



EAST SUNNYVALE AREA SENSE OF PLACE PLAN

Circulation and Neighborhood Beautification
Improvements

November 2015



Planning Division
Community Development Department
City of Sunnyvale
(408) 730-7444

Engineering Division
Department of Public Works
City of Sunnyvale
(408) 730-7415

P.O. Box 3707
Sunnyvale CA 94088-3707

ACKNOWLEDGEMENTS

City Council

Jim Griffith, Mayor
Tara Martin-Milius, Vice Mayor
David Whittum
Pat Meyering
Jim Davis
Glenn Hendricks
Gustav Larsson

Planning Commission

Russell Melton, Chair
Ken Olevson, Vice Chair
Ralph Durham
Sue Harrison
Ken Rheaume
David Simons
Larry Klein

Consultant

Brian Fletcher, Callander Associates
Sarah Peters, Fehr & Peers
Frank Fuller, Field Paoli Architects

City Staff

Manuel Pineda, Director of Public Works
Hanson Hom, Director of Community Development
Trudi Ryan, Planning Officer
Ryan Kuchenig, Senior Planner
Gerri Caruso, Principal Planner
Carol Shariat, Principal Transportation Engineer

Bicycle and Pedestrian Advisory Committee

Kevin Jackson, Vice Chair
John Cordes
David Jones
Richard Kolber
Margaret Okuzumi
Angela Rausch
Kyle Welch



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Chapter I INTRODUCTION

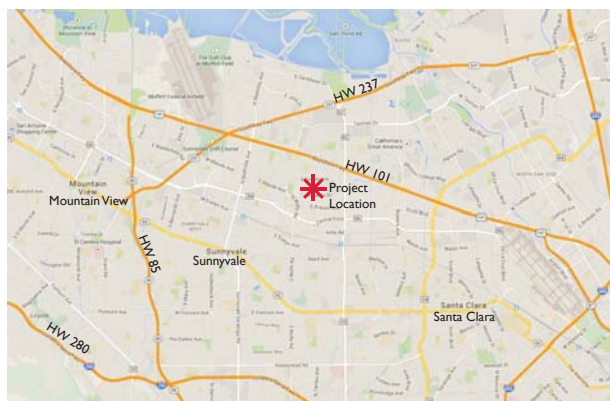


Figure 1: Context Map

Location

The project is located in East Sunnyvale. The study area is bounded by East Duane Avenue on the north and east, Stewart Drive on the south, and North Wolfe Road, Fair Oaks Park, and the Kings Academy School on the west. The Fair Oaks Junction Area Sense of Place Plan lies to the southwest of East Sunnyvale. Figure 2 illustrates the study area boundary.

Background

In 2006 the City was approached by developers who were interested in converting industrial land to residential uses, similar to that approved by the City in the 1993 Futures Study. In response to the application, the City considered a General Plan amendment to designate a new area with the Industrial-to-Residential (ITR) combining district. The City then re-zoned approximately 64 acres of the study area to ITR. Figures 3 and 4 display the existing zoning, land uses and development patterns in the area. Figure 5 displays selected photos of the site.

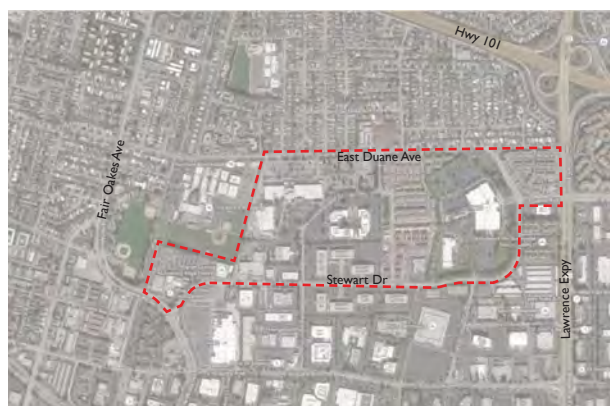


Figure 2: Study Area Boundary

By 2014, three residential developments (37 Degrees North, Fusion, and Stewart Village Apartments) had been designed and constructed. Due to the past industrial use, the area is heavily oriented towards vehicular circulation with: missing sidewalks, roadway-scale lighting, and bike lanes shared with the gutter pan. Figures 7 and 8 identify key pedestrian destinations within the plan area, as well as important pedestrian routes. Pedestrian destinations in the area include Fair Oaks Park, Swegles Park, several schools, existing commercial sites, and connections to the future East Channel Trail.

In 2010, owners at 920 De Guigne and 915 De Guigne approached the City about the potential transition of their two parcels from industrial to residential uses. The owners submitted a General Plan Amendment Initiation, but by 2014, both owners had sold their properties and the

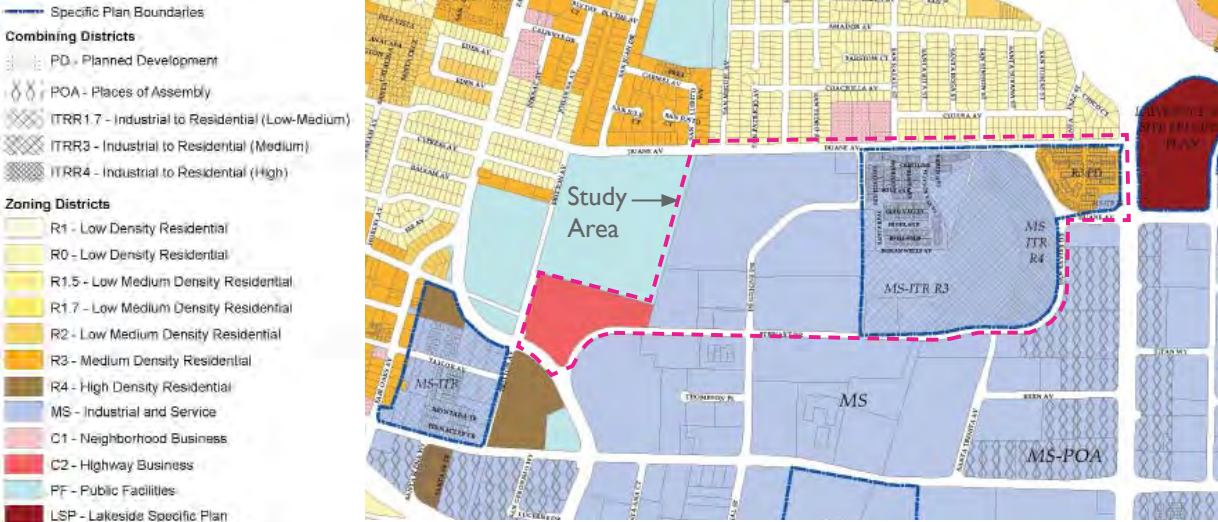


Figure 3: Zoning Map 2015

original General Plan Amendment was closed. With interest by the 915 De Guigne owner to continue with the development of the parcel, the City Council in 2014 asked staff to study the area and develop this Sense of Place Plan to provide a roadmap for future improvements that would better support use as a vibrant residential neighborhood.

Existing Conditions

The study area is bounded by Wolfe Road and N. Britton Avenue to the west, which is a Class I Arterial. E. Duane Avenue (to the north), De Guigne Drive, (through the middle) and Stewart Drive (to the south) are all commercial collector roads. Lawrence Expressway (to the east) is a County expressway.

A mature single family residential neighborhood lies to the north and west, with a predominantly industrial neighborhood to the south and east. The area is transitioning from industrial to residential uses.

About 600 residential units have already been constructed, with an additional 450+ units proposed in 2014 at the Watt Investments parcel. The area could support up 1,600 units. Prior industrial uses have left gaps in pedestrian facilities, with lack of sidewalks on several

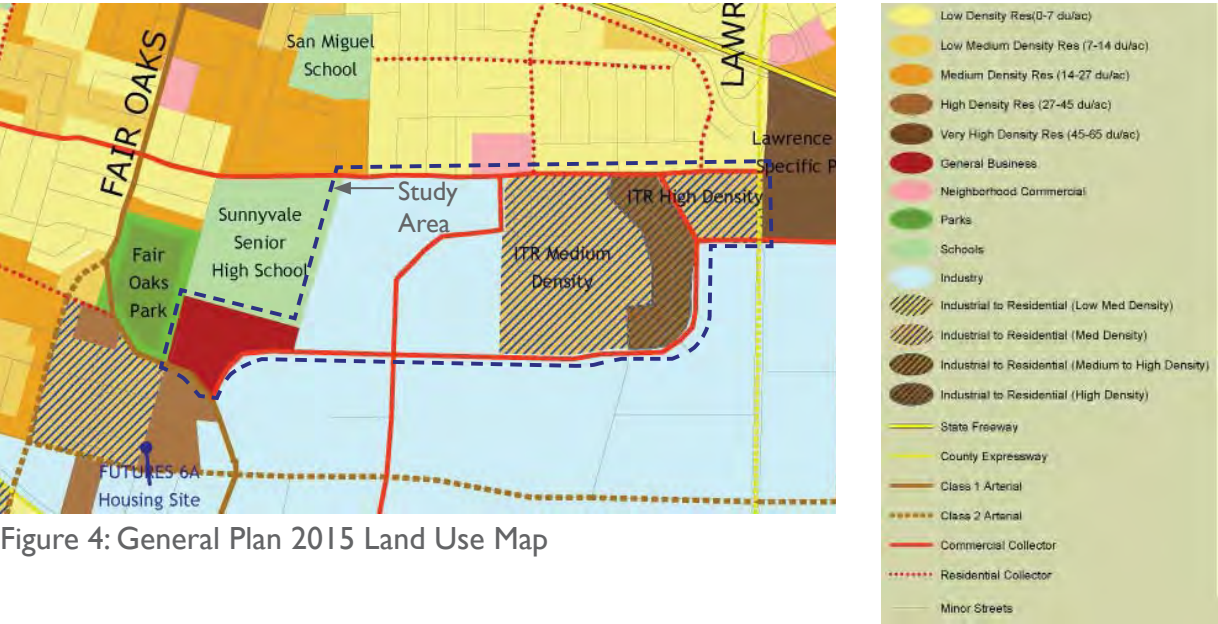


Figure 4: General Plan 2015 Land Use Map

E. Duane Ct.



Neighborhood has a mix of older and newer developments and lacks a cohesive character.

De Guigne Drive



Generally 5' wide sidewalks. Some areas near office parks are missing sidewalks.

E. Duane Ave.



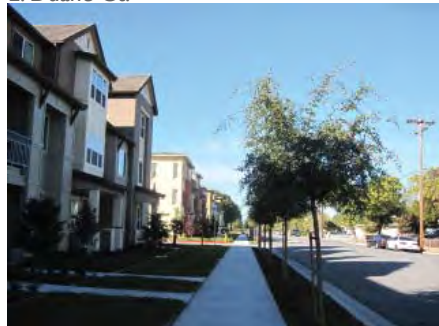
Lack of marked north-south crossings of Duane Avenue within project limits impede school access.

N. Wolfe Rd.



Off-street bike path is unobtrusively marked.

E. Duane Ct.



Sidewalks have landscape buffer or tree well between traffic and pedestrians, except for sidewalks along industrial parcels and plan area perimeter.

De Guigne Drive



Most streets have dedicated bike lanes, but lanes are frequently narrow or shared with gutter.

E. Duane Ave.



Underutilized public space may provide opportunity for street activation.

E. Duane Ave.



Many stops lack amenities such as benches or shelters.

E. Duane Ct.



Some intersections lack curb ramps. Curbs are often located in the middle of the corner. Some curbs lack associated crosswalk.

De Guigne Drive



Some sidewalk identity is lost when driveways are paved with asphalt and not concrete.

Stewart Drive



Large intersections, large turning radii, and presence of 'pork chop islands' require long crossing distances, which increases pedestrian exposure.

Figure 5: Site Photos

industrial parcels, missing or non-ADA compliant crosswalks, and varying conditions where sidewalks do exist. Some have landscape buffer strips, some have tree wells in pavement, and some lack a landscape strip.

The area is served by VTA bus line 55 and the Duane/ACE shuttle line on Stewart Drive. Existing bus amenities include a bus shelter and several benches on E. Duane Avenue.

The study area's northern limit on E. Duane is part of the school route to San Miguel Elementary, Columbia Middle, The Kings Academy, and Montessori schools.

Other Studies

The Fair Oaks Junction Sense of Place Plan was approved in 2012 and provides recommendations for the Futures Area 6, located immediately southwest of the study area. This East Sunnyvale Plan supplements those recommended in the Fair Oaks Junction Plan, which include development and connection to the East Channel Trail, a pedestrian activated signal across Wolfe Road at the Trail, and a proposed traffic signal at the intersection of Britton Avenue and E. Duane Avenue.

A road diet design was approved in 2014 for E. Duane Avenue to make room for bicycle lanes, as part of the outcome of the City's 2008 street space allocation policy. After a public outreach process and study of several alternatives, the City Council approved Alternative 3: reduce the existing 4 travel lanes to 2 automobile travel lanes, bike lanes with buffer in each direction, a center two-way left turn lane, on-street parking restriction on the south side of the street, and parking restrictions within 20 feet of a controlled intersection.

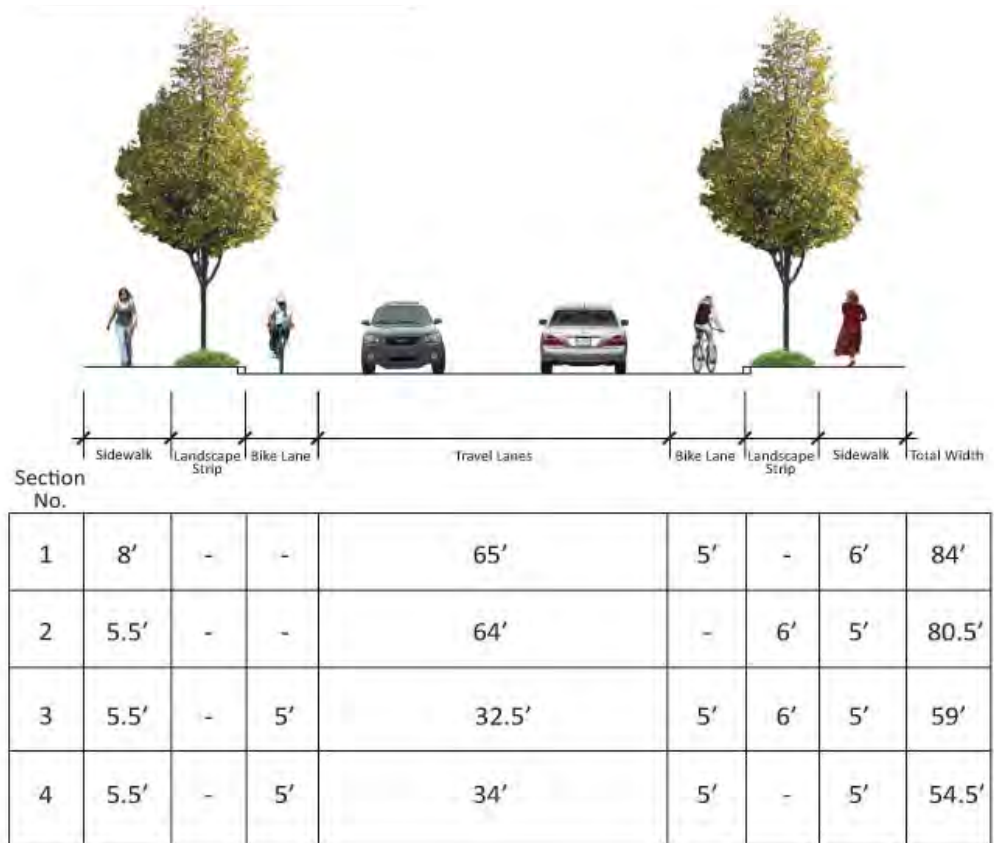


Figure 6: Existing Typical Sections (see page 6 and 7 for locations)

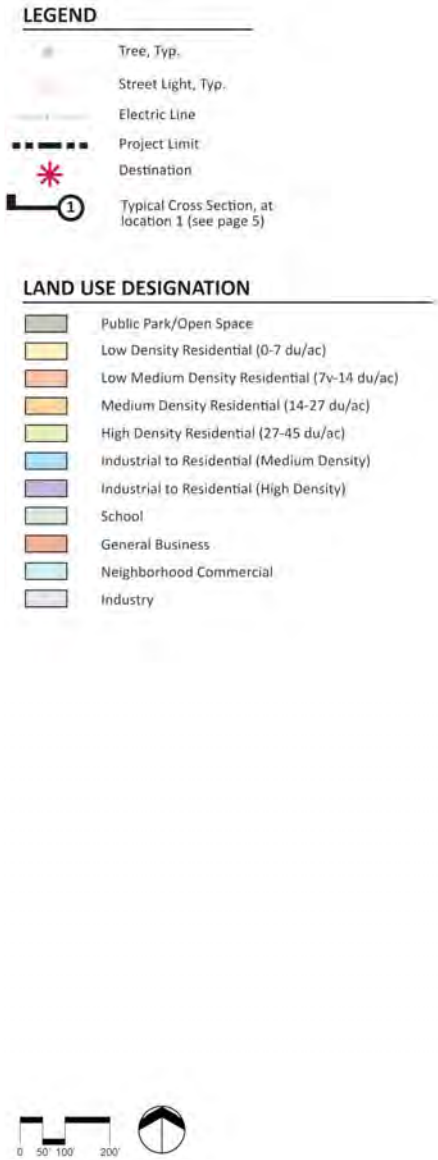


Figure 7: Existing Conditions Plan

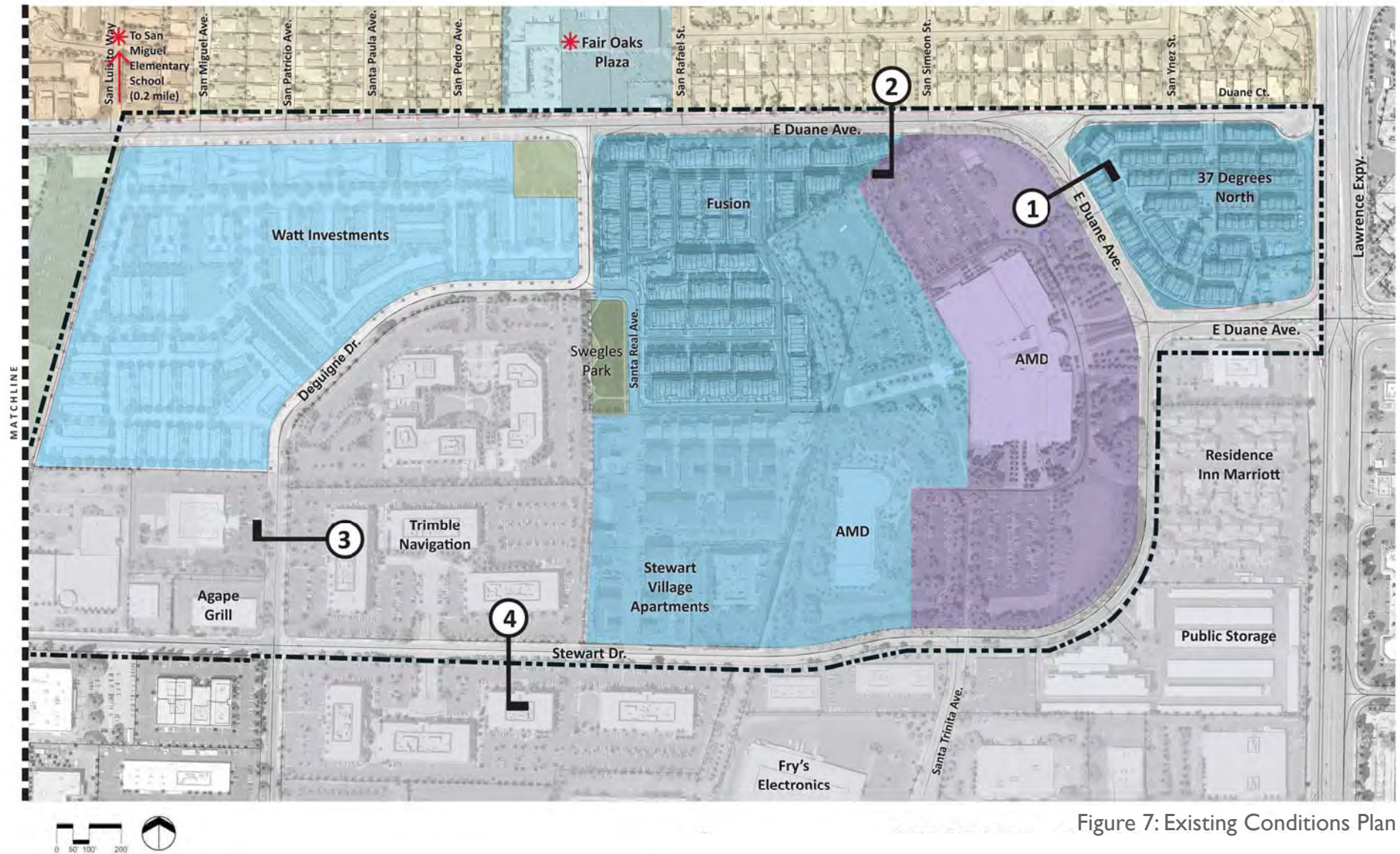


Figure 7: Existing Conditions Plan

- CIRCULATION LEGEND**
- Project Limit
 - Public Pedestrian Route
 - Private Pedestrian Route
 - Bicycle Path, 7'-6" Wide
 - Buffered Bicycle Lane
 - Bicycle Lanes
 - Bicycle Routes
 - Local Bus Routes
 - Duane Ave Shuttle
 - B Bus Stop without Bench
 - BB Bus Stop with Bench
 - BS Bus Stop with Shelter
 - R1 ADA Ramp
 - R2 Non-ADA Ramp
 - R3 No Ramp
 - Signal Controlled Intersection
 - S Stop Sign Controlled Intersection
 - Peak Hour Traffic (20 Vehicles, 15 Pedestrians and 5 Cyclists)
 - 35 Speed Limit



Figure 8: Existing Circulation Plan



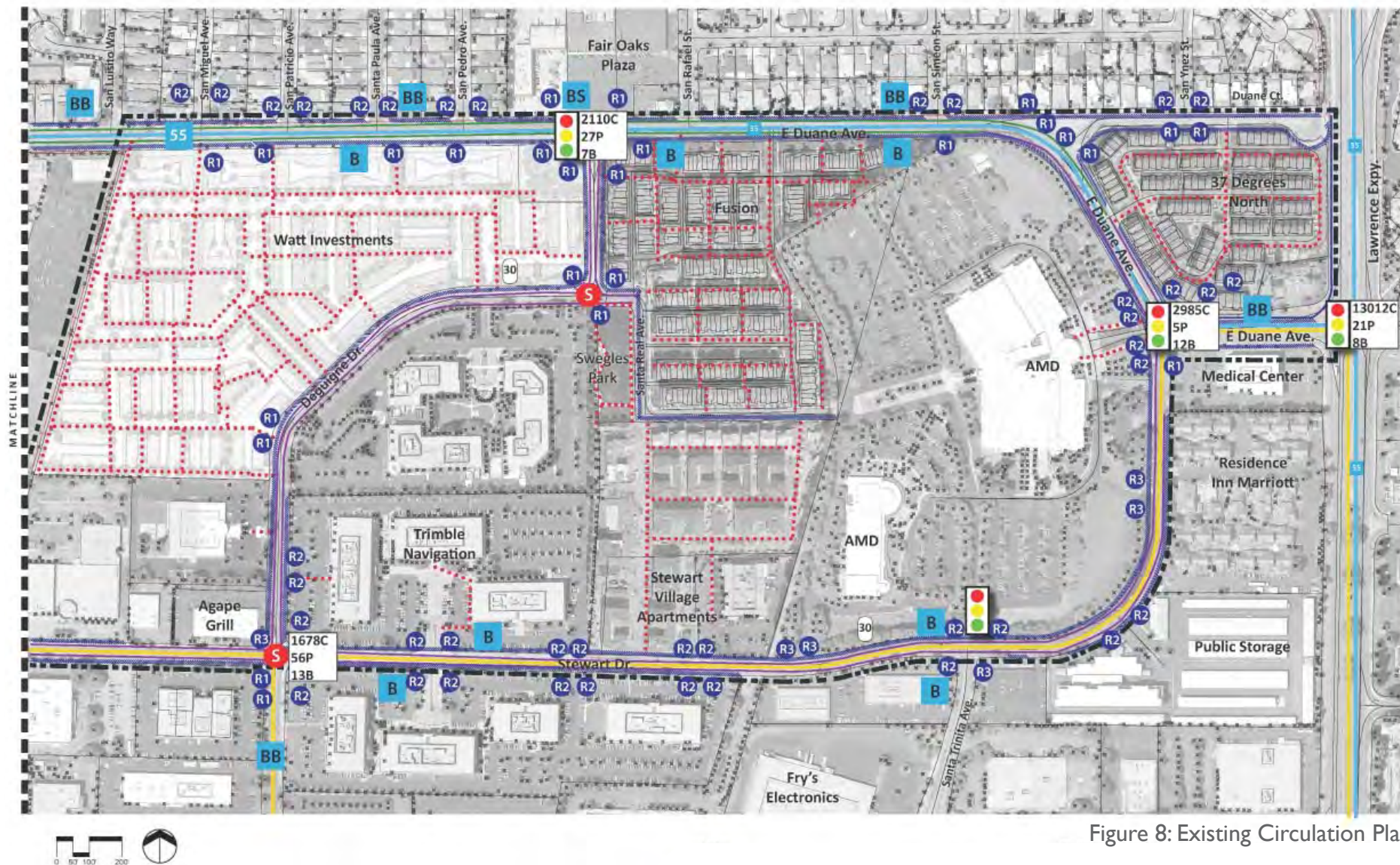


Figure 8: Existing Circulation Plan

Purpose

The purpose of this plan is to function as a policy document to ensure improvements to the area are implemented in accordance with the plan.

The specific goals of the Sense of Place Plan are to:

- Enhance the quality of life for existing and future residents by encouraging and supporting a vibrant streetlife through wayfinding signage, seating areas, access nodes, and the addition of destinations and neighborhood-scale amenities.
- Encourage non-vehicular modes of travel by making those options (pedestrian, bicycle, transit) more comfortable through circulation, landscaping, lighting, and streetscape improvements.
- Enhance the neighborhood character and identity by providing entry monuments to define the limits of the neighborhood, providing pedestrian-scale thematic lighting, and beautifying the streetscape through landscaped parkway strips.

Overview

The recommendations of this plan are organized into two main areas: circulation improvements and streetlife improvements. These improvements pertain primarily to the public right-of-way, although some recommendations for circulation and streetlife improvements affect site and building design and orientation. The plan also contains sections describing likely costs, potential funding sources, and methods for and timing of implementation.

This Plan does not contain any new City-wide policies. All proposed improvements and guidelines are pursuant to existing policies, which are discussed in Chapter IV.

Chapter II **GOALS AND OBJECTIVES**

Process

Project start-up activities began in October 2014 and included review of multiple City documents and a site visit to understand existing conditions. Documents that were reviewed included:

- City GIS information (aerial, street trees, street lights, parcel boundaries)
- collision data
- traffic counts for key intersections
- land use and zoning maps
- E. Duane Avenue road diet design plans
- school traffic study
- 915 DeGuigne development plans
- City design guidelines and zoning standards
- prior Sense of Place Plan reports for the Fair Oaks Junction and Tasman/Fair Oaks area

Opportunities and constraints presented by the site were evaluated and documented (see Figures 5, 7 and 8). Several meetings were held with City staff to review draft planning documents. A meeting with the 915 De Guigne owner was held to understand their design objectives and project history. Coordination with Santa Clara County Roads and Airport Department was conducted to review proposed improvements to the E. Duane Avenue/Lawrence Expressway intersection. Discussions with the Santa Clara Valley Transportation Authority (VTA) were held to review proposed improvements to the existing 55 bus line and stops.

A community workshop was held in November 2014 to solicit public input on what area residents wanted to see incorporated into the plan. Following a short overview of the project

background, goals, and process, the attendees broke out and viewed the four different discussion stations. The purpose of the stations was to understand what the public wanted the Sense of Place Plan to include, which types of improvements they wanted to see in the neighborhood, how they currently circulated through the site compared with how they wanted to travel, and how they ranked potential improvements in terms of priority.

Six members of the public attended the workshop and comments from an additional resident e-mailed to the City prior to the workshop. A more detailed summary of the public input is included in the Appendix. In general, residents had the following input in response to the stations:

- 1) **What is a Sense of Place Plan?** Residents were interested in seeing an increase in neighborhood destinations, such as food or retail.
- 2) **Where do you currently walk? Where do you want to walk?** Residents were concerned about traffic congestion on E. Duane Avenue (due to school traffic), a lack of on-street parking on E. Duane Avenue (due to the new residential developments), and improving pedestrian and bicycle safety. There was a general desire for better lighting and bicycle facilities.
- 3) **Select the inspiration image that reflects what you want to see in the neighborhood:** Residents liked the pedestrian countdown signals, buffered bicycle lanes, green-colored bicycle lanes, bike boxes, and a historic character.
- 4) **What are your priorities?** Residents were interested in biking more and eating out and shopping more.

Goals and Objectives

Based on the public input received, the following goals and objectives were established for the plan:

Pedestrian and Bicycle Circulation

- Complete gaps in facilities
- Increase walkability of the neighborhood
- Encourage bike and transit use
- Improve pedestrian safety and crossing ease on E. Duane Avenue
- Improve access to schools, parks and open space, as well as access to future retail/commercial sites
- Improve access between existing and future park sites

Streetlife Improvements

The term ‘streetlife’ in this document pertains to activation of the public street right-of-way through development of and addition to both the public and private spaces.

- Encourage addition of neighborhood destinations such as shops, cafes, and small, informal gathering areas.
- Encourage an exterior, public-street focus at private developments in lieu of developments that face the interior and are closed off to the surrounding neighborhood.
- Improve the comfort of pedestrians and bicyclists by improving lighting and the streetscape/sidewalk experience.
- Make public access corridors through private developments highly visible and clearly intuitive.

Vehicular Circulation

- Address perceived lack of parking
- Provide visual cues at neighborhood entries (particularly at Lawrence Expressway/E. Duane Avenue) of the change from high speed corridor to low speed neighborhood
- Identify new streets for future residential development (e.g. AMD site)

Transit Access

- Improve the comfort of riders by providing amenities at bus stops
- Complete gaps in bicycle facilities to improve bicycle access between the neighborhood and the Lawrence Caltrain station

NEIGHBORHOOD IMPROVEMENTS

Currently, the study area is occupied by industrial and residential uses. At the time the area was originally developed, the City did not foresee a demand for pedestrian access and therefore very little consideration was given to the development of pedestrian amenities. However, with the area designated for residential development and redevelopment occurring, pedestrian and bicycle needs are becoming more apparent. The study area has been designated primarily as a Medium Density Residential and High Density Residential district, although industrial and commercial sites are also part of the study area (De Guigne Drive and Stewart Drive west of De Guigne Drive). This residential component will allow up to 24 dwelling units (medium density) per acre and 36 dwelling units (high density) per acre. Potentially, an additional 5% density bonus through the city's green building incentive and additional 35% density through the state density bonus law is available over the maximum zoning (40% total). In addition, the southwest corner of De Guigne Drive and E. Duane Avenue has been designated for use as a future public park. The area is centrally located with nearby open space amenities, commercial/retail and places of assembly.

The improvements discussed in this section pertain to both pedestrian circulation and bicycle circulation, amenities such as lighting, street trees, and site furnishings, and facilities which will be provided through the City's development review and approval process. Through this process, the City ensures that residential and commercial developments comply with the VTA Bicycle Technical Guidelines. It should also be noted that all proposed public paths and trails are multi-use facilities for pedestrians and cyclists. In addition, City practice is to provide bicycle detection at traffic signals, maintenance of bikeways, bikeway-related signs, and other bike facilities.

The following improvements will be considered as parcels within the plan area develop and/or as funding becomes available to assure that the goals of increased pedestrian and bicycle activities and access to public transportation and other destinations are adequately met. City staff will seek funding for these improvements through the various funding opportunities (as applicable) described in Chapter V. Figure 18 indicates locations of the proposed improvements to the pedestrian and bicycle network. Figure 9 provides examples of the improvements. The proposed improvements will incorporate the techniques described below:

Circulation Strategies

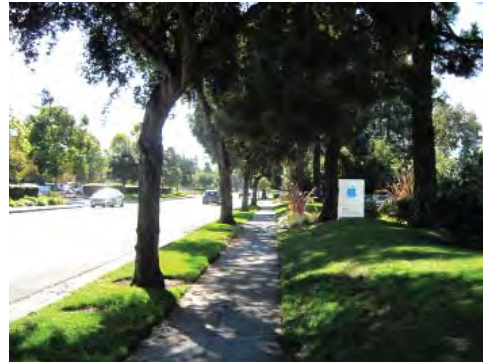
Public Street

- Enhance the streetscape by: constructing missing sidewalks, increasing sidewalk widths, increasing buffers between pedestrians and vehicles, providing pedestrian-scaled street lighting, and improving visibility at driveways.
- Improve public transit stops and associated amenities such as furniture, bus shelters, lighting and bicycle parking.
- Decrease the scale of block sizes to a walkable maximum distance of 400' (ie. eliminate 'superblocks.')
- Increase facility widths and/or buffers, such as incorporating a parkway strip between the sidewalk and curb, or provide a striped buffer between the bike lane and the travel lane.
- Improve pedestrian safety and comfort by narrowing wide street crossings to reduce the vehicular exposure and time in the roadway. Provide enhanced intersection treatments through the following measures: providing curb extensions ('bulb-outs) where they do not conflict with bike lanes, providing in-pavement pedestrian crossing lights, providing high visibility crosswalks, and reducing corner radii at intersections.
- Improve bike lane visibility with green colored lanes on major streets only (e.g. commercial collectors such as E. Duane Avenue), or only at conflict areas if maintenance is determined during the design phase to be a constraining factor. Maintain or improve on the existing Class II bikeway design. Provide bike racks at destinations such as parks, community institutions, and other public gathering areas.
- Improve pedestrian crossings on E. Duane Avenue through the addition of two uncontrolled pedestrian crossings to facilitate school access across the roadway (see in-pavement lights photo on page 20 as an example).
- Connect future improvements to Fair Oaks Park and the proposed SCVWD East Channel Trail.
- Implement traffic calming and street design practices to moderate traffic speeds and volumes, if necessary, such as pedestrian bulb-outs, raised crosswalks, removal of 'pork chop islands,' and replacement of existing curb and gutter with reduced corner radii at intersections.
- Restrict on-street parking and locate landscaping and site elements to ensure adequate visibility at intersections ("visibility triangle").

Neighborhood Improvements



Countdown Signals



Landscape Parkway Strip



Thematic Bus Shelter



Bulb-out



Accent Paving at Crosswalk



Thematic Bike Rack



High-visibility Crosswalk



Buffered Bicycle Lanes

Figure 9: Example Images

Private Developments

- Provide pedestrian/bicycle connections from the Watt Investments site (currently 915 De Guigne Drive) to E. Duane Avenue between San Miguel Avenue and De Guigne Drive.
- Design private streets and driveways within developments for pedestrian use with walkways that connect to the adjacent public street. Construct driveways to be flush with and a continuation of the sidewalk.
- Highlight key pedestrian crossings within the site and delineate boundaries between public and private development, utilizing quality paving materials.
- Provide bicycle and pedestrian facilities in retail and residential uses, including bicycle racks near building entrances and gathering areas, and pedestrian access from the street.
- Require land dedications or public access easements to accommodate the provision of public pedestrian and bicycle paths along the property lines or through a development as illustrated on Figure 10.
- Public multi-use pathways and trails should be landscaped with lighting provided to encourage use as a comfortable and safe recreational amenity.
- Provide unique area signs and bicycle parking at key locations.



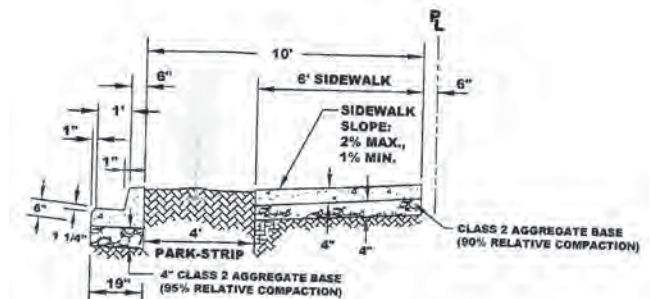
Figure 10: Public Access Easement



Sidewalk Continues Across Driveway

Circulation Design Guidelines

The sidewalks and streetscape elements throughout the Plan area are required to be consistent with the guidelines below. The dimensions illustrated in the cross sections are intended to show a typical condition. Actual geometric design of sidewalks, bicycle lanes, and travel lanes shall be determined during the final engineered design phase in consultation with city staff.



City Sidewalk Detail

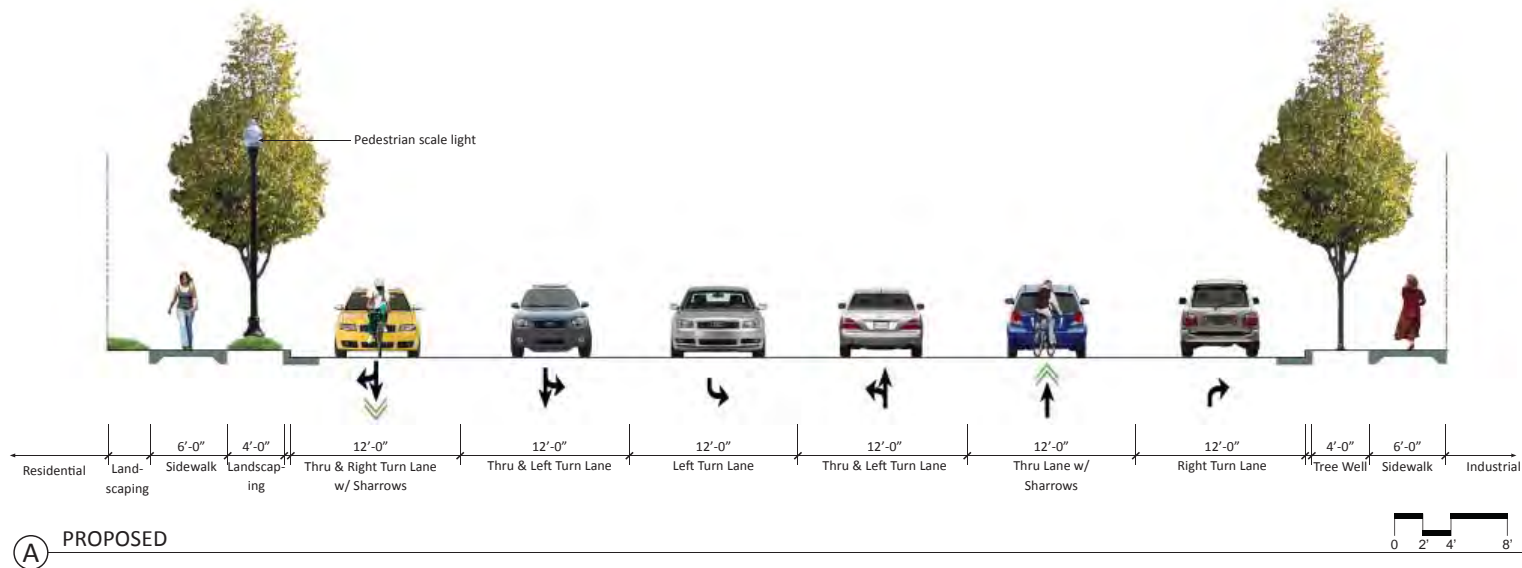
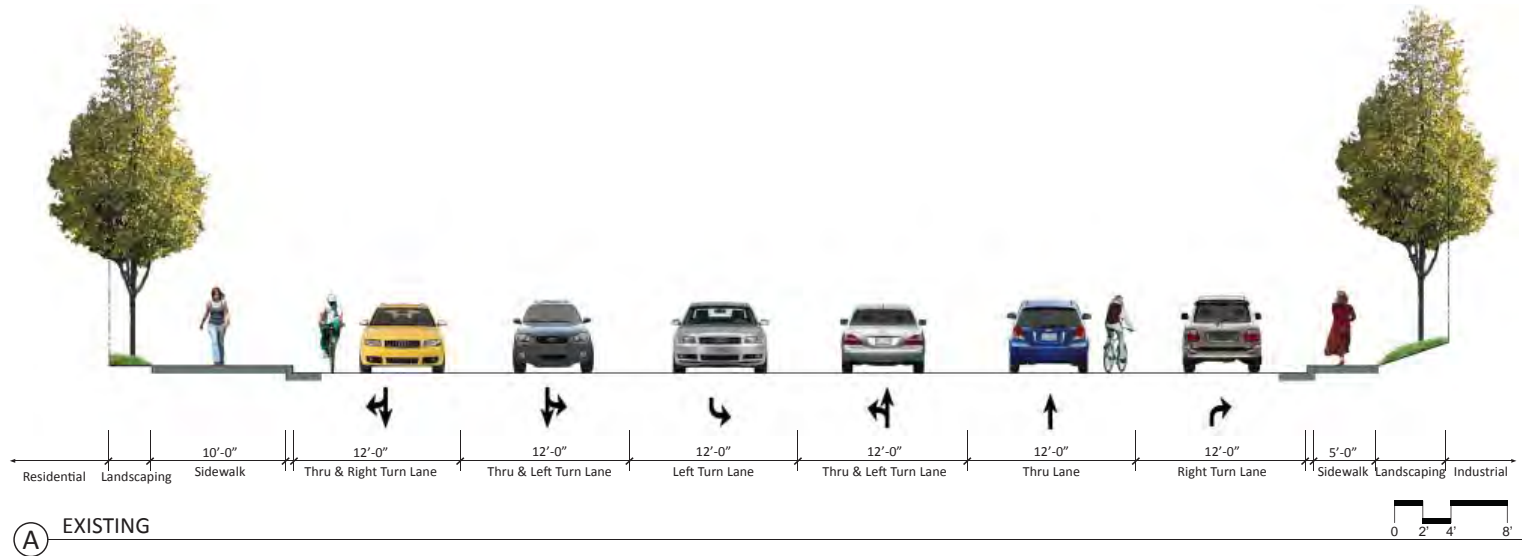


Figure 11: Section A: E. Duane Ave (looking east)

Public Street - E. Duane Avenue east of Stewart Drive

- See Figure 11, Section A. See pages 28 and 29 for locations of sections on plan.
- Sidewalks: Shall be 10'-0" minimum overall with 6'-0" minimum paved width. A 4'-0" minimum landscaped parkway strip or 4'-0" tree well (with additional 6" wide curb and gutter) shall also be provided between the sidewalk and curb. The parkway strip will be provided wherever sidewalk is adjacent to or fronts a residential development. Tree wells shall be provided wherever the sidewalk is adjacent to or fronts an industrial development. Exceptions may be granted where needed to retain existing trees.
- Bicycle lanes: Because the right-of-way is too narrow on E. Duane Avenue between Stewart Drive and Lawrence Expressway to provide bicycle lanes, green-backed sharrows shall be provided in the right-most through lane to provide a visual cue and reminder to vehicles to share the road with bicyclists.

Public Street - E. Duane Avenue west of Stewart Drive

- See Figure 13, Section B.
- Sidewalks: Shall be 10'-0" minimum overall with 6'-0" minimum paved width. A 4'-0" minimum landscaped parkway strip or 4'-0" tree well (with additional 6" wide curb and gutter) shall also be provided between the sidewalk and curb. The parkway strip will be provided wherever sidewalk is adjacent to or fronts a residential development. Tree wells shall be provided wherever the sidewalk is adjacent to or fronts an industrial development. Exceptions may be granted where needed to retain existing trees.
- Enhanced intersection treatment: See Figure 12. An uncontrolled pedestrian crossing shall be provided at San Miguel Avenue and somewhere east of San Rafael Street (future location to be determined after development plans for the existing AMD site have been prepared). The intersection treatment shall include curb extensions on both the north and south side of E. Duane Avenue to shorten the pedestrian roadway exposure. The bike lane shall be raised through the bulb-out area, and high visibility crosswalks with in-pavement lights shall be installed on both east and west legs of the intersection. Street infrastructure and landscaping shall remain clear of the visibility triangle at the intersection corners. Curb radii shall be reduced to 15' radius to slow turning vehicles and shorten pedestrian crossing distances.



In-pavement Lights



Colored Bike Lanes



Green-backed Sharrows

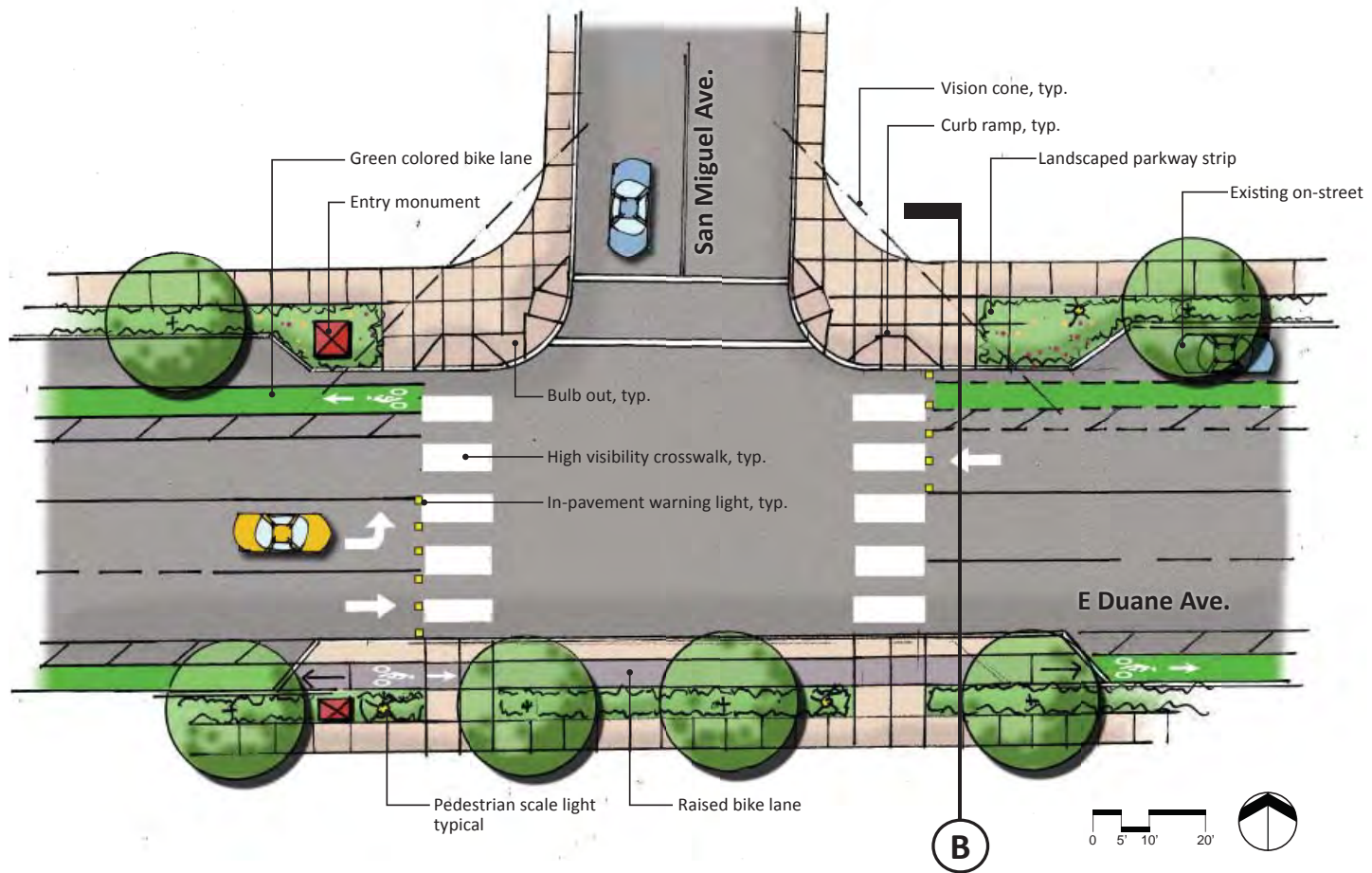


Figure 12: Example of Enhanced Intersection Treatment

Neighborhood Improvements



Figure 13: Section B: E. Duane Ave (looking west at enhanced intersection)

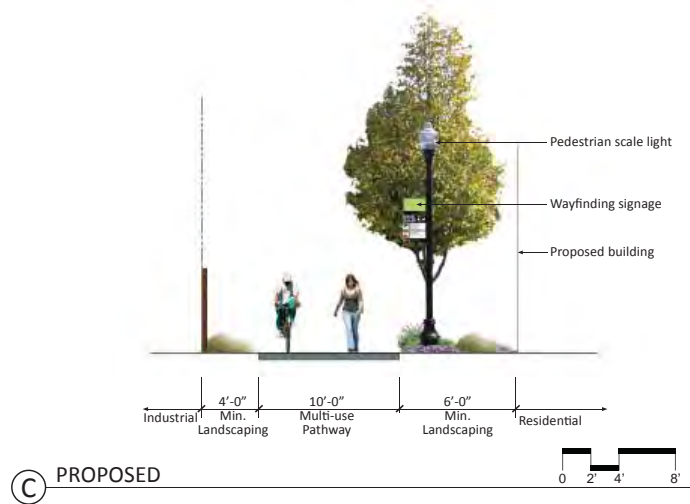


Figure 14: Section C: Multi-use Path at Various Locations

- Bicycle lanes: Shall be 6'-0" minimum in width. Maintain the bicycle buffer, lane reduction, and parking restrictions as dictated by the E. Duane Avenue road diet plan. Enhance the bike lanes with green color to increase the visibility of bicyclists.
- Parking: See Section E on page 24 and the discussion for De Guigne Drive.

Multi-use Paths

- See Figure 13, Section C.
- Off-street bicycle path/trail: Shall be 10'-0" wide asphalt or concrete pavement (12'-0" is preferred) to allow for multiple uses. A yellow center dashed stripe shall be provided down the center of the pavement to separate opposing bike traffic.

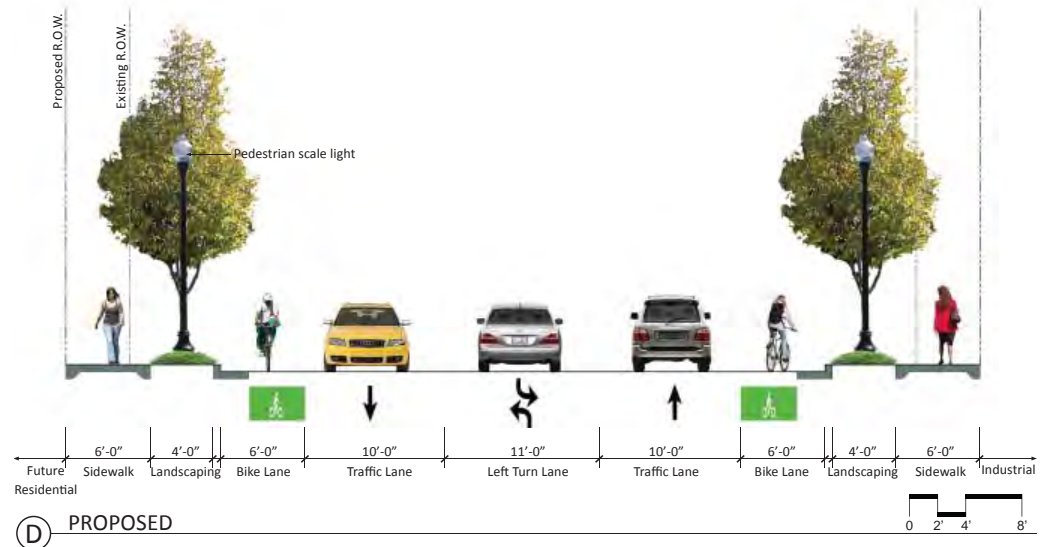
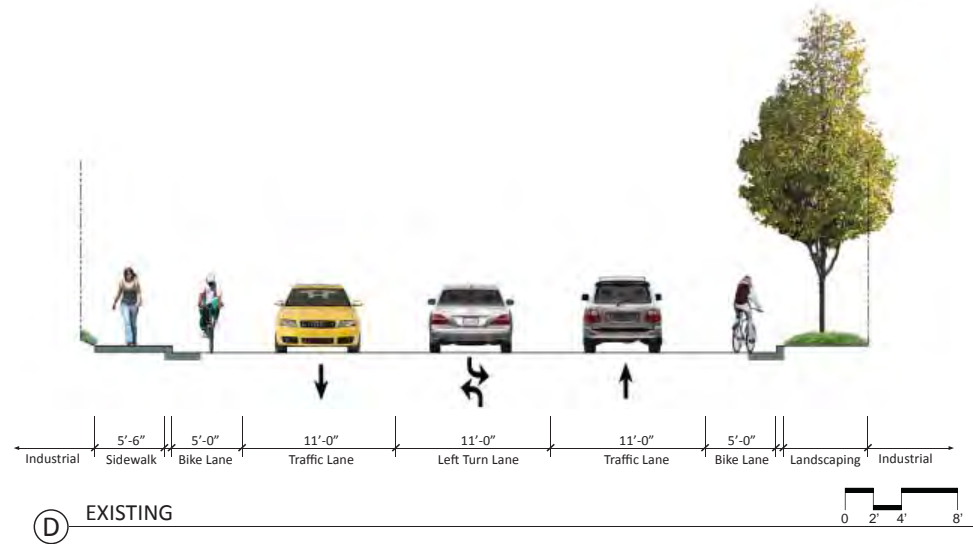
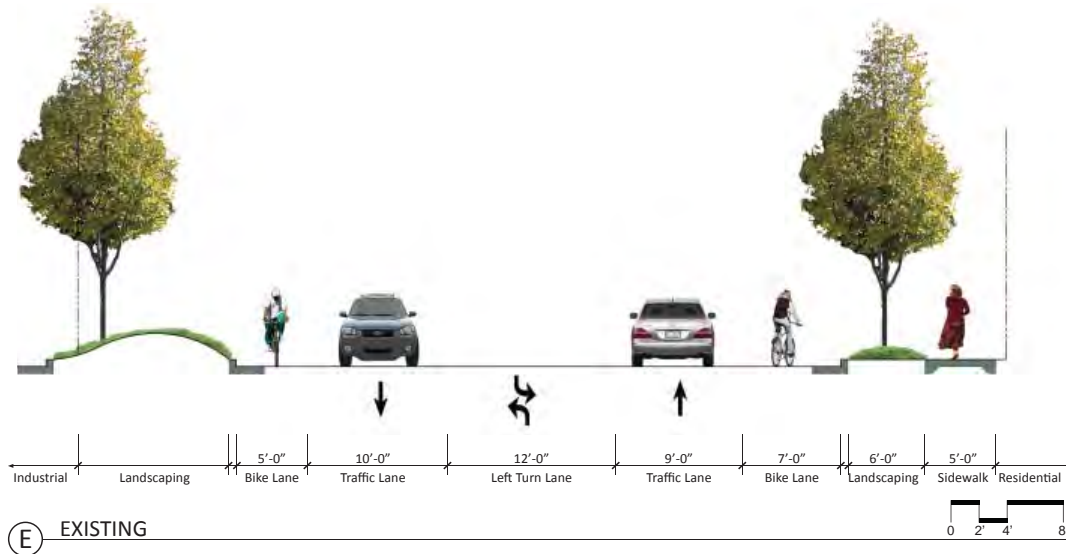


Figure 13: Section D: Stewart Drive (looking east)

Neighborhood Improvements



- Landscaping: Provide a minimum 4'-0" landscape strip between the property line and the trail, and a minimum 6'-0" landscape buffer with shade trees between the trail and adjacent property uses (such as building, parking or drive aisle). Where the landscape buffer is located adjacent to parking, a 2'-0" vehicle overhang is allowed (with a resultant 4'-0" minimum clear space).
- Easement: Trail and landscape buffers shall be dedicated as a public access easement with a minimum width of 20'-0" unless otherwise approved by the Director of Public Works, Director of Community Development, Planning Commission or City Council. On-site, publicly dedicated multi-use paths may be counted towards a development's usable open space requirement.
- Access nodes: Connection between trail and public sidewalks will be visually marked with an entry plaza constructed of high quality pavement materials such as unit pavers and shall have consistent directional signage to provide wayfinding and visual cues to encourage public use of the trail corridor. See the Streetlife Guidelines section.

Public Street - Stewart Drive

- See Figure 15, Section D.
- Sidewalks: Shall be 10'-0" minimum overall with 6'-0" minimum paved width. A 4'-0"

Figure 16: Section E: De Guigne Drive (looking southwest)



Multi-use Path / Trail

minimum landscaped parkway strip or 4'-0" tree well (with additional 6" wide curb and gutter) shall also be provided between the sidewalk and curb. The parkway strip will be provided wherever sidewalk is adjacent to or fronts a residential development. Tree wells shall be provided wherever the sidewalk is adjacent to or fronts an industrial development. Exceptions may be granted where needed to retain existing trees.

- Bicycle lanes: Shall be 6'-0" minimum in width. Re-stripe and narrow the through lanes in order to widen the bike lanes. Enhance the bike lanes with green color to increase the visibility of bicyclists.

Public Street - De Guigne Drive

- See Figure 16, Section E.
- Sidewalks: Shall be 11'-0" minimum overall with 6'-0" minimum paved width. A 5'-0" minimum landscaped parkway strip or 5'-0" tree well (with additional 6" wide curb and gutter) shall also be provided between the sidewalk and curb due to existing mature trees be retained. The parkway strip will be provided wherever sidewalk is adjacent to or fronts a residential development. Tree wells shall be provided wherever the sidewalk is adjacent to or fronts an industrial development. Exceptions may be granted where needed to retain existing trees.
- Bicycle lanes: Shall be 6'-0" minimum in width, with 7'-0" minimum width where adjacent to on-street parking. Enhance the bike lanes with green color to increase the visibility of bicyclists.
- Parking: Because of the transition of 915 De Guigne Drive from industrial to residential uses, it is anticipated that the existing double left-turn lane will no longer be needed. The traffic lanes along De Guigne Drive shall be restriped per Section E to widen the bike lanes and provide for an 8'-0" wide parking lane in the westbound direction to serve the future residents, pending confirmation of traffic impacts by the EIR consultant.

Public Street - De Guigne Drive North of Santa Real Avenue

- Reduce existing 13' travel lanes to 10' wide each to widen the western sidewalk to 13'-0" width overall (9' paved width with 4' minimum landscaped parkway strip). This will provide

a strong physical and visual connection between the future park at E. Duane Avenue and De Guigne Drive and the existing Swegles Park. Widen the bicycle lanes to 6'-0" on the west side and 7'-0" on the east side where it is adjacent to on-street parking.

Public Street - E. Duane Court

- Sidewalk: Enhance the existing pedestrian access between Lawrence Expressway and the cul-de-sac by widening the paved area, widening the opening in the wall, and providing directional signage.

Intersections

- The Wolfe Road intersection with Stewart Drive should be improved to make it as pedestrian friendly as possible. This may include the removal of the pork chop islands and reduction of the curb radii to reduce crossing distances.
- Add a pedestrian crossing signal with in-pavement warning lights at two locations across E. Duane Avenue to supplement the existing traffic signal at De Guigne Drive.
- An ADA-compliant ramp shall be installed at De Guigne Drive, Santa Trinita Avenue, and at the AMD driveway entrances. The ramp shall be located such that each corner has two ramps, one in each crossing direction.
- A crosswalk shall be installed at Santa Ynez Street at Duane Court, at De Guigne Drive at Santa Real Avenue, and at Stewart Drive near AMD. If traffic speeds reduce after implementation of the E. Duane Avenue road diet, consider providing a crosswalk aligned with Duane Court.
- To facilitate left turns at signalized intersections at Wolfe/Stewart, Stewart/Duane, and De Guigne/Duane, provide a left turn queue box at each intersection.

Transit

- Add benches at the stops near E. Duane Avenue/Santa Paula Avenue, E. Duane Avenue/San Rafael Street, E. Duane Avenue/San Simeon Street (both west and eastbound), Stewart Drive/Santa Trinita Avenue, and Stewart Drive/De Guigne Avenue, where ridership volumes support additional amenities.



Two-Stage Left Turn Queue Box

- Add bus shelter at E. Duane Avenue /Lawrence Expressway.
- Developers to provide and maintain high quality, thematic benches, bicycle racks, and/or shelters to improve aesthetics at transit stops and to integrate the street furnishings with that of the development adjacent to the stop.

Future Streets

- Future vehicle routes through the AMD site shall align with existing signalized intersections at Stewart Drive / E. Duane Avenue and at Stewart Drive / Santa Trinita Avenue.

Routes Listed	Stop Name	Street Direction	VTA Comments	Weekday Boarding	Weekday Offs	Weekend Boarding	Weekend Offs
55	DUANE & SANTA PAULA	E	Possibly add bench Low Boardings	1	9	0	0
55	DUANE & SANTA PAULA	W	Has VTA Bench	11	2	7	2
55	DUANE & DEGUIGNE	W	Has VTA Shelter	22	9	15	7
55	DUANE & SAN RAFAEL	E	Provide Bench	4	13	7	10
55	DUANE & SAN SIMEON	W	Provide Bench	15	0	7	4
55	DUANE & SAN SIMEON	E	Provide Bench	2	22	3	16
55	DUANE & LAWRENCE	W	Provide Bus Shelter, or 2 Benches	44	29	32	16
ACE	STEWART & SANTA TRINITA	W	Does Not Need Bench	ACE A.M. Offs Only			
ACE	STEWART & SANTA TRINITA	E	Provide Bench	ACE P.M. Boarding Only			
ACE	STEWART & DEGUIGNE	W	Does Not Need Bench	ACE A.M. Offs Only			
ACE	STEWART & DEGUIGNE	E	Provide Bench	ACE P.M. Boarding Only			

Figure 17: Bus Stop Amenity and Boardings

LEGEND

<p>--- Project Limit</p> <p>⊙ Typical Cross Section, location A</p>	
Existing	Proposed
Sidewalk or Sidewalk with Landscape Buffer	Sidewalk
Bicycle Path, 7'-6" Wide	Sidewalk with Landscape Buffer
Buffered Bicycle Lane	Multi-use Path, 10' Wide Min.
Bicycle Lane	Green Colored Buffered Bicycle Lane
Bicycle Route	Green Colored Bicycle Lane
	Green Backed Sharrows
	Bus Stop Improvements
	Two Stage Left Turn Box
	ADA Ramp
	On-street Parking
	Enhanced Intersection (Bult-out)
	Enhanced Intersection (Reduced Curb-Radii)
	Crosswalk
	Possible Future Street Right-of-Way



Figure 18: Circulation Plan



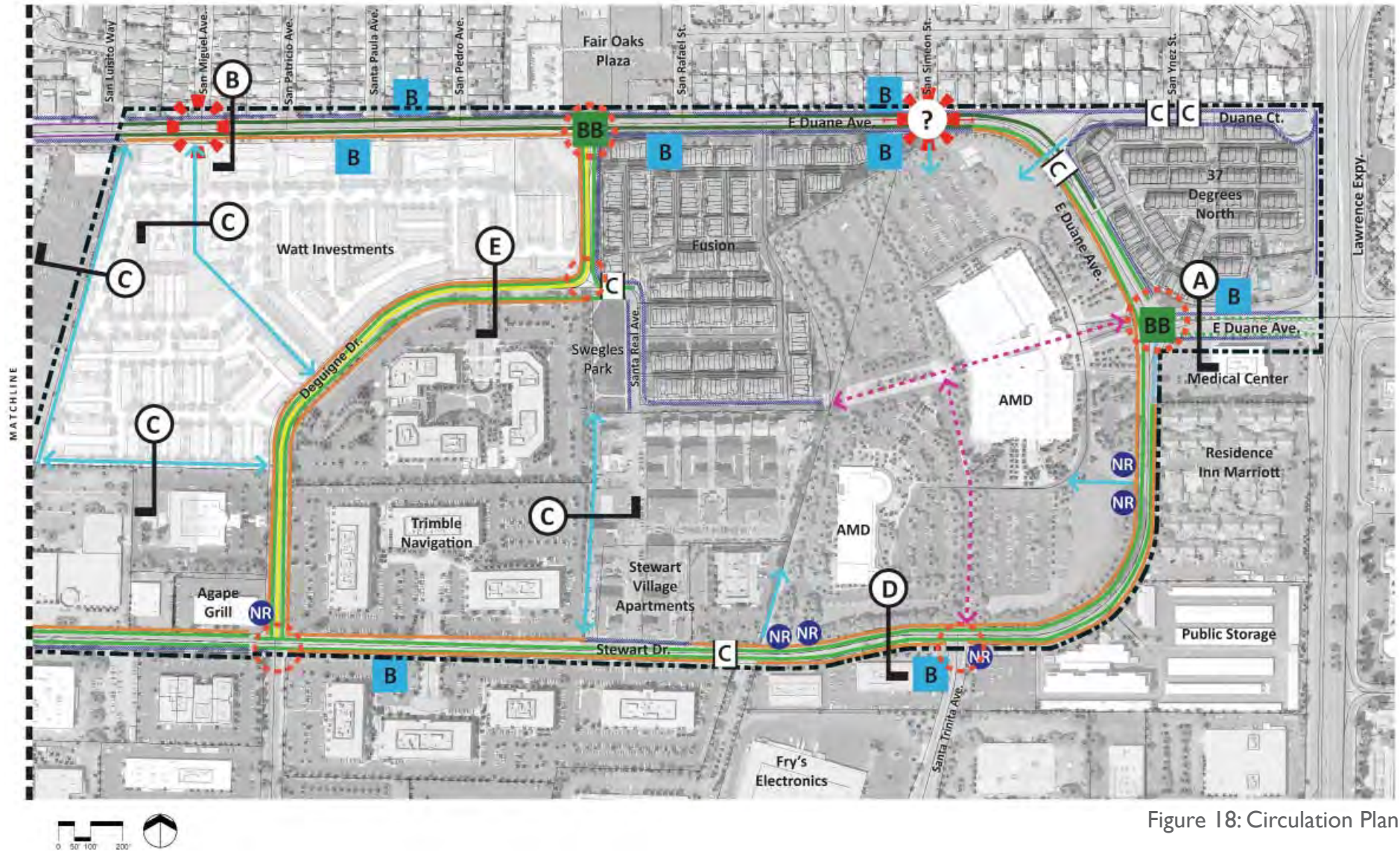


Figure 18: Circulation Plan

Street Life Strategies

- Create a sense-of-place for the area through design that establishes quality, comfortable social spaces with a unique identity.
- Provide visual information and pathfinder cues that inform people how to find transit facilities and access pedestrian connections. Provide neighborhood monument signs to enhance the area's character as well as act as kiosks for transportation related information and maps.
- Create public, semi-private and private realms (spaces) within the street frontage of residential units.
- Encourage street interaction with porches, front yards, widened sidewalk spaces with seating, and high visibility seating areas for stopping and socializing.
- Create a comfortable street environment by providing shade from the hot sun, pedestrian scale lighting that illuminates the sidewalk, and a landscape buffer between the sidewalk and roadway.
- Encourage the addition of neighborhood-serving destinations to encourage short, non-vehicular trips within the neighborhood.
- Decrease the scale of block sizes to a walkable maximum distance of 400' (ie. eliminate 'superblocks.')
- Encourage developments that have an external orientation towards the public streets, rather than ones that look inward or are walled off from the larger neighborhood.
- Provide sense of place improvements (e.g. entry elements, street furniture, signage) to define neighborhood characters.

Street Life Design Guidelines

See Figure 19 on page 34 and 35.

- I. Provide informal seating areas fronting onto and accessible from public streets and residential areas. These small areas may be tucked between residential buildings with widened sidewalk areas that serve as pause points and access nodes. Seating areas provide



Entry Monument



Seating Area



Access Node



Wayfinding Signage



Mixed-use Building With
Residential Over Retail

places to socialize and build community. Placing them on public streets help with security and make streets more dynamic. These areas may be combined with play areas for young children.

2. Add in-fill street trees in parkways to complement existing trees. Provide street-scaled, large deciduous trees to improve the tree canopy for the pedestrian experience and the thermal comfort of sidewalks. A goal would be to have street trees that have significant canopies that shade sidewalks and large portions of a street's vehicular roadway. Suggested tree species are:
 - E. Duane Avenue: Italian Oak
 - Stewart Drive: London plane
 - De Guigne Drive: Coast live oak

Street trees shall repeat and enhance the existing, established tree species unless disease, aggressive roots, or other reason prevents their use. New trees must be 24" box minimum size and placed 30 to 40 feet apart and staked per City standards in all cases and will be reviewed during the development review process. (Detail variation on detail DT 1). Deviations may be allowed to accommodate existing trees to be retained.

3. Allow opportunities for neighborhood-serving retail such as grocery stores, dry-cleaners, cafes, restaurants, pharmacies, and banks, within a walkable distance of residential neighborhoods.
4. Provide block sizes that are a walkable scale for new developments on large parcels of land. Blocks should not longer than 400 feet in any dimension, and a publically accessible circulation network should be available to improve walkability and access. Circulation paths should provide choices for access, be comprehended intuitively, and be publically accessible. Pathways which are for pedestrians and bicycles, as well as larger streets for all forms of transportation, including cars and buses, should be visually obvious through changes of materials, directional signage, and other means to reinforce public access and clear way-finding.

5. Establish new rights-of-way along shared property lines to create new pedestrian and bicycle pathways, and in some cases, new multi-model streets within the existing development in the neighborhoods of the area. The intent of this guideline is to foster more walkable neighborhoods and to make accessibility easier for short trips without using an automobile.
6. Provide community-based amenities and destinations, which are within walking distance and publicly accessible from residential neighborhoods. Amenities can include a community center, library, pool, open space, trails, pathways, and other recreational activities. The amenities can be combined with schools and other public facilities. Bicycle racks should be provided at each destination.
7. Encourage developments that face, or front, public streets and have an external orientation. A way to achieve this guideline includes placing building lobbies so that they face a public street, rather than facing interior private parking. Other methods include creating residential entrance stoops and porches that face a public street, and residential paseos with clear sight lines through the development that allow and encourage non-residents to use them.
8. Design the primary entrances and facades of residential buildings, including individual dwellings and larger apartment buildings to face public areas (streets or parks), rather than have their sides, backs, or vehicle garages facing the public right-of-way.
9. Provide pedestrian-scale street lights to illuminate sidewalks to improve safety and security of the pedestrian experience. Lights provide an opportunity to reinforce (with trees) the street rhythm and the aesthetic character of a neighborhood. Pedestrian scale street lighting shall be placed towards the face of curb. The lights shall be placed 40 feet apart (based on a tree spacing of 40 feet). Refer to the Downtown Streetscape Standard Details and Specifications, Detail DT I and DT II.



Residential stoops front street



Accent Lighting

10. Locate street furniture as noted on the plan and so they do not conflict with pedestrian routes and ADA clearance. Utilize accent lighting to announce and reinforce publicly accessible paths within private developments.
11. Design private streets and driveways within developments for pedestrian use with walkways allowing direct access from the site's interior to the public right of way.
12. Design and locate a project's internal pedestrian circulation pattern for maximum ease of use by pedestrians; this may be achieved by providing walkways along pedestrian desired lines. Link on-site walkways to the public sidewalk system outside the project for ease of pedestrian access, as well as provide public paths along property limits that connect with public streets and transit stop locations.
13. Lay out residential developments so that the street frontage is dominated by a residential appearance with units facing the street. Below grade parking facilities are encouraged, on larger lots, as a method to provide a residential front to the project.
14. Use quality paving materials such as architecturally enhanced concrete and natural materials to highlight key pedestrian crossings or to delineate boundaries between public and private development.
15. Ensure adequate visibility for pedestrians and motorists at driveway entrances.
16. Include new public street right-of-ways through the redeveloped AMD site. Provide a new public park at the site and allow for on-site connections outside to schools, parks, and other trails.
17. Design development to incorporate pleasant views as experienced from inside a vehicle.

LEGEND








-  Project Limit
-  Electric Line
-  Access/Point of Connection
-  Gateway Monument
-  Directional Sign / Accent Lighting
-  Seating Area
-  Pedestrian Scale Light Corridor



Figure 19: Street Life Plan

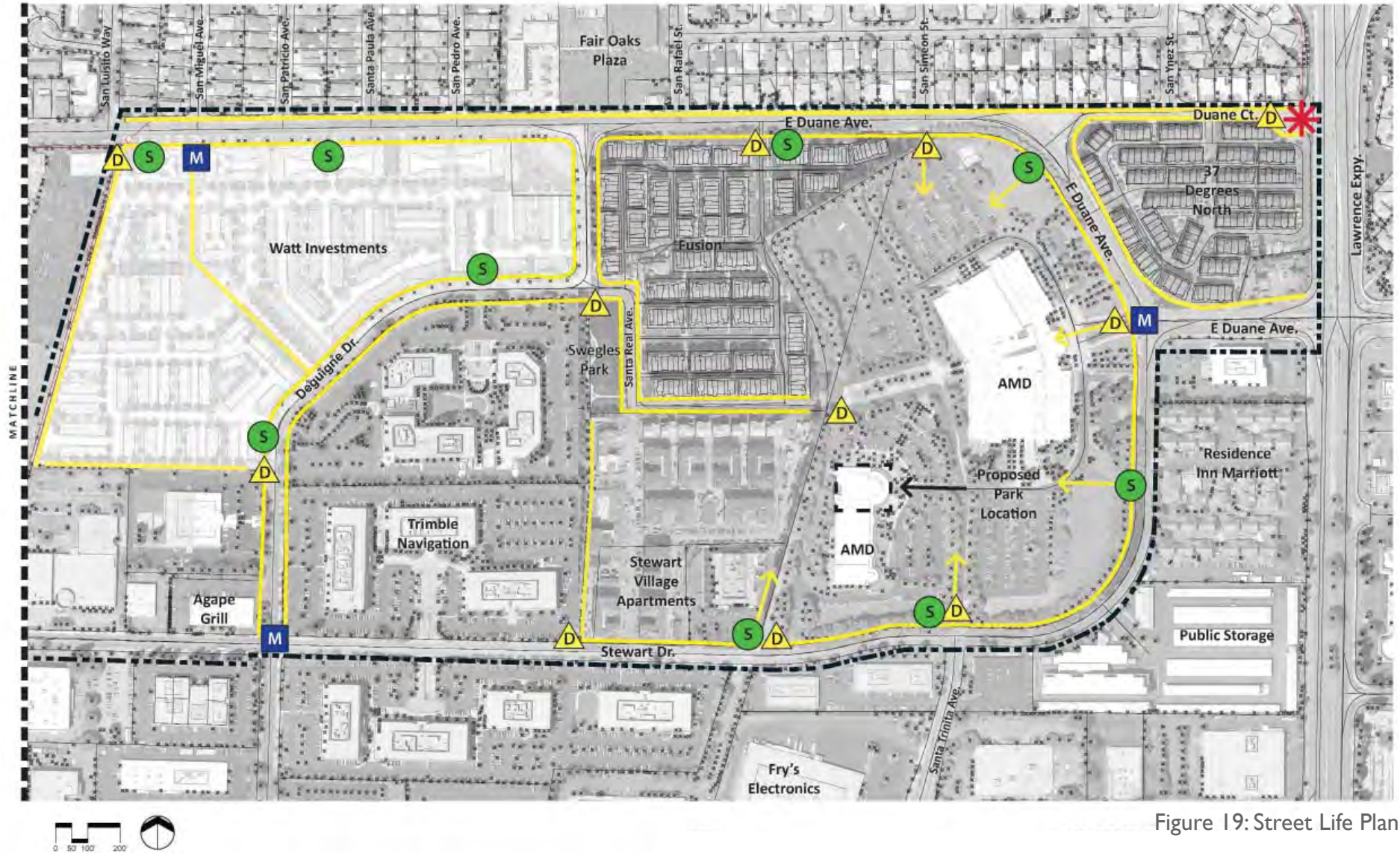


Figure 19: Street Life Plan

Chapter IV **RELATION TO EXISTING POLICIES**

Land Use And Transportation Element (LUTE)

This document is directly related to a number of existing City policies contained in the Land Use and Transportation Element of the General Plan. These policies pertain directly to land use development and transportation and are listed below.

- Policy LT-1.3: Promote integrated coordinated local land use and transportation planning
- Policy LT-1.9: Support flexible and appropriate alternative transportation modes and transportation system management measures that reduce reliance on the automobile and serve changing regional and City-wide land use and transportation needs.
- Policy LT-1.10: Support land use planning that complements the regional transportation system.
- Policy LT-2.1: Recognize that the City is composed of residential, industrial and commercial neighborhoods, each with its own individual character; and allow change consistent with reinforcing positive neighborhood values.
- Policy LT-4.1: Protect the integrity of the City's neighborhoods; whether residential, industrial or commercial.
- Policy LT-4.2: Require new development to be compatible with the neighborhood, adjacent land uses, and the transportation system.
- Policy LT-4.4: Preserve and enhance the high quality character of residential neighborhoods.

- Policy LT-4.5: Support a roadway system that protects internal residential areas from City-wide and regional traffic.
- Policy LT-5.2: Integrate the use of land and the transportation system.
- Policy LT-5.5: Support a variety of transportation modes.
- Policy LT-5.7: Pursue local, state and federal transportation funding sources to finance City transportation capital improvement projects consistent with City priorities.
- Policy LT-5.8: Provide a safe and comfortable system of pedestrian and bicycle pathways.
- Policy LT-5.9: Appropriate accommodations for motor vehicles, bicycles, and pedestrians shall be determined for City streets to increase the use of bicycles for transportation and to enhance the safety and efficiency of the overall street network for bicyclists, pedestrians, and motor vehicles.
- Policy LT-5.10: All modes of transportation shall have safe access to City streets.
- Policy LT-5.12: City streets are public space dedicated to the movement of vehicles, bicycles and pedestrians. Providing safe accommodation for all transportation modes takes priority over non-transport uses. Facilities that meet minimum appropriate safety standards for transport uses shall be considered before non-transport uses are considered.
- Policy LT-5.21: Safety considerations of all modes shall take priority over capacity considerations of any one mode.

Valley Transportation Authority

On September 30, 2003 the Sunnyvale City Council officially endorsed the Santa Clara Valley Transportation Authority (VTA) Community Design and Transportation (CDT) Program.

This is the VTA's primary program for integrating transportation and land use. The program is intended to build a stronger and more dynamic working relationship between VTA and its Member Agencies. The program provides a framework to pursue mutually beneficial projects, to enhance transportation and land use integration efforts already underway, and to create new opportunities for cities to plan and fund capital projects that enhance community livability, vitality and sustain-ability. The East Sunnyvale Area Pedestrian and Bicycle Circulation Plan is consistent with the intent of the City's endorsement and directly implements a number of facets of the VTA CDT Program.

The endorsement conveys the City's concurrence with the following CDT principals:

- Principal 1: Target growth to cores, corridors and station areas.
- Principal 3: Provide a diverse mix of uses.
- Principal 4: Design for pedestrians — comfortable, easy access to buildings, transit, wide sidewalks and pedestrian amenities.
- Principal 5: Design in context — create unique place identities via materials, design details, architectural styles, walks, streets and spaces.
- Principal 6: Focus on existing areas — infill versus outlying development, maintenance of existing communities.
- Principal 7: Create a multi-modal transportation system — balance walking, biking, and transit with vehicle movement.
- Principal 8: Establish streets as places — de-emphasize arterial network, provide wide sidewalks and landscaping.
- Principle 9: Integrate transit — locate transit stations within community cores, integrate transit stops and features into site designs.

- Principle 10: Manage parking — do not let parking dominate mode choice decisions, provide Transportation Demand Management (TDM) programs to heighten attractiveness of other modes.

The City of Sunnyvale was firmly invested in these principles well before the program's inception. The CDT principles are integrated into the full spectrum of the City's land use and transportation activities, and in this regard, the two are mutually supportive.

City-wide Design Guidelines

The City-Wide Design Guidelines were adopted by the City Council in June 1992 in order to implement the Community Design Sub-Element goals and policies and provide detailed direction on site and building design issues. They mainly address development projects on private properties and are intended to: enhance the overall image of the City, protect and preserve the existing character of the community, communicate the image the community desires, and achieve a higher design quality.

All site layout and building design guidelines provided in this Plan are consistent with existing City-Wide Design Guidelines.

High Density Residential Design Guidelines

The High Density Residential Design Guidelines adopted by the City Council in December 2014 provides the City with an additional means to evaluate the appropriate size, bulk and scale of new multi-family residential projects. The guidelines allow the size, bulk, and scale of projects to be considered, in addition to their density. These guidelines apply to the eastern R-4 edge of the AMD site.

The site layout and building design guidelines provided in this Plan are consistent with the newly adopted guidelines.

Chapter V

GRANT FUNDING / INCENTIVE OPPORTUNITIES

Small-scale transportation investments can make a big difference in a community's vitality and identity. Streetscape improvements, transit-, pedestrian- and bicycle-oriented developments, and related strategies can bring a new vibrancy to downtown areas, commercial cores and neighborhoods, enhancing their amenities and ambience and making them places where people want to live and visit.

The following section describes a number of funding opportunities that currently exist in the Bay Area that support the goals and improvements proposed in this Plan. Program criteria and funding levels are subject to change and are usually revised with each funding cycle. The descriptions below attempt to describe general goals and criteria of a number of possible sources of funding.

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) has been in the process of carrying out changes to the grants funding programs. MTC's framework for programming 2013-2016 Surface Transportation Program (STP), Congestion Mitigation and Air Quality (CMAQ) and Transportation Alternatives (TA) program funds has been amalgamated into one funding program, called the One Bay Area Grant Program (OBAG).

Due to the complexity of the program, VTA staff is developing the local OBAG programming framework with the advice of its regional Technical Advisory Committee and Capital Improvements Program Sub-committee. Funding of the OBAG program is expected to be in the form of guaranteed funds to all cities within Santa Clara county, as well as competitive funds. The equation and criteria for allocating the different funding categories will be considered by the VTA Board of Supervisors.

As presently recommended for VTA's Board consideration, the guaranteed funds will constitute 30% of the total grant funds that will be utilized in Non-Priority Development Areas (non-PDAs). These guaranteed funds are recommended to be utilized for road rehabilitation projects and complete streets projects such as bicycle and pedestrian facilities, safe routes to school projects, and traffic signal systems. City of Sunnyvale guaranteed funds are expected to be over one million dollars for complete streets projects in Non-PDA areas and road rehabilitation projects, and more specifically, for the Duane Avenue roadway rehabilitation project.

The competitive (not guaranteed) OBAG program are expected to fund CMA planning projects, San Tomas Expressway improvements, and competitive complete streets projects located in PDAs. The competitive process will be based on scoring of projects based on their merits and scoring criteria. Santa Clara County and the different cities within the county will have the right to compete for the non-guaranteed complete streets funds.

The study area is part of the East Sunnyvale Priority Development Areas (PDA) and is currently listed as a potential urban neighborhood. It is therefore eligible to receive both PDA and guaranteed complete streets funds.

Other than the aforementioned OBAG grant funds program, other funds that will remain are the Transportation Development Act (TDA) and the Transportation Funds for Clean Air (TFCA) funds.

Transportation Development Act

In November 2000, the voters in Santa Clara County approved Measure A, a 30-year half cent sales tax devoted to specified public transit capital improvement projects and operations. These funds are dedicated to planning/studies, construction and programs. As a part of the VTA biennial budget process, the VTA Board approves a two-year capital program for the Measure A program including development and implementation activities in the two-year budget cycle and its related estimates of expenses.

It should be noted that the TDA funds are intended for larger scale projects and transit hubs. Thus it would not be applicable for the bus stop improvements identified in this report, and these summary TDA notes are just provided for information and disclosure purposes.

Bay Area Air Quality Management District

Transportation Fund for Clean Air

The Transportation Fund for Clean Air (TFCA) is a grant program funded by a \$4 surcharge on motor vehicles registered in the Bay Area. This generates approximately \$22 million per year in revenue. TFCA's goal is to implement the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions, and therefore improve air quality. Projects must be consistent with the 1988 California Clean Air Act and the Bay Area Clean Air Plan.

The fund covers a wide range of project types, including purchase or lease of clean fuel buses; purchase of clean air vehicles; shuttle and feeder bus service to train stations; ridesharing programs to encourage carpool and transit use; bicycle facility improvements such as bike lanes, bicycle racks, and lockers; arterial management improvements to speed traffic flow on major arterials; smart growth; and transit information projects to enhance the availability of transit information.

The bicycle facilities and smart growth/traffic calming project types are most relevant to the possible projects included in this Plan which are expected to result in the achievement of motor vehicle emission reductions. TFCA funds are subject to the following conditions: a) the development project and the physical improvements must be identified in an approved area-specific plan, redevelopment plan, general plan, bicycle plan, pedestrian plan, traffic-calming plan, or other similar plan; and b) the project must implement one or more transportation control measures (TCMs) in the applicable Bay Area Clean Air Plan or Bay Area 2001 Ozone Attainment Plan. Projects that implement TCM 19 (pedestrian improvements) or TCM 20 (traffic calming) are encouraged. Projects that would implement other TCMs will also be considered for funding.

Valley Transportation Authority

Community Design & Transportation Program

In 2002, the Valley Transportation Authority (VTA) adopted the Community Design and Transportation (CDT) Program. This program is designed to provide information, tools, and planning, technical and design assistance to the cities, towns, and county of Santa Clara to proactively influence the planning and development process.

VTA offers two categories of financial assistance through the CDT Planning Grants Program. Policy Planning Projects revise existing or create new policies, codes, ordinances, or enforceable design standards to encourage changes in community form that result in multi-modal, pedestrian-friendly streets and transit-oriented, compact, mixed-use developments along major transportation corridors, core areas, or station areas. Capital Planning Projects incorporate pedestrian and multi-modal transportation design elements into a public street, corridor, commercial node or station area.

Eligible Policy Planning Projects include general plan and zoning code amendments and updates, strategic planning studies, targeted area plans, and pedestrian or streetscape master plans, among others. The project should have identifiable and likely synergistic effects, support other efforts by the agency to encourage transit use and walking, and demonstrate innovation in project purpose, approach, or community involvement techniques.

CDT Planning Grants also fund Capital Planning Projects in order to produce plans with sufficient feasibility analysis, scoping, and design guidance to allow the agency to program for the project. Capital Planning Projects include pedestrian improvements, streetscape/corridor enhancements, and pedestrian-oriented streets, plazas, and pocket parks related to transit facilities or multi-modal streets, among others. These projects should relate to a physical setting where deficiencies exist, involve a collaborative planning process with community stakeholders, and result in a discrete and clear product.

Chapter VI **COST AND IMPLEMENTATION**

Implementation Process

The goals in the East Sunnyvale Sense of Place Plan shall be implemented primarily through a combination of the private development approval and construction process and grant funded public improvement projects, separated into multiple construction projects.

Primarily, improvements will be funded and constructed by developers as part of the development process. When development applications are submitted for projects within the plan area, City staff will review the proposal and assure that it is consistent with the access improvements and design guidelines described in this document. City staff will then recommend that Conditions of Approval, consistent with the Plan, be applied to the approval of Planning Applications and Building Permits.

The City of Sunnyvale will also compete in the grant funding programs listed in the Grant Funding / Incentive Opportunities section of the Plan, and others as appropriate, in order to fund improvements in the public right of way. Grant application priority will be given to intersection and streetscape projects where no pedestrian access currently exists or where pedestrian safety issues are present. Priority should be given to those elements that enhance safety if it does not result in funding conflicts.

In addition, a Sense of Place fee will be applied to redevelopment projects on a per unit basis. These funds will be used for common improvements such as pedestrian crossings, wayfinding markers and other elements identified in the plan as well as matching funds for grants. Implementation of other plan elements such as the pedestrian signals may be funded by gas tax funds and other transportation mitigation funds.

Maintenance may be funded through a special maintenance district. If maintenance is determined by the City to be a constraining factor during the design phase, it is possible some plan elements will require adjustment.

Estimate of Costs

A summary of the estimated probable costs of construction and implementation for the Plan area is provided here. Details of the costs for each street segment are provided in the Appendix. The cost estimate reflects the proposed improvements as described in this Sense of Place Plan. Because the estimate has been developed without the benefit of detailed drawings, they are considered to be preliminary and subject to change.

Item #	Description	Unit	Cost	TOTAL		
				Qty	Item Total	Subtotal
A Sidewalk Without Parkway Strip						
1.	Sidewalk (6' wide)	SF	\$9	780	\$7,020	
2.	Curb ramp	EA	\$4,000	1	\$4,000	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	130	\$5,200	
4.	Curb and gutter	LF	\$40	130	\$5,200	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	28	\$224,000	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$184,065	
						\$429,485
B Sidewalk With Parkway Strip						
1.	Sidewalk (6' wide)	SF	\$9	65,580	\$590,220	
2.	Curb ramp	EA	\$4,000	5	\$20,000	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	10,930	\$437,200	
4.	Curb and gutter	LF	\$40	10,930	\$437,200	
5.	Landscaping and irrigation	LF	\$60	10,950	\$657,000	
6.	Street trees and irrigation	EA	\$500	80	\$40,000	
7.	Structural soil at trees	EA	\$300	80	\$24,000	
8.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	436	\$3,488,000	
9.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$4,270,215	
						\$9,963,835
C Bike Lane						
1.	Re-stripe road	LF	\$8	5,735	\$63,880	
2.	Green-colored thermoplastic sheet	SF	\$10	123,420	\$1,234,200	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$966,060	
						\$2,254,140
D Bike Path						
1.	Asphalt path, 10' w/12" dg shoulder	LF	\$150	5,300	\$795,000	
2.	Landscaping and irrigation	LF	\$60	7,950	\$477,000	
3.	Trees and irrigation	EA	\$500	130	\$65,000	
4.	Structural soil at trees	EA	\$300	130	\$39,000	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	130	\$1,040,000	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$1,812,000	
						\$4,228,000
E Transit						
1.	Bus shelter	EA	\$10,000	1	\$10,000	
2.	Concrete pad	EA	\$10,000	10	\$100,000	
3.	Bike rack	EA	\$1,000	8	\$8,000	
4.	Trash receptacle	EA	\$1,500	10	\$15,000	
5.	Metal bench	EA	\$2,000	8	\$16,000	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$111,750	
						\$260,750
F Roadway						
1.	Slurry seal	SY	\$2	14,600	\$29,200	
2.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$21,900	
						\$51,100

Item #	Description	Unit	Cost	TOTAL		
				Qty	Item Total	Subtotal
G Enhanced Intersection/Crosswalks						
1.	Sidewalk	SF	\$9	10,400	\$93,600	
2.	Curb ramp	EA	\$4,000	34	\$136,000	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	2,050	\$82,000	
4.	Curb and gutter	LF	\$40	2,050	\$82,000	
5.	Grading and drainage	EA	\$50,000	2	\$100,000	
6.	Raised bike lane	SF	\$9	1,800	\$16,200	
7.	In-pavement roadway lights	EA	\$50,000	2	\$100,000	
8.	Landscaping and irrigation	LF	\$60	1,790	\$107,400	
9.	Street trees and irrigation	EA	\$500	18	\$9,000	
10.	Structural soil at trees	EA	\$300	18	\$5,400	
11.	Roadway striping	EA	\$3,000	8	\$24,000	
12.	Traffic sign	EA	\$500	12	\$6,000	
13.	Two stage turn box, green	EA	\$2,000	4	\$8,000	
14.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$577,200	
						\$1,346,800
H Access Node/Directional Signage						
1.	Plaza pavement (200 SF)	EA	\$6,000	2	\$12,000	
2.	Accent lighting with wiring, 2 per location	EA	\$3,000	30	\$90,000	
3.	Directional sign, 1 per location	EA	\$5,000	15	\$75,000	
4.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$132,750	
						\$309,750
I Seating Area						
1.	Plaza pavement (250 SF)	EA	\$7,500	11	\$82,500	
2.	Bench	EA	\$2,500	15	\$37,500	
3.	Bike rack	EA	\$1,000	11	\$11,000	
4.	Trash receptacle	EA	\$1,500	11	\$16,500	
5.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$110,625	
						\$258,125
J Monument						
1.	Monument	EA	\$30,000	3	\$90,000	
2.	Landscaping and irrigation	LF	\$60	60	\$3,600	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$70,200	
						\$163,800
K Traffic Signal Synchronization						
1.	Conduit	LF	\$13	6,600	\$85,800	
						\$85,800
L ESTIMATED PROJECT TOTAL						
						\$19,351,585
						Subtotal Developer Items
						\$14,758,220
						Subtotal SOP Items
						\$4,693,365

Colors represent possible funding source for improvements:

- Developers of abutting properties
- SOP fees
- OBAG funds
- Gas tax funds

Estimating Assumptions

- 1) The items, amounts, quantities, and related information are based on CA's judgement at this level of document preparation and is offered only as reference data. CA has no control over construction quantities, costs and related factors affecting costs, and advises the client that significant variation may occur between this estimate of probable construction costs and actual construction prices.
- 2) Sidewalk assumes 4" concrete over 4" AB.
- 3) Pedestrian lighting pole assumes 10' to 14' tall thematic pole with LED fixture, 40' o.c. spacing, and all associated pull boxes, conduit, trenching, etc.
- 4) Landscaping and irrigation for parkway strips assume a 4'-0" wide planted area with groundcover and spray irrigation system with water and electrical service. Street trees and irrigation assumes 24" box tree at 40' o.c. spacing and two tree bubblers per tree.
- 5) Bike lanes assume 6' minimum width. Bike path assumes a total 20' wide public access easement with 12' wide pavement and 10' wide landscaping. Item D excludes improvements within the AMD parcel.
- 6) The enhanced intersection costs for Stewart Drive address 'squaring' of the N.Wolfe Road and East Duane Avenue intersection and removal of pork chop islands.
- 7) Start-up costs includes 15% of construction costs for bonding, mobilization, SWPPP, grading, tree protection, traffic control, and construction staking. Design assumes 20% of construction costs for professional services fees. Inspection assumes 10% of construction costs for City review and construction inspection. Contingencies include 20% of construction costs for estimating contingency and 10% for construction change order contingency. No inflation contingency is included.

Timing

Improvements shall be implemented as funding becomes available and as development projects are approved. Construction of improvements at 915 De Guigne Drive are anticipated to begin in 2016 and span multiple years.

Temporary sidewalk gap closures may be installed and required for safety reasons where no redevelopment occurs (remaining industrial sites). Temporary sidewalk gap closures may utilize asphalt paving material.

APPENDIX

Public Workshop Meeting Summary

Cost Estimate Opinion

Traffic Memorandum

Public Workshop Meeting Summary



Via E-Mail Only

November 25, 2014

Meeting Summary

Sense of Place Plan

RE: Community Workshop

Date of Meeting: Wednesday, November 19, 2014, 6:30 pm – 8:00 pm

4 pages

Attendees:

*The Public:*Jay Herbert, tigerjay1@hotmail.comJoseph Coezmo, H.TekLoLife@yahoo.com

Diana Ammon

Justin Burddiv, kineticsab@yahoo.comMarisa Juárez, isacelia@stanfordalumni.org*City of Sunnyvale:*Trudi Ryan (TR), Planning Officer, tryan@sunnyvale.ca.govCarol Shariat (CS), Principal Engineer, cshariat@sunnyvale.ca.govRyan Kuchenig (RK), Associate Planner, rkuchenig@sunnyvale.ca.gov*Watt Investments:*Jeff Warmoth (JW), Project Manager, jeffwarmoth@gmail.comPat Castillo (PF), Consultant, PECCBC@aol.com*Consultants:*Brian Fletcher (CA), Callander Associates, bletcher@callanderassociates.comMarie Mai (CA), Callander Associates, mmai@callanderassociates.com

Brian opened the meeting with a welcome and short overview of the project background, goals, and process. The group then broke out and viewed the four different stations. The following input was provided during the meeting and via written questionnaires. Numbers following each response indicate the amount of “votes” or people responding affirmatively to that choice. **Bold** text indicates response(s) receiving the highest number of “votes”.

Meeting Summary

Sense of Place Plan

RE: Community Workshop

Date of Meeting: Wednesday, November 19, 2014, 6:30 pm – 8:00 pm

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Station One: What is a Sense of Place Plan

1. Directional signage not needed due to smartphones
2. Walkable grocery
3. Mixed use developments
4. Multiple restaurant choices in one location
5. Parks
6. Bike lanes
7. Pedestrian
8. Would like to call it something different: San Miguel?

Station Two: Vote for Which Improvements You'd like to see in the Neighborhood

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. What's Your Style? What's Your Theme? <ul style="list-style-type: none"> -Mid-Century Modern/Eichler, 1 -Ranch, 1 -Historic, 2 -Spanish Heritage, 1 2. Pedestrian Enhancements: <ul style="list-style-type: none"> -Countdown Signals, 2 -Accent Paving at Crosswalk, 1 -Landscaped Parkway Strip, 1 | <ol style="list-style-type: none"> 3. Community Enhancements: <ul style="list-style-type: none"> -Thematic Lighting, 3 -Community Character, 1 -Parks, 1 4. Bicycle Enhancements: <ul style="list-style-type: none"> -Buffered Bicycle Lanes, 2 -Bicycle Lanes, 1 -Bike Box, 1 -Colored Bike Lanes, 3 |
|---|--|

Station Three: Getting Around

1. Relocate parking from North to South side of Duane.
2. Concerned with making a left turn on/at streets North of DeGuigne Drive onto Duane.
3. N. Fair Oaks Drive is a busy street with narrow sidewalks.
4. Remove street parking at N. Fair Oaks Ave. and East Duane. When full, drivers turning right block drivers turning left.
5. Drivers run red lights turning left at Fair Oaks and Duane.
6. Remove Parking on Duane between Johanna Ave. and Bernal.
7. Section on Duane from N. Fair Oaks Ave. to North Britton makes biking scary due to driveways and parked cars.
8. When dropping off and picking up children, cars back up onto East Duane, between Johanna Ave. and San Juan Dr.
9. Turning right or left is dangerous at San Juan Dr. due to limited visibility.
10. Signal planned at Britton Ave. and East Duane.
11. New trees removed and new ones planted between San Luisito Way and San Juan Dr. on Duane.
12. Flip parking on East Duane to south side. No driveways would improve visibility coming out of side streets.
13. Install turning signal on San Simeon St., onto Duane.

Meeting Summary

Sense of Place Plan

RE: **Community Workshop**

Date of Meeting: Wednesday, November 19, 2014, 6:30 pm – 8:00 pm

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Item

14. Want more parks, bike paths, and bike lanes.
15. Poor views for motorists on Duane at San Pedro and Duane.
16. Install 4 way light on Duane.
17. There are no sidewalks on DeGuigne Drive.
18. No amenities at Santa Real Ave.
19. Santa Real Ave., and DeGuigne Drive needs a three way stop.
20. Need walking path between Stewart and Duane.
21. Swegels Park parking is now used for residents.
22. No sidewalks near Agape Grill.
23. High traffic at East Channel Creek despite no crosswalk.

Station Four: Questionnaires

- | | |
|--|---|
| <p>1. <i>Where do you live/work?</i>
 -Within the Neighborhood, 2
 -Within 3 Blocks, 2</p> <p>2. <i>How do you currently travel within the neighborhood?</i>
 -Walk to Work, 1
 -Bike, 3
 -Drive to Work, 2
 -Take the Bus, 1
 -Take the Train, 2
 -Shop/Eat, 3
 -Park Car, 1
 -Recreational Walking, 2</p> <p>3. <i>How Would You Like to Travel?</i>
 -Walk More, 3
 -Bike More, 4
 -Bus More, 1
 -Take Transit More, 2</p> <p>4. <i>What Do You Do Most Frequently in the Neighborhood?</i>
 -Home, 4
 -School, 1
 -Work, 1
 -Shop/Eat, 2
 -Park, 1</p> | <p>5. <i>Biggest Concern in the Neighborhood?</i>
 -Pedestrian Safety, 3
 -Traffic Speed, 1
 -Parking, 3
 -Safety, 1
 -Lighting, 1
 -Things to Do, 1</p> <p>6. <i>What Amenities Would You Like to See More of?</i>
 -Bike Racks, 1
 -Pedestrian Lighting, 4
 -Parking, 1
 -Wider Sidewalks, 1</p> <p>7. <i>What do you think is the most important thing that will improve the neighborhood?</i>
 -No parking on corners, no parking on residential side of Duane. Safe exists for pre-school and elementary school.
 -Streets and sidewalk improvements, traffic lane reduction, street parking removal
 -Ice Cream Store
 -Safe crosswalks with signals</p> <p>8. <i>Can you describe the identity of the neighborhood?</i>
 -Different from rest of Sunnyvale, 3
 -Same as rest of Sunnyvale, 1</p> |
|--|---|

Meeting Summary

Sense of Place Plan

RE: **Community Workshop**

Date of Meeting: Wednesday, November 19, 2014, 6:30 pm – 8:00 pm

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- | | |
|--|--|
| <p>9. <i>If different, please describe what makes it unique?</i>
 -Mix of commercial, townhomes, schools.
 -Very diverse in income, age, new and old housing, commercial/industry
 -So many townhomes, no amenities within walking distance</p> <p>10. <i>Rate in Level of Importance, from 1-5, with 5 high importance (average is shown):</i>
 -Complete Sidewalks, 4
 -Widen Sidewalks, 3
 -Pedestrian Safety, 4.5
 -Improve Bicycle Safety, 3
 -Improve Overall Appearance, 3
 -Wayfinding/Identity, 2
 -Social Spaces/Meeting Neighbors, 3.5</p> | <p>12. <i>How can the intersection at DeGuigne Drive and Santa Real Avenue be improved?</i>
 -3-way stop
 -The park/green space is too plain.
 -Needs trees for shade, or something visually welcoming</p> <p>13. <i>How can crossing at East Duane Avenue and San Miguel Avenue be improved?</i>
 -Very visible crosswalks
 -Bike friendly ways to lessen traffic, especially for the schools
 -Road Diet
 -Eliminate parking on residential side of Duane</p> <p>14. <i>Additional comments:</i>
 -Please re-open the road diet plan for Duane and remove street parking</p> |
|--|--|

Station 1 Board



Meeting Summary
 Sense of Place Plan
 RE: Community Workshop
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*would like the neigh called something different than 'E. Sunnyvale'
 , How about som mique!*

Station 2 Boards



Meeting Summary
 Sense of Place Plan
 RE: Community Workshop
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Meeting Summary
 Sense of Place Plan
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Station 3 Board



-END-

Meeting Summary
 Sense of Place Plan
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The information above is Callander Associates' understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding. If you have any questions, additions, or corrections to this memo, please contact this office in writing within three days.

Submitted by:

Marie Mai

Marie Mai, Callander Associates

Attachments: Sign-in Sheet

Cost Estimate Opinion

E. Duane Ave						
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A Sidewalk Without Parkway Strip						
1.	Sidewalk (6' wide)	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
B Sidewalk With Parkway Strip						
1.	Sidewalk (6' wide)	SF	\$9	13,440	\$120,960	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	2,240	\$89,600	
4.	Curb and gutter	LF	\$40	2,240	\$89,600	
5.	Landscaping and irrigation	LF	\$60	2,240	\$134,400	
6.	Street trees and irrigation	EA	\$500	55	\$27,500	
7.	Structural soil at trees	EA	\$300	55	\$16,500	
8.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	150	\$1,440,000	
9.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$1,438,920	\$3,357,480
C Bike Lane						
1.	Re-stripe road	LF	\$8	0	\$0	
2.	Green-colored thermoplastic sheet	SF	\$10	42,600	\$426,000	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$319,500	\$745,500
D Bike Path						
1.	Asphalt path, 10' with 3' dg shoulder	LF	\$150	0	\$0	
2.	Landscaping and irrigation	LF	\$60	0	\$0	
3.	Trees and irrigation	EA	\$500	0	\$0	
4.	Structural soil at trees	EA	\$300	0	\$0	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
E Transit						
1.	Bus shelter	EA	\$10,000	1	\$10,000	
2.	Concrete pad	EA	\$10,000	6	\$60,000	
3.	Bike rack	EA	\$1,000	6	\$6,000	
4.	Trash receptacle	EA	\$1,500	6	\$9,000	
5.	Metal bench	EA	\$2,000	6	\$12,000	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$72,750	\$169,750
F Roadway						
1.	Slurry seal	SY	\$2	2,300	\$4,600	
2.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$3,450	\$8,050

E. Duane Ave						
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
G Enhanced Intersection/Crosswalks						
1.	Sidewalk	SF	\$9	5,000	\$45,000	
2.	Curb ramp	EA	\$4,000	6	\$24,000	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	600	\$24,000	
4.	Curb and gutter	LF	\$40	600	\$24,000	
5.	Grading and drainage	EA	\$50,000	2	\$100,000	
6.	Raised bike lane	SF	\$9	1,800	\$16,200	
7.	In-pavement roadway lights	EA	\$50,000	2	\$100,000	
8.	Landscaping and irrigation	LF	\$60	340	\$20,400	
9.	Street trees and irrigation	EA	\$500	12	\$6,000	
10.	Structural soil at trees	EA	\$300	12	\$3,600	
11.	Roadway striping	EA	\$3,000	2	\$6,000	
12.	Traffic sign	EA	\$500	8	\$4,000	
13.	Two stage turn box, green	EA	\$2,000	0	\$0	
14.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$279,900	\$653,100
H Access Node/Directional Signage						
1.	Plaza pavement (200 SF)	EA	\$6,000	0	\$0	
2.	Accent lighting with wiring, 2 per location	EA	\$3,000	10	\$30,000	
3.	Directional sign, 1 per location	EA	\$5,000	5	\$25,000	
4.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$41,250	\$96,250
I Seating Area						
1.	Plaza pavement (250 SF)	EA	\$7,500	4	\$30,000	
2.	Bench	EA	\$2,500	8	\$20,000	
3.	Bike rack	EA	\$1,000	4	\$4,000	
4.	Trash receptacle	EA	\$1,500	4	\$6,000	
5.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$45,000	\$105,000
J Monument						
1.	Monument	EA	\$30,000	1	\$30,000	
2.	Landscaping and irrigation	LF	\$60	20	\$1,200	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$23,400	\$54,600
K Traffic Signal Synchronization						
1.	Conduit	LF	\$15	2,200	\$28,600	\$28,600
L ESTIMATED PROJECT TOTAL						
						\$5,218,330

Colors represent possible funding source for improvements:

- Developers of abutting properties
- SOP fees
- OBAG funds
- Gas tax funds

De Guigne Drive						
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	Sidewalk Without Parkway Strip					
1.	Sidewalk (6' wide)	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
B	Sidewalk With Parkway Strip					
1.	Sidewalk (8' wide)	SF	\$9	23,460	\$211,140	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	3,910	\$156,400	
4.	Curb and gutter	LF	\$40	3,910	\$156,400	
5.	Landscaping and irrigation	LF	\$60	3,910	\$234,600	
6.	Street trees and irrigation	EA	\$500	15	\$7,500	
7.	Structural soil at trees	EA	\$300	15	\$4,500	
8.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	100	\$800,000	
9.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$1,177,905	\$2,748,445
C	Bike Lane					
1.	Re-stripe road	LF	\$8	1,955	\$15,640	
2.	Green-colored thermoplastic sheet	SF	\$10	23,460	\$234,600	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$187,680	\$437,920
D	Bike Path					
1.	Asphalt path, 10' with 2' dg shoulder	LF	\$150	0	\$0	
2.	Landscaping and irrigation	LF	\$60	0	\$0	
3.	Trees and irrigation	EA	\$500	0	\$0	
4.	Structural soil at trees	EA	\$300	0	\$0	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
E	Transit					
1.	Bus shelter	EA	\$10,000	0	\$0	
2.	Concrete pad	EA	\$10,000	0	\$0	
3.	Bike rack	EA	\$1,000	0	\$0	
4.	Trash receptacle	EA	\$4,500	0	\$0	
5.	Metal bench	EA	\$2,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
F	Roadway					
1.	Slurry seal	SY	\$2	10,000	\$20,000	
2.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$15,000	\$35,000

De Guigne Drive						
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
G	Enhanced Intersection/Crosswalks					
1.	Sidewalk	SF	\$9	400	\$3,600	
2.	Curb ramp	EA	\$4,000	16	\$64,000	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	800	\$32,000	
4.	Curb and gutter	LF	\$40	800	\$32,000	
5.	Grading and drainage	EA	\$50,000	0	\$0	
6.	Raised bike lane	SF	\$9	0	\$0	
7.	In-pavement roadway lights	EA	\$50,000	0	\$0	
8.	Landscaping and irrigation	LF	\$60	800	\$48,000	
9.	Street trees and irrigation	EA	\$500	0	\$0	
10.	Structural soil at trees	EA	\$300	0	\$0	
11.	Roadway striping	EA	\$3,000	3	\$9,000	
12.	Traffic sign	EA	\$500	2	\$1,000	
13.	Two stage turn box, green	EA	\$2,000	2	\$4,000	
14.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$141,450	\$335,050
H	Access Node/Directional Signage					
1.	Plaza pavement (200 SF)	EA	\$5,000	0	\$0	
2.	Accent lighting with wiring, 2 per location	EA	\$3,000	6	\$18,000	
3.	Directional sign, 1 per location	EA	\$5,000	3	\$15,000	
4.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$24,750	\$57,750
I	Seating Area					
1.	Plaza pavement (250 SF)	EA	\$7,500	2	\$15,000	
2.	Bench	EA	\$2,500	2	\$5,000	
3.	Bike rack	EA	\$1,000	2	\$2,000	
4.	Trash receptacle	EA	\$1,500	2	\$3,000	
5.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$18,750	\$43,750
J	Monument					
1.	Monument	EA	\$30,000	1	\$30,000	
2.	Landscaping and irrigation	LF	\$60	20	\$1,200	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$23,400	\$54,600
K	Traffic Signal Synchronization					
1.	Conduit	LF	\$13	0	\$0	\$0
L	ESTIMATED PROJECT TOTAL					\$3,712,515

Stewart Dr						
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
A	Sidewalk Without Parkway Strip					
1	Sidewalk (6' wide)	SF	\$9	780	\$7,020	
2	Curb ramp	EA	\$4,000	1	\$4,000	
3	Demolition (curb, gutter, sidewalk, ec)	LF	\$40	130	\$5,200	
4	Curb and gutter	LF	\$40	130	\$5,200	
5	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	3	\$24,000	
6	Start-up, design, inspection, contingencies	LS	75%	Allow	\$34,065	
						\$79,485
B	Sidewalk With Parkway Strip					
1	Sidewalk (6' wide)	SF	\$9	28,680	\$258,120	
2	Curb ramp	EA	\$4,000	5	\$20,000	
3	Demolition (curb, gutter, sidewalk, ec)	LF	\$40	4,780	\$191,200	
4	Curb and gutter	LF	\$40	4,780	\$191,200	
5	Landscaping and irrigation	LF	\$60	4,780	\$286,800	
6	Street trees and irrigation	EA	\$500	10	\$5,000	
7	Structural soil at trees	EA	\$300	10	\$3,000	
8	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	120	\$960,000	
9	Start-up, design, inspection, contingencies	LS	75%	Allow	\$1,436,490	
						\$3,351,810
C	Bike Lane					
1	Re-stripe road	LF	\$8	4,780	\$38,240	
2	Green-colored thermoplastic sheet	SF	\$10	57,360	\$573,600	
3	Start-up, design, inspection, contingencies	LS	75%	Allow	\$458,880	
						\$1,070,720
D	Bike Path					
1	Asphalt path, 10' with 2' dg shoulder	LF	\$150	0	\$0	
2	Landscaping and irrigation	LF	\$60	0	\$0	
3	Trees and irrigation	EA	\$500	0	\$0	
4	Structural soil at trees	EA	\$300	0	\$0	
5	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
E	Transit					
1	Bus shelter	EA	\$10,000	0	\$0	
2	Concrete pad	EA	\$10,000	4	\$40,000	
3	Bike rack	EA	\$1,000	2	\$2,000	
4	Trash receptacle	EA	\$1,500	4	\$6,000	
5	Metal bench	EA	\$2,000	2	\$4,000	
6	Start-up, design, inspection, contingencies	LS	75%	Allow	\$39,000	
						\$91,000
F	Roadway					
1	Slurry seal	SY	\$2	2,300	\$4,600	
2	Start-up, design, inspection, contingencies	LS	75%	Allow	\$3,450	
						\$8,050

Stewart Dr						
Item #	Description	Unit	Cost	Qty	Item Total	Subtotal
G	Enhanced Intersection/Crosswalks					
1	Sidewalk	SF	\$9	5,000	\$45,000	
2	Curb ramp	EA	\$4,000	12	\$48,000	
3	Demolition (curb, gutter, sidewalk, ec)	LF	\$40	650	\$26,000	
4	Curb and gutter	LF	\$40	650	\$26,000	
5	Grading and drainage	EA	\$60,000	0	\$0	
6	Raised bike lane	SF	\$9	0	\$0	
7	In-pavement roadway lights	EA	\$60,000	0	\$0	
8	Landscaping and irrigation	LF	\$60	650	\$39,000	
9	Street trees and irrigation	EA	\$500	6	\$3,000	
10	Structural soil at trees	EA	\$300	6	\$1,800	
11	Roadway striping	EA	\$3,000	3	\$9,000	
12	Traffic sign	EA	\$500	2	\$1,000	
13	Two stage turn box, green	EA	\$2,000	2	\$4,000	
14	Start-up, design, inspection, contingencies	LS	75%	Allow	\$152,100	
						\$354,900
H	Access Node/Directional Signage					
1	Plaza pavement (200 SF)	EA	\$6,000	0	\$0	
2	Accent lighting with wiring, 2 per location	EA	\$3,000	8	\$24,000	
3	Directional sign, 1 per location	EA	\$5,000	4	\$20,000	
4	Start-up, design, inspection, contingencies	LS	75%	Allow	\$33,000	
						\$77,000
I	Seating Area					
1	Plaza pavement (250 SF)	EA	\$7,500	4	\$30,000	
2	Bench	EA	\$2,500	4	\$10,000	
3	Bike rack	EA	\$1,000	4	\$4,000	
4	Trash receptacle	EA	\$1,500	4	\$6,000	
5	Start-up, design, inspection, contingencies	LS	75%	Allow	\$37,500	
						\$87,500
J	Monument					
1	Monument	EA	\$30,000	1	\$30,000	
2	Landscaping and irrigation	LF	\$60	20	\$1,200	
3	Start-up, design, inspection, contingencies	LS	75%	Allow	\$23,400	
						\$54,600
K	Traffic Signal Synchronization					
1	Conduit	LF	\$13	4,400	\$57,200	
						\$57,200
L	ESTIMATED PROJECT TOTAL					\$5,222,265

Item #	Description	Unit	Cost	Multi-Use Pedestrian/Bike Paths		
				Qty	Item Total	Subtotal
A Sidewalk Without Parkway Strip						
1.	Sidewalk (6' wide)	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
B Sidewalk With Parkway Strip						
1.	Sidewalk (6' wide)	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Landscaping and irrigation	LF	\$60	0	\$0	
6.	Street trees and irrigation	EA	\$500	0	\$0	
7.	Structural soil at trees	EA	\$300	0	\$0	
8.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
9.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
C Bike Lane						
1.	Re-stripe road	LF	\$8	0	\$0	
2.	Green-colored thermoplastic sheet	SF	\$10	0	\$0	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
D Bike Path						
1.	Asphalt path, 10' with 2' dg shoulder	LF	\$150	5,300	\$795,000	
2.	Landscaping and irrigation	LF	\$60	7,950	\$477,000	
3.	Trees and irrigation	EA	\$500	130	\$66,000	
4.	Structural soil at trees	EA	\$300	130	\$39,000	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	130	\$1,040,000	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$1,812,000	\$4,228,000
E Transit						
1.	Bus shelter	EA	\$10,000	0	\$0	
2.	Concrete pad	EA	\$10,000	0	\$0	
3.	Bike rack	EA	\$1,000	0	\$0	
4.	Trash receptacle	EA	\$1,500	0	\$0	
5.	Metal bench	EA	\$2,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
F Roadway						
1.	Slurry seal	SY	\$2	0	\$0	
2.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0

Item #	Description	Unit	Cost	Multi-Use Pedestrian/Bike Paths		
				Qty	Item Total	Subtotal
G Enhanced Intersection/Crosswalks						
1.	Sidewalk	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Grading and drainage	EA	\$50,000	0	\$0	
6.	Raised bike lane	SF	\$9	0	\$0	
7.	In-pavement roadway lights	EA	\$50,000	0	\$0	
8.	Landscaping and irrigation	LF	\$60	0	\$0	
9.	Street trees and irrigation	EA	\$500	0	\$0	
10.	Structural soil at trees	EA	\$300	0	\$0	
11.	Roadway striping	EA	\$3,000	0	\$0	
12.	Traffic sign	EA	\$500	0	\$0	
13.	Two stage turn box, green	EA	\$2,000	0	\$0	
14.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
H Access Node/Directional Signage						
1.	Plaza pavement (200 SF)	EA	\$6,000	1	\$6,000	
2.	Accent lighting with wiring, 2 per location	EA	\$3,000	2	\$6,000	
3.	Directional sign, 1 per location	EA	\$5,000	1	\$5,000	
4.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$12,750	\$29,750
I Seating Area						
1.	Plaza pavement (250 SF)	EA	\$7,500	1	\$7,500	
2.	Bench	EA	\$2,500	1	\$2,500	
3.	Bike rack	EA	\$1,000	1	\$1,000	
4.	Trash receptacle	EA	\$1,500	1	\$1,500	
5.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$9,375	\$21,875
J Monument						
1.	Monument	EA	\$30,000	0	\$0	
2.	Landscaping and irrigation	LF	\$60	0	\$0	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	\$0
K Traffic Signal Synchronization						
1.	Conduit	LF	\$13	0	\$0	\$0
L ESTIMATED PROJECT TOTAL						
						\$4,279,625

Item #	Description	Unit	Cost	Duane Ct		
				Qty	Item Total	Subtotal
A	Sidewalk Without Parkway Strip					
1.	Sidewalk (6' wide)	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
B	Sidewalk With Parkway Strip					
1.	Sidewalk (6' wide)	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Landscaping and irrigation	LF	\$80	20	\$1,200	
6.	Street trees and irrigation	EA	\$500	0	\$0	
7.	Structural soil at trees	EA	\$300	0	\$0	
8.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	36	\$288,000	
9.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$216,900	
						\$506,100
C	Bike Lane					
1.	Re-stripe road	LF	\$8	0	\$0	
2.	Green-colored thermoplastic sheet	SF	\$10	0	\$0	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
D	Bike Path					
1.	Asphalt path, 10' with 2' dg shoulder	LF	\$150	0	\$0.00	
2.	Landscaping and irrigation	LF	\$60	0	\$0.00	
3.	Trees and irrigation	EA	\$500	0	\$0.00	
4.	Structural soil at trees	EA	\$300	0	\$0.00	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
E	Transit					
1.	Bus shelter	EA	\$10,000	0	\$0	
2.	Concrete pad	EA	\$10,000	0	\$0	
3.	Bike rack	EA	\$1,000	0	\$0	
4.	Trash receptacle	EA	\$1,500	0	\$0	
5.	Metal bench	EA	\$2,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
F	Roadway					
1.	Slurry seal	SY	\$2	0	\$0	
2.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0

Item #	Description	Unit	Cost	Duane Ct		
				Qty	Item Total	Subtotal
G	Enhanced Intersection/Crosswalks					
1.	Sidewalk	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Grading and drainage	EA	\$50,000	0	\$0	
6.	Raised bike lane	SF	\$9	0	\$0	
7.	In-pavement roadway lights	EA	\$50,000	0	\$0	
8.	Landscaping and irrigation	LF	\$60	0	\$0	
9.	Street trees and irrigation	EA	\$500	0	\$0	
10.	Structural soil at trees	EA	\$300	0	\$0	
11.	Roadway striping	EA	\$3,000	0	\$0	
12.	Traffic sign	EA	\$500	0	\$0	
13.	Two stage turn box, green	EA	\$2,000	0	\$0	
14.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
H	Access Node/Directional Signage					
1.	Plaza pavement (200 SF)	EA	\$6,000	1	\$6,000	
2.	Accent lighting with wiring, 2 per location	EA	\$3,000	2	\$6,000	
3.	Directional sign, 1 per location	EA	\$5,000	1	\$5,000	
4.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$12,750	
						\$29,750
I	Seating Area					
1.	Plaza pavement (250 SF)	EA	\$7,500	0	\$0	
2.	Bench	EA	\$2,500	0	\$0	
3.	Bike rack	EA	\$1,000	0	\$0	
4.	Trash receptacle	EA	\$1,500	0	\$0	
5.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
J	Monument					
1.	Monument	EA	\$30,000	0	\$0	
2.	Landscaping and irrigation	LF	\$60	0	\$0	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
K	Traffic Signal Synchronization					
1.	Conduit	LF	\$13	0	\$0	
						\$0
L	ESTIMATED PROJECT TOTAL					\$625,850

Item #	Description	Unit	Cost	Santa Real Ave		
				Qty	Item Total	Subtotal
A	Sidewalk Without Parkway Strip					
1.	Sidewalk (6' wide)	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	25	\$200,000	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$150,000	
						\$350,000
B	Sidewalk With Parkway Strip					
1.	Sidewalk (6' wide)	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Landscaping and irrigation	LF	\$60	0	\$0	
6.	Street trees and irrigation	EA	\$500	0	\$0	
7.	Structural soil at trees	EA	\$300	0	\$0	
8.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
9.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
C	Bike Lane					
1.	Re-stripe road	LF	\$8	0	\$0	
2.	Green-colored thermoplastic sheet	SF	\$10	0	\$0	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
D	Bike Path					
1.	Asphalt path, 10' with 2' dg shoulder	LF	\$150	0	\$0	
2.	Landscaping and irrigation	LF	\$60	0	\$0	
3.	Trees and irrigation	EA	\$500	0	\$0	
4.	Structural soil at trees	EA	\$300	0	\$0	
5.	Pedestrian pole lighting with wiring (40' O.C.)	EA	\$8,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
E	Transit					
1.	Bus shelter	EA	\$10,000	0	\$0	
2.	Concrete pad	EA	\$10,000	0	\$0	
3.	Bike rack	EA	\$1,000	0	\$0	
4.	Trash receptacle	EA	\$1,500	0	\$0	
5.	Metal bench	EA	\$2,000	0	\$0	
6.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
F	Roadway					
1.	Slurry seal	SY	\$2	0	\$0	
2.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0

Item #	Description	Unit	Cost	Santa Real Ave		
				Qty	Item Total	Subtotal
G	Enhanced Intersection/Crosswalks					
1.	Sidewalk	SF	\$9	0	\$0	
2.	Curb ramp	EA	\$4,000	0	\$0	
3.	Demolition (curb, gutter, sidewalk, ac)	LF	\$40	0	\$0	
4.	Curb and gutter	LF	\$40	0	\$0	
5.	Grading and drainage	EA	\$50,000	0	\$0	
6.	Raised bike lane	SF	\$9	0	\$0	
7.	In-pavement roadway lights	EA	\$50,000	0	\$0	
8.	Landscaping and irrigation	LF	\$60	0	\$0	
9.	Street trees and irrigation	EA	\$500	0	\$0	
10.	Structural soil at trees	EA	\$300	0	\$0	
11.	Roadway striping	EA	\$3,000	0	\$0	
12.	Traffic sign	EA	\$500	0	\$0	
13.	Two stage turn box, green	EA	\$2,000	0	\$0	
14.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
H	Access Node/Directional Signage					
1.	Plaza pavement (200 SF)	EA	\$6,000	0	\$0	
2.	Accent lighting with wiring, 2 per location	EA	\$3,000	2	\$6,000	
3.	Directional sign, 1 per location	EA	\$5,000	1	\$5,000	
4.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$8,250	
						\$19,250
I	Seating Area					
1.	Plaza pavement (250 SF)	EA	\$7,500	0	\$0	
2.	Bench	EA	\$2,500	0	\$0	
3.	Bike rack	EA	\$1,000	0	\$0	
4.	Trash receptacle	EA	\$1,500	0	\$0	
5.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
J	Monument					
1.	Monument	EA	\$30,000	0	\$0	
2.	Landscaping and irrigation	LF	\$60	0	\$0	
3.	Start-up, design, inspection, contingencies	LS	75%	Allow	\$0	
						\$0
K	Traffic Signal Synchronization					
1.	Conduit	LF	\$13	0	\$0	
						\$0
L	ESTIMATED PROJECT TOTAL					\$369,250

Traffic Memorandum



MEMORANDUM

Date: December 23, 2014
 To: Marie Mai, Callander Associates
 From: Nate Conable and Sarah Peters
 Subject: **East Sunnyvale Sense of Place Plan**

SI14-1535

This memorandum summarizes existing issues and recommendations for the area covered in the East Sunnyvale Sense of Place Plan ("Plan Area"). Our focus is creating Complete Streets within the Plan Area to improve pedestrian and bicycle access, safety and comfort.

APPROACH

The East Sunnyvale Sense of Place Plan is intended to guide future transportation improvements within a large industrial and residential area immediately west of Lawrence Expressway. We took a Complete Streets approach to the transportation system, identifying opportunities to improve pedestrian and bicycle connectivity within and around the Plan Area. By promoting walking and bicycling, this approach helps connect the public realms of the roadway and public space with adjacent private uses, and activate the streets with pedestrians and cyclists.

These recommendations assume that future development within this area will be industrial, commercial and residential, and that the E. Duane Avenue bicycle lanes, recently approved by the Sunnyvale City Council, will be implemented.

MULTIMODAL IMPROVEMENTS

Develop Multi-Use Pedestrian and Bicycle Path Network

Issue: Large block sizes throughout the Plan Area have resulted in few and widely-spaced pedestrian and bicycle connections. This reduces opportunities for recreation and makes walking and bicycling less convenient for day-to-day uses.

Recommendation: As parcels within the Plan Area redevelop, look for opportunities to locate multi-use pathways along parcel edges, providing connections to Duane Avenue, Deguigne Drive and Stewart Drive. These pathways should have a minimum paved width

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of 12' and be limited to pedestrian and bicycle traffic. The East Sunnyvale Sense of Place Circulation Plan identifies several potential locations for multi-use paths.

Evaluate Stop Control at Deguigne Drive and Santa Real Avenue

Issue: This T-intersection adjacent to Swegles Park is stop-controlled on the southbound approach only. Vehicle traffic from the proposed residential development at 815 Deguigne Drive may worsen conflicts between eastbound left-turning vehicles and westbound right-turning vehicles, or increase delay for southbound left-turning vehicles. The lack of clear right-of-way for vehicles approaching this intersection may also create conflicts between vehicles and pedestrians.

Recommendation: We recommend conducting an all-way stop evaluation at this intersection to determine whether it meets the warrants or other operational/safety criteria outlined in the *California Manual on Uniform Traffic Control Devices* (2012, Section 2B.07). The evaluation should include a full day (12 hours minimum, 7 AM - 7 PM) of vehicle, pedestrian and bicycle counts, preferably collected via video. Alternatively, a traffic circle could be added to calm traffic and clarify right-of-way, with the added benefit of adding landscaping that helps to create a defined sense of place.

If the study determines that a stop is not warranted, other measures may be used to slow traffic and improve pedestrian safety at this intersection. These measures would be at the discretion of City of Sunnyvale staff, but could include chicanes, advance yield lines and pedestrian crossing signs. The crosswalk treatment outlined under *Pedestrian Network Improvements*, below, should be implemented whether or not stop control or traffic calming treatments are added here.

Add Curb Extensions and/or Reduce Turn Radii throughout Plan Area

Issue: Many intersections within the Plan Area have large curb radii, encouraging drivers to make right turns at high speeds and increasing crossing distances for pedestrians.

Recommendation: As parcels redevelop in the Plan Area, look for opportunities to add curb extensions and/or reduce turn radii at nearby intersections. Curb extensions offer the opportunity to add landscaping and other elements that enhance the Plan Area's visual identity.

Add Bus Benches throughout Plan Area

Issue: Most bus stops within the Plan Area lack amenities, including benches, shelters and waste bins.

Recommendation: Add bus benches at stops throughout the Plan Area, and consider adding waste bins, depending on maintenance budget. Bus stops with the highest

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number of passengers boarding and alighting should receive these amenities before bus stops that are less well-used.

BICYCLE NETWORK IMPROVEMENTS

Add Bicycle Facility to Duane Avenue between Lawrence Expressway and Stewart Drive

Issue: The bicycle lanes planned for E. Duane Avenue do not connect to Lawrence Expressway. This leaves a substantial gap between bicycle lanes within the Plan Area and bicycle lanes on Oakmead Drive, just east of Lawrence Expressway.

Recommendation: Add bicycle lanes on, at a minimum, green-backed shared lane markings (sharrows) to Duane Avenue between Lawrence Expressway and the E. Duane Avenue/Stewart Drive intersection. Narrowing the existing 12' vehicle travel lanes to 10' would permit the addition of 6' bicycle lanes in each direction. However, 10' lane widths may be inadequate for trucks or transit vehicles traveling on this stretch of roadway. To permit a minimum 11' lane width, the City of Sunnyvale may also consider a combination approach with an eastbound bicycle lane and westbound green-backed sharrow treatment. Both bicycle lanes and sharrows should be located to minimize conflicts between bicycles traveling straight through the intersection and drivers turning right; bicycle lanes should be located to the left of dedicated right turn lanes, and sharrows should be located in the center of shared travel lanes. If sharrows are used in the westbound lanes, we further recommend adding signs to alert drivers turning right onto westbound Duane that bicycles may be present.

We recommend the use of green-backed sharrows because they enhance bicyclist visibility to motorists, which is critical on a shared roadway. Guidance for the design of green-back sharrows can be found in the NACTO *Urban Bikeway Design Guide*, which was endorsed by Caltrans in April 2014. Per the *California Manual on Uniform Traffic Control Devices* (2012), these treatments are still experimental. The City of Sunnyvale should determine whether to implement these treatments through the formal FHWA experimentation process or to implement them under its own discretion, as other local jurisdictions in Santa Clara County have done.

Improved Bicycle Lane on Deguigne Drive

Issue: The bicycle lanes on Deguigne Drive are of substandard width and partially located in the gutter, resulting in inadequate and unwelcoming conditions for bicyclists. Based on field observations, the existing center left turn lane appears to be underutilized; driveway consolidation with future development at 915 Deguigne Drive will further reduce the need for this turn lane.

Recommendation: Reallocate space from center turn lane to bicycle lanes and on-street parking. Widen existing bicycle lanes on Deguigne Drive to 7', measured from concrete

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gutter edge to outer stripe. Add on-street parking to west side of Deguigne Drive to serve residential developments.

Dashed Bicycle Lanes and Two-Stage Left Turn Treatment at Major Intersections

Issue: Bicycle lanes are dropped at major intersections, reducing the visibility of bicycle riders to motorists and potentially leading to conflicts, particularly for bicyclists turning left.

Recommendation: Continue bicycle lanes through major intersections using dashed lane markings. Add two-stage turn queue boxes at major intersections to facilitate bicyclists making left turns. At a minimum, these treatments should be considered at:

- Stewart Drive/E. Duane Avenue
- N. Wolfe Road/Stewart Drive

Depending on cyclist volumes and whether conflicts are observed between motorists and bicyclists, additional treatments may be considered at:

- Deguigne Drive/Stewart Drive
- Deguigne Drive/E. Duane Avenue

We recommend that these treatments be implemented according to the NACTO *Urban Bikeway Design Guide*, endorsed by Caltrans in April 2014. Per the *California Manual on Uniform Traffic Control Devices* (2012), these treatments are still experimental. The City of Sunnyvale should determine whether to implement these treatments through the formal FHWA experimentation process or to implement them under its own discretion, as other local jurisdictions in Santa Clara County have done.

PEDESTRIAN NETWORK IMPROVEMENTS

Enhanced Intersection across Duane Avenue at San Miguel

Issue: No crosswalks are marked at the Duane Avenue/San Miguel Avenue intersection, presenting a barrier for students walking and bicycling to school at San Miguel Elementary and preventing access between the Plan Area and neighborhoods to the north. On Duane Avenue, plants in the sidewalk landscape strip and parked cars reduce visibility for drivers exiting San Miguel, leading them to pull into the unmarked crosswalk across San Miguel Avenue while they wait to run onto Duane Avenue.

Recommendation: Add enhanced intersection across Duane Avenue at San Miguel Avenue. The intersection should include:

- Curb extensions (bulb outs) on the northwest and northeast corners of the intersection

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- High-visibility crosswalk markings (continental style) on each side of San Miguel Avenue
- Advanced yield lines on eastbound approach (west side of intersection) where more than one lane of traffic is present
- In-roadway lights on the outside of the marked crossings

Based on a review of guidelines from the 2012 Highway Capacity Manual, in-roadway lights should result in drivers yielding to pedestrians. If they are not observed to yield, additional measures, such as overhead beacons (HAWK or RRFB) should be considered.

Enhanced Intersection across Duane Avenue east of Deguigne Drive

Issue: No crosswalks are marked on Duane Avenue east of Deguigne Drive, limiting pedestrian access between the Plan Area and neighborhoods to the north.

Recommendation: Add an enhanced intersection across Duane Avenue east of Deguigne Drive, similar to the intersection treatment proposed for San Miguel Avenue. The location of this treatment should be determined as parcels within the Plan Area redevelop and with input from community residents and City of Sunnyvale staff.

Add Marked Crosswalks at Deguigne Drive and Santa Real Avenue

Issue: Crosswalks are not marked on the east or west sides of the Deguigne Drive/Santa Real Avenue intersection, despite the presence of Swegles Park immediately south of the intersection. The addition of new residential development within the Plan Area will likely increase the number of people crossing at this location.

Recommendation: We recommend adding continental or ladder striped crosswalks on the east side of the Deguigne Drive/Santa Real Avenue intersection to improve access to Swegles Park. This recommendation should be implemented whether or not stop control or traffic calming treatments are added at this location.

Add Marked Crosswalks at Key Locations

Issue: Crosswalks are not marked along E. Duane Avenue, E. Duane Court, Stewart Drive and Deguigne Drive. This may lead to pedestrians crossing at unpredictable locations and is likely to discourage walking within the Plan Area. In some cases, curb outs with truncated dome treatments are present without a marked crosswalk. This may be confusing to pedestrians, especially if they are visually impaired.

Recommendation: We recommend striping continental or ladder striped crosswalks at key locations along E. Duane Avenue, Stewart Drive and Deguigne Drive. The locations of these crosswalks should be determined with input from community members. Depending on vehicle volumes and speeds on these streets, additional measures, such as

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pedestrian crossing signs, in-roadway lighting, and advanced yield lines should be considered for these crosswalks.

ADDITIONAL CONSIDERATIONS

School Traffic on Duane Avenue

Issue: Traffic along Duane Avenue during the AM peak hour is substantially affected by school drop-off traffic for The King's Academy and Rainbow Montessori. During the school drop-off period, several drivers were observed making illegal left turns across the double yellow line on Duane Avenue. Although these schools are outside of the Plan Area, unpredictable and/or illegal maneuvers from drivers near the schools will affect auto and bicycle traffic along Duane Avenue, and may have effects on pedestrian comfort and safety.

Recommendation: We recommend that the City of Sunnyvale continue to work with schools located along Duane Avenue to educate drivers and manage school traffic. The City should also continue to implement safety and operational improvements outlined in the *City of Sunnyvale Comprehensive School Traffic Study (2012)*.