pedestrian Segment LOS for the Master Plan corridor.

As shown in Table 4-15, pedestrians experience good levels of service (LOS C or better) when walking along both directions of Euclid Avenue during the AM peak hour. The good levels of service along the corridor is a reflection of the corridor generally providing a sidewalk of approximately five feet wide and an eight feet buffer of on-street parking between the sidewalk and roadway traffic.

Table 4-16 displays existing Pedestrian Segment LOS in the Project Area during the PM peak hour. Figure 4-17 illustrates the Pedestrian Segment LOS for the Master Plan corridor. As shown in Table 4-16, pedestrians experience good levels of service (LOS C or better) when walking along both directions of Euclid Avenue during the PM peak hour. The good levels of service along the corridor is a reflection of the corridor generally providing a sidewalk of approximately five feet wide and an eight feet buffer of on-street parking between the sidewalk and roadway traffic.

Table 4-15: EXISTING PEDESTRIAN SEGMENT AM PEAK HOUR LOS RESULTS

Euclid Avenue Segment	*Northbound*		*Southbound*	
	LOS Score	*Pedestrian LOS*	*LOS Score*	*Pedestrian LOS*
Federal Avenue to SR-94 WB Ramps	3.38	C	3.05	C
SR-94 WB Ramps to SR-94 EB Ramps	2.95	C	3.10	C
SR-94 EB Ramps to Hilltop Drive	2.97	C	2.38	B
Hilltop Drive to Lise Avenue	2.42	B	3.00	C
Lise Avenue to Guymon Street	3.08	C	2.35	B
Guymon Street to Market Street	2.40	B	3.33	C

1. Bold letter indicates unacceptable LOS E or F.

Source: Fehr & Peers, April 2013.

Table 4-16: EXISTING PEDESTRIAN SEGMENT PM PEAK HOUR LOS RESULTS

Euclid Avenue Segment	*Northbound*		*Southbound*	
	LOS Score	*Pedestrian LOS*	*LOS Score*	*Pedestrian LOS*
Federal Avenue to SR-94 WB Ramps	3.38	C	3.14	C
SR-94 WB Ramps to SR-94 EB Ramps	3.04	C	3.19	C
SR-94 EB Ramps to Hilltop Drive	2.93	C	2.51	B
Hilltop Drive to Lise Avenue	2.45	B	3.23	C
Lise Avenue to Guymon Street	3.08	C	2.67	B
Guymon Street to Market Street	2.60	B	3.44	C

1. Bold letter indicates unacceptable LOS E or F.

Source: Fehr & Peers, April 2013.

Figure 4-16: Existing Pedestrian LOS (AM Peak) Euclid Ave

April 2013

Pedestrian Level of Service
- A - C
- D
- E
- F

- Project Area
- Trolley Station
- Orange Line Trolley

FEHR & PEERS

N

0 0.03 0.06 0.12 Miles

Source:
City of San Diego (2012)

Figure 4-17: Existing Pedestrian LOS (PM Peak) Euclid Ave

April 2013

Pedestrian Level of Service
- A - C
- D
- E
- F

- Project Area
- Trolley Station
- Orange Line Trolley

FEHR & PEERS

N

0 0.03 0.06 0.12 Miles

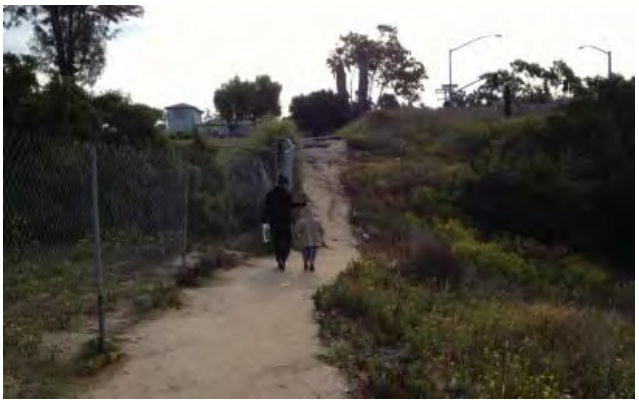
Source:
City of San Diego (2012)

APPENDIX 5: SITE IMAGES

View south on Euclid Avenue just north of the SR-94 overpass

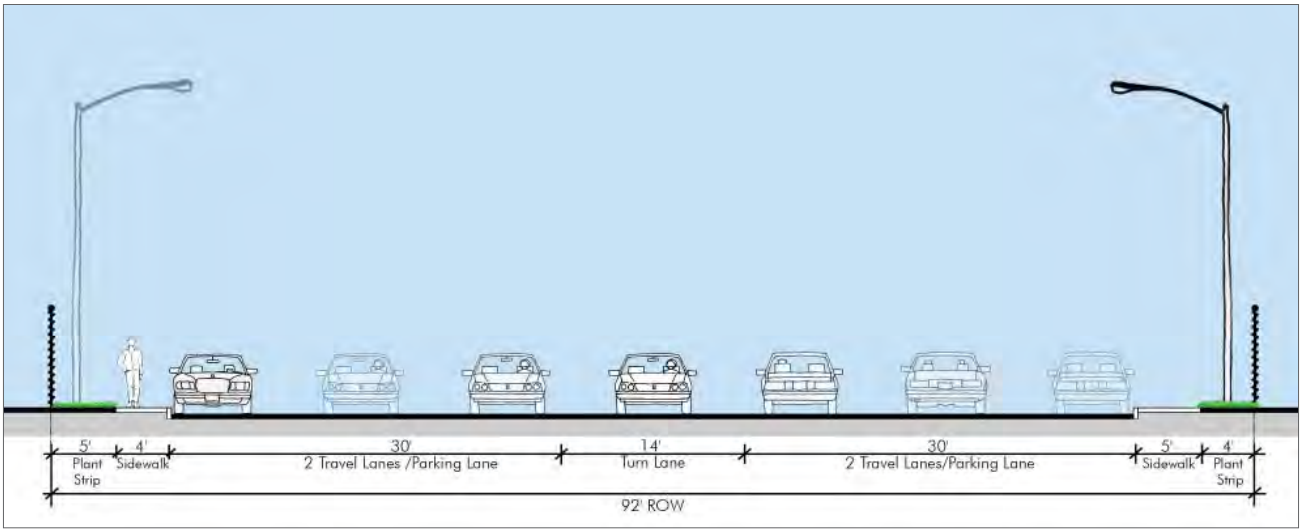
Pedestrians crossing at the intersection of Euclid Avenue and Hilltop Drive

Vacant "Hilltop parcel" west of Euclid Avenue presents a development opportunity for compatibility with nearby transit



Pedestrians frequently walk along the south edge of the "Hilltop parcel" to access schools and Gompers Park just to the west of the corridor

APPENDIX 6: STREET SECTION - EXISTING CONDITIONS



Prototypical Section for Euclid Avenue: Existing Condition