UNIVERSITY COMMUNITY PLAN UPDATE

Existing Conditions Summary

The City of SAN DIEGO

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EXECUTIVE SUMMARY

This study documents analysis and observations of the existing mobility network in the University community.

Pedestrian Evaluation

The University community has a mode share relatively close to that of the City of San Diego and San Diego County. This is likely due to the relatively urban, mixed-use nature of the area. Pedestrian facilities are provided for most of the community, but distances between points of interest can be long. Specifically, Rose Canyon, I-805, I-5, and SR-52 act as barriers for pedestrian connectivity through the community. There are pedestrian bridges at certain locations that provide important pedestrian connections, but otherwise the community's pedestrian travel is challenging with the currently wide street configurations. A 0.25-mile walkshed was calculated from each intersection, allowing the simulated pedestrian to only utilize available sidewalks and crossings. It was found that the central areas within the community along Regents Road and Genesee Avenue provide high pedestrian connectivity, however, the outer areas are not well served due to freeway interchange constraints.

Pedestrian demand is highest in the denser, central part of the community. Demand is closely correlated with the commercial (both retail and office space uses) core of the community. The areas of highest demand also have the best-connected street grid and are less impacted by the topographic and freeway barriers that affect the southern and northern ends of the community. Demand is predictably lower in areas that are largely residential, including areas to the west of Regents Road, south of Rose Canyon and east of Genesee Avenue.

Between October 2012 and September 2017, there were a total of 69 reported collisions involving pedestrians within the University community. The vast majority (72 percent) of pedestrian-involved collisions occurred at intersections. Intersections in the community have wide crossings and are heavily travelled by motorists with frequent delay, making both drivers and pedestrians more aggressive in their decision-making.

Multiple roadway segments within the community are either missing sidewalks or have sidewalks that are less than 5 feet in width. Many sub-standard sidewalks are adjacent to City-owned right-of-way that is currently used for landscaping. Both the provision of sidewalks as well as increasing sidewalk widths would likely improve the pedestrian experience.

Pedestrian connections are an important part of this community to serve transit users and those traveling between retail, residential, and employment areas. Connections along the higher speed, wider roadways in the community should consider alternatives to standard at-grade crossings. Providing efficient pedestrian connections internal to large private developments also helps improve the pedestrian experience.

Bicycle Evaluation

The University community has a mode share over two times that of the City of San Diego and San Diego County. This is likely due to the relatively urban, mixed-use nature of the area.

Overall, the community is primarily a high-stress bicycle environment along the major roadways. Pockets of low stress local roadways are often isolated from adjacent areas by these high stress circulation element roads. In the northern part of the community, high speeds and traffic volumes on most roadways create a stress barrier for cyclists. Pockets of low stress roadways in the UCSD area and residential areas in the community can travel around their immediate area with low-stress, but have minimal low-stress options to get to other parts of the community. The southern portion of the community is primarily residential and has a high number of low-stress roadways, but lacks connections to the destinations in the northern portion of the community.

The greatest connectivity is seen along the major roadways in the central part of the community. This is likely due to the lack of barriers (canyons and freeways) in that part of the community, as well as the slightly more grid-like street network connecting to Regents Road, Genesee Avenue, and La Jolla Village Drive. Freeway barriers (I-5 and I-805) significantly reduce the bike connectivity at adjacent intersections.

Between October 2012 and September 2017, there were a total of 70 reported collisions involving bicycles within the University community. Just as with pedestrian-involved collisions, almost three-quarters of all bicycle-involved collisions occurred at intersections.

To increase bicycle commuter mode share, it is important to create a low-stress bicycle network which can connect places of employment, residences, and commercial centers. Major arterials are the only roads that connect those elements in the University community; thus, low-stress facilities would need to be implemented along the major arterials, such as those listed above, to increase the low-stress bicycle connectivity of the community. On or adjacent to these major arterials, routes that are separated from cars should be provided to attract more users.

Public Transit

Areas that are well served by transit have transit use similar to or better than the City-wide average. South of Rose Canyon has low transit ridership; this result is not surprising given the limited transit service and long walking distances to bus stops in this area.

The University community has three major transit stations: UTC Transit Center, Gilman Transit Center, and the Gilman Drive & Eucalyptus Grove Lane bus stop. Of the three, only the UTC Transit Center has access to low or medium stress pedestrian facilities immediately adjacent to the three major transit stops. Conversely, the major transit stops along Gilman have access to low-stress bicycle facilities. Improved pedestrian and bicycle connections from the transit stations may further increase ridership.

The success of the SuperLoop demonstrates how connecting high-density residential with employment, retail, commercial, and educational uses with frequent transit service can attract riders who otherwise may have used a car. Over time, with future planned transit service, people may choose to live where they can take transit and thereby own fewer cars. Transit demand for work commuters may focus on providing access to the businesses in the northern areas of the community and along La Jolla Village Drive, whereas resident-focused service may be in greater demand in the central and southern ends of the community.

Key chokepoints were identified that cause delays for buses in the community.

- *The on-ramp from eastbound La Jolla Village Drive to southbound I-805 backs up during the PM peak and there isn't an HOV lane to allow buses to bypass the queues.*
- *The southbound I-805 off ramp to La Jolla Village Drive congestion during the PM peak.*
- *The right lane on Gilman Drive leading to the on-ramp to southbound I-5 backs up during the PM peak and there is not an HOV lane to allow buses to bypass the queues.*
- *The left turn from northbound Genesee Avenue to westbound La Jolla Village Drive does not provide enough green time to clear the queue and creates abnormal delays for buses making this left turn movement.*
- *Delays occur frequently during peak periods along Genesee Avenue between Nobel Drive and Governor Drive and there is no alternative route to cross Rose Canyon.*
- *Heavy through movement demand on La Jolla Village Drive approaching I-5 leads to large queue development on all approaches*

Street Network

Between October 2012 and September 2017, there were a total of 1,196 reported vehicular collisions (excluding pedestrian and bicycle involved collisions) within the University community.

A total of 79 intersections throughout the community were analyzed to determine the operations during morning and afternoon peak periods. Roadway segment travel times and midday intersection analyses were performed for intersections along Genesee Avenue, La Jolla Village Drive, Nobel Drive, and Regents Road.

The Genesee Avenue corridor is approximately 4.5 miles and has 20 signalized intersections between North Torrey Pines Road and Appleton Street/Lehrer Drive; 13 intersections operate at LOS E or F during at least one peak hour. In the AM and PM peaks, congestion is shown from Eastgate Mall to Lehrer Drive/Appleton Street and at the I-5 ramps.

The La Jolla Village Drive/Miramar Road corridor is approximately 4.2 miles and has 19 signalized intersections between Torrey Pines Road and Camino Santa Fe; 9 intersections operate at LOS E or F during at least one peak period. In the AM peak, the westbound direction has major congestion between the I-805 ramps and Genesee Avenue, and again near the I-5 ramps and the eastbound direction has noticeable congestion between the I-5 ramps and Genesee Avenue. In the PM peak, congestion at a couple key intersections significantly reduce travel speeds on the corridor. In the eastbound direction, the Towne Centre Drive intersection shows extreme congestion; in the westbound direction, Miramar Mall shows extreme congestion.

The Nobel Drive corridor is approximately 3.0 miles and has 17 signalized intersections between Villa La Jolla Drive and Miramar Road; 2 intersections operate at LOS E or F during at least one peak period. Congestion is shown near the I-5 interchange and from Regents Road to Towne Centre Drive during both peak periods.

Regents Road has 10 signalized intersections between Genesee Avenue and Arriba Street and 4 signalized intersections between Governor Drive and Luna Avenue; 4 intersections operate at LOS E or F during at least one peak period. Congestion is shown from La Jolla Village Drive to Nobel Drive and from SR-52 ramps to Luna Avenue during both peak periods.

North Torrey Pines Road has 5 signalized intersections between UCSD Northpoint Driveway and Genesee Avenue; 3 intersections operate at LOS E or F during the PM peak period. Congestion is shown at Genesee Avenue and south of La Jolla Shores Drive.

Gilman Drive has 4 signalized intersections and 1 unsignalized intersection between La Jolla Village Drive Ramps and I-5 Ramps; the unsignalized intersection at La Jolla Village Drive EB Ramp operates at LOS F during the PM peak period.

Governor Drive has 2 signalized intersections and 2 unsignalized intersections between Regents Road and I-805 Ramps; 2 intersections operate at LOS E or F during at least one peak period. Congestion is shown at Genesee Avenue and at I-805 NB Ramps.

As part of the SuperLoop rapid bus route, a total of 40 intersection have transit signal priority. This includes 31 City operated intersections, 7 UCSD operated intersections, and 2 Caltrans operated intersections.

Freeways

Freeway operations for the adjacent Interstate 5, Interstate 805, and State Route 52 facilities were analyzed to determine the operations and capacity of the mainline and ramp connections.

- *There are 18 intersections that provide a connection to the adjacent freeway facilities.*
  - *7 of the 18 intersections experience poor operations during at least one peak period, and*
  - *3 of the 18 intersections experience poor operations during more than one peak period.*

- *The freeway mainlines adjacent to the community area are currently operating at capacity during the peak periods. As a result, the ramp connections from the community to get on the freeway are not able to allow more vehicles onto the freeway. With the current capacity restraints, vehicles will either wait longer, spread into a longer peak period, or choose other modes of travel.*

- *High-occupancy vehicle (HOV) lanes are under construction on Interstate 805 and are planned for future implementation along Interstate 5. Direct access ramps are proposed at Voigt Drive (via Interstate 5) and Nobel Drive (via Interstate 805). These lanes should encourage more carpool, vanpool, and transit use.*

Overall, access points to the freeways are at or above capacity and many of the major corridors in the community experience congestion.

Parking

Parking in the University community is primarily off-street parking. In the commercial areas, off-street parking lots are provided for the adjacent uses. In residential areas, off-street parking is mostly provided as well, with on-street parking sparingly used as overflow parking for residents and visitors. For on-street parking in the community, there are no permit parking areas and time-restricted and metered parking is used infrequently.

Portions of some of the key corridors in the community currently provide on-street parking:

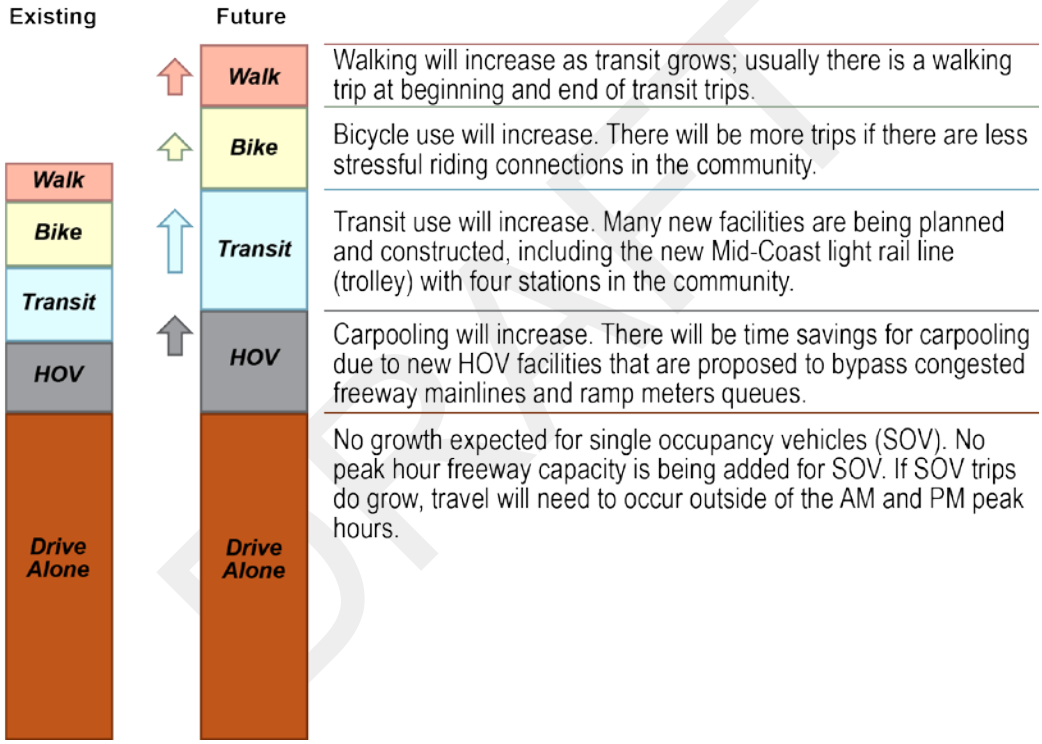
- *La Jolla Village Drive*
- *Governor Drive*

- *Regents Road*
- *Nobel Drive*

Connectivity in the community may benefit from the conversion of on-street parking to transit or bicycle facilities. Providing enough off-street parking to accommodate the adjacent land uses and repurposing the roadways to accommodate other modes of travel may be needed to capture future growth. The effect of removing on-street parking will need to be considered on an individual project basis.

How will travel in the University community grow?

Based on the information gathered in this report, growth in the University community is contingent on providing opportunities for modes of travel other than single occupancy vehicles. The following graphic summarizes the vision of the community growth by mode of travel:



Contents

Figures

Tables

Appendices

1 INTRODUCTION

The following section introduces the Existing Conditions Report of the University Community Plan Update.

BACKGROUND

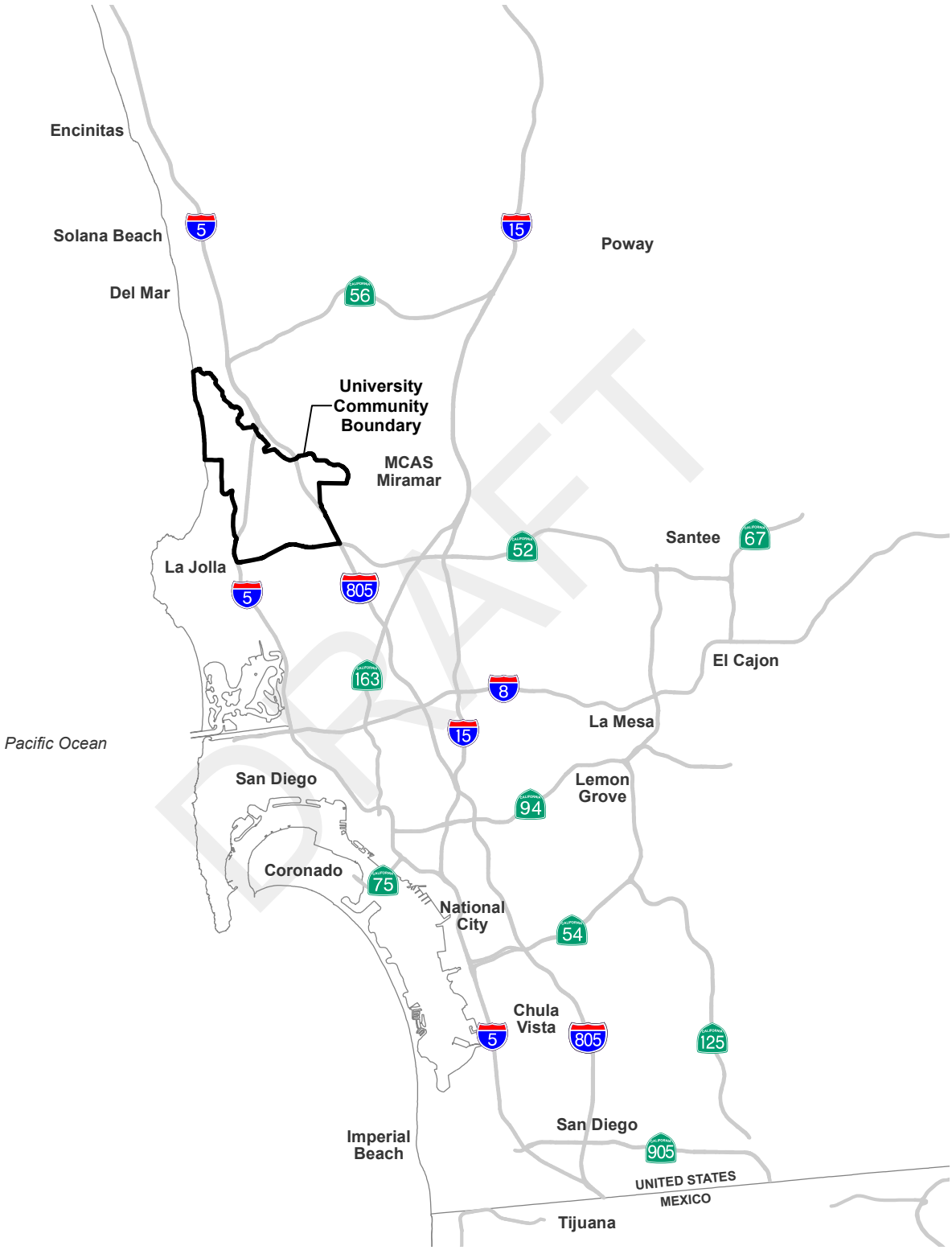
The University community is located at the northern border of the City of San Diego, encompassing the University Town Center, Torrey Pines, and the University of California San Diego (UCSD). The area commonly referred to as the "golden triangle", bounded by I-5, I-805, and SR-52, is within the University community. **Figure 1-1** depicts the location of the University community in a regional context and **Figure 1-2** shows the community boundary in a localized context.

REPORT PURPOSE AND APPLICABILITY

The purpose of the Community Plan Existing Conditions Mobility Report is to summarize the existing conditions within the community for all modes of transportation and to identify potential deficiencies and conflicts that could be addressed through future changes in the transportation network. The existing conditions report is a critical building block in the preparation of the land use plan and future mobility network. Key purposes of the existing conditions report include:

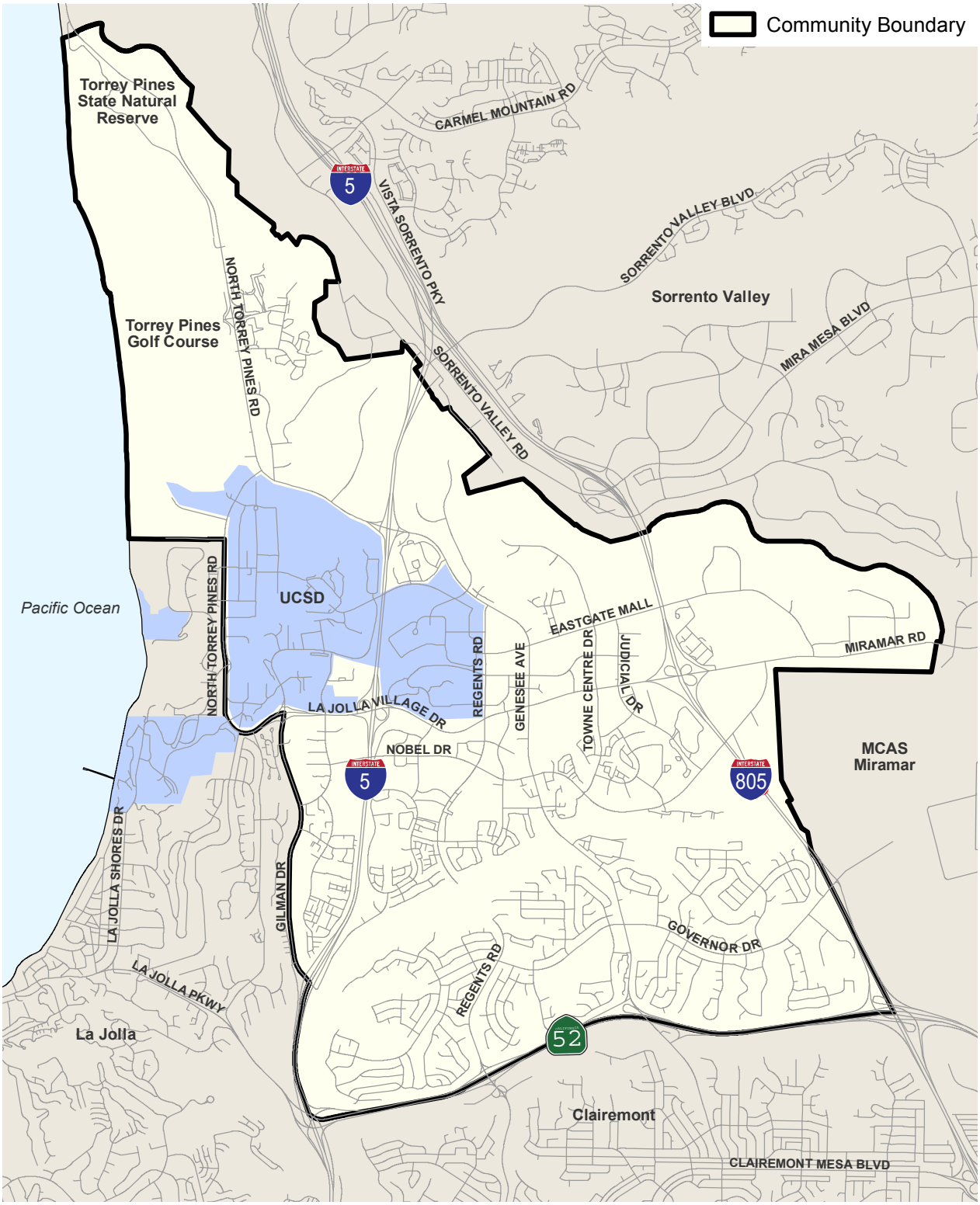
- Summarizing traffic volume and collisions data collected,
- Describing the analysis methods and techniques,
- Evaluating existing mobility conditions,
- Establishing a baseline condition for the environmental documents, and
- Educating the stakeholders and plan preparers of current conditions.

FIGURE 1-1



Regional Vicinity Map

FIGURE 1-2



Community Boundary

2 ANALYSIS STUDY AREA AND METHODOLOGY

The following section describes the methodology used to determine the study area and evaluate existing conditions of the mobility network within the University community.

STUDY AREA

ANALYSIS METHODOLOGY

The existing conditions evaluation process includes the following analyses:

- Pedestrian network connectivity and barriers
- Pedestrian demand based upon the Pedestrian Priority Model and mode share
- Pedestrian Safety
- Pedestrian route typology
- Pedestrian Environment Quality Evaluation (PEQE)
- Pedestrian Connectivity
- Determination of walkable area within 1/4-mile distance to each transit stop within the community
- Bicycle level of traffic stress
- Bicycle demand based upon the Bicycle Demand Model and mode share
- Bicycle Safety
- Bicycle connectivity (all facilities and low-stress facilities)
- Transit demand and connections
- Safety Near a Transit Stop/Station
- Levels of service at all study intersections for the AM and PM peak-hours during a typical weekday
- Levels of service for study intersections along Genesee Avenue, La Jolla Village Drive, Nobel Drive, and Regents Road during the midday peak-hour during a typical weekday
- Levels of service for roadway segments within the community based on average daily traffic and theoretical capacity based on the roadway classification
- Levels of service along corridors within the community based on average speed
- Levels of service along freeway segments adjacent to the community based on density
- Length of queues and delays at freeway entrance ramps that have ramp meter operations
- Vehicular Safety

PEDESTRIAN METHODOLOGY

PEDESTRIAN DEMAND

The City of San Diego's Pedestrian Priority Model (PPM) was used to evaluate the relative pedestrian demand within the University community. The PPM evaluates pedestrian demand based on existing land use and other characteristics within the built environment. The PPM determines demand based on three types of amenities: pedestrian trip attractors, trip generators, and trip detractors. A summary of land uses and other amenities in each category is shown below in **Table 2-11**.

Table 2-1 Pedestrian Demand Factors

Category	Pedestrian Demand Factors
Attractors	Schools, Universities, Neighborhood Civic Facilities, Neighborhood and Community Retail, Parks and Recreation Facilities, Proximity to and Ridership at Transit Stops/Stations
Generators	Population and Employment Density, Age, Income, Disability Density, Mixed Land Density
Detractors	Collisions, Traffic Volumes, Traffic Speeds, Lack of Street Lighting, Barriers

Source: Active Travel Assessments, Integrating Bicycle, Pedestrian and Transit Evaluation in Long Range Planning (City of San Diego, 2017)

Using the above factors, the PPM identifies pedestrian propensity land uses and population concentrations. The PPM also considers factors indicating potential pedestrian barriers or safety issues.

The PPM was also used to determine the Pedestrian Study Area, which was used in the pedestrian quality and connectivity assessments.

PEDESTRIAN SAFETY

In order to further understand existing pedestrian safety issues, a safety assessment was performed. Safety was evaluated using collision data obtained from the City of San Diego Police Department's Crossroads software (SDPD) for the period from October 2012 through September 2017. Collisions from SDPD were geocoded and mapped to display the locations of collisions within the University community.

The location and concentration of pedestrian-involved collisions was taken into consideration when developing the Pedestrian Study Area, as locations with three or more collisions between 2012 and 2017 were included in the pedestrian quality and connectivity assessments. A map showing the spatial distribution of pedestrian-involved collisions is also included.

Several tables were also created to further understand safety issues and trends within the community. These include: high-frequency collision locations, cause of collisions, party at fault, and collision location types. The collision location types are differentiated between intersection, midblock, and approaching/departing. Collisions that occurred within 100 feet of the center of the intersection, to account for vehicles that are queued at the intersection control, were identified as intersection collisions. Collisions that occurred between 100 feet and 350 feet from the center of the intersection were identified as approaching/departing collisions. This net 250 feet is reflective of the stopping sight distance of a vehicle travelling at 35 mph. Collisions that occurred at a distance over 350 feet away from the center of the intersection were identified as mid-block collisions.

PEDESTRIAN NETWORK CONNECTIVITY AND BARRIERS

An existing sidewalk inventory was provided by City staff in Geographic Information System (GIS) format of the study area for review and analysis in the ArcGIS software. This information was used to provide an overview of where pedestrian connections currently are provided, areas that have missing pedestrian facilities, and barriers that may impede pedestrian connectivity.

PEDESTRIAN ROUTE TYPOLOGY

Pedestrian route typology methodology was established in in Appendix B[1] of the City's Pedestrian Master Plan effort. The methodology establishes criteria for defining pedestrian route types and ultimately developing priority pedestrian improvements. Pedestrian route type criteria and data sources are identified in **Table 2-2**.

Table 2-2 Pedestrian Route Type Criteria

Phase I Pedestrian Route Type Criteria	Phase 2 & 3 Operationalization of Route Type Criteria	Data Sources
Street Design Manual Classification	Circulation Element Roadway Classification	General_Plan_Road_Network.shp (City of San Diego, 2008)
Strategic Framework Element Village Type	Village Propensity Model	Villagepropensity_vpMay30.img (City of San Diego, 2008)
Land Uses	Pedestrian Priority Attractor Model and existing adjacent land uses and intensities	Updated PPM 2015 (City of San Diego 2015) and 2007 lu.shp (SANDAG)

Source: City of San Diego Pedestrian Master Plan Volume 1, Appendix B (2015)

[1] https://www.sandiego.gov/sites/default/files/legacy/planning/programs/transportation/mobility/pdf/sdpmp_volume_1_appendix_b.pdf

PEDESTRIAN ENVIRONMENT QUALITY EVALUATION (PEQE)

A pedestrian quality assessment was performed to understand the overall quality of existing pedestrian facilities within the Pedestrian Study Area[2]. The Pedestrian Study Area includes areas which meet one or more of the following criteria:

- Existing Pedestrian Demand: PPM score that is one standard deviation above the community mean
- Pedestrian Safety: locations with two or more pedestrian collisions over the analyzed five-year period
- Proximity to Transit: areas within a half-mile of a major transit stop[3]

The quality of all existing pedestrian facilities (roadway segments, intersection crossings, and mid-block crossings) within the Pedestrian Study Area were evaluated using the Pedestrian Environment Quality Evaluation (PEQE) tool. Pedestrian facilities were assessed using the criteria described below in **Table 2-3**, and given a score of High, Medium, or Low, based upon the following scoring system:

- *Low:* < 4 points
- *Medium:* = 4 – 6 points
- *High:* > 6 points

Table 2-3 PEQE Scoring Criteria

Facility Type	Measure	Description/Feature	Scoring
Segment between two intersections	Horizontal Buffer	Between the edge of auto travel way and the clear pedestrian zone	0 point: < 6 feet 1 point: 6 - 14 feet 2 points: > 14 feet
	Lighting		0 point: below standard/requirement 1 point: meet standard/requirement 2 points: exceed standard/requirement
	Clear Pedestrian Zone	5’ minimum	0 point: has obstructions 2 points: no obstruction
	Posted Speed Limit		0 point: > 40 mph 1 point: 30 - 40 mph 2 points: < 30 mph

[2]Active Travel Assessments, Integrating Bicycle, Pedestrian and Transit Evaluation in Long Range Planning (City of San Diego, 2017)

[3] Major transit stop (CEQA Section 21064.3) is a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the AM and PM peak commute periods

Facility Type	Measure	Description/Feature	Scoring
Maximum			**8 points**
Intersection – Individual Crossing	Physical Feature	Enhanced/High Visibility Crosswalk Raised Crosswalk/Speed Table Advanced Stop Bar Bulb out/Curb Extension	0 point: < 1 feature per ped crossing 1 point: 1 – 2 features per ped crossing 2 points: > 2 features per ped crossing
	Operational Feature	Pedestrian Countdown Signal Pedestrian Lead Interval No-Turn On Red Sign/Signal Additional Pedestrian Signage	0 point: < 1 feature per ped crossing 1 point: 1 – 2 features per ped crossing 2 points: > 2 features per ped crossing
	ADA Curb Ramp		0 point: no existing curb ramp 1 point: existing curb ramp is below standard/requirement 2 points: curb ramp meets standard/requirement
	Traffic Control		0 point: No control 1 point: Stop sign controlled 2 points: Signal/ Roundabout/Traffic Circle
Maximum			**8 points**
Mid-block Crossing	Visibility		0 point: w/o high visibility crosswalk 2 points: with high visibility crosswalk
	Crossing Distance		0 point: no treatment 2 points: with bulb out or median pedestrian refuge
	ADA		0 point: no existing curb ramp 1 point: existing curb ramp is below standard/requirement 2 points: curb ramp meets standard/requirement
	Traffic Control		0 point: No control 1 point: Pedestrian Activated Warning Device (In-pavement, Pedestrian Activated Flashing Beacons etc.) 2 points: Signal/Pedestrian Hybrid Beacon (HAWK)
Maximum			**8 points**

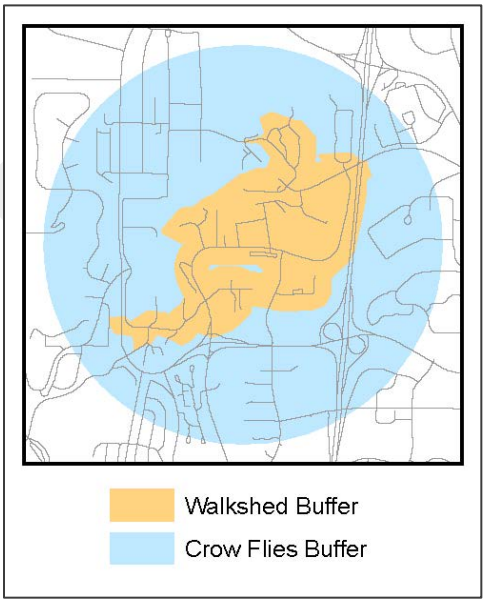
Source: Active Travel Assessments, Integrating Bicycle, Pedestrian and Transit Evaluation in Long Range Planning (City of San Diego, 2017)

PEDESTRIAN NETWORK CONNECTIVITY

Pedestrian network connectivity was evaluated within the Pedestrian Study Area as described above. The Walkshed Ratio is calculated using the approach as described below.

Walkshed Ratio

Before assessing pedestrian network connectivity within the Pedestrian Study Area, the pedestrian network itself was developed. The most current roadway GIS data, provided by SanGIS, was used as a base for developing the network. Additionally, segments without pedestrian connections were manually removed.



Using the pedestrian network, a Walkshed Ratio was calculated for study intersections within the Pedestrian Study Area. The Walkshed Ratio assesses the level of connectivity provided at each of the studied intersections within the Pedestrian Study Area. The Walkshed Ratio was calculated by comparing the land area accessible within a ½-mile pedestrian network buffer to the land areas accessible within a ½-mile as-the-crow-flies buffer. The higher the Walkshed Ratio, the better the overall connectivity is at the intersection[4]. The Walkshed Ratio utilizes the following formula:

$$\frac{\text{Land Area Accessible within a 0.5 mile walkshed (acres)}}{\text{Land Area Accessible within a 0.5 mile crow flies buffer (acres)}}$$

An illustration of the variables that are used to compute a Walkshed Ratio is included to the right. An overview of the existing Walkshed Ratio analysis for existing conditions at intersections within the Pedestrian Study Area is provided in **Table 4-9** and **Figure 4-11**.

[4] *65% is typically the highest Walkshed Ratio that can be achieved in even the most ideal communities (i.e. urban downtown settings with tight grid networks). Therefore, any community with a connectivity ratio over 50% may be considered ideal.*

BICYCLE METHODOLOGY

BICYCLE LEVEL OF TRAFFIC STRESS

The Mineta Transportation Institute published Low-Stress Bicycling and Network Connectivity which establishes a methodology for evaluating the level of stress for bicyclists riding on a designated bicycle facility associated with specific factors. The Mineta Transportation Institute document used the City of San Jose as a test case to apply the methodology. This methodology applies a level of traffic stress (LTS) on a scale of LTS 1 (lowest stress) to LTS 4 (highest stress) for the following criteria:

- Roadway Classifications
- Roadway Speeds
- Bicycle Facility Type
- Bike Lane and Buffer Widths
- Intersection Control
- Bike Lane configuration at Intersections
- Parking Lane width
- Existing Transit Routes

LTS 1 facilities present little traffic stress and demand little attention from cyclists. They are suitable for almost all cyclists and attractive enough for a relaxing bike ride. LTS 2 facilities are suitable to most adult cyclists but demand more attention than might be expected from children. LTS 3 starts to introduce a stress level that not all adult cyclists feel comfortable with. LTS 4 is the highest level of stress and may be used by experienced bicyclists or not used at all.

Per the methodology guidance, both directions of a roadway segment are independently assigned a score between LTS 1 and LTS 4 based on several criteria shown in **Table 2-4** through **Table 2-10**. The resulting directional roadway level of traffic stress is the worst level of stress assigned to a segment from the several individual criteria scores. Where a table cell shows a result of "(no effect)", the resulting LTS for that situation is equal to the lower adjacent LTS.

Data on roadway classifications, speeds, bicycle facility type, and intersection control were compiled using field observations of roadway segments and intersections for classified roadways in the University community. This information was supplemented with measurement estimates and documentation of bike lane configurations at intersections taken from aerial imagery.

Table 2-4 Criteria for Bike Lanes Alongside a Parking Lane

	LTS ≥ 1	LTS ≥ 2	LTS ≥ 3	LTS ≥ 4
Street Width** (through lanes per direction)	1	(no effect)	2 or more	(no effect)
Sum of bike lane and parking lane width	15 ft. or more	14 or 14.5 ft.*	13.5 ft or less	(no effect)
Speed Limit or prevailing speed	25 mph or less	30 mph	35 mph	40 mph
Bike Lane Blockage	Rare	(no effect)	Frequent	(no effect)

Note: (no effect) =factor does not trigger an increase to this level of traffic stress.
* If speed limit < 25 mph or Class= residential, then any width is acceptable for LTS 2.

Table 2-5 Criteria for Bike Lanes Not Alongside a Parking Lane

	LTS ≥ 1	LTS ≥ 2	LTS ≥ 3	LTS ≥ 4
Street Width (through lanes per direction)	1	2, if separated by a raised median	More than 2 or 2 without a separating median	(no effect)
Bike Lane width (includes marked buffer and paved gutter)	6 ft. or more	5.5 ft or less	(no effect)	(no effect)
Speed Limit or prevailing speed	30 mph or less	(no effect)	35 mph	40 mph or more
Bike Lane Blockage	Rare	(no effect)	Frequent	(no effect)

Note: (no effect) =factor does not trigger an increase to this level of traffic stress.

Table 2-6 Criteria for Level of Traffic Stress in Mixed Traffic

Speed Limits	Street Width		
	2-3 Lanes	4-5 Lanes	6+ Lanes
Up to 25 mph	LTS 1* or 2*	LTS 3	LTS 4
30 mph	LTS 2* or 3*	LTS 4	LTS 4
35+ mph	LTS 4	LTS 4	LTS 4

Note: *Use lower value for streets without marked centerlines or classified as residential and with fewer than 3 lanes; use higher values otherwise.

Table 2-7 Level of Traffic Stress Criteria for Pocket Bike Lanes

Configuration	Level of Traffic Stress
Single right-turn lane up to 150 ft. long, starting abruptly while the bike lane continues straight, and having intersection angle and curb radius such that turning speed ≤ 15 mph.	LTS ≥ 2
Single right-turn lane up to 150 ft. long, starting abruptly while the bike lane continues straight, and having intersection angle and curb radius such that turning speed ≤ 20 mph.	LTS ≥ 3
Single right-turn lane in which the bike lane shifts to the left but the intersection angle and curb radius are such that turning speed is ≤ 15 mph.	LTS ≥ 3
Single right-turn lane with any other configuration; dual right-turn lanes; or right-turn lane along with an option (through-right) lane.	LTS ≥ 4

Table 2-8 Level of Traffic Stress Criteria for Mixed Traffic in the Presence of a Right-turn Lane

Configuration	Level of Traffic Stress
Single right-turn lane with length ≤ 75 ft. and intersection angle and curb radius limit turning speed to 15 mph.	(No effect on LTS)
Single right-turn lane with length between 75 ft. and 150 ft., and intersection angle and curb radius limit turning speed to 15 mph.	LTS ≥ 3
Otherwise	LTS = 4

Table 2-9 Level of Traffic Stress Criteria for Unsignalized Crossings Without a Median Refuge

Speed Limit of Street Being Crossed	Width of Street Being Crossed		
	Up to 3 lanes	4-5 lanes	6+ lanes
Up to 25 mph	LTS 1	LTS 2	LTS 4
30 mph	LTS 1	LTS 2	LTS 4
35 mph	LTS 2	LTS 3	LTS 4
40 mph	LTS 3	LTS 4	LTS 4

Table 2-10 Level of Traffic Stress Criteria for Unsignalized Crossings with a Median Refuge at Least Six Feet Wide

Speed Limit of Street Being Crossed	Width of Street Being Crossed		
	Up to 3 lanes	4-5 lanes	6+ lanes
Up to 25 mph	LTS 1	LTS 1	LTS 2
30 mph	LTS 1	LTS 2	LTS 3
35 mph	LTS 2	LTS 3	LTS 4
40 mph	LTS 3	LTS 4	LTS 4

BICYCLE DEMAND

The City of San Diego's Bicycle Demand Model (BDM) was used to evaluate facilities with high cycling demand or places warranting relatively higher considerations for bicycle infrastructure improvements within the University community. The BDM analyzes two components of demand: intra-community travel and inter-community travel. The Intra-community demand submodel is based on population characteristics combined

with bicycle trip attractors and generators within the community. The inter-community demand model is based on higher intensity areas and their proximity to land uses typically associated with higher rates of cycling activity. A summary of land uses and other amenities in each category is shown below in **Table 2-**.

Table 2-11 Bicycle Demand Factors

Category	Bicycle Demand Factors
Attractors	Schools, Universities, Neighborhood Civic Facilities, Neighborhood and Community Retail, Parks and Recreation Facilities, Proximity to and Ridership at Transit Stops/Stations
Generators	Population and Employment Density, Age, Income, Disability Density, Mixed Land Density

Source: City of San Diego (2017)

BICYCLE SAFETY

Similar to pedestrian safety issues, to understand existing bicycle safety issues, a safety assessment was performed. Safety was evaluated using collision data obtained from the City of San Diego Police Department's Crossroads software (SDPD) for the period from October 2012 through September 2017. Collisions from SDPD were geocoded and mapped to display the locations of collisions within the University community.

The location and concentration of bicycle-involved collisions were taken into consideration when developing the Bicycle Study Area, as locations with three or more collisions between October 2012 and September 2017 were included in the pedestrian quality and connectivity assessments. A map showing the spatial distribution of pedestrian-related collisions is also included.

Several tables were also created to further understand safety issues and trends within the community. These include: high-frequency collision locations, cause of collisions, party at fault, and collision location types. The collision location types are differentiated between intersection, midblock, and approaching/departing. Collisions that occurred within 100 feet of the center of the intersection, to account for vehicles that are queued at the intersection control, were identified as intersection collisions. Collisions that occurred between 100 feet and 350 feet from the center of the intersection were identified as approaching/departing collisions. This net 250 feet is reflective of the stopping sight distance of a vehicle travelling at 35 mph. Collisions that occurred at a distance over 350 feet away from the center of the intersection were identified as mid-block collisions.

BICYCLE CONNECTIVITY

The overall connectivity of the bicycle network measures the accessibility it provides to the community, particularly to and from bicycle-oriented land uses. This is measured in two ways, both using the ArcGIS Network Analyst tool:

1) Bikeshed Ratio
2) Low-Stress Bicycle Connectivity

The first step is identifying the community's bicycle land uses in order to develop a bicycle study area within the community. **Table 2-12** identifies land use types associated with bicycle trip generators and attractors, as well as land uses that should not be considered in this evaluation. These land uses are consistent with the BDM's Intra-community submodel, except where noted.

This analysis identified bicycle land uses in each of the community's 82 Traffic Analysis Zones (TAZs), making the bicycle study area the entire community.

Table 2-12 Bicycle Land Use Categories

Generators	Attractors	Not Included as Bicycle Land Uses
Residential Land Uses[5]	Retail Office[6] Class I Bike Path Access Points Transit Stations Parks/Recreational Uses/Beaches Schools/College/ Universities Neighborhood Civic Uses Inter-community Access Points[7]	Retail Catering to Automobiles/Automobile Services (car dealers, service stations, etc.) Passive or Low-Intensity Recreation (Golf Courses, etc.)/Open Space/Preserves Communications/Utilities Infrastructure Industrial/Warehousing/Junkyards/Landfills Agricultural Police/Fire Stations Military Base

Source: City of San Diego (2017)

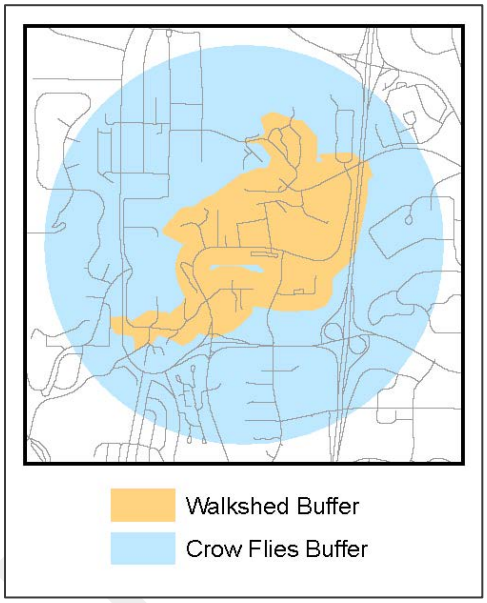
Bikeshed Ratio

The Bikeshed Ratio measures overall bicycle connectivity from any given point, by comparing the area reachable via the bike network within a given travel distance (the "bikeshed") to the area of an "as the crow flies" circle covering the same travel distance:

[5] The Intra-community BDM submodel includes population densities by various types, such as youth, bicycle commuters, and zero-vehicle households. This input has been simplified as "residential land use" for the purposes of the connectivity assessment since having all inputs by TAZs will facilitate GIS analysis processes.
[6] Office land uses were not included in the PPM or the BDM, but were deemed as possibly important at the community level.
[7] Inter-community Access Points were not included in the Intra-Community submodel since that facet of travel was modeled via the Inter-community submodel. These connection points just outside the community were deemed as important attractions for this community-level connectivity assessment.

$$\frac{\text{Area accessible via the bicycle network by traveling distance X}}{\text{Area accessible "as the crow flies" by traveling distance X}}$$

A higher Bikeshed Ratio at a given point indicates that the network provides better overall bicycle connectivity from that location.[8]



This analysis examined over 1,300 points in the community's bicycle network—including intersections between segments, as well as key inflection points along segments—to provide a comprehensive picture of the community bicycle connectivity. The analysis focused specifically on the area reachable between 0.25 miles and 1.0 mile from each point. (The inner area within 0.25 miles from each point was removed, as it is assumed to be dominated by pedestrian trips.)

The ArcGIS Network Analyst tool conducted the core analysis using the Service Area function, by generating a doughnut-shaped (0.25-1.0 mile) "service area" for each point that is reachable via the bicycle network. Dividing that land area by the land area of a 0.25-1.0 "as the crow flies" doughnut (1,884.95 acres) yields the Bikeshed Ratio for each point.

Low-Stress Bicycle Connectivity

The Low-Stress Bicycle Connectivity analysis evaluates each TAZ's connectivity to the rest of the community via low-stress routes, characterized as LTS 1 or 2. The analysis assigns each TAZ a connectivity score based on the following ratio:

$$\frac{\text{Number of TAZs accessible via low-stress routes (LTS 1/2 only)}}{\text{Number of TAZs accessible via all routes}}$$

The ArcGIS Network Analyst tool conducted the core analysis in two parts using the Closest Facility function, which creates the shortest available paths to/from each TAZ. The first analysis—producing the numerator of the ratio above—constrained the network to low-stress routes only (classified as LTS 1 or 2), with LTS 3 and 4 routes not only removed as potential pathways, but also acting as barriers to crossing. The second analysis—producing the denominator of the ratio above—analyzed paths between TAZs using the entire bicycle network, with potential routes unconstrained by high-stress paths.

This results in each TAZ with bicycle land uses being assigned a percentage reflecting its level of connectivity to other TAZ's with bicycle land uses in the community.

[8] *Due to the presence of natural features and other constraints, 65% is typically the highest Bikeshed Ratio that can be achieved in even the most ideal communities. In general, any score over 50% is considered ideal.*

TRANSIT METHODOLOGY

TRANSIT QUALITY

Transit stations and stops were reviewed to identify the presence or absence of the following amenities:

- Shelters
- Benches
- Trash Receptacles
- Station Signs
- Maps/Wayfinding
- Lighting
- ADA compliancy

Table 2- outlines the standard amenities that should be provided at transit stations/stops based on the projected daily passenger boardings (across all routes), according to MTS bus stop features guidelines[9].

Table 2-13 Transit Amenity Standards by Ridership Levels

Amenity	Daily Passenger Boardings by Station/Stop				
	< 50	50 -100	101 -200	201 – 500	> 500
Sign and Pole	X	X	X	X	
Built-in Sign					X
Expanded Sidewalk			X	X	X
Bench		X	X	X	X
Shelter			X	X	X
Route Designations	X	X	X	X	X
Time Table				X	X
Route Map			X	X	X
System Map					X
Trash Receptacle				X	X
Lighting			X	X	X
ADA Compliant	X	X	X	X	X

Source: Designing for Transit, MTS (1993)

[9] *Designing for Transit: A Manual for Integrating Public Transportation and Land Development in the San Diego Metropolitan Area*. San Diego Metropolitan Transit Development Board (MTDB). 1993.

QUALITY CONNECTIONS TO TRANSIT

The latent demand evaluation described under "Transit Demand" indicates the number of potential transit users (residents and employees) within the vicinity of each major stop/station, using a 0.25 mile pedestrian network walkshed and a 0.75 mile bicycle network travelshed.

The quality connections assessment draws from the quality walking analysis and quality cycling analysis results (using only "high and medium" quality networks based on the bicycle and pedestrian analysis) to identify quality 0.25 mile pedestrian and 0.75 mile bicycle networks surrounding major transit stations/stops. These distances were defined and based upon information in the San Diego Forward: The Regional Plan, Appendix U4 – SANDAG Regional Transit Oriented Development Strategy, and represent a five-minute travel distance for pedestrians and cyclists.

A Quality Walk Ratio and a Quality Bicycle Ratio were then developed for each major transit station/stop and presented on a map using the following equations:

$$\text{Quality Walk Ratio from Transit} = \frac{\text{Quality Walking Distance from Transit}}{\text{Crow Flies Buffer from Transit}}$$

$$\text{Quality Bike Ratio from Transit} = \frac{\text{Quality Bike Distance from Transit}}{\text{Crow Flies Buffer from Transit}}$$

The resulting Quality Walk Ratio from Transit and Quality Bicycle Ratio from Transit are presented on separate maps, for each major transit station/stop.

SAFETY NEAR TRANSIT STOP/STATION

To understand existing pedestrian and bicycle safety issues near transit stations/stops, a safety assessment was performed. Safety was evaluated using collision data obtained from the City of San Diego Police Department's Crossroads software (SDPD) for the period from October 2012 through September 2017. Collisions from SDPD were geocoded and mapped to display the locations of collisions within the University community.

A 500 foot buffer around transit stations within the community was applied to select the relevant bicycle- and pedestrian-involved collisions. A map showing the spatial distribution of three or more pedestrian- and bicycle-involved collisions near a transit stop or station is also included.

Several tables were also created to further understand safety issues and trends within the community. These include: high-frequency collision locations, cause of collisions, party at fault, and collision location types. The collision location types are differentiated between intersection, midblock, and approaching/departing. Collisions that occurred within 100 feet of the center of the intersection, to account for vehicles that are queued at the intersection control, were identified as intersection collisions. Collisions that occurred between 100 feet and 350 feet from the center of the intersection were identified as approaching/departing collisions. This net 250 feet is reflective of the stopping sight distance of a vehicle travelling at 35 mph. Collisions that occurred at a distance over 350 feet away from the center of the intersection were identified as mid-block collisions.

VEHICLE METHODOLOGY

INTERSECTIONS

Intersections to be studied were selected based on several factors, which included the following:

- Existing Circulation Element roadways intersecting with other existing Circulation Element roadways where both roadways function or are classified as a collector or higher
- Anticipated Circulation Element roadways intersecting with other existing and/or anticipated Circulation Element roadways where both roadways function or are classified as a collector or higher
- Key intersections where both intersecting streets meet one of the following conditions:
    - 4-lanes (or greater)
    - 3-lanes and carries over 15,000 Average Daily Traffic (ADT)
    - 2-lanes and carries over 10,000 ADT
- Intersections that provide access to/from freeways located within the University community
- Signalized intersections along corridors where travel time analysis is performed

It should be noted that some intersections selected for the study area fall just outside the University community boundary. However, these intersections were included in the analysis because they may influence or impact the flow of transportation within the community.

Based on the criteria listed above, a total of 79 intersections were selected for inclusion in the analysis study area. **Table 2-14** provides a list of the intersections, identifies the type of control currently present at each location, and assigns an identification number to each intersection for use in this study. **Figure 2-1** graphically displays the location of each of the study intersections.

As shown in the table, 76 of the 79 intersections evaluated in the University community are signalized. The other 3 intersections are unsignalized with vehicles required to stop on two legs of the intersection. Most of the intersections include at least one of the major corridors within the community, which are Genesee Avenue, La Jolla Village Drive, Nobel Drive, and Regents Road.

ROADWAY SEGMENTS AND CORRIDORS

Roadway segments to be studied were selected based on several factors, which included the following:

- Existing Circulation Element roadways functioning or classified as a collector or higher
- Anticipated Circulation Element roadways functioning or classified as a collector or higher
- Roadways providing access to/from freeways

Based on the criteria listed above, a total of 66 roadway segments were selected for analyses. **Figure 2-2** graphically displays the location of each of the roadway segments in the community selected for analyses.

Four corridors were selected to have travel time analysis performed to understand the flow of traffic through the community: La Jolla Village Drive, Genesee Avenue, Nobel Drive, and Regents Road.

FREEWAY SEGMENTS AND RAMPS

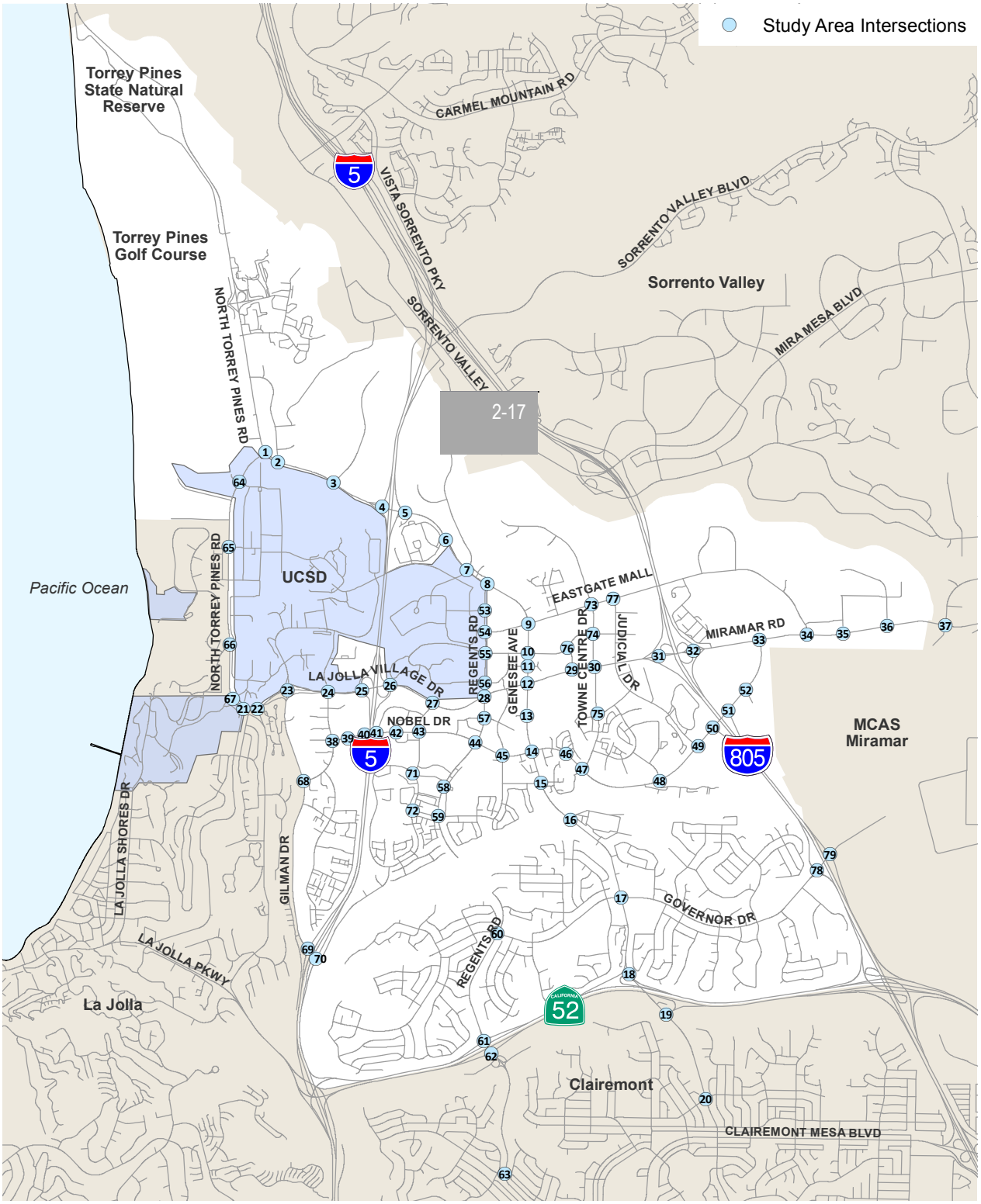
Freeway segments adjacent to the community and freeway entrance ramps that are controlled by ramp meters are included in the study area. **Figure 2-3** graphically displays the location of each of the freeway segments and entrance ramps included in the analysis study area. This includes facilities along I-5, I-805, and SR-52.

Table 2-14 Study Intersections

ID	Intersection
1	Genesee Ave & N. Torrey Pines Rd
2	Genesee Ave & John Hopkins Dr (S)
3	Genesee Ave & Science Center Dr
4	Genesee Ave & I-5 SB Ramps
5	Genesee Ave & I-5 NB Ramps
6	Genesee Ave & Scripps Hospital
7	Genesee Ave & Campus Point Dr
8	Genesee Ave & Regents Rd
9	Genesee Ave & Eastgate Mall
10	Genesee Ave & Executive Dr
11	Genesee Ave & Executive Square
12	Genesee Ave & La Jolla Village Dr
13	Genesee Ave & Esplanade Ct
14	Genesee Ave & Nobel Dr
15	Genesee Ave & Decoro St
16	Genesee Ave & Centurion Square
17	Genesee Ave & Governor Dr
18	Genesee Ave & SR-52 WB Ramps
19	Genesee Ave & SR-52 EB Ramps
20	Genesee Ave & Appleton St/Lehrer Dr
21	La Jolla Village Dr & Torrey Pines Rd
22	La Jolla Village Dr & La Jolla Scenic Dr
23a	La Jolla Village Dr WB & Gilman Dr
23b	La Jolla Village Dr EB & Gilman Dr (unsignalized; side-street stop controlled)
24	La Jolla Village Dr & Villa La Jolla Dr
25	La Jolla Village Dr & I-5 SB Off-Ramps
26	La Jolla Village Dr & I-5 NB Off-Ramps
27	La Jolla Village Dr & Lebon Dr
28	La Jolla Village Dr & Regents Rd
29	La Jolla Village Dr & Executive Way
30	La Jolla Village Dr & Towne Centre Dr
31	La Jolla Village Dr & I-805 SB Ramps
32	La Jolla Village Dr & I-805 NB Ramps
33	Miramar Rd & Nobel Dr
34	Miramar Rd & Eastgate Mall
35	Miramar Rd & Miramar Mall
36	Miramar Rd & Miramar Place
37	Miramar Rd & Camino Santa Fe
38	Nobel Dr & Villa La Jolla Dr
39	Nobel Dr & La Jolla Village Square Dwy
40	Nobel Dr & I-5 SB On Ramp
41	Nobel Dr & I-5 NB Off-Ramp/University Center Ln
42	Nobel Dr & Caminito Plaza Centro
43	Nobel Dr & Lebon Dr
44	Nobel Dr & Regents Rd
45	Nobel Dr & Costa Verde Blvd/Cargill Ave
46	Nobel Dr & Lombard Place

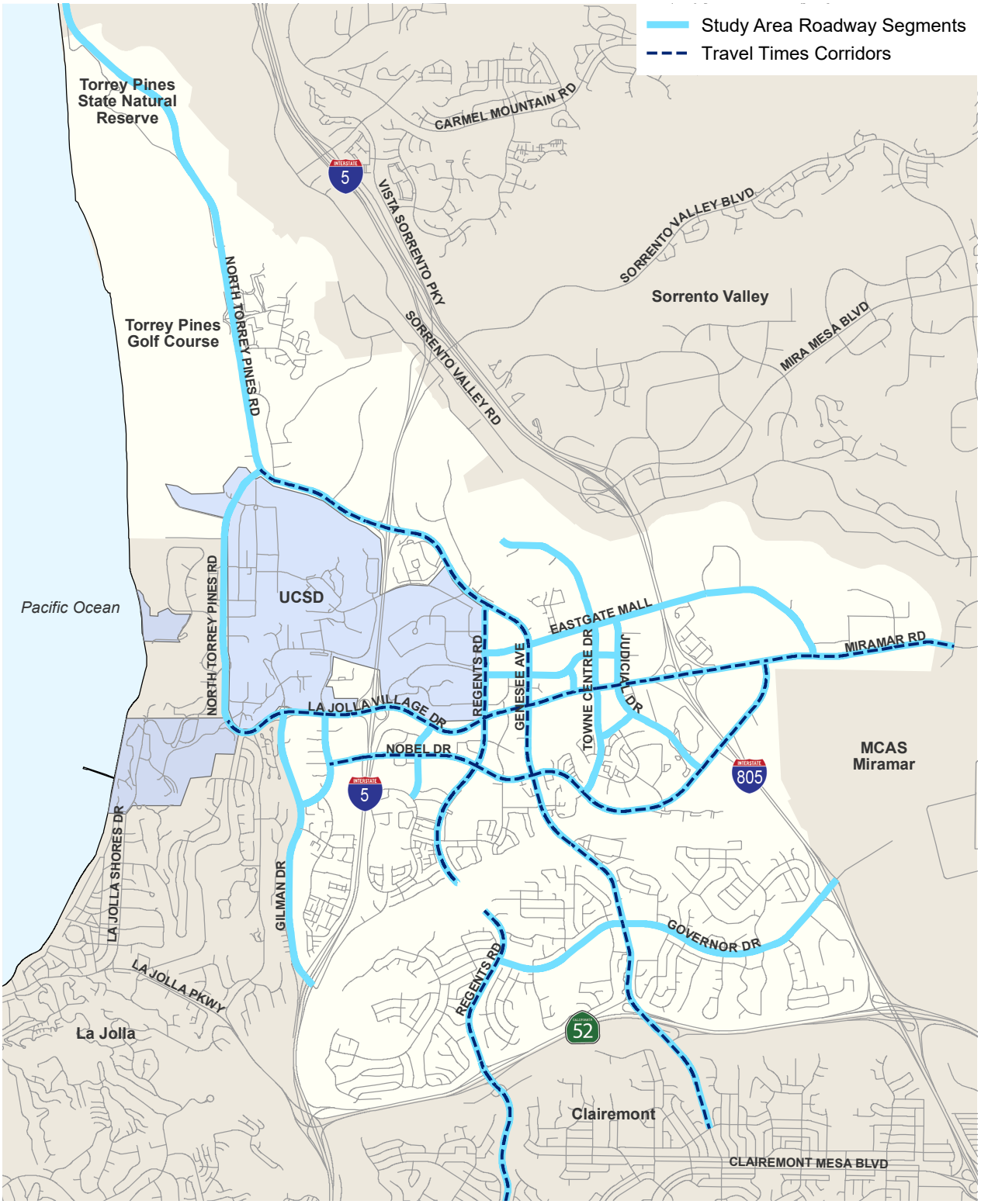
47	Nobel Dr & Towne Centre Dr
48	Nobel Dr & Shoreline Dr
49	Nobel Dr & Judicial Dr
50	Nobel Dr & I-805 SB On-Ramp
51	Nobel Dr & I-805 NB Off-Ramp
52	Nobel Dr & Avenue of Flags
53	Regents Rd & County Day Ln/ Health Science Dr
54	Regents Rd & Eastgate Mall
55	Regents Rd & Executive Dr
56	Regents Rd & Regents Park Row
57	Regents Rd & Plaza De Palmas
58	Regents Rd & Berino Ct
59	Regents Rd & Arriba St
60	Regents Rd & Governor Dr
61	Regents Rd & SR-52 WB Ramps
62	Regents Rd & SR-52 EB Ramps
63	Regents Rd & Luna Ave
64	N. Torrey Pines Rd & UCSD Northpoint Dwy
65	N. Torrey Pines Rd & Pangea Dr
66	N. Torrey Pines Rd & La Jolla Shores Dr
67	N. Torrey Pines Rd & Revelle College Dr
68	Gilman Dr & Villa La Jolla Dr
69	Gilman Dr & I-5 SB Ramps
70	Gilman Dr & I-5 NB Ramps
71	Palmilla Dr & Lebon Dr
72	Palmilla Dr & Ariba St
73	Towne Centre Dr & Eastgate Mall
74	Towne Centre Dr & Executive Dr
75	Towne Centre Dr & Golden Haven Dr
76	Executive Way & Executive Dr
77	Judicial Dr & Eastgate Mall
78	Governor Dr & I-805 SB Ramps *(unsignalized; side-street stop controlled)*
79	Governor Dr & I-805 NB Ramps *(unsignalized; side-street stop controlled)*

FIGURE 2-1



Study Area: Intersections

FIGURE 2-2



Study Area: Roadways

FIGURE 2-3

Study Area: Freeways and Ramps

SIGNALIZED AND UNSIGNALIZED INTERSECTION LEVEL OF SERVICE

The 2010 Highway Capacity Manual (*HCM)* published by the Transportation Research Board establishes procedures to evaluate highway facilities and rate their ability to process traffic volumes. The terminology "level of service" is used to provide a qualitative evaluation based on certain quantitative calculations, which are related to empirical values. The criteria for the various levels of service designations for intersections are given in **Table 2-15**.

Level of service (LOS) for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay.

LOS for unsignalized intersections is determined by the computed or measured control delay and is defined for each movement. At an all-way stop control intersection, the delay reported is the average control delay of all movements at the intersection. At a one-way or two-way stop control intersection, the delay reported represents the worst movement, which is typically the left-turn from the minor street approach.

Synchro 9 (Trafficware) software was used to analyze the operations of both signalized and unsignalized intersections.

Some analysis limitations are present in HCM 2010 methodology that include:

- Exclusive pedestrian phases
- Exclusive U-turn phases
- Right turn overlaps with through movements
- Permissive left turns yielding to pedestrians at a T-intersection
- Custom/Non-NEMA phasing

To provide HCM 2010 results for some of the study intersections, applicable existing signal timings, phasings, and/or geometries were modified to produce approximately equivalent intersection operations. More detail on modifications used to address HCM 2010 limitations are included in **Appendix J**.

The following list contains the assumptions used for the existing conditions intersection analyses:

- HCM 2010 methodology
- Peak-hour factor (PHF) = Measured in field PHFs were used for the analysis
- Percent of heavy vehicle (PHV) = 2 percent
- Pedestrians & Bicycles = Volumes measured in field
- Signal Timing = Existing signal timing was used for all existing signalized intersections

The acceptable Level of Service (LOS) standard for intersections in the City of San Diego is LOS D.

Table 2-15 LOS Criteria for Intersections

LOS	Control Delay (sec/veh)		Description
	Signalized Intersections (a)	Unsignalized Intersections (b)	
A	≤10.0	≤10.0	Operations with very low delay and most vehicles do not stop.
B	>10.0 and ≤20.0	>10.0 and ≤15.0	Operations with good progression but with some restricted movement.
C	>20.0 and ≤35.0	>15.0 and ≤25.0	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35.0 and ≤55.0	>25.0 and ≤35.0	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines
E	>55.0 and ≤80.0	>35.0 and ≤50.0	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80.0	>50.0	Operations that is unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Notes:

(a) 2010 Highway Capacity Manual, Chapter 18, Page 6, Exhibit 18-4

(b) 2010 Highway Capacity Manual, Chapter 19, Page 2, Exhibit 19-1 and Chapter 20, Page 3, Exhibit 20-2

ROADWAY SEGMENT CAPACITY LEVEL OF SERVICE ANALYSIS

To determine the operations along the study area roadway segments, capacity thresholds and associated LOS have been developed by the City of San Diego and is used as a reference. **Table 2-** presents this information. The segment traffic volumes under LOS E as shown in this table are considered to be the capacity of the roadway. It should be noted that the values listed in the table are planning-level estimates only. The actual operations of a roadway segment would be affected by the type and frequency of traffic control, terrain, lane width, percent of heavy vehicles, and other factors.

Table 2-16 City of San Diego Roadway Segment Capacity and LOS Summary

Road Class	Lanes	A	B	C	D	E
Freeway	8	60,000	84,000	120,000	140,000	150,000
Freeway	6	45,000	63,000	90,000	110,000	120,000
Freeway	4	30,000	42,000	60,000	70,000	80,000
Expressway	6	30,000	42,000	60,000	70,000	80,000
Prime Arterial*	8	35,000	50,000	70,000	75,000	80,000
Prime Arterial*	7	30,000	42,500	60,000	65,000	70,000
Prime Arterial	6	25,000	35,000	50,000	55,000	60,000
Prime Arterial*	4	17,500	24,500	35,000	40,000	45,000
Major Arterial*	7	22,500	31,500	45,000	50,000	55,000
Major Arterial	6	20,000	28,000	40,000	45,000	50,000
Major Arterial*	5	17,500	24,500	35,000	40,000	45,000
Major Arterial	4	15,000	21,000	30,000	35,000	40,000
Major Arterial*	2	7,500	10,500	15,000	17,500	20,000
Collector (w/ two-way left-turn lane)	4	10,000	14,000	20,000	25,000	30,000
Collector (w/o two-way left-turn lane) Collector (w/ two-way left-turn lane)	4 2	5,000	7,000	10,000	13,000	15,000
Collector (No fronting property)	2	4,000	5,500	7,500	9,000	10,000
Collector (w/o two-way left-turn lane)	2	2,500	3,500	5,000	6,500	8,000
Sub-Collector (single-family)	2	---	---	2,200	---	---

Notes:

The volumes and the average daily level of service listed above are only intended as a general planning guideline.

Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

[1]Cross Section: Curb to Curb width (feet)/Right-of-way width (feet)

Sources:

City of San Diego Traffic Impact Study Manual, Table 2, Page 8, July 1998.

*City of San Diego Planning Department Mobility Staff Input

CORRIDOR SPEED ANALYSIS

Four corridors within the community were selected for analysis of travel time during the peak hours in addition to the estimated daily capacity; these corridors include Genesee Avenue, La Jolla Village Drive, Nobel Drive, and Regents Road. Genesee Avenue and La Jolla Village Drive are the primary arterials serving the community. Nobel Drive and Regents Road are major roads that provide alternative routes. The corridor analysis consisted of two procedures: travel time runs performed under actual conditions and simulated travel time using software.

Travel time runs were performed using the floating car method. A minimum of 5 runs in each direction per peak hour were collected to arrive at an average value. This method simulates average travel speed along a corridor by maintaining a similar position within vehicle progression bands.

Software analysis was performed using the 2000 HCM methodology which provides a computation of LOS using average vehicle travel speed. This average speed is computed by adding the running time between signalized intersections assuming free flow speed along the corridor and the control delay associated with each signalized intersection. **Table 2-** presents the arterial LOS criteria based on the urban street class and average travel speed.

Table 2-17 HCM 2000 Urban Street LOS Criteria

Urban Street Class	**I**	**II**	**III**	**IV**
Range of free-flow speeds (FFS)	55 to 45 mi/h	45 to 35 mi/h	35 to 30 mi/h	35 to 25 mi/h
Typical FFS	50 mi/h	40 mi/h	35 mi/h	30 mi/h
LOS	**Average Travel Speed (mi/h)**			
A	> 42	> 35	> 30	> 25
B	>34 – 42	> 28 – 35	> 24 – 30	> 19 – 25
C	> 27 – 34	> 22 – 28	> 18 – 24	> 13 – 19
D	> 21 – 27	> 17 – 22	> 14 – 18	> 9 – 13
E	> 16 – 21	> 13 – 17	> 10 – 14	> 7 -9
F	≤ 16	≤ 13	≤ 10	≤ 7

Source: HCM 2000, Exhibit 15-2

FREEWAY SEGMENTS

Freeway segments were analyzed during the AM and PM peak hours based on the methodologies outlined in Chapters 10 and 11 of the 2010 HCM. The free-flow speed of each freeway segment was calculated based on a base free-flow speed of 75.4 mph. Factors affecting the free-flow speed of each segment include the lane width, lateral clearance, number of lanes, interchange density, and geometric design. Based on each segment's free-flow speed, the density was calculated, which is the primary factor for determining the segment's LOS. **Table 2-** presents the freeway segment criteria based on density.

Table 2-18 HCM 2010 Freeway Segment LOS Criteria

LOS	Density Range (pc/mi/ln)*
A	0 – 11
B	> 11 – 18
C	> 18 – 26
D	> 26 – 35
E	> 35 – 45
F	>45

Source: HCM 2010, Page 10-9
* passenger car per mile per lane

FREEWAY RAMP METERS

Ramp metering is a means of controlling the volume of traffic entering the freeway with the goal of improving the safety, traffic operations, and flow on the freeway main lanes. Freeway ramp meter analysis estimates the peak hour queues and delays at freeway ramps by comparing existing volumes to the meter rate at the given location. The fixed rate and uniform 15-minute maximum delay approaches are two approaches that are currently accepted by the City. The fixed rate approach is based solely on the specific time intervals that ramp meters are programmed to release traffic. The uniform 15-minute approach is based on the assumption that any demand exceeding 15-minutes will seek an alternate route or will choose to use the ramp during other time periods when the traffic demand is lower. The fixed rate approach was utilized in this study to analyze freeway ramp meters.

The excess demand at a freeway ramp forms the basis for calculating the maximum queues and maximum delays anticipated at each location. Substantial queues and delays can form where demand significantly exceeds the meter rate. This approach assumes a static rate throughout the course of the peak hour; however, Caltrans has indicated that the meter rates operate in a traffic responsive mode and based on the level of traffic using the on-ramp. To the extent possible, the meter rate in the field is set such that the queue length does not exceed the available storage, smooth flows on the freeway mainline are maintained, and there is no interference to arterial traffic.

Meter rates were provided by Caltrans and include a range between the least and most restrictive rates. Since many of the freeways currently operate at or above its capacity during the peak hours, the most

restrictive rate was used for the analysis. Some rates were adjusted within the range of rates provided to better reflect queue lengths consistent with field observations. The field observations were completed at each ramp meter location.

The following list contains the assumptions used for the existing conditions ramp meter analyses based on field observations:

- Storage length measured from recent aerials of the area
- 20% High Occupancy Vehicle (HOV)
- 80% Single Occupancy Vehicle (SOV) and evenly distributed between the SOV lanes
- 25-foot vehicle length

VEHICLE SAFETY

Vehicle Safety was evaluated using collision data obtained from the City of San Diego Police Department's Crossroads software (SDPD) for the period from October 2012 through September 2017. Vehicle collisions, excluding pedestrian- and bicycle-involved collisions, from SDPD were geocoded and mapped to display the locations of collisions within the University community.

Several tables were also created to further understand safety issues and trends within the community. These include: high-frequency collision locations, cause of collisions, party at fault, and collision location types. The collision location types are differentiated between intersection, midblock, and approaching/departing. Collisions that occurred within 100 feet of the center of the intersection, to account for vehicles that are queued at the intersection control, were identified as intersection collisions. Collisions that occurred between 100 feet and 350 feet from the center of the intersection were identified as approaching/departing collisions. This net 250 feet is reflective of the stopping sight distance of a vehicle travelling at 35 mph. Collisions that occurred at a distance over 350 feet away from the center of the intersection were identified as mid-block collisions.

3 REVIEW OF RELEVANT PLANNING DOCUMENTS

This chapter summarizes the planning documents used to guide and inform the development of future year circulation element alternatives for the University CPU. Where appropriate, projects and policies which are identified in the following planning documents will be considered as proposed improvements in the CPU.

The documents researched include City of San Diego plans and programs, regional planning documents, and local plans and projects as summarized below:

- City of San Diego General Plan – Mobility Element (Last Amended June 2015)
- University Community Plan (1987)
- North (2012) and South (2013) University Public Facilities Financing Plans
- City of San Diego Capital Improvement Program (2015)
- City of San Diego Climate Action Plan (2015)
- City of San Diego Bicycle Master Plan (2013)
- City of San Diego Pedestrian Planning Effort (2006)
- UCSD Master Plan (Ongoing)
- City of San Diego Traffic Unfunded Needs List (2018)
- SANDAG San Diego Forward: The Regional Plan (2015)
- SANDAG San Diego Regional Bike Plan: Riding to 2050 (2010)
- Caltrans I-5 (2017), I-805 (2017) and SR-52 (2015) Transportation Concept Reports
- Transit Optimization Plan (2016)
- Local Private Development Projects

CITY OF SAN DIEGO PLANS, PROGRAMS, AND PROJECTS

CITY OF SAN DIEGO GENERAL PLAN – MOBILITY ELEMENT

Adopted in 2008 and amended in 2015, the City of San Diego's General Plan Mobility Element identifies the proposed transportation network and strategies that have been designed to meet the future transportation needs generated by planned land uses in the General Plan. The purpose of the Mobility Element is to *improve mobility through development of a balanced, multi-modal transportation network*. The Mobility Element includes several programs, including but not limited:

- Walkable Communities
- Transit
- Street and Freeway System
- Intelligent Transportation Systems
- Transportation Demand Management
- Bicycling
- Parking management
- Goods Movement/Freight
- Regional Coordination/Financing
- Passenger Rail

Within each of the above programs is a series of policies designed to help achieve the goals of the program itself.

CURRENT UNIVERSITY COMMUNITY PLAN

Adopted in 1987, the University Community Plan includes a series of goals and recommendations that guided development in the community for the subsequent years. The University Community Plan contains a series of goals and objectives established with input by the residents, property owners, and business owners of the University Community, and were also consistent with citywide policies at the time of its adoption. The objectives for transportation include:

- Develop a transportation system designed to move people and goods safely and efficiently within the community, including linkages with other communities, and with consideration for energy conservation.
- Encourage the adequate provision of public transit between major activity areas such as the University of California San Diego, the University Towne Centre and La Jolla Village Square.
- Provide pedestrian paths and bikeways to accommodate the community and complement the citywide systems.
- Encourage alternative modes of transportation by requiring developer participation in transit facility improvements, the Intra-Community Shuttle Loop and the Light Rail Transit (LRT) system.
- Ensure implementation of City Council Policy 600-34, Transit Planning and Development.

In December 2016, the City Council adopted an amendment to the Transportation Element of the University Community Plan to remove the widening of Genesee Avenue from Nobel Drive to State Route 52, and the connection of Regents Road over Rose Canyon. The current Community Plan includes recommended changes to the arterial roadway and public transit within the University community. The following project is a listed as a recommendation in the current community plan, but funding has not been identified or collected for completion:

- **Nobel Drive:** Construct a full (rather than partial) interchange on I-805 and widen to six lanes from Genesee Avenue to Town Centre Drive

NORTH AND SOUTH UNIVERSITY PUBLIC FACILITIES FINANCING PLANS (PFFP)

The North University PFFP (2012) and South University PFFP (2013) set forth the major public facility needs in several areas of transportation, including roadways, storm drains, traffic signals, and other facilities for the University community.

The facilities included in the PFFPs were anticipated to be needed to accommodate the ultimate build-out of the University community. The PFFPs inventory the existing and needed facilities within the community, and the potential financing mechanisms to fund these facilities.

These projects, their potential implications, and the funding mechanisms that enable their construction is important to consider when developing proposed improvements as part of the University Community Plan Update.

CITY OF SAN DIEGO CAPITAL IMPROVEMENTS PROGRAM (CIP)

The City of San Diego Capital Improvements Program (CIP) is the plan for all individual capital improvement projects and funding sources. CIP projects are unique construction projects that provide improvements or additions such as land, buildings, and infrastructure.

The CIP helps enhance the overall quality of life in the City by improving the physical structures, systems, and facilities that provide services to the community. CIP projects are generally large and expensive, and the assets they install, replace, or rehabilitate will likely be required for decades of public use.

The following projects within the University community are identified in the CIP as being within the design, bid and award, or construction phase:

- **Miramar Road between I-805 and 300' east of Eastgate Mall:** Widen the segment to 8 lanes and add dual left turn lanes at Eastgate Mall.
- **Regents Road between Genesee Avenue and Executive Drive:** Widen the roadway to a modified 4 lane Major Arterial and relocate the intersection at Genesee Avenue to the east to add Class II bike lanes.
- **Genesee Avenue Overcrossing at I-5:** Widen the overcrossing to 6 lanes with dual left turn lanes at I-5 ramps with a 26' median.
- **North University Fire Station No. 50:** Construct a new fire station including apparatus bay, dorm rooms, kitchen, watch room, ready room, station alerting system, and training classroom.
- **Gilman Drive from La Jolla Village Drive to La Jolla Colony Drive:** Install 1.8 miles of improved bicycle facilities
- **Citywide Street Lights**: involves installing new street lights to City of San Diego standards to enhance safety along existing roadways.

CITY OF SAN DIEGO CLIMATE ACTION PLAN

Adopted in December 2015 and amended in July 2016, the City of San Diego's Climate Action Plan (CAP) aims to reduce greenhouse gas (GHG) emissions to specific targets in the year 2020 and 2035. The CAP aims to reduce emissions in part through a variety of improvements to existing vehicular, pedestrian, bicycling, and transit networks. It includes goals to create walkable and pedestrian-friendly neighborhoods and to promote active transportation and rapid transit systems.

Several of the targets included in the CAP are related to performance within transit priority areas. Per California Senate Bill 743 (SB 743), "Transit priority area" means "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." A Major Transit Stop, as defined in the California Public Resources Code (CPRC) Section 21064.3, means: a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes each having a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods.

Among others, the CAP specifically identifies the following actions as targets which would reduce overall GHG emissions:

- Achieve mass transit mode share of 12% by 2020 and 25% by 2035 in Transit Priority Areas.

- Achieve walking commuter mode share of 4% by 2020 and 7% by 2035 in Transit Priority Areas.
- Achieve 6% bicycle commuter mode share by 2020 and 18% mode share by 2035 in Transit Priority Areas.
- Retime 200 traffic signals by 2020.
- Install roundabouts at 15 intersections by 2020 and an additional 20 intersections by 2035.
- Reduce average vehicle commute distance by two miles through implementation of the General Plan City of Villages Strategy by 2035.

The CAP also identifies the following supporting measures for walking, biking, and transit:

- Implement bicycle improvements concurrent with street re-surfacing projects, including lane diets, green bike lanes, sharrows, and buffered bike lanes.
- Implement a bicycle sharing program with DecoBikes. Reduce the "1 mile" barrier gap by ensuring that further expansion of the bike share program is designed and implemented to reduce the distance needed to travel between transit stops and destinations.
- Identify and address gaps in the City's pedestrian network and opportunities for improved pedestrian crossings, using the City's Pedestrian Planning Effort and the City's sidewalk assessment.
- Adopt City portions of SANDAG's forthcoming first mile/last mile initiative and incorporate Safe Routes to Transit strategies in Transit Priority Areas.
- Coordinate pedestrian counting programs with SANDAG and SDSU Active Transportation Research Programs.
- Develop a Parking Plan to include measures such as "unbundled parking" for nonresidential and residential sectors in urban areas.
- Prepare a Commuter Report with measures to increase commuting by transit for City employees.
- Achieve better walkability and transit-supportive densities by locating a majority of all new residential development within Transit Priority Areas.
- Develop a new priority ranking for capital improvement projects in Transit Priority Areas that will be integrated into Council Policy 800-14, Community Development Block Grant and other grant opportunities, and Public Facilities Financing Plans.
- In addition to commuting, implement infrastructure improvements including "complete streets" to facilitate alternative transportation modes for all travel trips.
- The most recent version of the California Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen tool will be used as one method to identify and help prioritize, when possible, underserved communities in census tracts ranking in the top 30% of CalEnviroScreen scores, which may be locally normalized, for transit-related infrastructure improvements and capital improvements.

CITY OF SAN DIEGO BICYCLE MASTER PLAN

Adopted in December 2013, the City of San Diego's Bicycle Master Plan (BMP) presents a vision for bicycle transportation, recreation, and quality of life in San Diego. The vision is closely aligned with the 2008 General Plan's mobility, sustainability, health, economic, and social goals. The bicycle network, projects, policies, and programs included in the Bicycle Master Plan provide the City with a strong framework for improving bicycling through 2030 and beyond.

The goals of the BMP are to create:

- A city where bicycling is a viable travel choice, particularly for trips of less than five miles
- A safe and comprehensive local and regional bikeway network
- Environmental quality, public health, recreation and mobility benefits through increased bicycling

The BMP proposes the following key bicycle facilities within the University community planning area:

- Class II bicycle facility along La Jolla Village Drive from Villa La Jolla Drive to I-805
- Class II bicycle facility along Nobel Drive from I-5 to Regents Road and Genesee Avenue to Towne Centre Drive
- Class II bicycle facility along Judicial Drive from Eastgate Mall to Golden Haven Drive
- Class II bicycle facility along Lebon Drive from La Jolla Village Drive to Palmilla Drive
- Class II bicycle facility along Governor Drive from Kantor Street to I-805
- Class III bicycle facility along Executive Drive from Regents Road to Judicial Drive
- Class II or III bicycle facility along Eastgate Mall from Regents Road to Genesee Avenue
- Class II or III bicycle facility along Towne Centre Drive from Eastgate Mall to Nobel Drive
- Class II or III bicycle facility along Governor Drive from Regents Road to Genesee Avenue
- Class II or III bicycle facility along Regents Road from Nobel Drive to Rose Canyon and from Rose Canyon to Governor Drive.

Bicycle facilities which have not been implemented to any extent will be considered as proposed improvements in the University Community Plan Update.

CITY OF SAN DIEGO PEDESTRIAN PLANNING EFFORT

Adopted in 2006, the City of San Diego's Framework Report for the Pedestrian Master Plan guides the way the City plans and implements new or enhanced pedestrian projects. The Pedestrian Master Plan is intended to be a complementary document to the City of San Diego General Plan, the Transit Oriented Development Guidelines, the San Diego Association of Government's (SANDAG) Planning and Designing for Pedestrians, the City of San Diego Street Design Manual and more specifically, the Mobility Element of the City's General Plan.

The vision statement for the Pedestrian Planning Effort is: "To create a safe, accessible, connected and walkable pedestrian environment that enhances neighborhood quality and promotes walking as a practical and attractive means of transportation in a cost-effective manner." The goals which both support the vision statement and serve as project prioritization criteria are:

- Safety: Create a safe pedestrian network free of barriers and tripping hazards that has sufficient street crossings, buffer pedestrians from vehicles and has facilities wide enough to accommodate peak pedestrian use.
- Accessibility: Make facilities accessible to pedestrians of all abilities and meet all local, state, and federal requirements.
- Connectivity: Develop a complete pedestrian network that provides direct and convenient connections for neighborhoods, employment centers, transit stations, public places, and community destinations.
- Walkability: Create pedestrian facilities that offer amenities to encourage usage and to enhance the pedestrian experience.

The Pedestrian Planning Effort provided guidance in establishing consistency among how improvements are shaped and prioritized, taking into account the context of an area within the community as well as understanding different levels of pedestrian interaction and needs. The Effort included Pedestrian Master Plan Volumes 1 and 2 in 2015 which created pedestrian plans for the following communities:

- **Volume 1:** Greater North park, Southeastern San Diego, Greater Golden Hill, Uptown, Normal Heights, and Barrio Logan
- **Volume 2:** College, Kensington-Talmadge, Midway-Pacific Highway, Old Town, Ocean Beach, Pacific Beach, and San Ysidro

UNIVERSITY OF CALIFORNIA, SAN DIEGO (UCSD) LONG RANGE DEVELOPMENT PLAN (LRDP)

As UCSD evolves and grows in light of increasing student enrollment, the campus is currently updating its Long-Range Development Plan (LRDP), which was last updated in 2004. The LRDP is a general land use plan that guides the physical development of the campus. The LRDP will enable the campus to continue planning in a thoughtful and sustainable manner and includes the following:

- Principles that will guide planning for future development.
- Projections of enrollments and campus population.
- Estimates of the additional academic and ancillary space, including housing, clinical, research and lab space needed to achieve the delineated program goals.

CITY OF SAN DIEGO TRANSPORTATION UNFUNDED NEEDS LIST (TUNL) PROJECTS

As noted previously, the City of San Diego Capital Improvements Program (CIP) identifies projects that help enhance the overall quality of life in the City by improving, among other things, transportation infrastructure. Projects included in the CIP are funded via a variety of sources, including bonds, development impact fees, and City general funds, among others. Projects included in the TUNL may or may not be identified in other planning documents.

Often times, sufficient funding does not exist for all mobility projects that are identified in the CIP. As such, projects without identified funding are included in the Transportation Unfunded Needs List (TUNL). The TUNL is maintained by the City to keep an inventory of projects which can be implemented should sufficient funding become available. **Table 3-1** provides a brief description, location, type, and status of current TUNL projects within the University Community Plan area.

Table 3-1 Transportation Unfunded Needs List (TUNL) Projects

Type	TUNL ID	Location	Description
Intersection	1300	Genesee Ave & SR-52 WB On Ramp	Install a new traffic signal.
Intersection	1136	Governor Dr & Lakewood St	Install a new traffic signal
Intersection	1276	Pennant Wy & Regents Rd	Install a new traffic signal.

Type	TUNL ID	Location	Description
Intersection	5595	Gilman Dr & La Jolla Village Dr EB Ramp	Install a new traffic signal
Roadway Segment	1194	Towne Centre Dr & Excalibur Wy	This project will install a raised median on the south leg of the intersection
Pedestrian	5960	10675 John Jay Hopkins Dr	This project will install crosswalk with two pedestrian access ramps, street lighting, and median modification.
Pedestrian	7576	Via Mallorca & Via Marin	Install new crosswalk with Pedestrian Activated Flashing Beacons and curb ramps.
Pedestrian	4999	Executive Dr - Midblock east of Judicial Dr	This project will install one Pedestrian Hybrid Beacon (HAWK)
Pedestrian	4814	Stadium St - Governor Dr to Stadium Pl	This project will install one (1) electronic V-Calm sign facing northbound traffic
Pedestrian	656	Gilman Dr - Gilman Ct to Via Alicante	This project will install two (2) electronic V-Calm Signs
Pedestrian	4763	Lakewood St - Corlita Ct to Lakewood Ct	This project will install one (1) electronic V-Calm sign
Pedestrian	4776	Mercer St - Governor Dr to Mercer Ln	This project will install two (2) electronic V-Calm signs, one sign per direction
Pedestrian	4797	Radcliffe Dr - Governor Dr to Dennison St	This project will install one (1) electronic V-Calm sign
Pedestrian	4798	Radcliffe Dr - Radcliffe Ln to Syracuse Ave	This project will install one (1) electronic V-Calm sign
Pedestrian	4801	Renaissance Ave - Towne Centre Dr to Golden Haven Dr	This project will install two (2) electronic V-Calm sign, one sign per direction.
Pedestrian	4813	Soderblom Ave/Stresemann St - Lamas St to Barkla St	This project will install two (2) electronic V-Calm signs, one sign per direction
Pedestrian	6142	Stresemann St - Pennant Wy to Bragg St	This project will install two (2) electronic V-Calm Signs
Pedestrian	6156	Governor Dr - Radcliffe Dr to Stadium St	This project will install two (2) electronic V-Calm Signs, one sign per direction.

Type	TUNL ID	Location	Description
Pedestrian	7748	Arriba St - Regents Rd to Camino Tranquilo	This project will install two (2) electronic V-Calm Signs
Pedestrian	1201	Radcliffe Dr - Governor Dr to Dennison St	This project will install two (2) electronic V-Calm Signs
Pedestrian	5403	Stadium St & Eton Ave	This project will install two (2) pop outs and a new school crosswalk on the north leg of the intersection
Pedestrian	7449	Via Alicante - Gilman Dr to Via Malorca	This project will install two (2) electronic V-Calm Signs
Intersection	1320	Governor Dr & Scripps St	Install additional signal heads for NB and SB approaches and install new street light pole in the SW corner.
Pedestrian	6138	Governor Dr & Mercer St	Add 8 pedestrian countdown timers
Intersection	878	Genesee Ave & N Torrey Pines Rd	Install longer mast arm for NB/EB traffic on Genesee (2008)
Pedestrian	2463	La Jolla Village Dr & Towne Centre Dr	Install Polara APS
Pedestrian	6342	Governor Dr & Gullstrand St	Install 8 pedestrian count down timers.
Pedestrian	6343	Governor Dr & Agee St	Install pedestrian countdown timers
Pedestrian	6344	Governor Dr & Edmonton St	Install 8 pedestrian countdown timers.
Pedestrian	7863	Genesee Ave & Esplanade Ct	Polara APS for all legs
Pedestrian	2462	Executive Wy & La Jolla Village Dr	Upgrade existing APS to Polara system. Upgrade 1 pedestrian ramp to ADA.
Pedestrian	1006	La Jolla Shores Dr & N Torrey Pines Rd	Upgrade signal heads to 12" (2000)
Pedestrian	3392	La Jolla Shores Dr & North Torrey Pines Rd	Replace (1) pedestrian head and install (7) pedestrian countdown timers.

Type	TUNL ID	Location	Description
Pedestrian	4098	Genesee Ave & La Jolla Village Dr	Install pedestrian crossings on north and east legs and install (8) pedestrian countdown timers.
Pedestrian	4601	Governor Dr & Radcliffe Dr	Install new signal mast-arm for NB/SB Radcliffe Dr, install pedestrian countdown timers and upgrade pedestrian ramps
Pedestrian	4610	Governor Dr & Regents Rd	Install right turn overlap (5-section signal head) for NB Regents Rd., and install pedestrian countdown timers.
Pedestrian	4981	Genesee Ave & Nobel Dr	Install pedestrian countdown timers for all directions.
Pedestrian	5080	Governor Dr & Scripps St	Install pedestrian count down timers and ADA Ped ramps
Pedestrian	5913	Genesee Ave & Decoro St	One Signal head require for SW corner and another signal head require for NE signal post
Pedestrian	5937	Governor Dr & Agee St	Install (2) Pedestrian Push Button (PPB) posts/foundations on north side
Pedestrian	Missing Sidewalk Inventory	Circulation Element Roadways	This project will provide 40,700 linear feet of sidewalk located along Circulation Element roadways within the community
Bicycle	1114	Nobel Dr - I-5 to Regents Rd	Class II Bike Lanes
Bicycle	1116	Eastgate Mall - Olson Dr to Miramar Rd	Class II Bike Lanes. This project will remove several on-street parking or may widen the street.
Bicycle	4050	La Jolla Village Dr - Gilman Dr to Regents Rd	Install Class II Bike Lanes
Bicycle	640	Coastal Rail Trail - University to Rose Canyon connection	This project would provide a segment of the multi-jurisdictional Coastal Rail Trail, connecting University to the existing Rose Canyon bike path at Gilman Dr. The project is being managed by SANDAG.
Bicycle	4081	Campus Point Dr - Campus Point Ct to Genesee Ave	Install Sharrows

SAN DIEGO FORWARD: THE REGIONAL PLAN

Adopted in October 2015 by SANDAG, the San Diego Forward: The Regional Plan (RTP) is an overarching blueprint for a more sustainable future. It combines a big-picture vision for how the region will grow over the next 35 years (through the year 2050) with an implementation program to help make that vision a reality. At its core, it relies on creating a transportation network that will provide more choices to people in the region, which in turn will protect the environment, create healthy communities, and stimulate economic growth.

The Regional Plan builds upon local planning efforts by emphasizing the link between land use planning and transportation planning. Closer integration of the two will result in more compact and sustainable communities, helping the region meet greenhouse gas (GHG) reduction targets. As it is implemented, the Plan will enhance the movement of both people and goods, as well as break new ground by incorporating components aimed at enhancing public health.

The vision statement for this long-range blueprint – which will carry the region through 2050 – is "to provide innovative mobility choices and planning to support a sustainable and healthy region, a vibrant economy, and an outstanding quality of life for all."

The majority of land within the University community planning area is identified as a potential transit priority project area. As such, several arterial roadways and highways within the University community are identified in the Regional Plan as focus corridors for high quality transit. Several high-capacity transit routes and other enhancements are identified in the 2050 RTP within University, including:

- **Trolley Route 510 (Mid-Coast Trolley Blue Line Extension):** Scheduled to open in 2021, the Mid-Coast Trolley will extend the existing Blue Line service from America Plaza to the University Towne Centre (UTC) Transit Center. The trolley is planned to run along I-5, Voigt Drive, and Genesee Avenue within the University community. This includes six new trolley stations within the University community.
- **Trolley Route 561:** The proposed trolley route will provide a COASTER connection from the UTC Transit Center via the Sorrento Valley station. The San Diego Forward year for completion of this improvement is 2035.
- **Trolley Route 562:** The proposed trolley route will provide a connection from Kearny Mesa to Carmel Valley. The expected year for completion of this improvement is 2050.
- **Rapid Bus Route 30:** Conversion of existing MTS Route 30 to a rapid bus route would connect Old Town to Sorrento Mesa via Pacific Beach, La Jolla and UTC/University. The service would run along La Jolla Village Drive within the University community. The San Diego Forward year for completion of this improvement is 2035.
- **Rapid Bus Route 41**: Conversion of existing MTS Route 41 to a rapid bus route would connect Fashion Valley to UTC/UC San Diego via Linda Vista and Clairemont. The service would run along Genesee Avenue and La Jolla Village Drive within the University community. The San Diego Forward year for completion of this improvement is 2035.
- **Rapid Bus Route 473**: The proposed rapid bus route would connect Solana Beach to UTC/UC San Diego via Hwy 101 Coastal Communities and Carmel Valley. The service would run along La Jolla Village Drive within the University community. The San Diego Forward year for completion of this improvement is 2035.

- **Rapid Bus Route 689**: The proposed rapid bus route would connect Otay Mesa Port of Entry (POE) to UTC/Torrey Pines via Otay Ranch/Millennia and I-805 Corridor (Peak Only). The service would run along Genesee Avenue and La Jolla Village Drive within the University community. The San Diego Forward year for completion of this improvement is 2035.
- **Rapid Bus Route 870:** The proposed rapid bus route would connect El Cajon to UTC via Santee, SR-52 & I-805. The service would run along La Jolla Village Drive within the University community. The San Diego Forward year for completion of this improvement is 2050.

The Regional Plan is updated every four years. SANDAG is in the process of developing transportation scenarios to incorporate into a comprehensive update of the Regional Transportation Plan. Completion of the new Transportation Plan is expected in 2021. At this time, it is too early to determine which, if any, changes will be made to transportation projects within the community. With the exception of the Mid-Coast Trolley, which is currently under construction, all other transit enhancements indicated will undergo further evaluation to determine the reasonable expectancy and need and will be consider for incorporation into the new regional Transportation Plan. SANDAG is pursuing its *5 Big Moves* (Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and Next Operating System (OS)) as part of a new transportation vision for the region.

In 2017, the Sorrento Valley Skyway Feasibility Study was conducted for SANDAG to evaluate the feasibility of an aerial cableway or "skyway" connecting the Mid-Coast Light Rail Transit line and the Sorrento Valley/Sorrento Mesa employment areas. The study included relocating the existing Coaster commuter rail service in Sorrento Valley and provided overall cost and ridership analysis and developed alignment concepts for SANDAG to consider (along with other feasible transit technologies) as it continues to develop their future transportation system for the region.

SAN DIEGO REGIONAL BIKE PLAN: RIDING TO 2050

Adopted in April 2010 by SANDAG, Regional Bike Plan identifies a vision for a regional bicycle system of interconnected bicycle corridors, support facilities, and programs to make cycling more appealing to a broader range of the population. The document includes recommendations and goals that strive to increase bicycle ridership for all purposes. It also encourages the development of Complete Streets, to improve safety for bicyclists, and to increase public awareness and support for bicycling in the region. The following planned regional corridor alignments are within the University community:

- **Coastal Rail Trail – Roselle Canyon:** Install a Class I Bikeway along Roselle Canyon connecting Sorrento to UTC. This project is included in the Early Action Program (EAP).
- **Coastal Rail Trail – UTC:** Install a Class II bicycle facility along Eastgate Mall from Genesee Avenue to Judicial Drive, and along Judicial Drive from Eastgate Mall to Nobel Drive. Portions of this project have already been completed and it is included in the EAP.
- **Coastal Rail Trail – Rose Canyon:** Install a Class I Bikeway along Rose Canyon from Nobel Drive trail entrance to San Clemente Canyon. This project is included in the EAP.
- **SR-52 Bikeway:** Install a Class I Bikeway along SR-52 from I-5 to Santo Road. The expected year of completion of this improvement is 2050.

CALTRANS I-5, I-805, SR-52 TRANSPORTATION CONCEPT REPORT

The purpose of the Transportation Concept Report (TCR) is to evaluate current and projected conditions along the State Highway System (SHS) route and communicate the vision for the development of each route in each Caltrans District during a 20 to 25 year planning horizon. The following goals of the report will be achieved through integrated management of the transportation network, including highway, transit, pedestrian, bicycle, freight, and operational improvements, as well as travel demand management components of the corridor.

- Safety: Provide a safe transportation system for workers and users, and promote health through active transportation and reduced pollution in communities.
- Stewardship and Efficiency: Responsibly manage California's transportation-related assets
- System Performance: Utilize leadership, collaboration and strategic partnerships to develop an integrated transportation system that provides reliable and accessible mobility for travelers.
- Organization/Excellence: Be a national leader in delivering quality service through excellent employee performance, public communication, and accountability.

I-5 and I-805 TCRs were updated in 2017 and the SR-52 TCR was updated in 2015.

TRANSIT OPTIMIZATION PLAN (2016)

San Diego Metropolitan Transit System (MTS) launched the Transit Optimization Plan (TOP) in 2016. The project was a comprehensive evaluation, including extensive customer outreach effort, to ensure that MTS services are efficient and effective for the region's travel needs.

Among the goals of the TOP was to create a network of services that would attract more riders to the system and to reverse a two-year decline in ridership and fare revenue. The TOP process included nearly 6,000 surveys, more than 50 outreach events across the region and a public hearing. Using rider input in conjunction with system performance data and ridership patterns, proposals were made for adjustments to over 60% of MTS' bus services.

MTS is implementing TOP changes in phases, beginning January 2018. The following changes will occur in the University Community:

- **Route 50 Downtown to UTC Express:** Adjust in Clairemont and University to use Regents Road and Governor Drive. Midday service would be discontinued between approx. 10 a.m. and 2 p.m. (but remain available on Route 41 on Genesee Avenue and Route 105 on Clairemont Drive).
- **Route 105 Old Town to UTC:** Segment between Clairemont Square and UTC would be replaced during weekday peak hours by a realigned Route 50.
- **Route 204 UTC East Loop:** Weekday midday service would be reduced to a 30-minute frequency, and weekend service would be discontinued.
- **Route 237 Rancho Bernardo to UCSD:** All trips would terminate on the east end at the Miramar College Transit Station. Connecting service to/from Sabre Springs/Peñasquitos and Rancho Bernardo Transit Stations would remain available on Route 235.

LOCAL PRIVATE DEVELOPMENT PROJECTS

Several proposed private developments have been identified within University, including the following:

- 10300 Campus Point Drive (Campus Point Master Plan)
- UCSD Center for Novel Therapeutics
- 9791 Towne Centre Drive (Eastgate Tech Park)
- 4655 Executive Drive (La Jolla Centre III)
- 10308, 10590, and 10640 John Jay Hopkins Drive and 3528 General Atomics Court (The Scripps Research Institute)
- 5811 Gullstrand Street (La Jolla Del Rey)
- 9333 Genesee Avenue (Genesee Executive Plaza)
- 9455 Towne Centre Drive
- 9501-9539 Genesee Avenue (La Jolla Canyon Gardens)
- North University City Fire Station 50
- Costa Verde Revitalization
- 4545 La Jolla Village Drive (UTC Residential)
- 5200 Illumina Way (ARE/Illumina Campus)
- 5007 Eastgate Mall (Pure Water North City)
- 3777 La Jolla Village Drive (The Sporting Club)
- 9775 Towne Centre Drive
- UCSD Mesa Nueva Graduate and Professional Student Housing
- 4727 Executive Drive (La Jolla Commons III)
- 9880 Campus Point Drive
- Scripps Institute of Oceanography Marine Conservation Facility
- 3115 Merryfield Row (Spectrum III & IV)
- 11099 North Torrey Pines (Touchstone)
- 8440-80 Eastgate Court
- 8390 Miramar Place

Any new developments will need to be identified during the model calibration process to ensure the correct land use is assumed in the Series 13 (ABM) model. Additionally, any project impact mitigation measures that are identified in the traffic impact analysis for the above developments will be considered in the future year model network.

4 ACTIVE TRANSPORTATION: WALKABLE COMMUNITY

The City of San Diego collects and maintains an inventory of the sidewalks within and adjacent to the University community. This information was used to create a baseline pedestrian network and to help determine existing pedestrian facilities, missing facilities and connections within the community. The data is not all-inclusive, but has the necessary information to determine the adequacy of pedestrian connections. **Figure 4-1** presents an overview of the sidewalk inventory within the community. It is important to note that the sidewalk inventory available does not include separated trails, such as those within Rose Canyon.

PEDESTRIAN BARRIERS AND MISSING FACILITIES

As shown in **Figure 4-1**, sidewalks are provided along many of the roadways within the community. There are a few areas within the community that have missing facilities or barriers for pedestrian connectivity. **Figure 4-2** shows the pedestrian barriers identified in the community that are described below:

- *Rose Canyon*: There are several trails through Rose Canyon that pedestrians can use to travel east-west across the community or across the canyon. These trails are primarily used for recreation purposes. For a pedestrian on a non-recreation trip, the canyon can act as a barrier between the northern and southern portion of the community. Crossing the canyon requires traversing steep slopes and railroad tracks that can be limiting to certain users and be less time-efficient than other modes of travel. Genesee Avenue currently provides the only paved crossing across the canyon, providing sidewalks on both sides of the roadway.

- *Interstate 805*: In general, the interstate acts as a barrier between land uses located east and west due to the limited crossing locations and undesirable crossings near high volumes of vehicles. This is typical with freeways as there are limited roadways that cross or intersect with freeways. There are only two existing roadways providing connections across Interstate 805, La Jolla Village Drive and Nobel Drive. The following roadways intersect with I-805; however, not all of these roadways provide a facility for pedestrians to cross, some provide sidewalks on only one side of the roadway:
    - Nobel Drive provides pedestrian facilities on both sides of the bridge crossing over I-805. The sidewalks have little separation from high speed vehicles and no crossing opportunities are available across Nobel Drive at the I-805 ramps.
    - La Jolla Village Drive provides pedestrian facilities on the north side of the bridge only. There are uncontrolled crossings at freeway ramps along this roadway.
    - Eastgate Mall does not provide any pedestrian facilities on the bridge crossing over I-805. This would be the communities northernmost crossing; however lack of facilities along this roadway present a barrier for east-west connectivity in the area.
    - Governor Drive does not provide any pedestrian facilities on the roadway crossing under I-805. In addition, freeway ramps are uncontrolled presenting an additional barrier in the area.
    - Rose Canyon provides trails that go under I-805. These trails are for recreation and can be limiting for certain users.

- *Interstate 5*: While the number of locations where pedestrians can cross Interstate 5 is limited, there are pedestrian connections along each roadway crossing the freeway. The impact the freeway barrier has on pedestrians has been minimized by providing sidewalks on each intersecting

roadway crossing, however sidewalks at certain locations are only found along one side of the roadway and have little separation from traffic.

- Genesee Avenue is currently under construction but will have a pedestrian bridge crossing over Interstate 5 when construction is completed.
- Voigt Drive provides pedestrian facilities on both sides of the bridge crossing over I-5. This connection falls within the UCSD Campus but is available to pedestrians in the area.
- La Jolla Village Drive provides pedestrian facilities on both sides of the bridge crossing over I-5; however uncontrolled freeway ramps make the area challenging for pedestrians.
- Nobel Drive provides pedestrian facilities on both sides of the bridge crossing over I-5.
- Gilman Drive provides pedestrian facilities along the south side, although sidewalk is narrow with little separation from high speed, high volume traffic.

- *State Route 52*: There are only two roads that cross SR-52 connecting the University and Clairemont communities. Both roadways provide sidewalks.
  - Regents Road provides pedestrian facilities on the east side crossing under SR-52. There are no sidewalks nor crossing opportunities provided along the west side of the roadway along this segment. Uncontrolled freeway ramps make the area challenging for pedestrians.
  - Genesee Avenue provides pedestrian facilities on the east side crossing under SR-52. There are no sidewalks nor crossing opportunities provided along the west side of the roadway along this segment. Uncontrolled freeway ramps make the area challenging for pedestrians and lack of pedestrian ramps can be limiting for certain users.

Pedestrian facilities within the UCSD campus are illustrated in **Figure 4-1** and **Figure 4-2**; however, there is an overarching assumption that the UCSD campus is walkable. Pedestrian trails and connections through large private development sites are not shown as part of this community-level evaluation. These sites may provide additional and quicker paths of travel for pedestrians.

The inventory provided did not have the level of detail to identify if pedestrian ramps are provided at each corner of each intersection. Missing pedestrian ramps at intersections can be a barrier for some users and limit the connectivity.

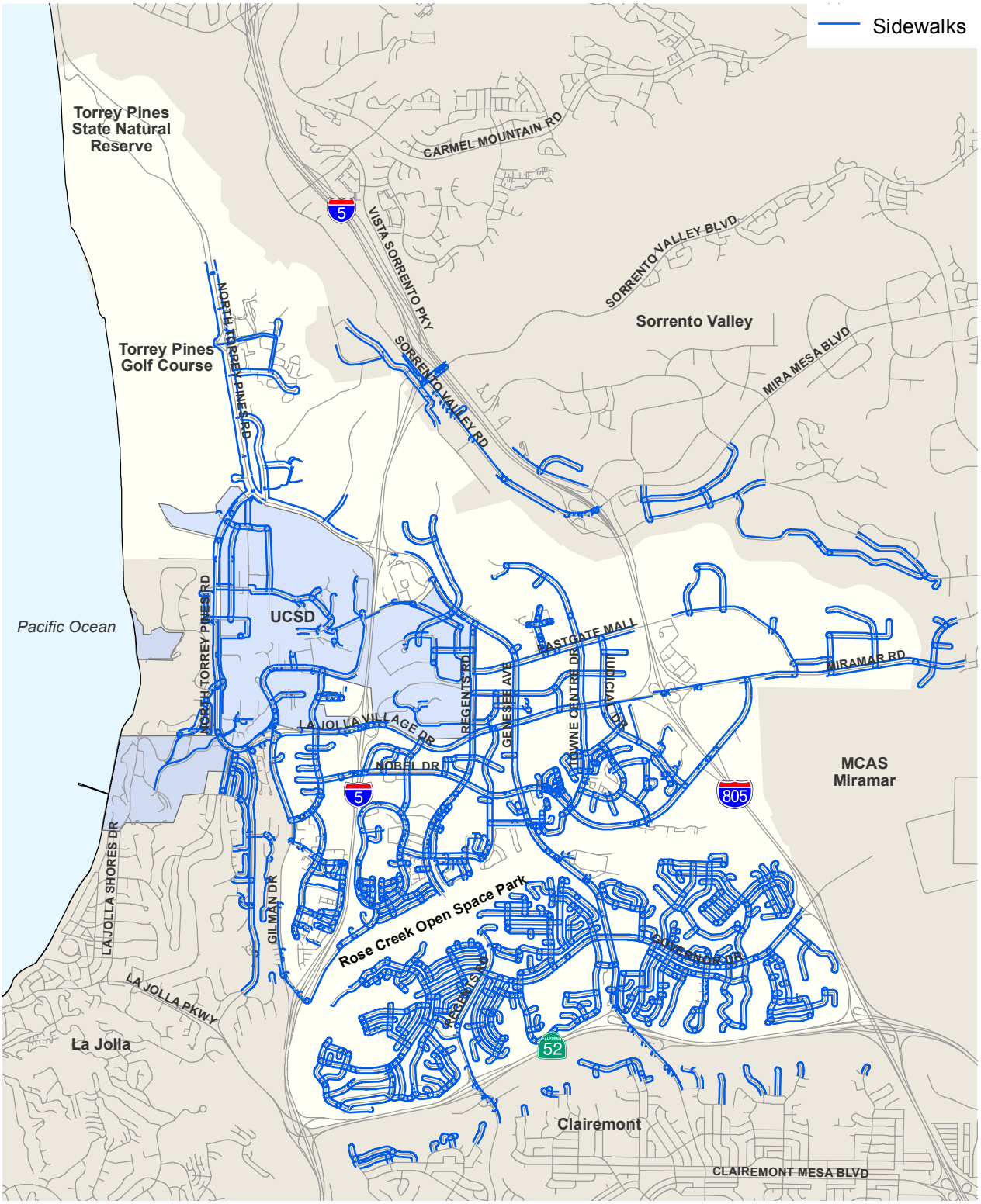
The University community consists of many wide roadways, carrying six or more travel lanes. These roadways also allow for higher speeds of travel and more vehicle capacity. These factors limit pedestrian crossing locations to be at signalized locations only and make pedestrian crossing times and distances longer. Pedestrian trips that require crossing multiple legs of large intersections are less desirable. Pedestrian bridges are more common in this community than most others to minimize the need for pedestrians to cross these wide, busy streets. Pedestrian bridges are currently built across La Jolla Village Drive, east of Genesee Avenue and west of Villa La Jolla Drive. The following locations in the urban core of the community previously had pedestrian bridges that will be replaced with Mid-Coast trolley stations:

- Genesee Ave near Executive Square (Executive Square Station)
- Genesee Avenue between La Jolla Village Drive and Esplanade Court (UTC Station)

The Executive Square Station and the La Jolla Village Drive bridge will be connected by a walkway through the property located at the northeast corner of La Jolla Village Drive and Genesee Avenue. This walkway will allow pedestrians from the Executive Square areas to travel to the Westfield UTC shopping center and have high pedestrian traffic during the typical work week. The construction of the transit center at the

southeast corner of this intersection will further attract pedestrian traffic across these walkways. Similarly, the UTC Station platform located between La Jolla Village Drive and Esplanade Court along Genesee Avenue, will allow pedestrians to cross Genesee Avenue to access additional shopping centers and residential areas located on the west side of the roadway. The pedestrian bridge across La Jolla Village Drive, near Villa La Jolla Drive, provides a connection from the souths side of La Jolla Village Drive to UCSD.

FIGURE 4-1



Existing Pedestrian Network

FIGURE 4-2

Existing Pedestrian Barriers

PEDESTRIAN DEMAND

Pedestrian demand was evaluated using the City of San Diego Pedestrian Priority Model (PPM). The PPM was created to identify areas within the City where there is relatively high demand or propensity for walking. This is combined with an analysis of trip detractors or deficiencies to assess where both existing and latent demand for walking may exist. **Figure 4-3** presents the pedestrian demand in the University community based on the results of the Pedestrian Priority Model.

As seen in the figure, pedestrian demand is highest in the denser, central part of the community. Demand is closely correlated with the commercial (both retail and office space uses) core of the community. The areas of highest demand also have the best-connected street grid within the community and are less impacted by the topographic and freeway barriers that affect the southern and northern ends of the community. Demand is highest along La Jolla Village Drive and Genesee Avenue. Demand is predictably lower in areas that are largely residential, including areas to the west of Regents Road, south of Rose Creek and the area to the east of Genesee Avenue, north of Governor Drive.

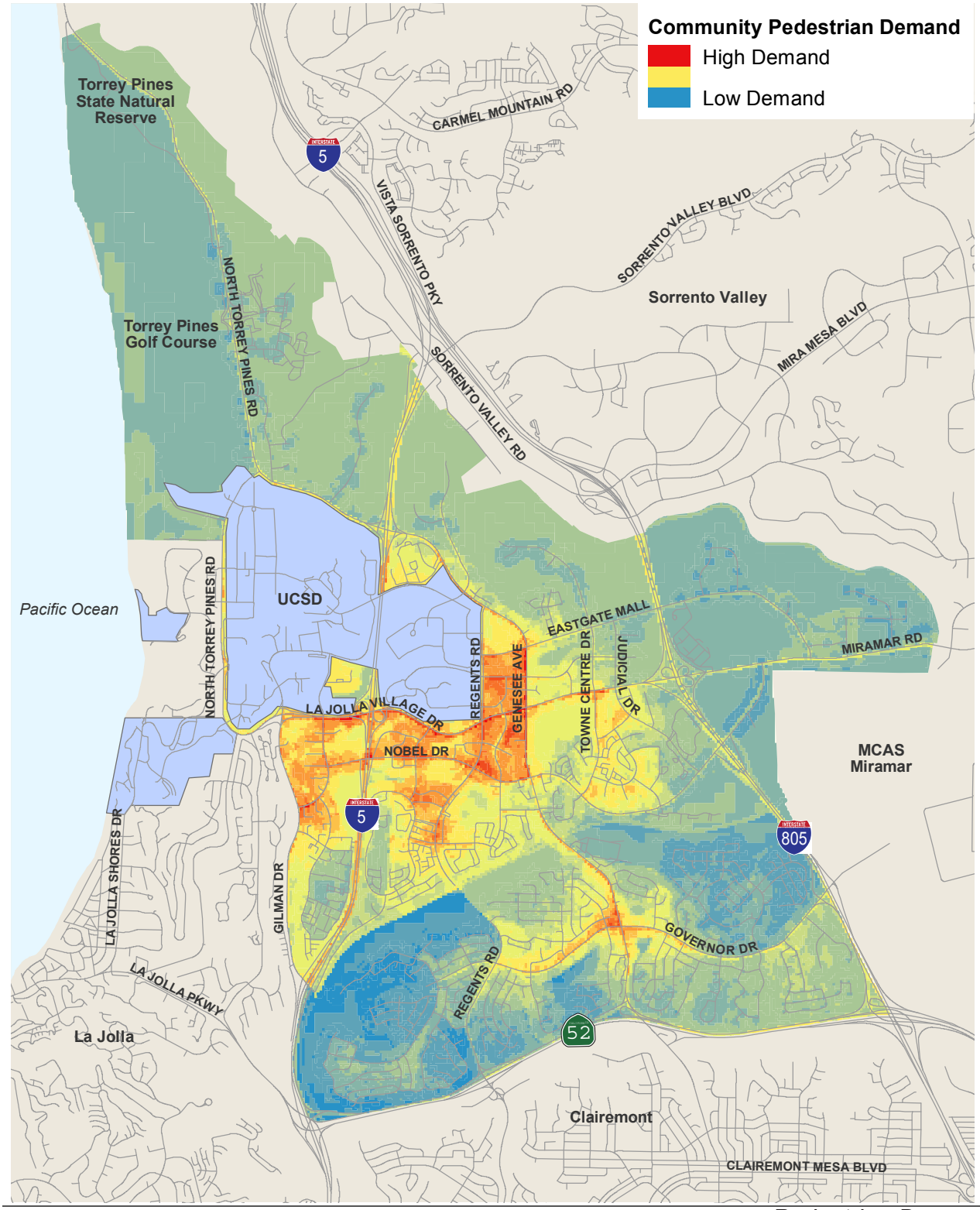
Pedestrian commute mode share is another measure of where demand exists for pedestrian infrastructure or where existing facilities are successfully facilitating some pedestrian commutes. American Community Survey data, 2015 5-year estimates, were used to determine how the commute mode share in the University community compares to both the City of San Diego and the County of San Diego. **Table 4-1** and **Figure 4-4** present the pedestrian commute mode share comparison. The University community has a mode share relatively close to that of the City of San Diego and San Diego County. This is likely due to the relatively urban, mixed-use nature of the area.

Table 4-1 Pedestrian Commute Mode Share Comparison

	University	**City of San Diego**	**San Diego County**
Total Pedestrian Commutes	920	20,196	42,968
Total Workers	35,740	668,643	1,503,987
Pedestrian Commute Mode Share	***2.6%***	***3.0%***	***2.9%***

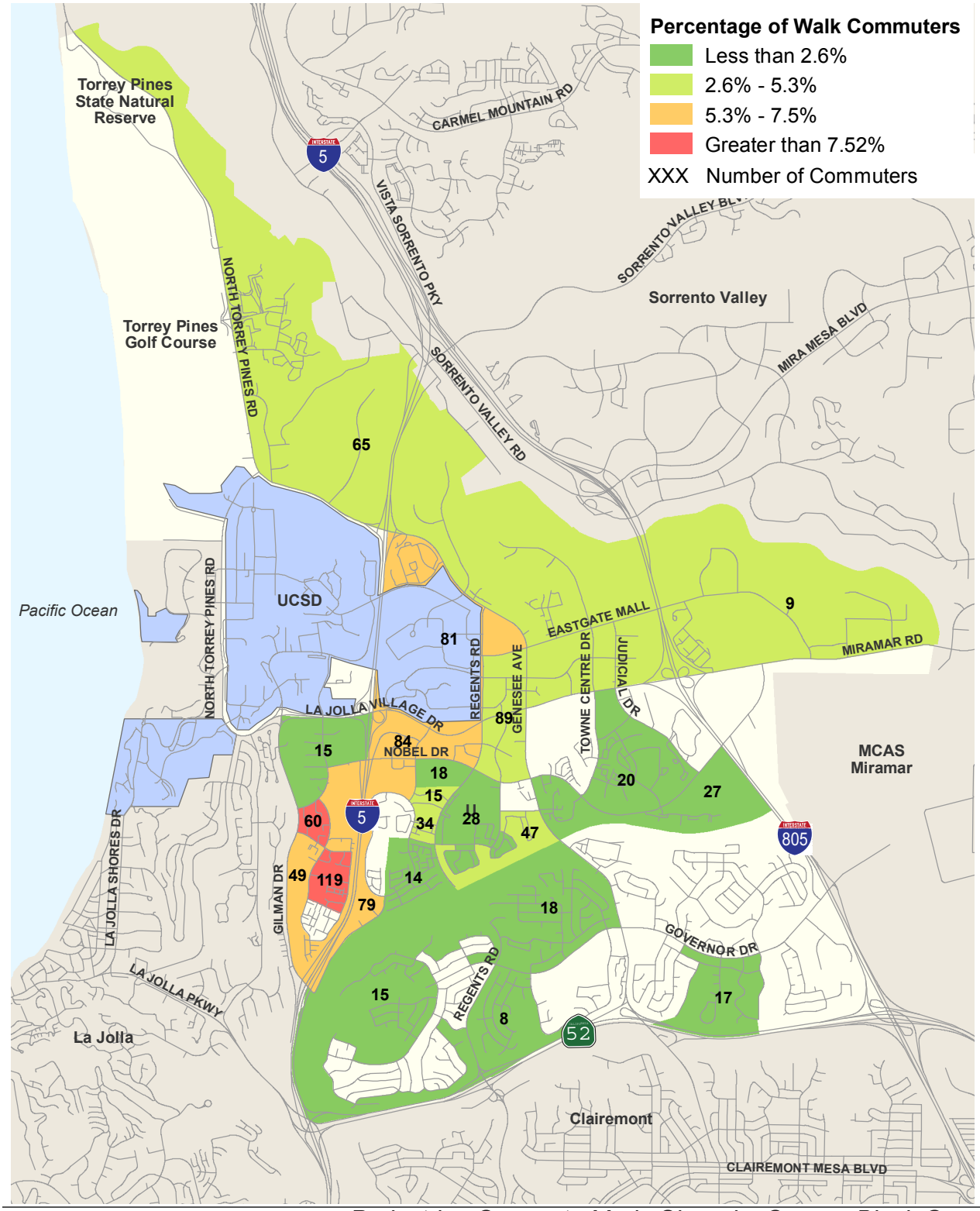
Pedestrian counts were collected and are presented in **Figure 4-5** through **Figure 4-7**.

FIGURE 4-3



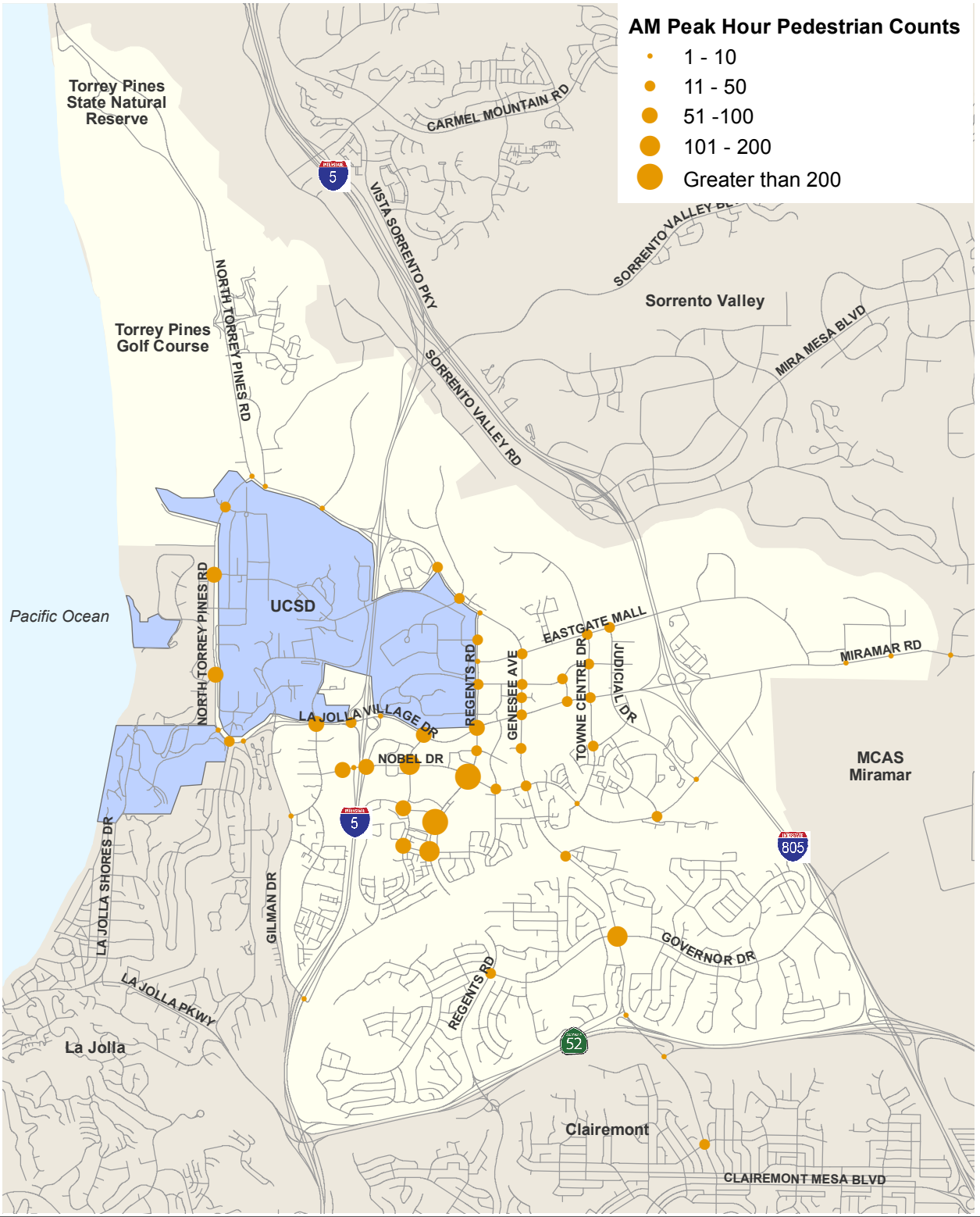
Pedestrian Demand

FIGURE 4-4



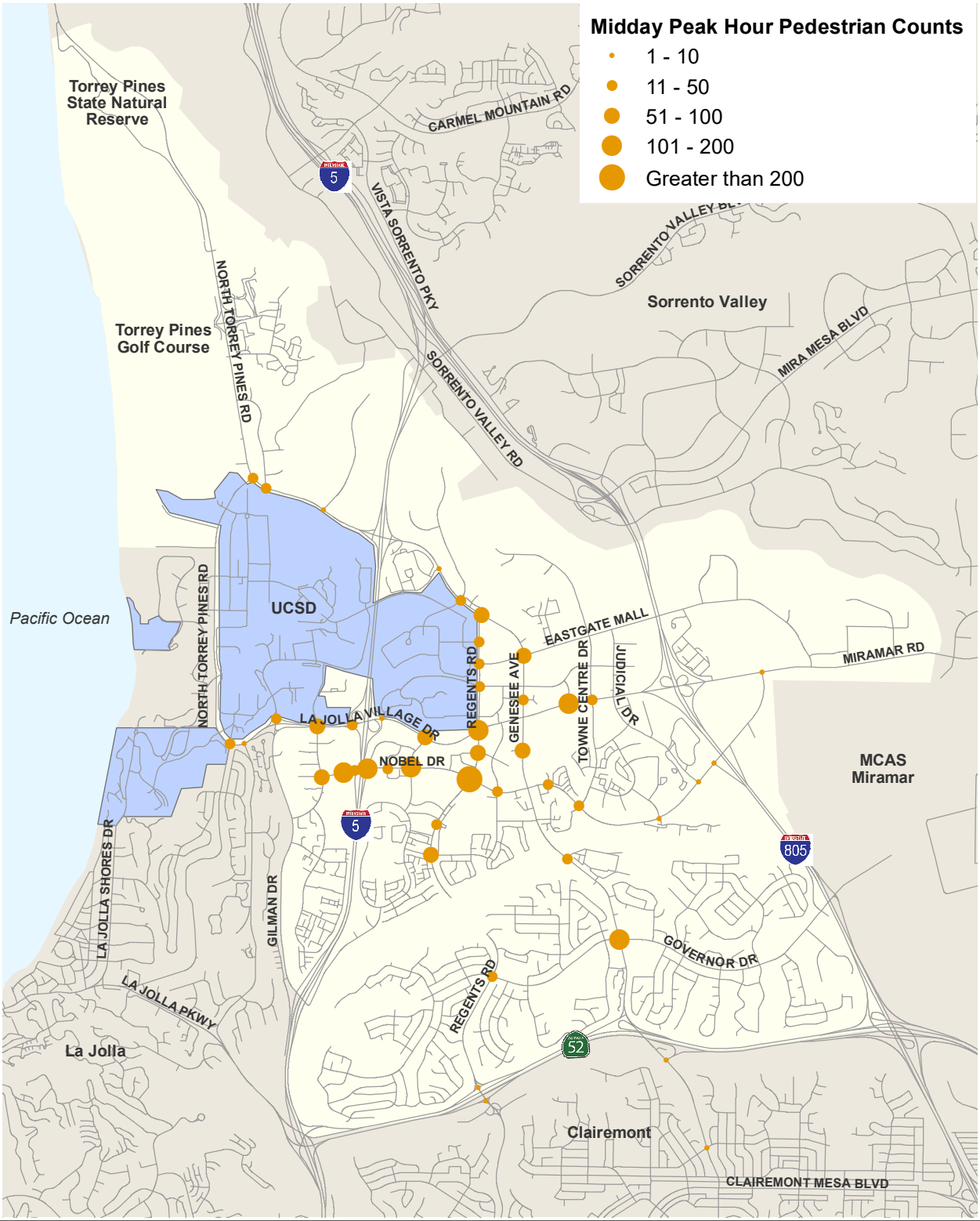
Pedestrian Commute Mode Share by Census Block Group

FIGURE 4-5



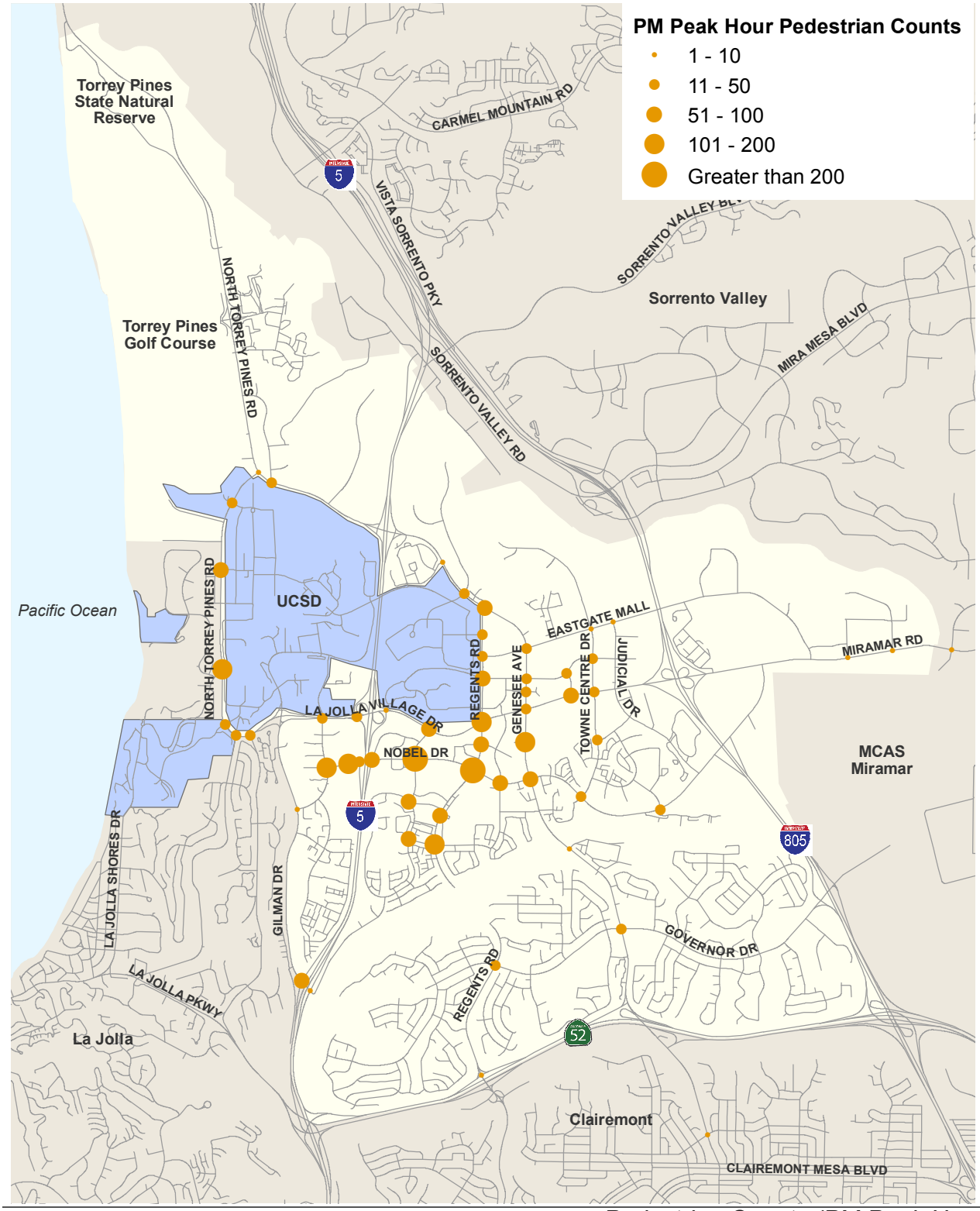
Pedestrian Counts (AM Peak Hour)

FIGURE 4-6



Pedestrian Counts (Mid-day)

FIGURE 4-7



Pedestrian Counts (PM Peak Hour)

PEDESTRIAN COLLISION HISTORY

Between October 2012 and September 2017, there were a total of 69 reported collisions involving pedestrians within the University community. In the State of California, collision reports must be generated for any collision where property damage equals or exceeds 750 dollars, involves city property, someone is injured, a fatality occurs, a pedestrian or cyclist is involved, or it is a hit-and-run and DUI collision. It is important to note some pedestrian incidents may go unreported and therefore, cannot be included in this analysis. Reported pedestrian-involved collision data within the vicinity of the community planning area is provided in **Appendix A** and illustrated in **Figure 4-8**.

Most locations have isolated incidents. A few locations have a history of multiple collisions. **Table 4-2** identifies those intersections with three or more collisions within the five-year period. A more in depth look at the causes of these collision will help to identify improvements needed at these locations.

Table 4-2 Most Frequent Pedestrian Collision Locations

Rank	Intersections	Collisions
1	Executive Way & La Jolla Village Drive	4
1	Genesee Avenue & La Jolla Village Drive	4
2	Genesee Avenue & Governor Drive	3
2	La Jolla Village Drive & Town Centre Drive	3
2	La Jolla Village Drive & Lebon Drive	3
2	Regents Road & Nobel Drive	3

Table 4-3 summarizes the location types for pedestrian-involved collisions, differentiating between intersection, mid-block, and approaching/departing locations. The vast majority (73 percent) of pedestrian-involved collisions occurred at intersections.

Table 4-3 Pedestrian Collisions by Location Types

Collision Location Type	Collisions	Percent of Total
Mid-Block	9	13%
Intersection	50	73%
Approaching/Departing	10	14%
Total	***69***	***100%***

Table 4-4 identifies the party-at-fault for each reported pedestrian-involved collision. Drivers were reported as at-fault for over one-quarter of all collisions. Pedestrians were reported at-fault for nearly one-third of all collisions. Approximately 40 percent of recorded collisions do not identify a party at-fault, or state “other” as the party at fault.

Table 4-4 Pedestrian Collisions by Party at Fault

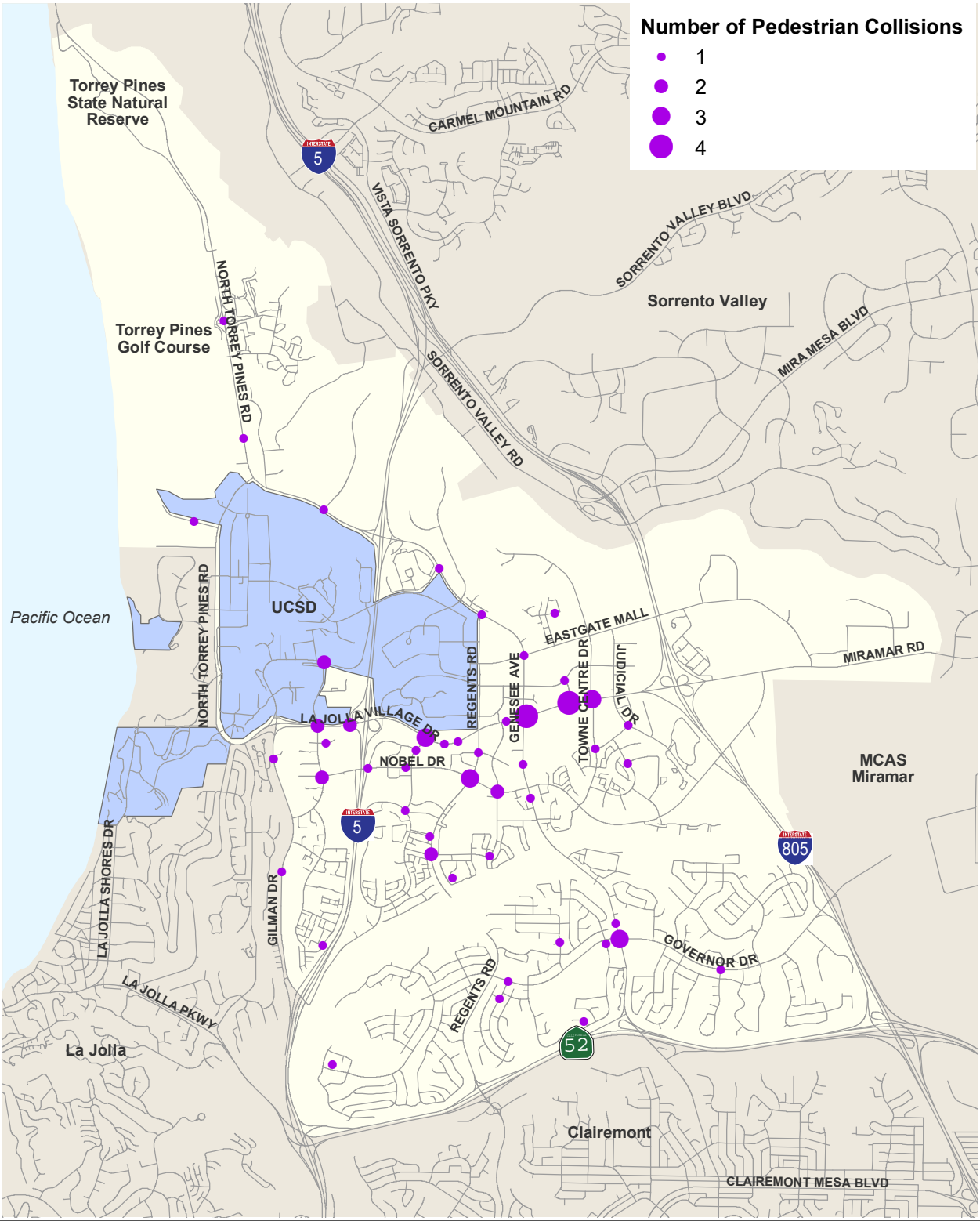
Party at Fault	Collisions	Percent of Total
Driver	20	29%
Pedestrian	22	32%
Not Stated	26	38%
Bicyclist	0	0%
Other	1	1%
Total	***69***	***100%***

Table 4-5 identifies the primary collision cause reported for the reported pedestrian-involved collisions. The leading cause was attributed to pedestrian right-of-way violations, which occurred in approximately 22 percent of pedestrian-involved collisions. The second-most frequent cause of collision was "pedestrian violation", followed by "auto right-of-way violation" and "other hazardous movement".

Table 4-5 Primary Pedestrian Collision Cause

Primary Collision Cause	Collisions	Percent of Total
Auto R/W Violation	9	13%
Improper Passing	0	0%
Improper Turning	6	9%
Not Stated	4	6%
Other	1	1%
Other Hazardous Movement	9	13%
Ped R/W Violation	15	22%
Pedestrian Violation	11	16%
Traffic Signals and Signs	2	3%
Unknown	3	4%
Unsafe Lane Change	2	3%
Unsafe Speed	3	4%
Unsafe Starting or Backing	4	6%
Total	***69***	***100%***

FIGURE 4-8



Pedestrian Collision History (2012-2017)

PEDESTRIAN ENVIRONMENT QUALITY EVALUATION (PEQE)

The Pedestrian Environment Quality Evaluation (PEQE) represents a data-driven methodology for assessing pedestrian facilities. Elements which are evaluated include roadway segments, intersections, and mid-block crossings where present.

For roadway segments, data inputs include horizontal buffer, lighting, a clear pedestrian zone, and the posted speed limit. For the intersection analysis, physical features that serve as safety mechanisms, operational features, curb ramps which meet standards for the Americans with Disabilities Act (ADA), and intersection traffic control are identified and evaluated for their contribution to the pedestrian environment. An overview of the methodology used to calculate PEQE scores, including required inputs and scoring used, is provided in **Section 2. Appendix B** includes the existing inputs used for PEQE analysis.

Table 4-6 summarizes the PEQE analysis results for sidewalks along roadway segments within the Pedestrian Study Area. As shown, 67 percent of these pedestrian facilities currently score as medium-quality. Low-quality scores were observed along 33 percent of facilities. No facilities scored as high-quality within the community; however, the analysis did not account for the four pedestrian bridges that would offer an alternative to cross major roadways within the community with no vehicular conflicts.

Many of the roadway segments within the Pedestrian Study Area are either missing sidewalks altogether, or have sidewalks that are less than 5 feet in width. Many sub-standard sidewalks are adjacent to City-owned right-of-way that is currently used for landscaping. Both the provision of sidewalks as well as increasing sidewalk widths to provide a clear pedestrian zone of 5 feet or more would likely improve the PEQE score along several Study Area roadways.

Several roadways have street lighting that does not meet minimum spacing requirements (e.g. one light every 150-300 feet). Adding street lights along key roadway segments to achieve minimum requirements would likely improve the PEQE score along several study area roadways.

Additionally, several intersections have curb ramps that do not meet ADA requirements. Upgrading curb ramps to meet ADA standards would likely improve the PEQE score at several Study Area intersections.

Table 4-6 Summary of PEQE Analysis for Segments within Pedestrian Study Area

PEQE Score	Total Length (feet)	Percent of Study Area Facilities
High	0	0%
Medium	169,488	67%
Low	84,022	33%
Total	***253,510***	***100%***

Table 4-7 summarizes the PEQE analysis results for intersections within the study area. The evaluation found that 84 percent of intersections exhibited medium-quality conditions, 15 percent of intersection crossings were observed to have low-quality conditions, and only 1% (one intersection) exhibited high-quality conditions.

Table 4-7 Summary of PEQE Analysis for Intersections within Pedestrian Study Area

PEQE Score	Number of Intersections	Percent of Study Area Facilities
High	1	1%
Medium	58	84%
Low	10	15%
Total	***69***	***100%***

Table 4-8 summarizes the length (in feet) of the missing sidewalks along roadway segments which provide access to the pedestrian study area. No curb ramps were found to be missing, although not all are ADA-accessible compliant.

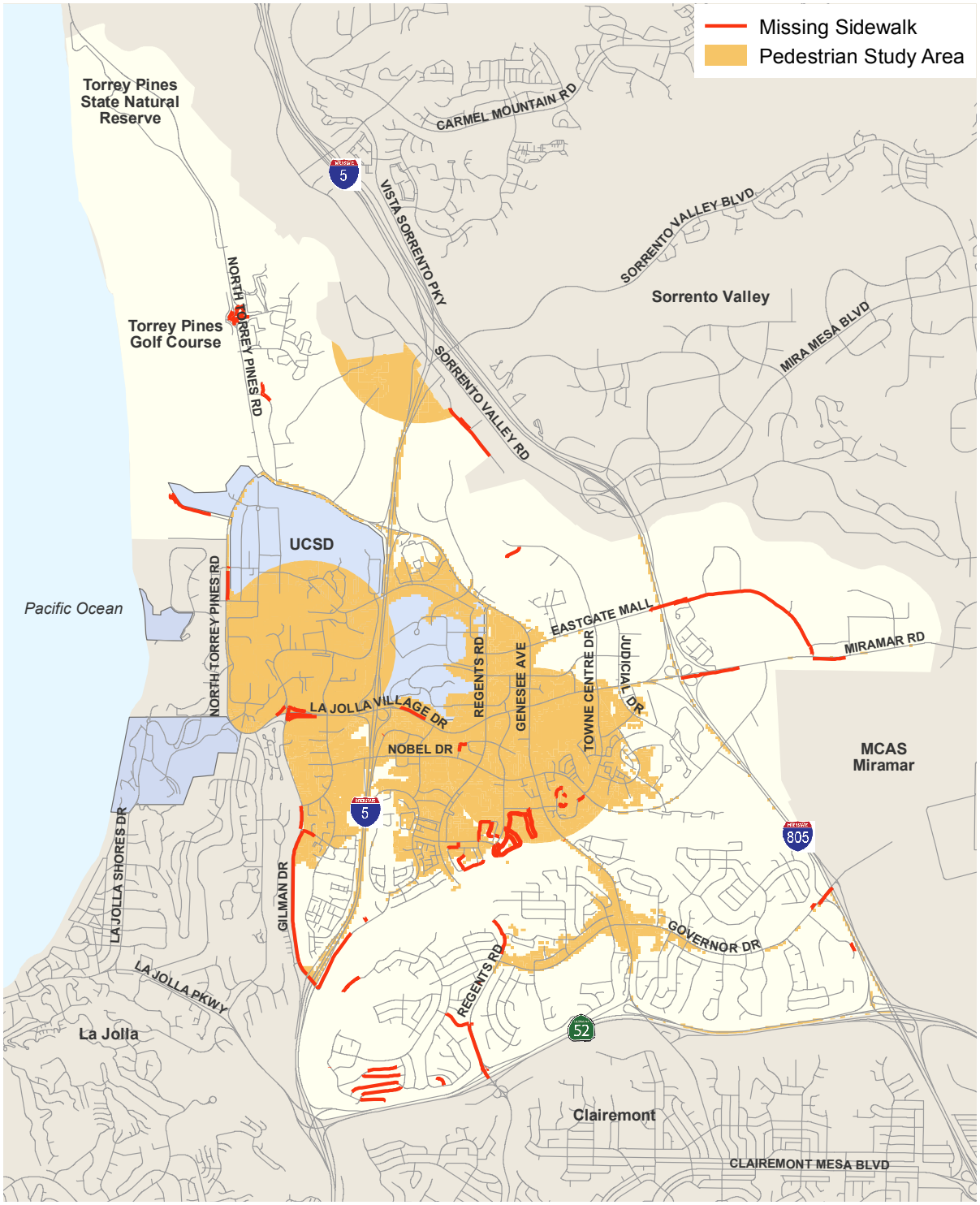
Table 4-8 Summary of Missing Curb Ramps and Sidewalks within or Providing Access to the Pedestrian Study Area

Item	Quantity	Length (feet)
Missing Sidewalk	NA	58,456
Missing Curb Ramps	*0*	NA

The locations of missing sidewalks within the community are shown in **Figure 4-9**.

The results of the PEQE are presented in **Figure 4-5**. As shown, roadway segments exhibiting low-quality pedestrian conditions are generally shown along major arterial roadways that have little or no adjacent development. Roadways exhibiting medium-quality conditions are generally found along roadways with adjacent residential and commercial activity. There are no high-quality segments on study area roadways within the pedestrian study area. The only high-quality intersection is at La Jolla Village Drive and Town Center Drive.

FIGURE 4-9



Missing Sidewalks

FIGURE 4-10

Existing Pedestrian Environmental Quality Evaluation (PEQE) Rating

PEDESTRIAN NETWORK CONNECTIVITY

The level of connectivity at each pedestrian study intersection was assessed using a travelshed analysis. The methodology for calculating the Pedestrian Connectivity Ratio is described in detail in **Section 2**, and utilizes the formula shown below. Note that a higher ratio is associated with better overall connectivity at the intersection.

$$\frac{\text{Land Area Accessible within a 0.5 mile walkshed (acres)}}{\text{Land Area Accessible within a 0.5 mile crow flies buffer (acres)}}$$

The pedestrian connectivity ratio for each intersection within the pedestrian study area is shown in **Table 4-9.**

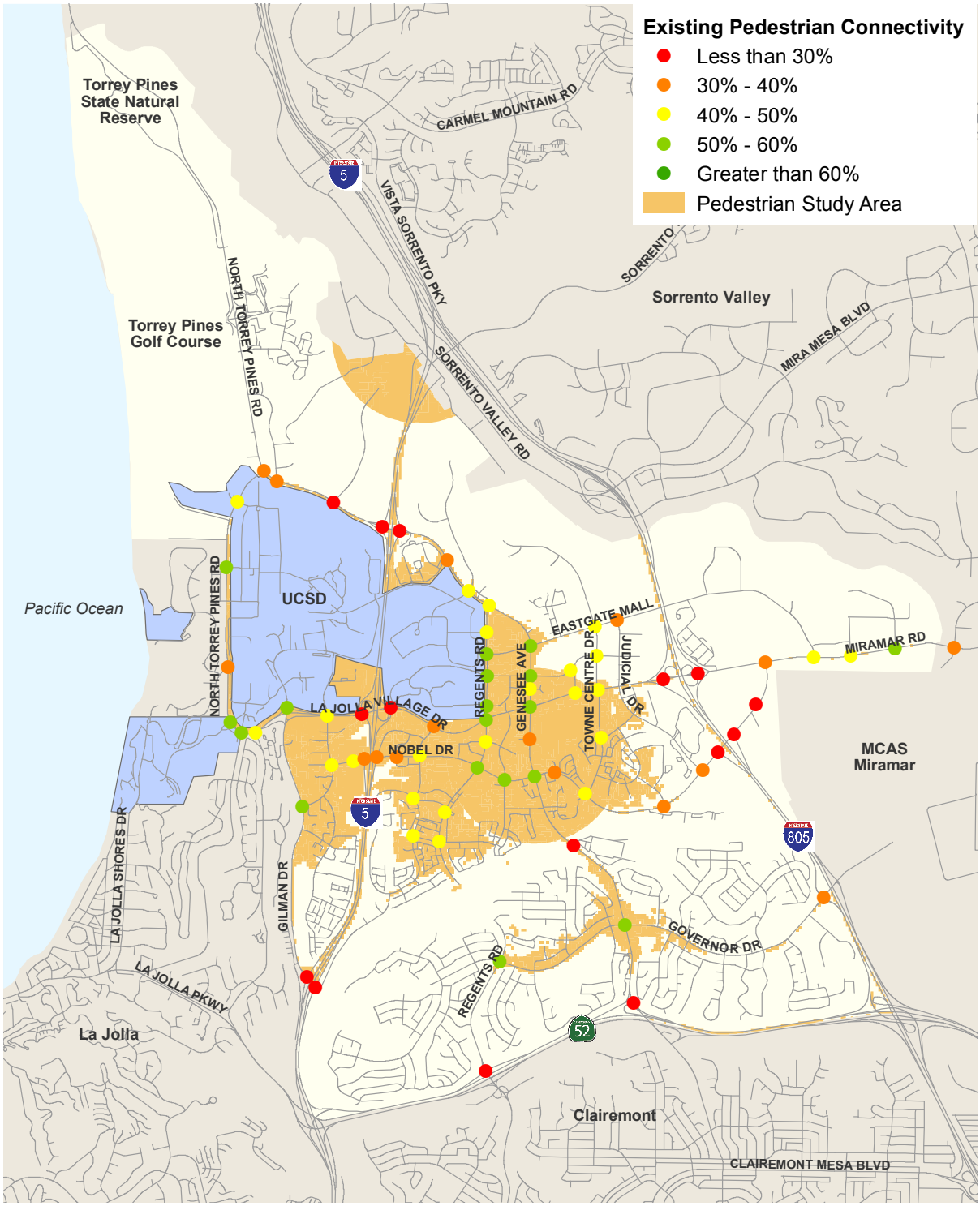
As shown in **Figure 4-6**, higher pedestrian connectivity ratios are found along the major arterials in the community. This represents the wide access to secondary roads that these major roadways provide. By contrast, intersections near barriers (canyons or freeways) show limited connectivity available. In fact, the majority of intersections with a pedestrian connectivity ratio of lower than 30 percent are those adjacent to I-5. The freeway presents a major barrier to pedestrian connectivity between the eastern and western portions of the community. Improving connectivity within the University community could have the greatest impact by focusing on areas of high pedestrian demand, including the pedestrian study area. Raising the connectivity ratios within the pedestrian study area would greatly increase the land area coverage of pedestrians in the community.

Table 4-9 Pedestrian Connectivity Ratio at Pedestrian Study Intersections

Intersection ID	Intersection Name	Pedestrian Connectivity Ratio
1	Genesee Ave & N. Torrey Pines Rd	37%
2	Genesee Ave & John Hopkins Dr (S)	34%
3	Genesee Ave & Science Center Dr	22%
4	Genesee Ave & I-5 SB Ramps	16%
5	Genesee Ave & I-5 NB Ramps	17%
6	Genesee Ave & Scripps Hospital	36%
7	Genesee Ave & Campus Point Dr	46%
8	Genesee Ave & Regents Rd	44%
9	Genesee Ave & Eastgate Mall	52%
10	Genesee Ave & Executive Dr	52%
11	Genesee Ave & Executive Square	50%
12	Genesee Ave & La Jolla Village Dr	52%
13	Genesee Ave & Esplanade Ct	36%
14	Genesee Ave & Nobel Dr	51%
15	Genesee Ave & Decoro St	43%
16	Genesee Ave & Centurion Square	28%
17	Genesee Ave & Governor Dr	51%
18	Genesee Ave & SR-52 WB Ramps	17%
19	Genesee Ave & SR-52 EB Ramps	Outside of Study Area
20	Genesee Ave & Appleton St/Lehrer Dr	Outside of Study Area
21	La Jolla Village Dr & Torrey Pines Rd	52%
22	La Jolla Village Dr & La Jolla Scenic Dr	44%
23	La Jolla Village Dr & Gilman Dr	52%
24	La Jolla Village Dr & Villa La Jolla Dr	46%
25	La Jolla Village Dr & I-5 SB Off-Ramps	24%
26	La Jolla Village Dr & I-5 NB Off-Ramps	20%
27	La Jolla Village Dr & Lebon Dr	37%
28	La Jolla Village Dr & Regents Rd	56%
29	La Jolla Village Dr & Executive Way	40%
30	La Jolla Village Dr & Towne Centre Dr	48%
31	La Jolla Village Dr & I-805 SB Ramps	23%
32	La Jolla Village Dr & I-805 NB Ramps	22%
33	Miramar Rd & Nobel Dr	35%
34	Miramar Rd & Eastgate Mall	42%
35	Miramar Rd & Miramar Mall	49%
36	Miramar Rd & Miramar Place	58%
37	Miramar Rd & Camino Santa Fe	32%
38	Nobel Dr & Villa La Jolla Dr	46%
39	Nobel Dr & La Jolla Village Square Dwy	40%

Intersection ID	Intersection Name	Pedestrian Connectivity Ratio
40	Nobel Dr & I-5 SB On Ramp	33%
41	Nobel Dr & I-5 NB Off-Ramp/University Center Ln	31%
42	Nobel Dr & Caminito Plaza Centro	33%
43	Nobel Dr & Lebon Dr	48%
44	Nobel Dr & Regents Rd	52%
45	Nobel Dr & Costa Verde Blvd/Cargill Ave	53%
46	Nobel Dr & Lombard Place	39%
47	Nobel Dr & Towne Centre Dr	48%
48	Nobel Dr & Shoreline Dr	37%
49	Nobel Dr & Judicial Dr	33%
50	Nobel Dr & I-805 SB On-Ramp	23%
51	Nobel Dr & I-805 NB Off-Ramp	20%
52	Nobel Dr & Avenue of Flags	24%
53	Regents Rd & County Day Ln/ Health Science Dr	47%
54	Regents Rd & Eastgate Mall	53%
55	Regents Rd & Executive Dr	55%
56	Regents Rd & Regents Park Row	58%
57	Regents Rd & Plaza De Palmas	49%
58	Regents Rd & Berino Ct	42%
59	Regents Rd & Arriba St	42%
60	Regents Rd & Governor Dr	50%
61	Regents Rd & SR-52 WB Ramps	15%
62	Regents Rd & SR-52 EB Ramps	Outside of Study Area
63	Regents Rd & Luna Ave	Outside of Study Area
64	N. Torrey Pines Rd & UCSD Northpoint Dwy	43%
65	N. Torrey Pines Rd & Pangea Dr	54%
66	N. Torrey Pines Rd & La Jolla Shores Dr	36%
67	N. Torrey Pines Rd & Revelle College Dr	52%
68	Gilman Dr & Villa La Jolla Dr	51%
69	Gilman Dr & I-5 SB Ramps	25%
70	Gilman Dr & I-5 NB Ramps	25%
71	Palmilla Dr & Lebon Dr	44%
72	Palmilla Dr & Ariba St	44%
73	Towne Centre Dr & Eastgate Mall	50%
74	Towne Centre Dr & Executive Dr	46%
75	Towne Centre Dr & Golden Haven Dr	45%
76	Executive Way & Executive Dr	43%
77	Judicial Dr & Eastgate Mall	38%
78	Governor Dr & I-805 SB Ramps	30%
79	Governor Dr & I-805 NB Ramps	Outside of Study Area

FIGURE 4-11

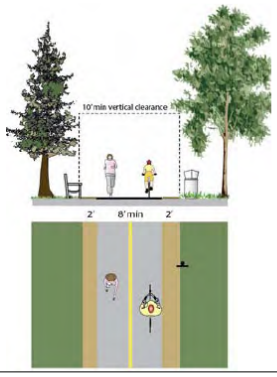
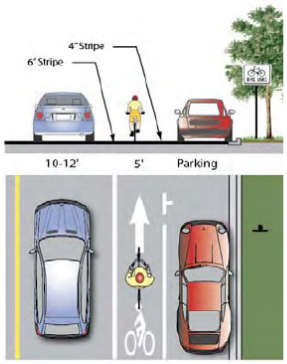


Existing Pedestrian Connectivity Ratio

5 ACTIVE TRANSPORTATION: BICYCLING

The City of San Diego has developed a network of designated Class I, II, and III bikeways as part of their Bicycle Master Plan efforts. A Class I facility is a bike path that provides for bicycles to travel on a paved right-of-way completely separated from any street or highway. A Class II facility is a bike lane that provides bicycles an exclusive lane of travel on a roadway separated by a painted line. This facility can also include a painted buffer which may provide a separation from cyclists and vehicles. A Class III facility is a bike route that provides for a shared use motor vehicle traffic and is typically identified by signage and/or pavement markings. **Table 5-1** provides more description and illustrates the types of bikeway identified in the City of San Diego Bicycle Master Plan (BMP).

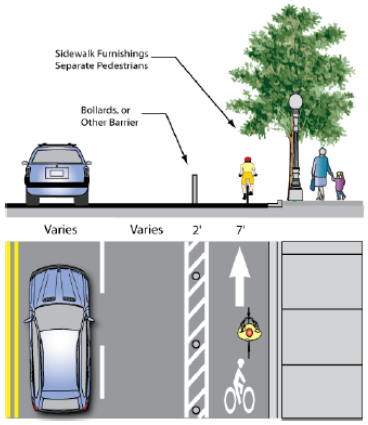
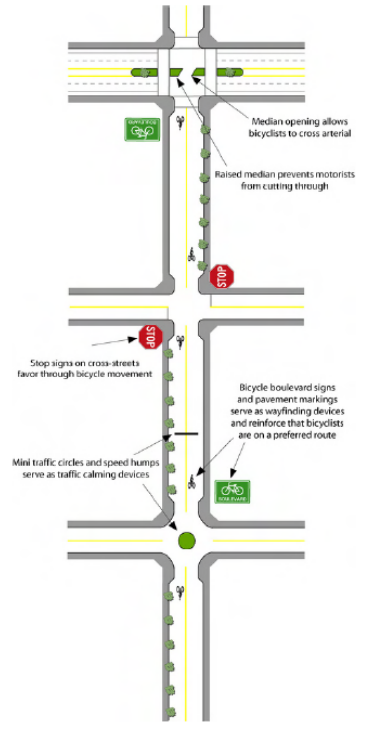
Table 5-1 Regional Bicycle Facility Classifications

Class I – Bike Path Bike paths are bikeways that are physically separated from vehicular traffic. Also termed shared-use paths, bike paths accommodate bicycle, pedestrian, and other non-motorized travel. Paths can be constructed in roadway right-of-way or independent right-of-way. Bike paths provide critical connections in the region where roadways are absent or are not conducive to bicycle travel.	
Class II - Bike Lanes Bike lanes are defined by pavement markings and signage used to allocate a portion of a roadway for exclusive or preferential bicycle travel. Within the regional corridor system, bike lanes should be enhanced with treatments that improve safety and connectivity by addressing site-specific issues. Such treatments include innovative signage, intersection treatments, and bicycle loop detectors.	
Class III - Bike Routes Bike routes are located on shared roadways that accommodate vehicles and bicycles in the same travel lane. Established by signs, bike routes provide continuity to other bike facilities or designate preferred routes through corridors with high demand. Within the regional corridor system, bike routes should be enhanced with treatments that improve safety and connectivity by addressing site-specific issues.	

Source: *SANDAG Regional Bicycle Plan*, dated April 2010 (ALTA Planning)

Two additional bicycle facilities, Cycle Track and Bicycle Boulevard, have been adopted into the SANDAG Regional Bike Plan (RBP). A Cycle Track is a bicycle facility that is located within the roadway right-of-way with a physical separation from vehicular traffic. Bicycle Boulevards are roadways where physical improvements such as traffic calming and diversions are intended to provide priority to bicyclists. Bicycle Boulevards are typically installed on local roads with a low volume of vehicles and residential speeds. **Table 5-2** further explains the two new bicycle facilities.

Table 5-2 Additional Bicycle Facilities

Cycle Tracks A cycle track is a hybrid type bicycle facility that combines the experience of a separated path with the on-street infrastructure of a conventional bike lane. Cycle tracks are bikeways located in roadway right-of-way but separated from vehicle lanes by physical barriers or buffers. Cycle tracks provide for one-way bicycle travel in each direction adjacent to vehicular travel lanes and are exclusively for bicycle use. Cycle tracks are not recognized by Caltrans Highway Design Manual as a bikeway facility. Development of cycle track on segments of the regional corridor system is proposed through experimental, pilot projects.	
Bicycle Boulevards Bicycle boulevards are local roads or residential streets that have been enhanced with traffic calming and other treatments to facilitate safe and convenient bicycle travel. Bicycle boulevards accommodate bicyclists and motorists in the same travel lanes, typically without specific vehicle or bicycle lane delineation. These roadway designations prioritize bicycle travel above vehicular travel. The treatments applied to create a bike boulevard heighten motorists' awareness of bicyclists and slow vehicle traffic, making the boulevard more conducive to safe bicycle and pedestrian activity. Bicycle boulevard treatments include signage, pavement markings, intersection treatments, traffic calming measures and can include traffic diversions. Bicycle boulevards are not defined as bikeways by Caltrans Highway Design Manual; however, the basic design features of bicycle boulevards comply with Caltrans standards.	

Source: *SANDAG Regional Bicycle Plan*, dated April 2010 (ALTA Planning)

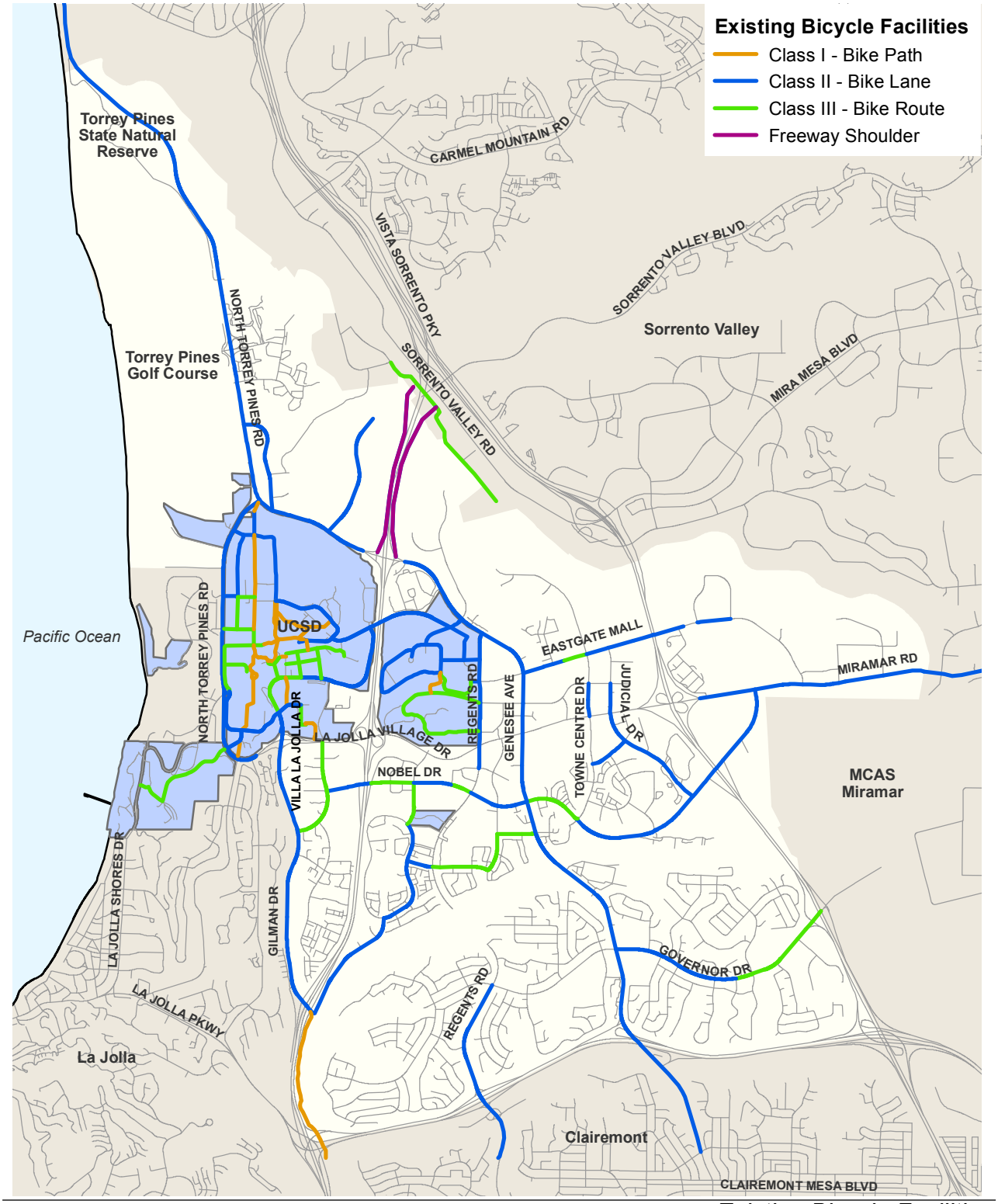
A unique feature of the San Diego bicycle network is the five freeway segments (totaling 16.1 miles) which permit bicyclists to ride on the freeway shoulder. These bicycle facilities are deemed necessary to provide connections between areas with no viable alternative within the existing bicycle network. The image below displays a bicyclist riding along a freeway shoulder.

Source: TransNet North Coast Corridor webpage, retrieved November 2015

The University community contains one of the five freeway shoulder facilities within Caltrans District 11 currently designated as a bicycle facility: a segment of Interstate 5 between Sorrento Valley Road and Genesee Avenue. As part of the North Coast Corridor (NCC) Program, a Class I bicycle facility will be constructed adjacent to Interstate 5 to connect the Sorrento Valley Coaster Station and the UCSD Campus. The use of the freeway shoulder along Interstate 5 as a bicycle facility will be prohibited upon completion of the Class I facility bicycle that is currently under construction.

Figure 5-1 displays the location of the existing bicycle facilities within the University community. As shown, the existing bicycle network lacks continuity of bicycle facility classifications and has gaps along certain roadways. Bicycle facility consistency is prevalent along north-south roadways and are primarily located north of Rose Canyon.

FIGURE 5-1



Existing Bicycle Facilities

BICYCLE DEMAND

Bicycle demand was evaluated using the City of San Diego Bicycle Demand Model (BDM). The BDM has two demand components: intra-community and inter-community travel. Among the inputs into the model are: population characteristics; bicycle trip attractors and generators; and, proximity to land uses that are typically associated with higher rates of cycling activity. The BDM process is described in more detail in Section 2. **Figure 5-3** displays the Bicycle Demand Model results for the University community relative to the City of San Diego as a whole.

Bicycle demand is concentrated along the major arterials in the community. These roadways help to connect the attractors and generators and are usually the closest roadways to commercial land uses and mixed-use development. Bicycle demand is lowest in the largely residential, lower-density neighborhoods at the periphery of the community particularly to the south of Rose Canyon.

Bicycle commute mode share is another measure of where demand exists for bicycle infrastructure or where existing facilities are successfully facilitating some bicycle commutes. American Community Survey data, 2015 5-year estimates, were used to determine how the commute mode share in the University community compares to both the City of San Diego and the County of San Diego. **Table 5-3** presents the bicycle commute mode share comparison. The University community has a mode share over two times that of the City of San Diego and San Diego County. This is likely due to the relatively urban, mixed-use nature of the area.

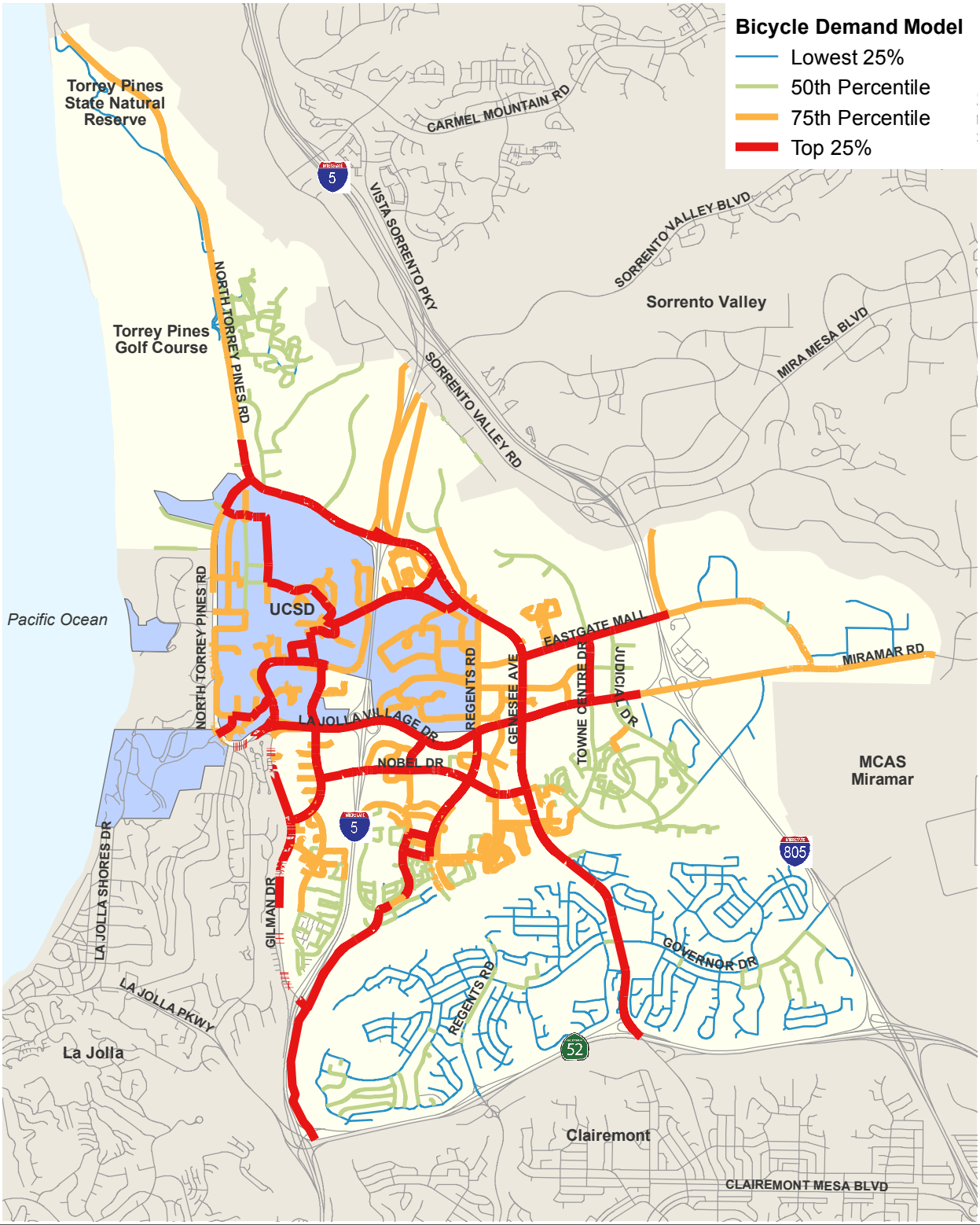
Table 5-3 Bicycle Commute Mode Share Comparison

	University	City of San Diego	San Diego County
Total Bicycle Commutes	709	6,256	10,027
Total Workers	35,740	668,643	1,503,987
Bicycle Commute Mode Share	***2.0%***	***0.9%***	***0.7%***

Figure 5-3 displays bicycle commute rates and the total number of bicycle commuters by census block group throughout the University community. As shown, bicycle commute mode share is highest in the northern portion of the community.

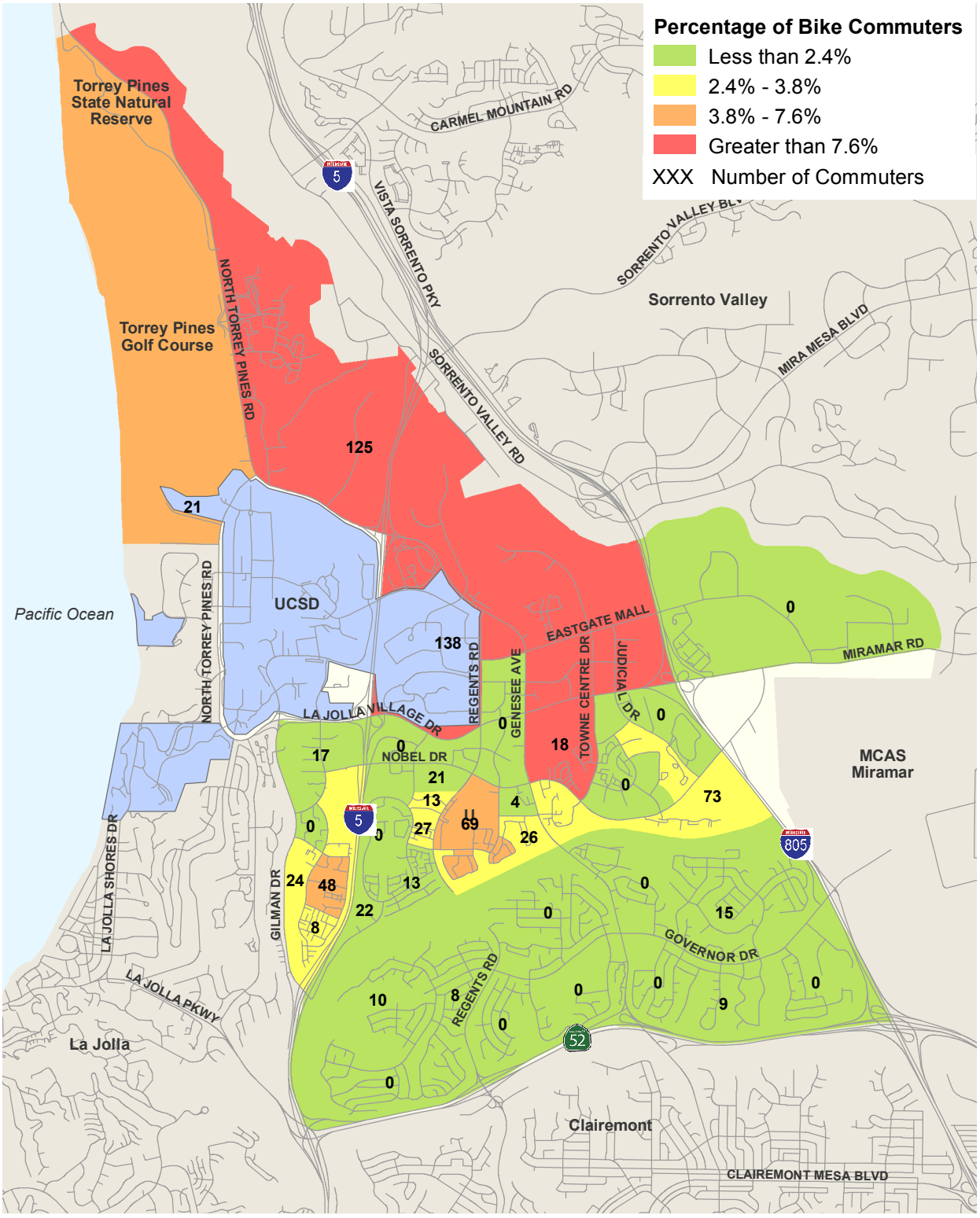
Bicycle counts were performed at study intersections during the AM, mid-day, and PM peak hours and are displayed in **Figure 5-4** through **Figure 5-6**. Overall, observed bicycle volumes were higher along the northern portion of the community along North Torrey Pines Road and Regents Road in the AM peak. Volumes along these two roadways reduce in the PM peak. Throughout the study intersections, bicycle volumes remain consistent for both the AM and PM peak hours. Fewer bicyclists are found near freeway ramps with the exception of Gilman Drive and Genesee Avenue and Interstate 5.

FIGURE 5-2



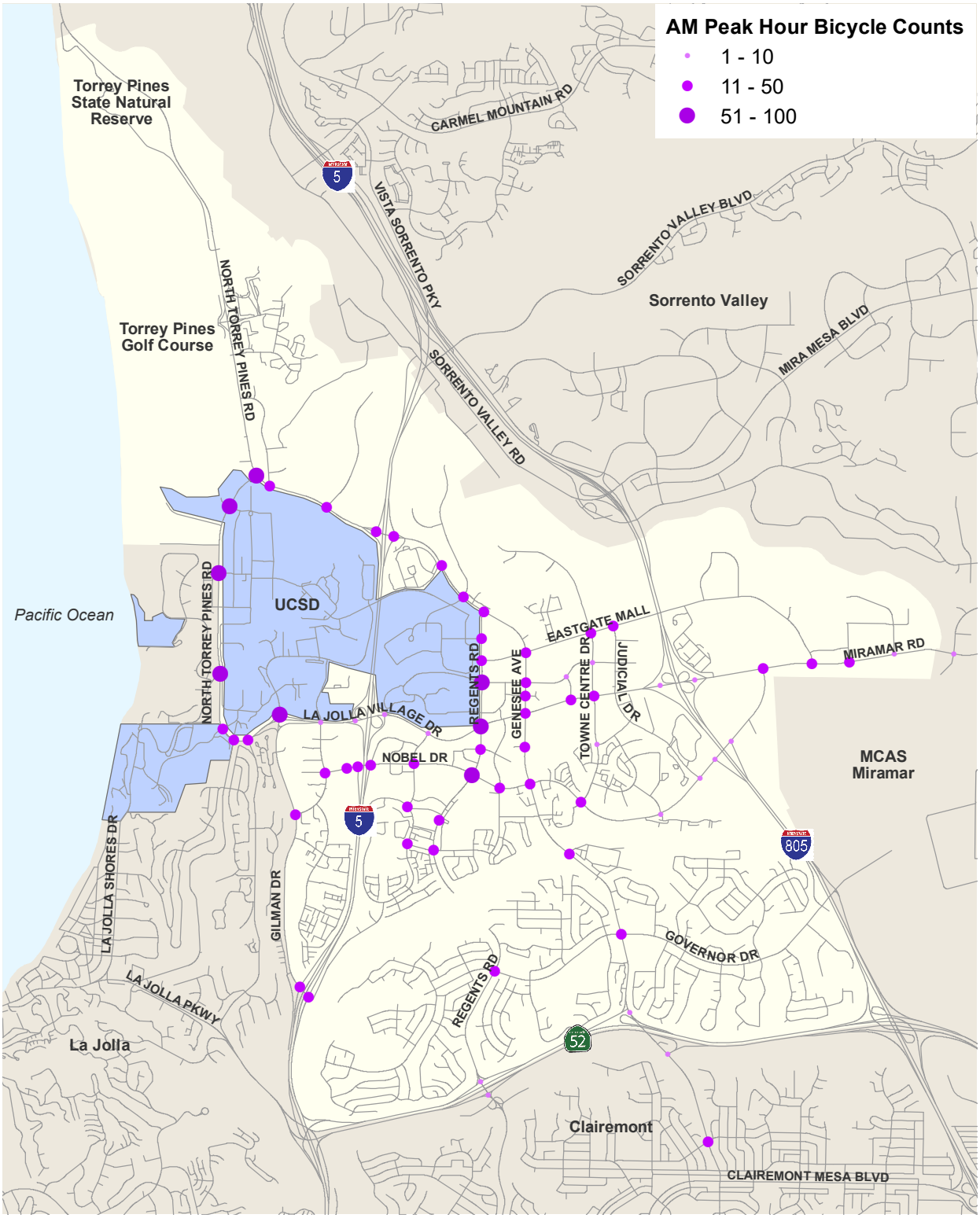
Bicycle Demand

FIGURE 5-3



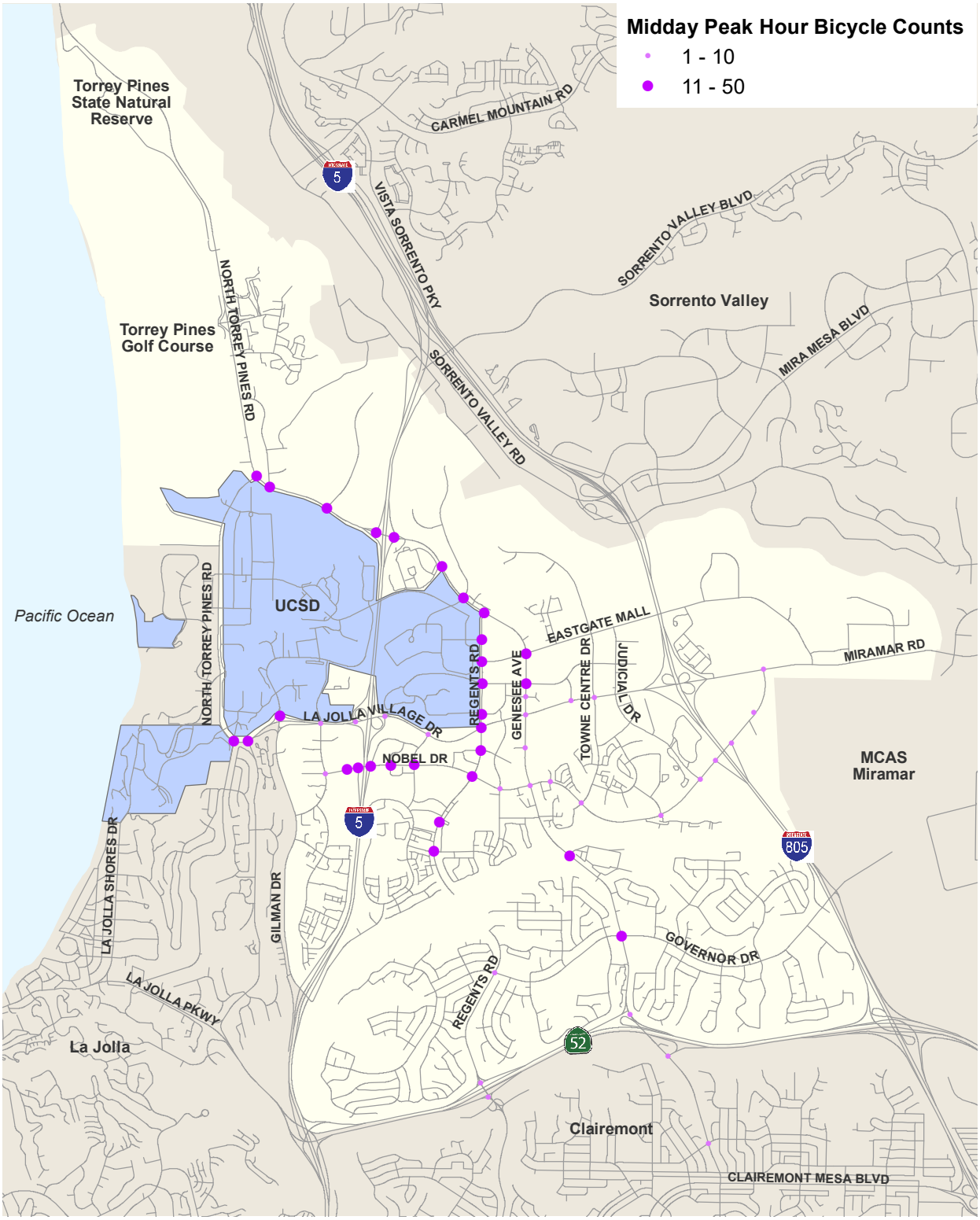
Bicycle Commute Mode Share by Census Block Group

FIGURE 5-4



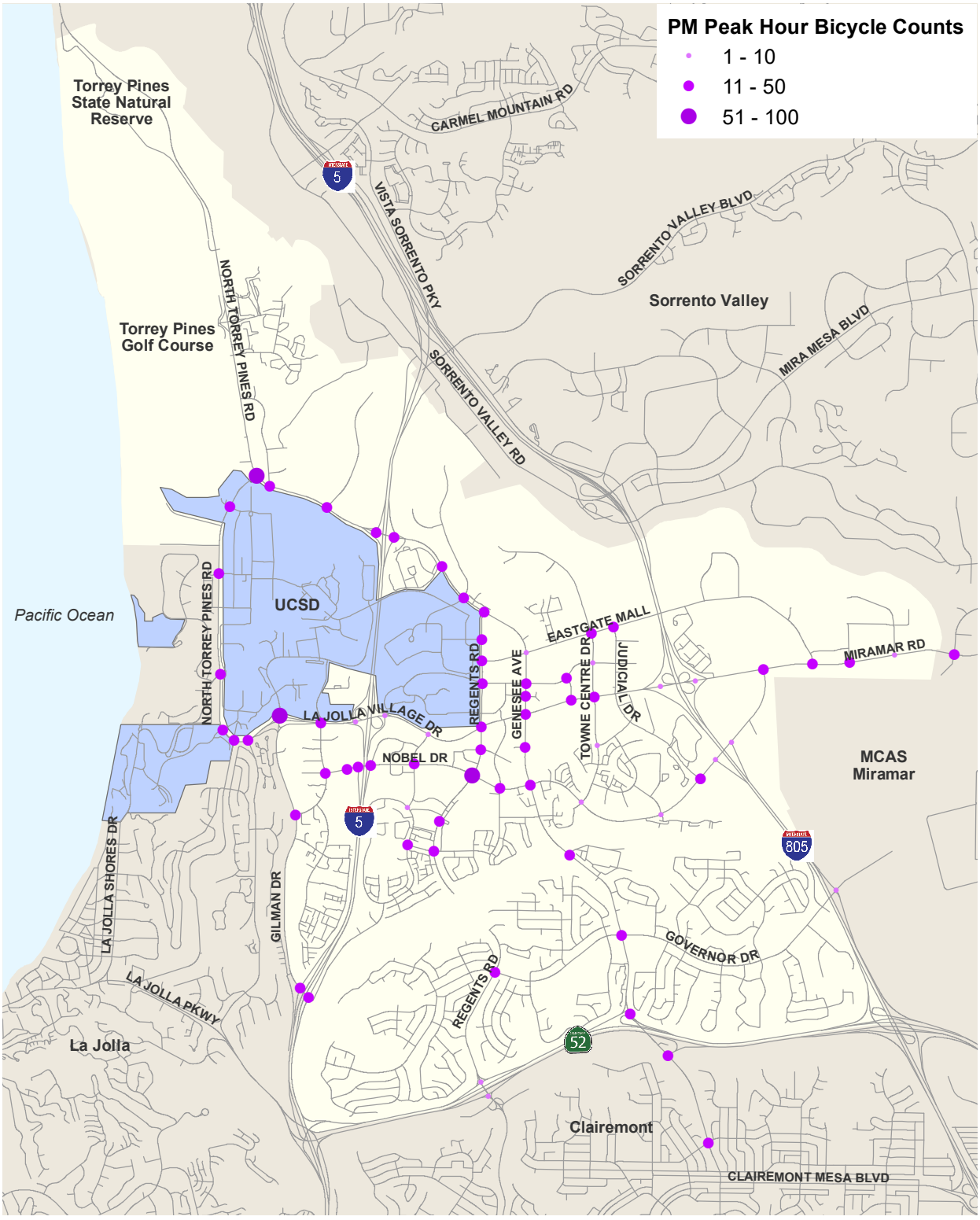
Bicycle Counts (AM Peak Hour)

FIGURE 5-5



Bicycle Counts (Mid-Day)

FIGURE 5-6



Bicycle Counts (PM Peak Hour)

BICYCLE COLLISION HISTORY

Between October 2012 and September 2017, there were a total of 70 reported collisions involving bicycles within the University community. In the State of California, collision reports must be generated for any collision where property equals or exceed 750 dollars or involves city property, someone is injured, or killed fatality occurs, a pedestrian or cyclist is involved, or it is a hit-and-run and DUI collision. It is important to note some bicycle collisions may go unreported. **Figure 5-7**Figure 5-7 displays the reported collisions involving bicycles across the community, as included in **Appendix A**, symbolized by the number of collisions at a given location. Most locations have isolated collisions, but some intersections experienced three or more collisions in the five-year period. These collision locations are identified in **Table 5-4**.Table 5-4

Table 5-4 Most Frequent Bicycle Collision Locations

Rank	Intersections	Collisions
1	La Jolla Village Drive & Regents Road	4
2	Nobel Drive & Regents Road	3
3	North Torrey Pines Road & John Jay Hopkins Drive	3
4	Villa La Jolla Drive & La Jolla Village Drive	3

The location types of the reported bicycle-involved collisions are summarized in **Table 5-5**.Table 5-5 Types include intersection, mid-block, and approaching/departing locations. Just as with pedestrian-involved collisions, almost three-quarters of all bicycle-involved collisions occurred at intersections.

Table 5-5 Bicycle Collisions by Location Types

Collision Location Type	Collisions	Percent of Total
Mid-Block	10	14%
Intersection	50	71%
Approaching/Departing	10	14%
Total	***70***	***100%***

Table 5-6 Table 5-6 summarizes the collisions by the party at fault, as reported for the collision. Drivers and bicyclists were each reported as “at-fault” in 29 percent of all collisions.

Table 5-6 Bicycle Collisions by Party at Fault

Party at Fault	Collisions	Percent of Total
Driver	20	29%
Pedestrian	0	0%
Not Stated	30	43%
Bicyclist	20	29%
Other	0	0%

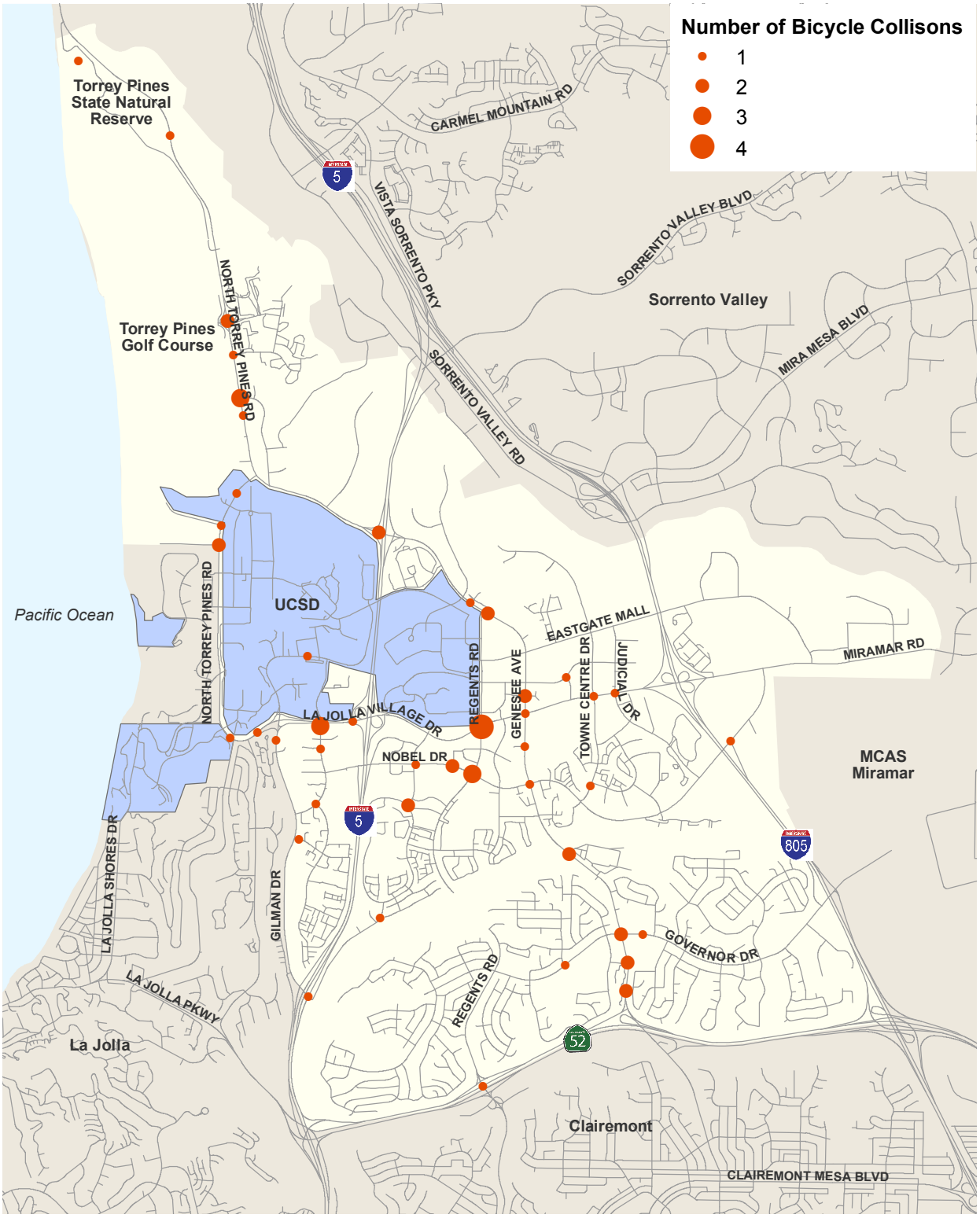
Total	***70***	***100%***

Table 5-7 Table 5-7 displays the primary causes for bicycle involved collisions. As shown in the table, the top cause for bicycle-involved collisions was broadside, followed by other causes.

Table 5-7 Primary Bicycle-Involved Collision Cause (2012-2017)

Primary Collision Cause	Number of Collisions	Percent of Total Bicycle Collisions
Broadside	19	27%
Hit Object	2	3%
Not Stated	2	3%
Other	18	26%
Overturned	4	6%
Rear-End	11	16%
Sideswipe	13	19%
Vehicle-Pedestrian	1	1%
Total	***70***	***100%***

FIGURE 5-7



Bicycle Collision History (2012-2017)

LEVEL OF TRAFFIC STRESS ANALYSIS

The Bicycle Level of Traffic Stress (BLTS) analysis was completed to summarize the quality of bicycle facilities in the community. **Appendix C** includes the existing inputs used for BLTS analysis. **Figure 5-8** shows the LTS score for each direction of the study roadway segments. A score of 1 represents the lowest level of stress/highest suitability, while a score of 4 represents the highest level of stress/least suitability.

Increased number of travel lanes and higher speeds result in a more stressful experience and is shown in the BLTS scoring. As seen in **Figure 5-8**, pockets of low stress local roadways are often isolated from adjacent areas by high stress circulation element roadways. In the northern and central part of the community, high speeds and traffic volumes on the majority of roadways create a stress barrier for cyclists. Pockets of low stress roadways in the UCSD area and residential areas have minimal low-stress options to get to other parts of the community. The southern portion of the community is primarily residential and has a high number of low-stress roadways, but lacks connections to the destinations in the northern portion of the community as Governor Drive and Genesee Avenue create high stress barriers. Overall, the community is currently a high-stress bicycle community due to high speeds and traffic volumes and lack of physical separation for cyclists.

FIGURE 5-8

Existing Bicycle Level of Traffic Stress

BICYCLE NETWORK CONNECTIVITY

Bicycle network connectivity can be measured by the Bikeshed Ratio. This is a metric which compares the area reachable via the bike network within a given distance, often known as the bikeshed, to the "as the crow flies" area, which is a circle with a radius of the same given distance. This measure indicates how connected and accessible a given area is with the bicycle network. Constraints on connectivity include natural features and street grid inefficiencies – a score of 65 percent is considered to be a near maximum score, while a score over 50% is considered ideal.

The methodology for the Bikeshed Ratio is described in **Section 2**. The analysis focuses on the area between 0.25 miles and 1.0 mile from the point being assessed. Results from the analysis are displayed in **Figure 5-9**. The greatest connectivity is seen along the major roadways in the central part of the community. This is likely due to the lack of barriers (canyons and freeways) in that part of the community, as well as the slightly more grid-like street network connecting to Regents Road, Genesee Avenue, and La Jolla Village Drive. Freeway barriers (I-5 and I-805) significantly reduce the bike connectivity at adjacent intersections. The bicycle connectivity ratio for each intersection within the study area is shown in **Table 5-8.**

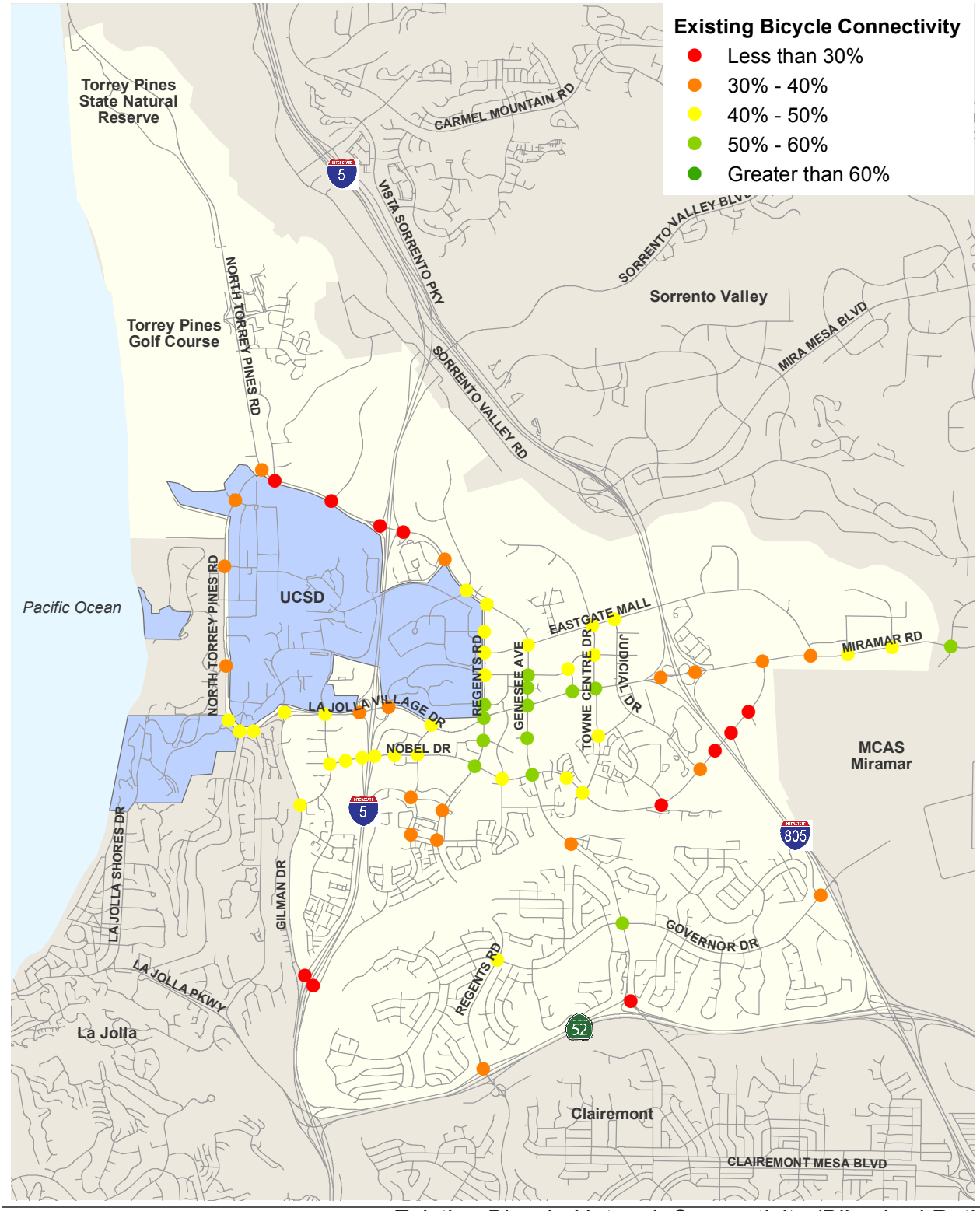
Table 5-8 Bicycle Connectivity Ratio at Pedestrian Study Intersections

Intersection ID	Intersection Name	Bicycle Connectivity Ratio
1	Genesee Ave & N. Torrey Pines Rd	31%
2	Genesee Ave & John Hopkins Dr (S)	29%
3	Genesee Ave & Science Center Dr	21%
4	Genesee Ave & I-5 SB Ramps	20%
5	Genesee Ave & I-5 NB Ramps	23%
6	Genesee Ave & Scripps Hospital	36%
7	Genesee Ave & Campus Point Dr	42%
8	Genesee Ave & Regents Rd	48%
9	Genesee Ave & Eastgate Mall	49%
10	Genesee Ave & Executive Dr	52%
11	Genesee Ave & Executive Square	55%
12	Genesee Ave & La Jolla Village Dr	59%
13	Genesee Ave & Esplanade Ct	50%
14	Genesee Ave & Nobel Dr	53%
15	Genesee Ave & Decoro St	45%
16	Genesee Ave & Centurion Square	31%
17	Genesee Ave & Governor Dr	55%
18	Genesee Ave & SR-52 WB Ramps	28%
19	Genesee Ave & SR-52 EB Ramps	Outside of Study Area
20	Genesee Ave & Appleton St/Lehrer Dr	Outside of Study Area
21	La Jolla Village Dr & Torrey Pines Rd	48%
22	La Jolla Village Dr & La Jolla Scenic Dr	46%
23	La Jolla Village Dr & Gilman Dr	42%

Intersection ID	Intersection Name	Bicycle Connectivity Ratio
24	La Jolla Village Dr & Villa La Jolla Dr	43%
25	La Jolla Village Dr & I-5 SB Off-Ramps	36%
26	La Jolla Village Dr & I-5 NB Off-Ramps	37%
27	La Jolla Village Dr & Lebon Dr	43%
28	La Jolla Village Dr & Regents Rd	55%
29	La Jolla Village Dr & Executive Way	51%
30	La Jolla Village Dr & Towne Centre Dr	53%
31	La Jolla Village Dr & I-805 SB Ramps	36%
32	La Jolla Village Dr & I-805 NB Ramps	32%
33	Miramar Rd & Nobel Dr	30%
34	Miramar Rd & Eastgate Mall	40%
35	Miramar Rd & Miramar Mall	40%
36	Miramar Rd & Miramar Place	41%
37	Miramar Rd & Camino Santa Fe	50%
38	Nobel Dr & Villa La Jolla Dr	48%
39	Nobel Dr & La Jolla Village Square Dwy	44%
40	Nobel Dr & I-5 SB On Ramp	42%
41	Nobel Dr & I-5 NB Off-Ramp/University Center Ln	40%
42	Nobel Dr & Caminito Plaza Centro	41%
43	Nobel Dr & Lebon Dr	48%
44	Nobel Dr & Regents Rd	50%
45	Nobel Dr & Costa Verde Blvd/Cargill Ave	50%
46	Nobel Dr & Lombard Place	43%
47	Nobel Dr & Towne Centre Dr	43%
48	Nobel Dr & Shoreline Dr	27%
49	Nobel Dr & Judicial Dr	30%
50	Nobel Dr & I-805 SB On-Ramp	28%
51	Nobel Dr & I-805 NB Off-Ramp	27%
52	Nobel Dr & Avenue of Flags	26%
53	Regents Rd & County Day Ln/ Health Science Dr	46%
54	Regents Rd & Eastgate Mall	49%
55	Regents Rd & Executive Dr	50%
56	Regents Rd & Regents Park Row	51%
57	Regents Rd & Plaza De Palmas	53%
58	Regents Rd & Berino Ct	39%
59	Regents Rd & Arriba St	36%
60	Regents Rd & Governor Dr	42%
61	Regents Rd & SR-52 WB Ramps	36%
62	Regents Rd & SR-52 EB Ramps	Outside of Study Area
63	Regents Rd & Luna Ave	Outside of Study Area

Intersection ID	Intersection Name	Bicycle Connectivity Ratio
64	N. Torrey Pines Rd & UCSD Northpoint Dwy	31%
65	N. Torrey Pines Rd & Pangea Dr	33%
66	N. Torrey Pines Rd & La Jolla Shores Dr	36%
67	N. Torrey Pines Rd & Revelle College Dr	47%
68	Gilman Dr & Villa La Jolla Dr	43%
69	Gilman Dr & I-5 SB Ramps	17%
70	Gilman Dr & I-5 NB Ramps	19%
71	Palmilla Dr & Lebon Dr	39%
72	Palmilla Dr & Ariba St	35%
73	Towne Centre Dr & Eastgate Mall	46%
74	Towne Centre Dr & Executive Dr	46%
75	Towne Centre Dr & Golden Haven Dr	43%
76	Executive Way & Executive Dr	48%
77	Judicial Dr & Eastgate Mall	46%
78	Governor Dr & I-805 SB Ramps	37%
79	Governor Dr & I-805 NB Ramps	Outside of Study Area

FIGURE 5-9



Existing Bicycle Network Connectivity (Bikeshed Ratio)

LOW-STRESS BICYCLE CONNECTIVITY

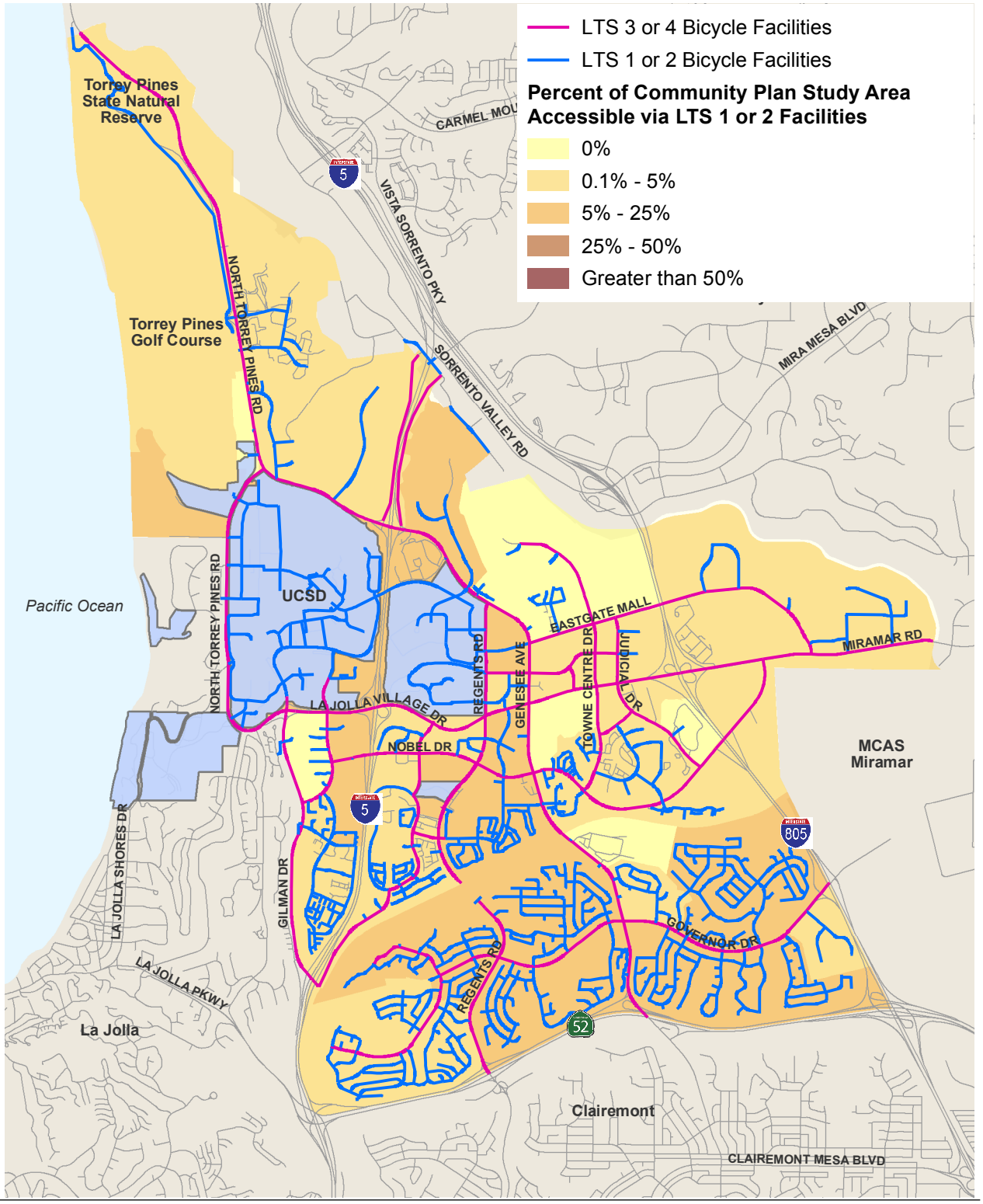
Bicycle connectivity can also be assessed by the ability for connections to be made on low stress routes, which are those characterized as LTS 1 or LTS 2. The analysis determined how each TAZ in the community is connected via the low stress routes. The equation below represents the ratio's calculation:

$$\frac{\text{Number of TAZs accessible via low-stress routes (LTS 1 and 2 only)}}{\text{Number of TAZs accessible via all routes}}$$

The results of the analysis are shown in **Figure 5-10**. As seen, there are a number of TAZs where there is no accessibility via low-stress bicycle facilities. These areas are completely isolated due to adjacency to high-stress facilities along Genesee Avenue, La Jolla Village Drive, Regents Road, Nobel Drive, and North Torrey Pines Road significantly reduce the connectivity of the study area.

The barriers created by the high-stress facilities means that residents could potentially bike around their neighborhoods, as seen in the areas just north of SR 52, but cannot connect to the remainder of the community via the low-stress bike network. To increase bicycle commuter mode share, it is important to create a low-stress bicycle network which can connect places of employment, residences, and commercial centers. Major arterials are the only roads that connect those elements in the University community; thus, low-stress facilities would need to be implemented along the major arterials, such as those listed above, to increase the low-stress bicycle connectivity of the community.

FIGURE 5-10



Existing Bicycle Network Connectivity (Low-Stress Connectivity)

6 PUBLIC TRANSIT

There are several types of transit currently serving the University community. **Figure 6-1** shows an overview of the roadways and separated facilities where transit is available within the community.

BUS ROUTES

There are 14 Metropolitan Transit Service (MTS) routes that serve the University community including the SuperLoop (201/202 and 204), Rapid Route 237, and Coaster Connection Routes 978 and 979. There is also one North County Transit District (NCTD) Breeze Route (Route 101). A description and map of each of the bus routes within the community is provided in **Appendix D**. The combination of the MTS, NCTD, and UCSD bus routes cover most of the community and provide connections to transfer stations and COASTER/AMTRAK stations that allow users to access other bus routes, trolley lines and regional services.

Bus routes within the University community include;

- MTS Route 30: Downtown – UTC/VA Medical Center
- MTS Routes 31 and 921: UTC – Mira Mesa
- MTS Route 41: Fashion Valley – UCSD/VA Medical Center
- MTS Route 50: Downtown - UTC Express
- MTS Route 150: Downtown – UTC/ VA Hospital Express
- MTS Route 60: Euclid Transit Center – UTC
- NCTD Route 101: Oceanside – VA/UCSD
- MTS Route 105: Old Town – UTC
- MTS SuperLoop 201/202: UTC Transit Center – UCSD
- MTS SuperLoop 204: UTC East Loop
- MTS Rapid Route 237: Rancho Bernardo – UCSD
- MTS Coaster Connection Route 978: Torrey Pines
- MTS Coaster Connection Route 979: North University City

SHUTTLE SERVICES

The UCSD Transportation Services provides eight shuttle routes that serve the University community. The shuttle routes specifically serve the campus, medical centers, and other key points off campus. Students, faculty, and staff can ride the shuttles for free. All shuttles operate during academic quarters with some shuttles operating year-round.).

RAIL SERVICES

There are two rail lines that travel through the University community: the NCTD COASTER and the AMTRAK Pacific Surfliner. The closest COASTER/AMTRAK station is located in Sorrento Valley, one exit north of the community on Interstate 5. Access to this station is provided by shuttle service to limited portions of the University community. The rail services provide connections north and south of the community and connect to other regional rail services. Both the COASTER and the Pacific Surfliner services are part of the 351-mile Los Angeles-San Diego-San Luis Obispo Rail Corridor that travels through a six-county coastal region in Southern California.

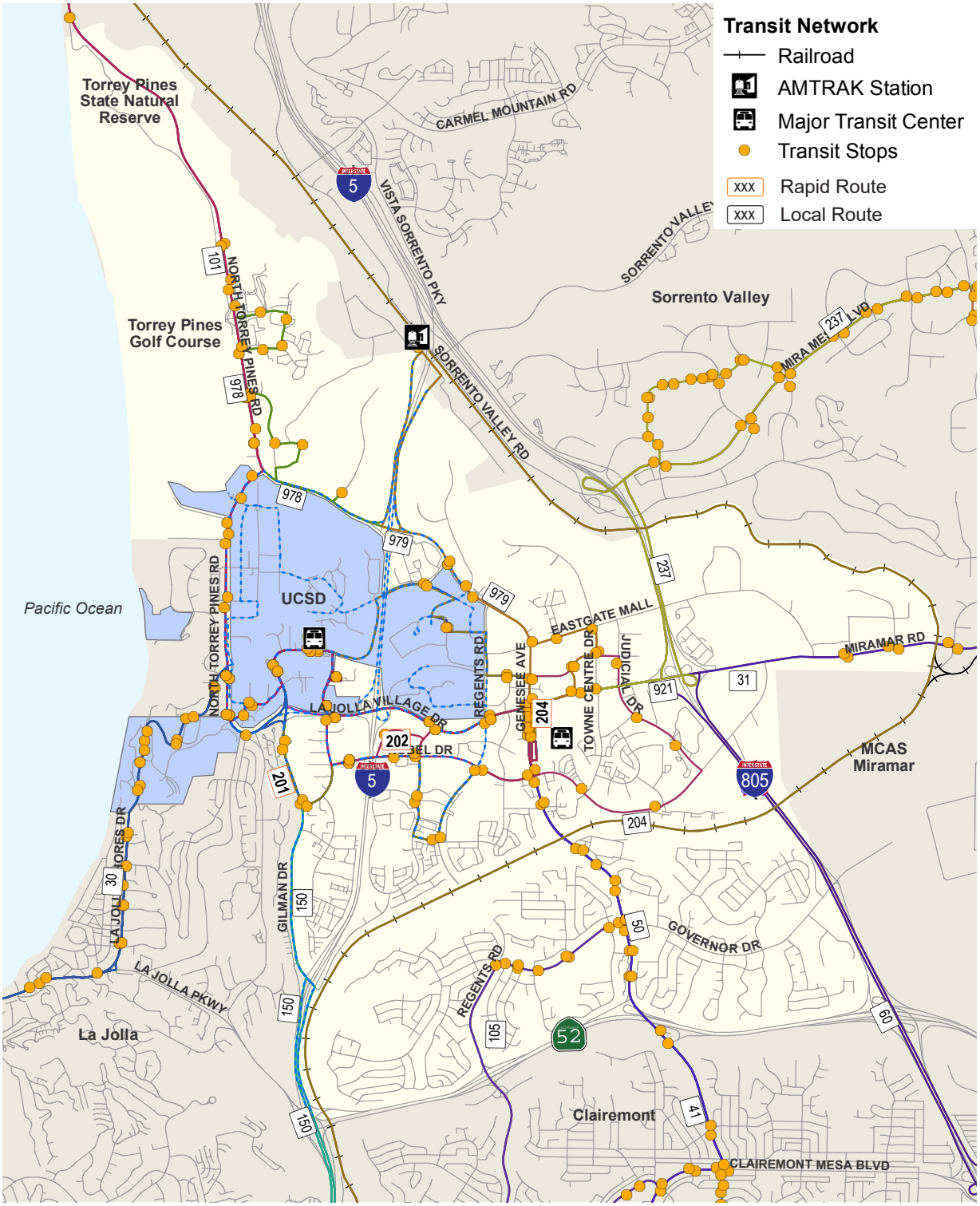
NCTD COASTER

The COASTER is a commuter rail line operated by NCTD that runs north to south from Oceanside to downtown San Diego through the University community. The COASTER serves eight stations including Santa Fe Depot, Old Town, Sorrento Valley, Solana Beach, Encinitas, Carlsbad Poinsettia, Carlsbad Village, and Oceanside. It takes about an hour to travel the entire route from downtown San Diego (Santa Fe Depot) to the Oceanside Transit Center. The rail line provides 11 daily round-trip services Monday through Thursday, 13 round-trip services on Fridays, six round-trip services on Saturdays, and four round-trip services on Sundays and Holidays. The COASTER also provides expanded service in the spring and summer and additional trains scheduled for special events as needed (such as a Padres games). The fare varies depending on the number of zones traveled.

AMTRAK Pacific Surfliner

The Pacific Surfliner is a passenger rail line operated by AMTRAK that runs north to south from San Luis Obispo to downtown San Diego through the University community. The Pacific Surfliner serves thirty stations including the eight COASTER stations stated above, as well as Anaheim, Santa Barbara, and Los Angeles. The rail line offers 12 daily round-trip services between San Diego and Los Angeles, and between Santa Barbara and San Diego. Commuters with COASTER passes can use AMTRAK trains that are not full.

FIGURE 6-1



Existing Transit Routes

TRANSIT DEMAND

Transit demand was assessed through a combination of stop-level ridership data and the demographics of the University community – specifically population and employment density.

Stop-level ridership is presented in **Appendix I**. The Gilman Drive Transit Center (Gilman Dr/Myers Dr) and the UTC Transit Center saw the highest average daily boardings and alightings. These stops are served by SuperLoop Routes 201 and 202 which have significant levels of ridership in the area.

Transit commute mode share is another measure of where demand exists for safe transit infrastructure or where existing facilities are successfully facilitating some transit commutes. American Community Survey data, 2015 5-year estimates, were used to determine how the commute mode share in the University community compares to both the City of San Diego and the County of San Diego. **Table 6-1** presents the transit commute mode share comparison. The University community has a mode share nearly two times that of the City of San Diego and over two times that of San Diego County. This is likely due to the relatively high levels of transit service in the area and transit-supportive land use patterns. The commute mode share by block group is shown in. **Figure 6-2**.

Table 6-1 Transit Commute Mode Share Comparison

	University	City of San Diego	San Diego County
Total Transit Commutes	2,708	6,256	10,027
Total Workers	35,740	668,643	1,503,987
Transit Commute Mode Share	*7.6%*	*4.0%*	*3.0%*

Table 6-2 presents transit boardings (getting on the vehicle) and alightings (getting off the vehicle) for MTS routes serving the University Community using ridership numbers provided by SANDAG representing fiscal year 2017 data. The SuperLoop Rapid Buses (Routes 201/202/204) combine to serve about 10,500 daily boardings and alightings. Route 41, which connects to the Fashion Valley Transit Center has about 4,600 daily boardings/alightings in the community. Route 30, with service to La Jolla and downtown San Diego, and Route 150, with service to downtown San Diego, each have over 3,200 daily boardings/alightings. **Appendix I** contains the SANDAG boardings and alightings for 2017.

Table 6-3 depicts the transit stops or stations within the University Community that have the most transit boardings and alightings. Not surprisingly, the locations with the highest values are in the high-density areas and locations with transfer points. These are also areas served by multiple transit lines.

A summary of the existing ridership is illustrated in **Figure 6-3**. The ridership values shown on the figure represent the total use of a stop, combining boardings and alightings.

Table 6-2 University Community Ridership by Route

Route	Daily Boardings and Alightings within Community
202	8,519
201	8,308
41	4,000
150	3,601
30	2,697
237	1,078
921	512
105	250
50	249
31	198
60	153
204	129
978	97
979	77

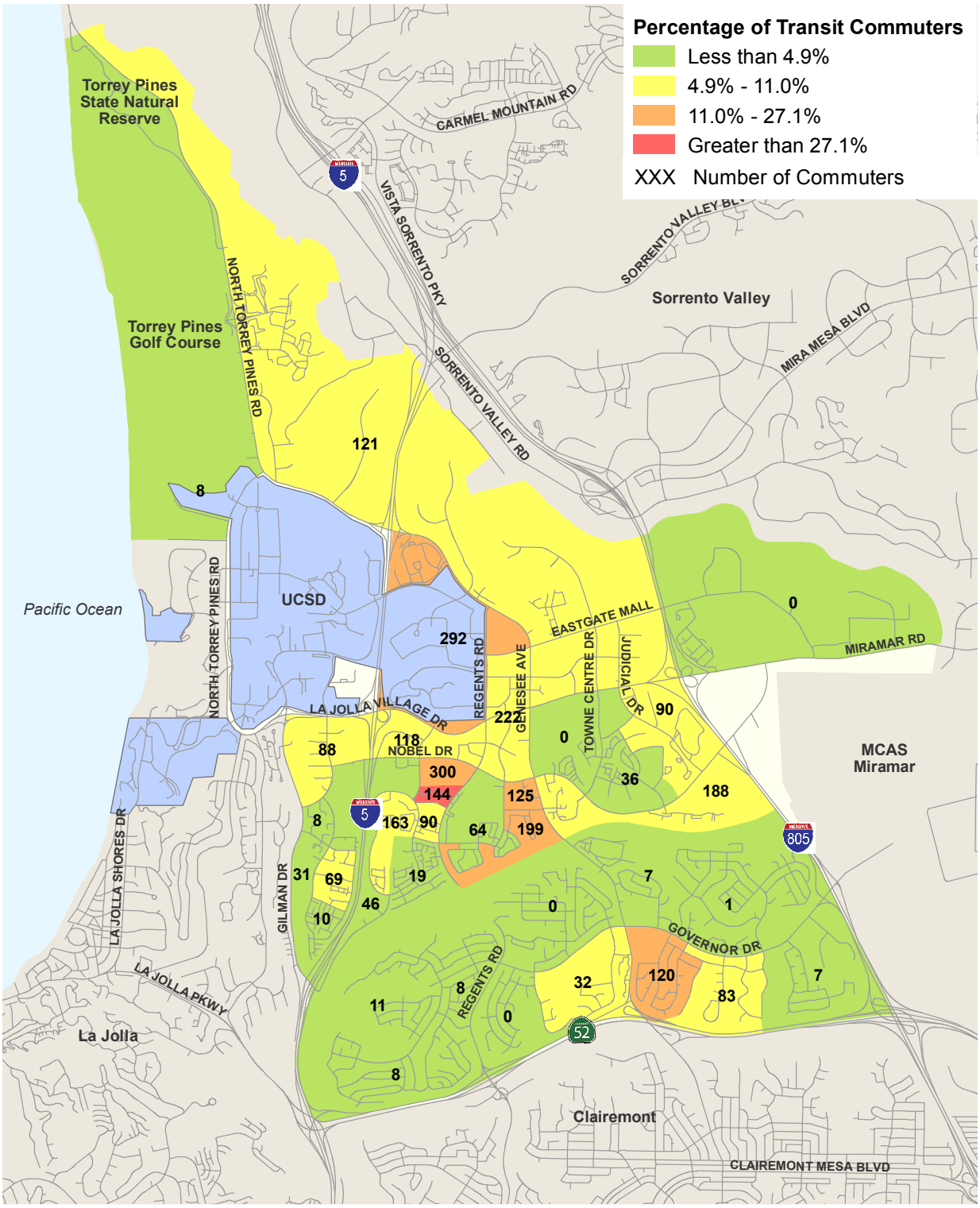
*FY2017 Spring Ridership
Source: SANDAG

Table 6-3 University Community Transit Stops with Most Passengers

Transit Stops with Most Passengers	Boardings and Alightings
Westbound Gilman Dr/Myers Dr	5,321
Eastbound Gilman Dr/Myers Dr	3,696
Northbound Gilman Dr/Eucalyptus Grove Ln	2,369
Southbound Genesee Av/La Jolla Village Dr	1,403
Southbound Gilman Dr/Eucalyptus Grove Ln	1,348
Eastbound La Jolla Village Dr/Regents Rd	951
Southbound Palmilla Dr/Lebon Dr	904
Southbound Regents Rd/Nobel Dr	862
Westbound La Jolla Village Dr/Regents Rd	855
Westbound Arriba/Regents Rd	805

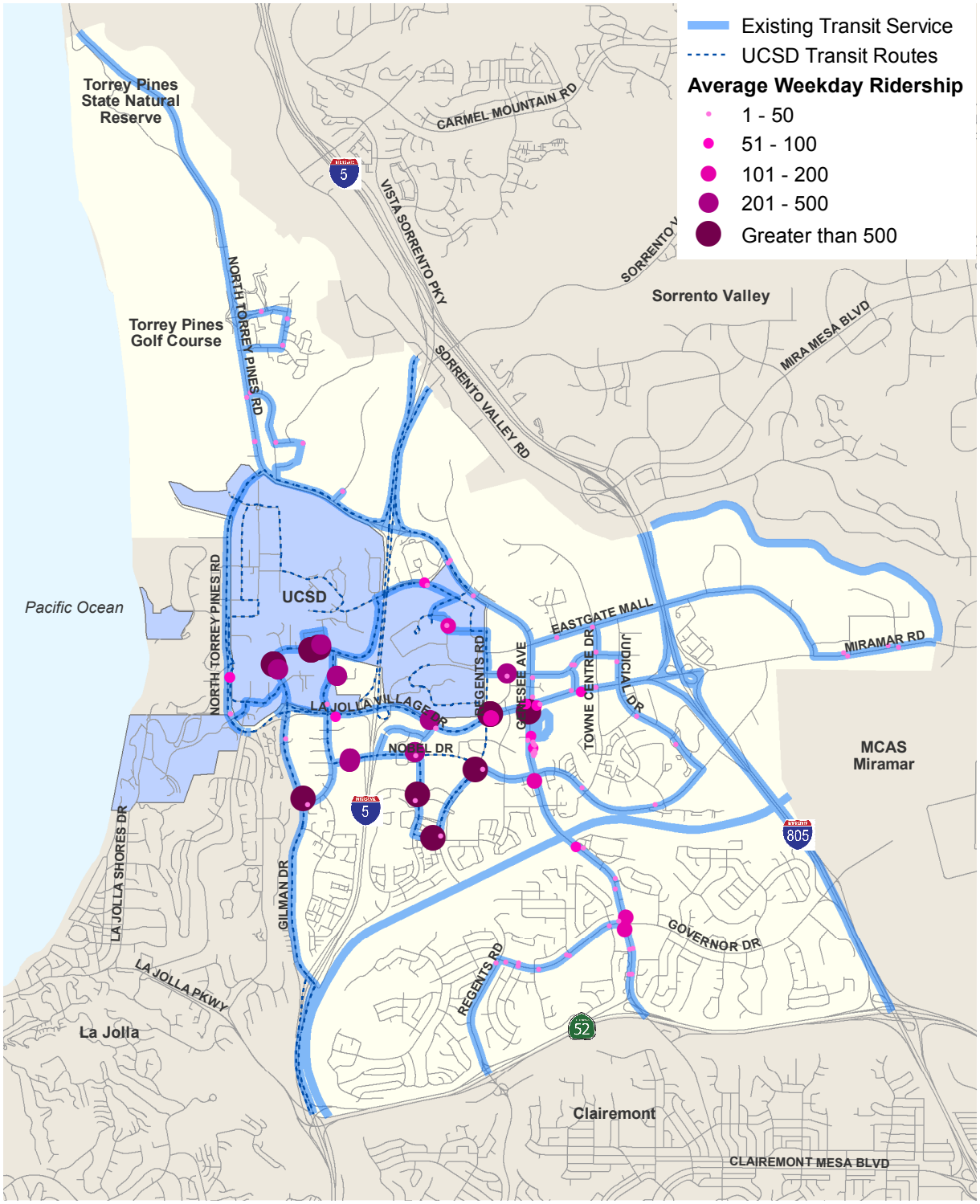
*FY2017 Spring Ridership
Source: SANDAG

FIGURE 6-2



Transit Commute Mode Share by Census Block Group

FIGURE 6-3



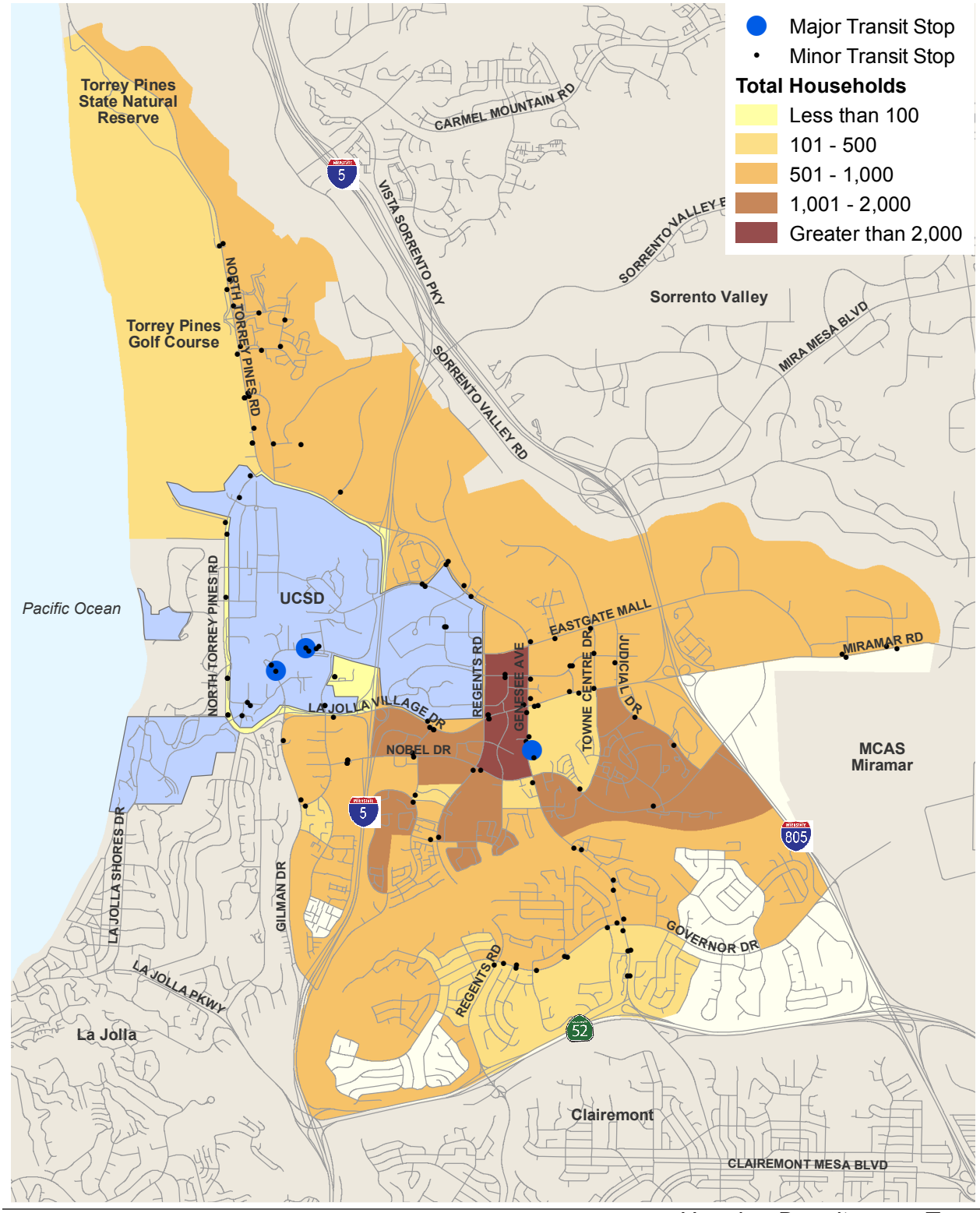
Transit Ridership by Stop

Housing units are concentrated towards the center of the community, largely between Regents Road and Genesee Avenue, between Eastgate Mall and Nobel Drive. Housing units are also found south of La Jolla Village Drive, but in generally slightly lower densities. By contrast, employment density is focused on the northern ends of the community. Jobs are largely concentrated north of Genesee Avenue as well as on the UCSD campus. A significant number of office towards are also located along La Jolla Village Drive, largely between Towne Centre Drive and I-5. Thus, transit demand for work commuters may focus on providing access to the businesses in the northern areas of the community and along La Jolla Village Drive, whereas resident-focused service may be in greater demand in the central and southern ends of the community. Housing and employment density are shown in **Figure 6-44** and **Figure 6-5**, respectively.

Table 6-4 Housing and Employment near Transit

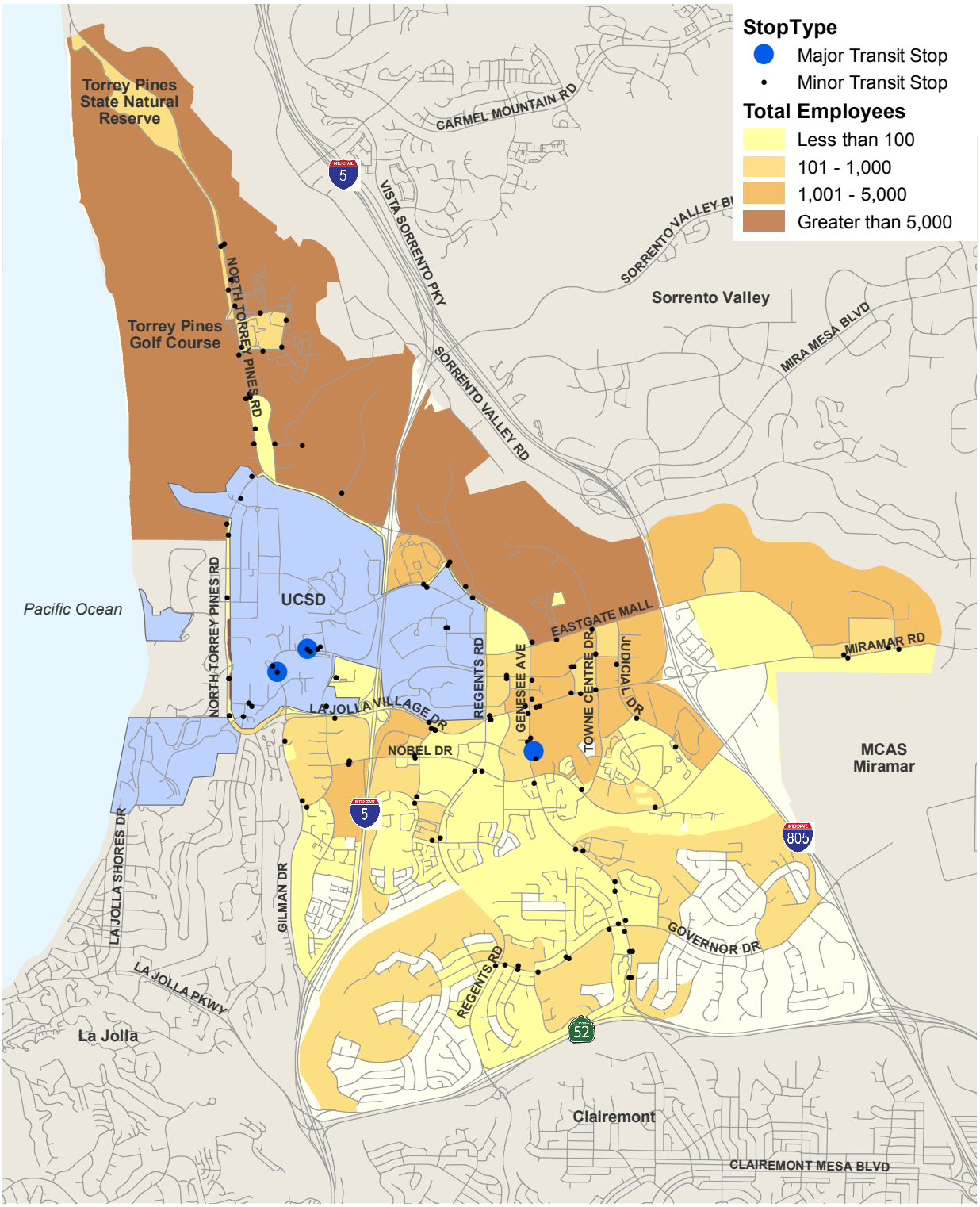
Demographic Unit	Total in University Community
Housing Units	22,854
Jobs	*78,727*

FIGURE 6-4



Housing Density near Transit

FIGURE 6-5



Employment Density near Transit

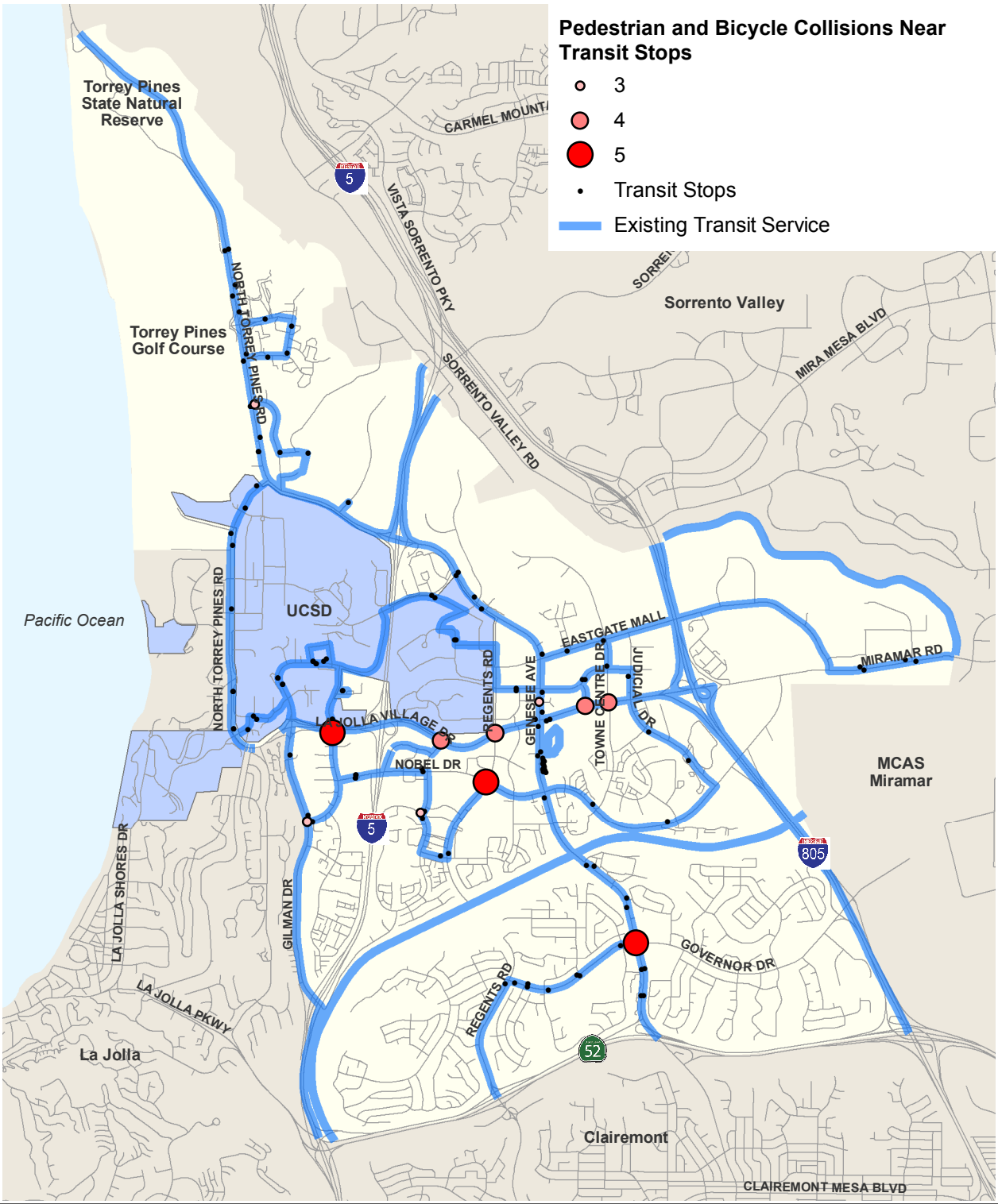
SAFETY NEAR A TRANSIT STOP/STATION

Between October 2012 and September 2017, there were a total of 92 reported pedestrian- and bicycle-related collisions within 500 feet of a transit stop within the University community. In the State of California, collision reports must be generated for any collision where property damage totals 750 dollars or more, someone is injured or someone is killed. As a result, it is important to note some bicycle incidents may go unreported for failing to meet one of these criteria. **Figure 6-6** displays the pedestrian- and bicycle-involved collision locations near transit stops across the community, as included in **Appendix A**. These collision locations are identified in **Table 6-5.**

Table 6-5 Most Frequent Collision Locations near Transit Stops

Rank	Intersections	Collisions
1	La Jolla Village Drive & Villa La Jolla Drive	5
1	Nobel Drive & Regents Road	5
1	Genesee Avenue & Governor Drive	5
2	Executive Way & La Jolla Village Drive	4
2	La Jolla Village Drive & Regents Road	4
2	La Jolla Village Drive & Town Centre Drive	4
2	La Jolla Village Drive & Lebon Drive	4
3	Charmant Drive/Palmilla Drive & Lebon Drive	3
3	Genesee Avenue & Executive Square	3
3	Gilman Drive (South) & Villa La Jolla Drive (South)	3
3	John Jay Hopkins Drive & North Torrey Pines Road	3

FIGURE 6-6



Bicycle and Pedestrian Collisions within 500 feet of Transit (2012-2017)

TRANSIT STATION QUALITY

The rider amenities provided at each stop are presented in **Table 6-6**. For each stop, the amenities present are compared against the standard suite of amenities as identified in the MTS Designing for Transit Manual. Of particular interest are stations which do not meet ADA standards. ADA-accessible stations must have sidewalks with sufficient width, a landing area for a bus ramp, and space for seating underneath a shelter (where present). The MTS stops listed below did not meet ADA requirements; *italics* represent stops serving more than one route. Of the 104 stops assessed, 37 were found to have ADA deficiencies.

Route 30
10391 - La Jolla Village Dr/Lebon Dr
11548 - Gilman Dr/Eucalyptus Grove Ln
11923 - La Jolla Village Dr/Genesee Av
12634 - N Torrey Pines Rd/Revelle College Dr

Route 31
10074 - Miramar Rd/Miramar Mall
11210 - Miramar Rd/Miramar Mall
12348 - Genesee Av/Executive Dr
13387 - Genesee Av/La Jolla Village Dr
99075 - Executive Dr/Executive Wy
99159 - Towne Center Dr/Executive Dr

Route 41
10391 - La Jolla Village Dr/Lebon Dr
11921 - Genesee Av/Esplanade Ct
11923 - La Jolla Village Dr/Genesee Av
12354 - Genesee Av/Calgary Dr
12355 - Genesee Av/April Ct
12668 - Genesee Av/Decoro St
12678 - Genesee Av/Radcliffe Ln
13133 - Genesee Av/Centurion Sq
13143 - Genesee Av/Centurion Sq
99185 - Genesee Av/Esplanade Ct

Route 50
12354 - Genesee Av/Calgary Dr
12668 - Genesee Av/Decoro St
12678 - Genesee Av/Radcliffe Ln
13133 - Genesee Av/Centurion Sq
13143 - Genesee Av/Centurion Sq

Route 60
99197 - La Jolla Village Dr/Towne Center Dr

Route 105
12354 - Genesee Av/Calgary Dr
12668 - Genesee Av/Decoro St
13133 - Genesee Av/Centurion Sq
13143 - Genesee Av/Centurion Sq

Route 150
10391 - La Jolla Village Dr/Lebon Dr
11548 - Gilman Dr/Eucalyptus Grove Ln
11923 - La Jolla Village Dr/Genesee Av

Route 201
11548 - Gilman Dr/Eucalyptus Grove Ln
11909 - Palmilla Dr/Lebon Dr
12662 - Regents Rd/Arriba St

Route 202
11154 - Arriba St/Regents Rd
11915 - Regents Rd/Nobel Dr
99932 - Lebon Dr/Palmilla Dr

Route 204
99075 - Executive Dr/Executive Wy

Route 237
11923 - La Jolla Village Dr/Genesee Av

Route 921
99197 - La Jolla Village Dr/Towne Center Dr

Route 978
11882 - N Torrey Pines Rd/Scripps Clinic Drwy
98544 - 10240 Science Center Dr
98545 - John Hopkins Ct/General Atomics
98546 - 3033 Science Park Rd
98547 - Torreyana Rd/ Science Park Rd
98548 - 11099 Callan Rd
98562 - General Atomics Ct/John Hopkins Dr
98563 - John Hopkins Dr/N Torrey Pines Rd
98564 - Torreyana Rd/Callan Rd

Route 979
11913 - Genesee Av/Campus Point Dr
12348 - Genesee Av/Executive Dr
13387 - Genesee Av/La Jolla Village Dr
21706 - Genesee Av/Eastgate Mall
21787 - Genesee Av/Scripps Hospital
99159 - Towne Center Dr/Executive Dr
99184 - Eastgate Mall/Towne Centre Dr

Table 6-6 Transit Stop Amenities

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
Route #30												
10374	Yes	Gilman Dr/Myers Dr	430	X	X	X	X	X	X	X	X	X
10378	Yes	La Jolla Village Dr/Villa La Jolla Dr	15	X	X	X	X	X	X	X	X	X
10391	No	La Jolla Village Dr/Lebon Dr	7	X	X		X					
10400	No	La Jolla Village Dr/Regents Rd	8	X	X	X	X		X	X	X	X
10772	No	Gilman Dr/Myers Dr	157	X	X	X	X	X	X		X	X
10793	No	La Jolla Village Dr/Regents Rd	319	X	X	X	X		X	X	X	X
11153	No	La Jolla Village Dr/Lebon Dr	82	X	X	X	X					
11548	No	Gilman Dr/Eucalyptus Grove Ln	73	X	X		X				X	X
11923	No	La Jolla Village Dr/Genesee Av	37	X	X		X			X		
12310	Yes	N Torrey Pines Rd/La Jolla Shores Dr	92	X	X	X	X		X	X	X	X
12320	No	Gilman Dr/Eucalyptus Grove Ln	66	X	X	X	X				X	
12634	No	N Torrey Pines Rd/Revelle College Dr	6	X	X		X					
13091	Yes	VA Hospital	122	X	X	X	X	X	X	X	X	X
13171	Yes	Genesee Av/La Jolla Village Dr	4	X	X	X	X	X	X	X	X	X
95034	Yes	UTC Transit Center	229	X	X	X	X	X	X	X	X	X
99931	Yes	Villa La Jolla Dr/La Jolla Village Dr	23	X	X	X	X	X				X
Route #31												
10074	No	Miramar Rd/Miramar Mall	2	X			X					
10444	Yes	Miramar Rd/Miramar Pl	2	X	X	X	X					
11210	No	Miramar Rd/Miramar Mall	3	X	X		X					
11214	Yes	Miramar Rd/Miramar Pl	2	X	X	X	X					X
13171	Yes	Genesee Av/La Jolla Village Dr	1	X	X	X	X	X	X	X	X	X

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
13387	No	Genesee Av/La Jolla Village Dr	8	X	X		X			X		
99186	Yes	UTC Transit Center	74	X	X	X	X	X	X	X	X	X
Route #41												
10378	Yes	La Jolla Village Dr/Villa La Jolla Dr	62	X	X	X	X	X	X	X	X	X
10391	No	La Jolla Village Dr/Lebon Dr	42	X	X		X					
10400	No	La Jolla Village Dr/Regents Rd	46	X	X	X	X		X	X	X	X
10793	No	La Jolla Village Dr/Regents Rd	320	X	X	X	X		X	X	X	X
11153	No	La Jolla Village Dr/Lebon Dr	73	X	X	X	X					
11572	Yes	Genesee Av/Decoro St	35	X	X	X	X		X	X	X	X
11576	Yes	Genesee Av/April Ct	0	X	X	X	X					
11903	No	Gilman/Myers	700	X	X	X	X	X	X		X	X
11921	No	Genesee Av/Esplanade Ct	44	X	X		X	X		X		
11923	No	La Jolla Village Dr/Genesee Av	24	X	X		X			X		
11924	No	Genesee Av/Nobel Dr	56	X	X	X	X		X	X	X	X
11935	Yes	Genesee Av/Calgary Dr	4	X	X	X	X					
11937	No	Genesee Av/Governor Dr	91	X	X	X	X		X	X	X	X
11938	Yes	Genesee Av/Radcliffe Ln	12	X	X	X	X					
12354	No	Genesee Av/Calgary Dr	11	X	X							X
12355	No	Genesee Av/April Ct	0	X	X							
12668	No	Genesee Av/Decoro St	104	X	X		X	X				
12677	No	Genesee Av/Governor Dr	127	X	X	X	X		X	X	X	X
12678	No	Genesee Av/Radcliffe Ln	21	X	X		X					
13091	Yes	VA Hospital	200	X	X	X	X	X	X	X	X	X
13133	No	Genesee Av/Centurion Sq	18	X	X		X				X	

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
13143	No	Genesee Av/Centurion Sq	22	X	X		X	X				X
13171	Yes	Genesee Av/La Jolla Village Dr	114	X	X	X	X	X	X	X	X	X
99185	No	Genesee Av/Esplanade Ct	14	X	X		X	X		X		
99931	Yes	Villa La Jolla Dr/La Jolla Village Dr	6	X	X	X	X	X				X
Route #50												
11572	Yes	Genesee Av/Decoro St	10	X	X	X	X		X	X	X	X
11576	Yes	Genesee Av/April Ct	0	X	X	X	X					
11924	No	Genesee Av/Nobel Dr	10	X	X	X	X		X	X	X	X
11935	Yes	Genesee Av/Calgary Dr	2	X	X	X	X					
11937	No	Genesee Av/Governor Dr	38	X	X	X	X		X	X	X	X
11938	Yes	Genesee Av/Radcliffe Ln	2	X	X	X	X					
12354	No	Genesee Av/Calgary Dr	1	X	X							X
12668	No	Genesee Av/Decoro St	0	X	X		X	X				
12677	No	Genesee Av/Governor Dr	9	X	X	X	X		X	X	X	X
12678	No	Genesee Av/Radcliffe Ln	1	X	X		X					
13133	No	Genesee Av/Centurion Sq	7	X	X		X				X	
13143	No	Genesee Av/Centurion Sq	3	X	X		X	X				X
95032	Yes	UTC Transit Center	94	X	X	X	X	X	X	X	X	X
Route #60												
10409	Yes	La Jolla Village Dr/Executive Wy	20	X	X	X	X		X	X	X	X
11167	Yes	La Jolla Village Dr/Executive Wy	0	X	X	X	X	X				X
13171	Yes	Genesee Av/La Jolla Village Dr	0	X	X	X	X	X	X	X	X	X
95036	Yes	La Jolla Village Dr/Genesee Av	26	X	X	X	X	X	X	X	X	X
95037	Yes	UTC Transit Center	-	X	X	X	X	X	X	X	X	X

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
99197	No	La Jolla Village Dr/Towne Center Dr	0	X	X		X					
Route #101												
11539	Yes	N Torrey Pines Rd/Science Park Rd South	5	X	X	X						
21663	No	N Torrey Pines Rd/Golf Course	-	X	X							
11541	Yes	N Torrey Pines Rd/Science Park Rd	21	X	X	X	X		X	X	X	X
21665	No	N Torrey Pines Rd/Science Park Rd	5	X	X							
24959	Yes	N Torrey Pines Rd/John J. Hopkins Dr	35	X	X	X	X	X	X	X		X
13141	Yes	N Torrey Pines Rd/John J. Hopkins Dr	11	X	X	X	X	X	X	X		X
11882	No	N Torrey Pines Rd/Scripps Clinic Drwy	-	X	X		X					X
12639	No	N Torrey Pines Rd/Scripps Clinic Drwy	2	X	X		X	X				X
11885	No	N Torrey Pines Rd/Genesee Ave	9	X	X		X					X
12316	No	N Torrey Pines Rd/North Point Dr	-	X	X		X					
11538	No	N Torrey Pines Rd/Torrey Pines Scenic Dr	21	X	X		X	X				
12311	No	N Torrey Pines Rd/Torrey Pines Scenic Dr	-	X	X		X	X				
11877	Yes	N Torrey Pines Rd/Salk Institute	-	X	X	X		X				
11875	Yes	N Torrey Pines Rd/Almahurst Rw	-	X	X	X	X	X	X		X	
12631	No	N Torrey Pines Rd/Muir College Dr	24	X	X		X					X
11876	No	N Torrey Pines Rd/La Jolla Shores Dr	-	X	X							
12310	Yes	N Torrey Pines Rd/La Jolla Shores Dr	-	X	X	X	X	X	X	X	X	X
12634	No	N Torrey Pines Rd/Revelle College Dr	3	X	X		X					
24149	No	Revelle College Dr/N Torrey Pines Rd	-	X	X							X
24151	No	Scholars Dr South/Revelle College Dr	6	X	X		X			X		X
24150	No	Scholars Dr South/Revelle College Dr	0	X	X		X			X		X
12320	No	Gilman Dr/Eucalyptus Grove Ln	10	X	X	X	X				X	

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
11548	No	Gilman Dr/Eucalyptus Grove Ln	-	X	X		X				X	X
10374	Yes	Gilman Dr/Myers Dr	70	X	X	X	X	X	X	X	X	X
10772	No	Gilman Dr/Myers Dr	97	X	X	X	X	X	X		X	X
13091	Yes	VA Hospital	142	X	X	X	X	X	X	X	X	X
99931	Yes	Villa La Jolla Dr/La Jolla Village Dr	9	X	X	X	X	X				
13058	No	Nobel Dr/La Jolla Village Square Drwy	28	X	X	X	X		X	X	X	X
10391	No	La Jolla Village Dr/Lebron Dr	1	X	X		X					
10400	Yes	La Jolla Village Dr/Regents Rd	0	X	X	X	X		X	X	X	X
10793	No	La Jolla Village Dr/Regents Rd	59	X	X	X	X		X	X	X	X
11923	No	La Jolla Village Dr/Genesee Ave	15	X	X		X			X		
95034	No	UTC	-	X	X	X	X	X	X	X	X	X
Route #105												
10049	Yes	Governor Dr/Radcliffe Dr	1	X	X	X	X	X				
10401	Yes	Governor Dr/Regents Rd	12	X	X	X	X	X				
10404	Yes	Governor Dr/Scripps St	7	X	X	X	X	X				
10408	Yes	Governor Dr/Stadium St	1	X	X	X	X	X				
10412	Yes	Governor Dr/Mercer St	1	X	X	X	X	X				
10798	Yes	Governor Dr/Scripps St	13	X	X	X	X	X				
11170	Yes	Governor Dr/Mercer St	3	X	X	X		X				
11177	Yes	Governor Dr/Genesee Av	19	X	X	X	X		X	X	X	X
11572	Yes	Genesee Av/Decoro St	4	X	X	X	X		X	X	X	X
11924	No	Genesee Av/Nobel Dr	8	X	X	X	X		X	X	X	X
11935	Yes	Genesee Av/Calgary Dr	1	X	X	X	X					
12354	No	Genesee Av/Calgary Dr	1	X	X							X

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
12668	No	Genesee Av/Decoro St	0	X	X		X	X				
12677	No	Genesee Av/Governor Dr	11	X	X	X	X		X	X	X	X
13133	No	Genesee Av/Centurion Sq	5	X	X		X				X	
13143	No	Genesee Av/Centurion Sq	2	X	X		X	X				X
99186	Yes	UTC Transit Center	-	X	X	X	X	X	X	X	X	X
99852	Yes	Regents Rd/Governor Dr	9	X	X	X	X	X				
Route #150												
10374	Yes	Gilman Dr/Myers Dr	103	X	X	X	X	X	X	X	X	X
10378	Yes	La Jolla Village Dr/Villa La Jolla Dr	4	X	X	X	X	X	X	X	X	X
10391	No	La Jolla Village Dr/Lebon Dr	4	X	X		X					
10400	No	La Jolla Village Dr/Regents Rd	2	X	X	X	X		X	X	X	X
10772	No	Gilman Dr/Myers Dr	302	X	X	X	X	X	X		X	X
10793	No	La Jolla Village Dr/Regents Rd	118	X	X	X	X		X	X	X	X
11153	No	La Jolla Village Dr/Lebon Dr	46	X	X	X	X					
11548	No	Gilman Dr/Eucalyptus Grove Ln	233	X	X		X				X	X
11923	No	La Jolla Village Dr/Genesee Av	33	X	X		X			X		
12320	No	Gilman Dr/Eucalyptus Grove Ln	19	X	X	X	X				X	
12326	Yes	Gilman Dr/Villa La Jolla Dr	94	X	X	X	X	X	X	X	X	X
13091	Yes	VA Hospital	307	X	X	X	X	X	X	X	X	X
13171	Yes	Genesee Av/La Jolla Village Dr	2	X	X	X	X	X	X	X	X	X
13278	Yes	Gilman Dr/Evening Way	7	X	X	X	X					
95032	Yes	UTC Transit Center	127	X	X	X	X	X	X	X	X	X
99931	Yes	Villa La Jolla Dr/La Jolla Village Dr	16	X	X	X	X	X				X
Route #201												

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
10034	Yes	Nobel Dr/Lebon Dr	17	X	X	X	X	X	X	X	X	X
10399	Yes	Nobel Dr/Regents Rd	13	X	X	X	X		X	X	X	X
10772	No	Gilman Dr/Myers Dr	1253	X	X	X	X	X	X		X	X
11548	No	Gilman Dr/Eucalyptus Grove Ln	336	X	X		X				X	X
11909	No	Palmilla Dr/Lebon Dr	28	X	X		X			X		
12662	No	Regents Rd/Arriba St	37	X	X					X		
13024	No	Nobel Dr/La Jolla Village Square Drwy	173	X	X	X	X		X	X	X	X
13092	Yes	Voigt Dr/Scripps Memorial Hospital	61	X	X	X	X	X	X		X	X
95031	Yes	UTC Transit Center	246	X	X	X	X	X	X	X	X	X
99459	No	Executive Dr/Regents Rd	240	X	X	X	X	X	X		X	X
99461	Yes	Medical Center Dr/Health Sciences Dr	0	X	X	X	X	X	X		X	X
99463	Yes	Villa La Jolla Dr/Gilman Dr	33	X	X	X	X	X	X	X	X	X
Route #202												
10374	Yes	Gilman Dr/Myers Dr	556	X	X	X	X	X	X	X	X	X
11151	No	Nobel Dr/Lebon Dr	175	X	X	X	X	X	X		X	X
11154	No	Arriba St/Regents Rd	301	X	X		X			X		X
11915	No	Regents Rd/Nobel Dr	328	X	X		X			X	X	
12320	No	Gilman Dr/Eucalyptus Grove Ln	114	X	X	X	X				X	
12326	Yes	Gilman Dr/Villa La Jolla Dr	154	X	X	X	X	X	X	X	X	X
13058	No	Nobel Dr/La Jolla Village Square Drwy	271	X	X	X	X		X	X	X	X
95030	Yes	UTC Transit Center	317	X	X	X	X	X	X	X	X	X
99200	Yes	Voigt Dr/Scripps Memorial Hospital	20	X	X	X	X	X	X		X	X
99460	Yes	Executive Dr/Regents Rd	7	X	X	X	X	X	X		X	X
99462	Yes	Medical Center Dr/Health Sciences Dr	29	X	X	X	X	X	X		X	X

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
99932	No	Lebon Dr/Palmilla Dr	303	X	X		X			X		
Route #204												
13267	Yes	Nobel Dr/Towne Centre Dr	10	X	X	X	X		X	X	X	X
95033	Yes	UTC Transit Center	154	X	X	X	X	X	X	X	X	X
99075	No	Executive Dr/Executive Wy	8	X	X							
99194	Yes	Judicial Dr/Research Pl	18	X	X	X	X	X	X	X	X	X
99586	Yes	Judicial Dr/Golden Haven Dr	107	X	X	X	X	X	X	X	X	X
99587	Yes	Judicial Dr/Executive Dr	1	X	X	X		X				
99588	Yes	Nobel Dr/Shoreline Dr	12	X	X	X	X		X			
Route #237												
10400	No	La Jolla Village Dr/Regents Rd	-	X	X	X	X		X	X	X	X
10793	No	La Jolla Village Dr/Regents Rd	-	X	X	X	X		X	X	X	X
11902	No	Gilman/Myers	197	X	X	X	X	X	X		X	X
11923	No	La Jolla Village Dr/Genesee Av	7	X	X		X			X		
12320	No	Gilman Dr/Eucalyptus Grove Ln	2	X	X	X	X				X	
13263	Yes	La Jolla Village Dr/Genesee Av	86	X	X	X	X	X	X	X	X	X
Route #921												
10409	Yes	La Jolla Village Dr/Executive Wy	43	X	X	X	X		X	X	X	X
11167	Yes	La Jolla Village Dr/Executive Wy	4	X	X	X	X	X				X
13171	Yes	Genesee Av/La Jolla Village Dr	-	X	X	X	X	X	X	X	X	X
95036	Yes	La Jolla Village Dr/Genesee Av	46	X	X	X	X	X	X	X	X	X
95039	Yes	UTC Transit Center	-	X	X	X	X	X	X	X	X	X
99197	No	La Jolla Village Dr/Towne Center Dr	13	X	X		X					
Route #978												

Stop ID	Meets Standards?*	Stop Location	Boardings	Sign and Pole	Route Designation	ADA	Bench	Expanded Sidewalk	Shelter	Time Table	Trash Container	Lighting
11882	No	N Torrey Pines Rd/Scripps Clinic Drwy	20	X	X		X					X
13130	Yes	N Torrey Pines Rd/John Hopkins Dr	3	X	X	X	X	X	X	X	X	X
98544	No	10240 Science Center Dr	4									
98545	No	John Hopkins Ct/General Atomics	4									
98546	No	3033 Science Park Rd	5									
98547	No	Torreyana Rd/Road to the Cure	0									
98548	No	11099 Callan Rd	2									
98562	No	General Atomics Ct/John Hopkins Dr	2									
98563	No	John Hopkins Dr/N Torrey Pines Rd	1									
98564	No	Torreyana Rd/Callan Rd	3									
Route #979												
11913	No	Genesee Av/Campus Point Dr	4	X	X		X					X
12348	No	Genesee Av/Executive Dr	6	X	X		X					
13387	No	Genesee Av/La Jolla Village Dr	12	X	X		X			X		
21195	Yes	Genesee Av/Scripps Hospital	4	X	X	X	X	X				
21700	Yes	Genesee Av/Campus Point Dr	3	X	X	X	X	X				
21706	No	Genesee Av/Eastgate Mall	0	X	X		X					
21787	No	Genesee Av/Scripps Hospital	7	X	X		X					
99046	Yes	Executive Dr/Executive Way	2	X	X	X	X	X	X		X	
99159	No	Towne Center Dr/Executive Dr	8	X	X		X					
99183	Yes	Eastgate Mall/Easter Wy	0	X	X	X		X				
99184	No	Eastgate Mall/Towne Centre Dr	7	X	X							

Notes:
*For stops serving multiple routes, minimum transit amenity requirements are based on total boardings from all routes that serve that stop.

X	Meets minimum standard
	Does not meet minimum standard
X	Amenity exceed minimum standard
	Amenity not required per minimum standard

TRANSIT STATION CONNECTIONS

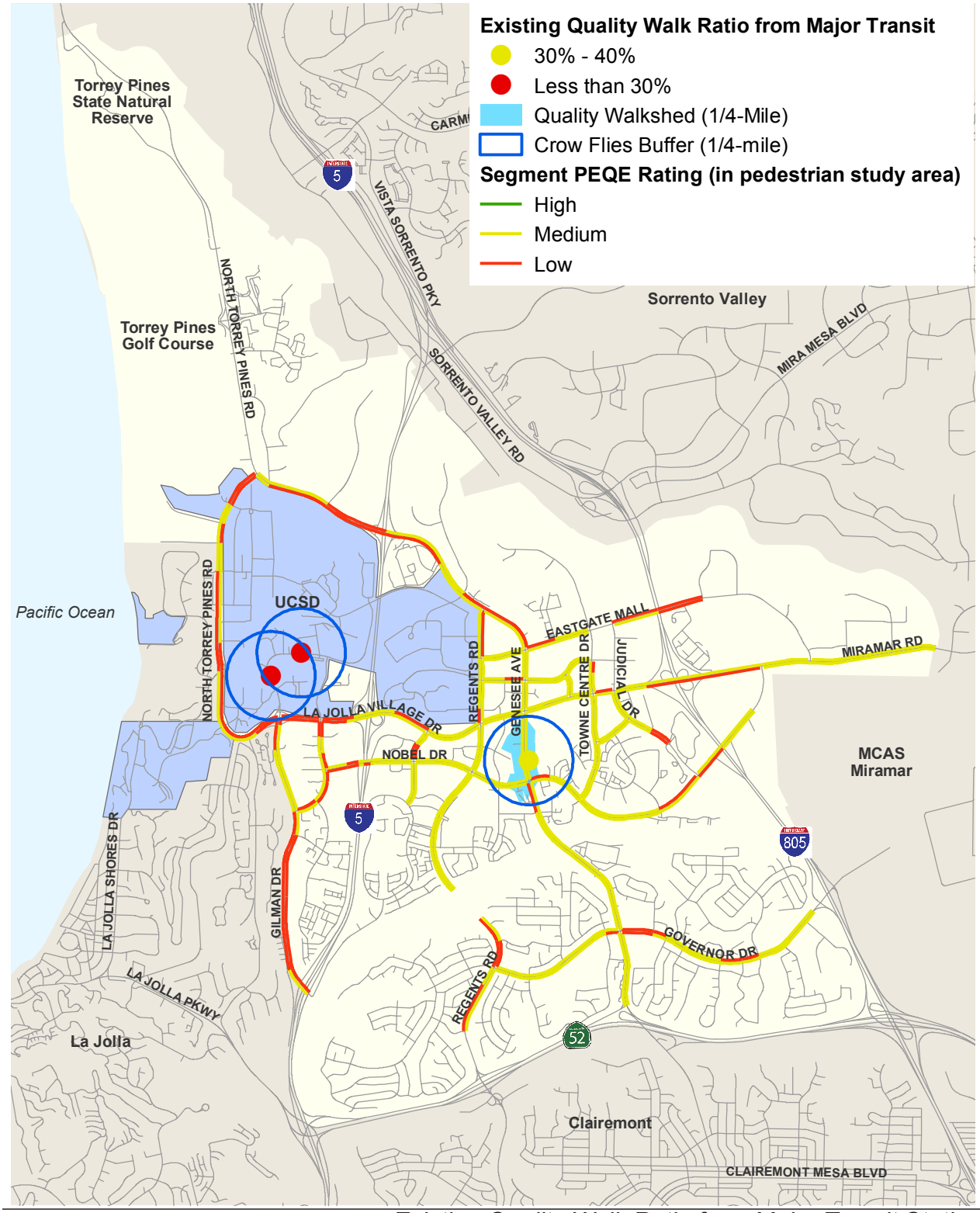
To access the transit system, passengers in the community must walk or bike to a transit stop. High-stress and missing connections in the bicycle and pedestrian networks limit the areas accessible by transit and depresses ridership. First-mile and last-mile connections in the community were assessed by considering the connectivity of bicycle and pedestrian facilities in the areas around major transit stops.

As noted previously in **Section 3**, a major transit station is defined in part as "the intersection of two or more major bus routes each having a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods." The University community has three locations that meet this criteria at the UTC Transit Center, Gilman Transit Center, and the Gilman Drive & Eucalyptus Grove Lane bus stop.

The quality connections assessment draws from the quality walking analysis and quality bicycle analysis results to identify quality ¼-mile pedestrian and ¾-mile bicycle networks surrounding major transit stations. These travelshed distances were obtained from *San Diego Forward: The Regional Plan, Appendix U4 – SANDAG Regional Transit Oriented Development Strategy*, and represent a five-minute travel distance for pedestrians and cyclists.

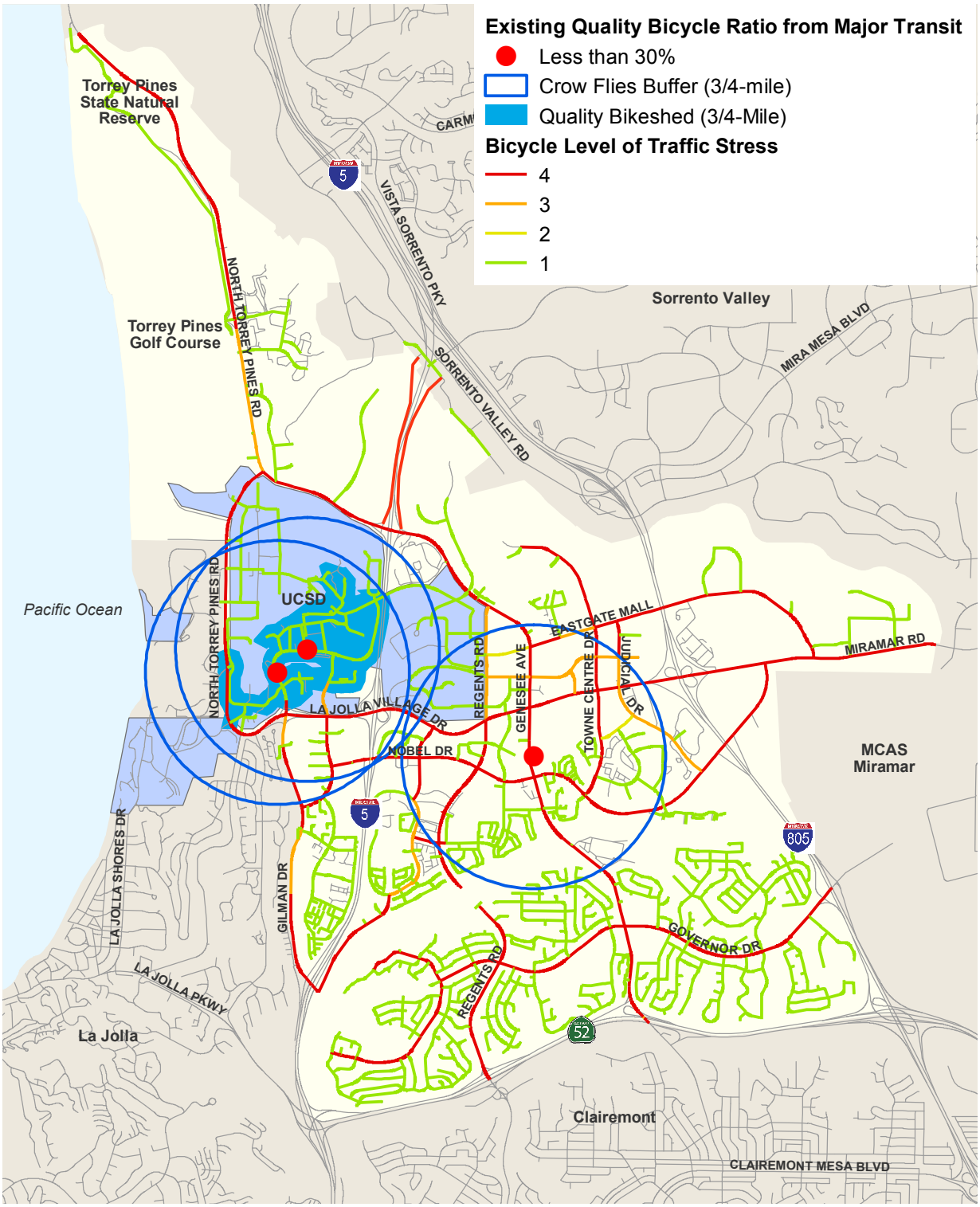
Only the UTC Transit Center has access to low- or medium stress pedestrian facilities immediately adjacent to the three major transit stops, resulting in a connectivity score between 30% and 40%. This connectivity score is the result of the super-blocks along Genesee Avenue that provide limited East-West access. Conversely, only the major transit stops along Gilman have access to BLTS level 1 or 2 facilities with both stops having connectivity scores less than 30%. Both scores result from the lack of access directly west of the stops and south of La Jolla Village Drive. The existing Quality Walk and Bicycle Ratios are shown below in **Figure 6-7** and **Figure 6-8**, respectively.

FIGURE 6-7



Existing Quality Walk Ratio from Major Transit Stations

FIGURE 6-8



Existing Quality Bicycle Ratio from Major Transit Stations

7 VEHICULAR MOBILITY

This section describes the layout and operations of the street system, including the results of existing conditions analyses at the study area intersections, roadway segments, corridors and freeways.

EXISTING SETTING

The following section provides a description of the existing Circulation Element streets within the University community, as shown in **Figure 7-1.** Ultimate roadway classifications are taken from the University Community Plan, last updated during the University Community Plan Amendment, approved December 2016. The portions of the roadways described are intended to reflect the areas within the community and may not reflect the entirety of the roadway.

Peak hour and daily traffic volumes were counted in 2015 as part of the University Community Plan Amendment Under a separate effort, in 2016 and 2017, the University of California San Diego collected counts within the community which were compared to previous counts. Due to continued construction of the Mid-Coast Trolley extension, I-5 Genesee Avenue Interchange, and private developments resulting in intermittent roadway and lane closures throughout the community it was concluded that traffic patterns used in the University Community Plan Amendment is representative of typical traffic patterns within the community. **Appendix E** contains the existing traffic volume data and validation count memo for this report.

URBAN STREETS

Eastgate Mall functions as a two-way east-west, 2 and 4-lane Collector. Between Regents Road and Genesee Avenue, Eastgate Mall is a 2-lane Collector with a two-way left-turn lane, angled parking on both sides of the street and a curb to curb width of 70 feet. The posted speed limit is 25 mph. Between Genesee Avenue and Easter Way, Eastgate Mall is a 4-lane Collector with a two-way left-turn lane, no parking, bike lanes on both sides of the street and a curb to curb width of 70 feet. Eastgate Mall turns into a 4-lane Major Arterial with a raised median, no parking, bike lanes on both sides of the street and a curb to curb width of 70 feet between Easter Way and the I-805 Freeway Overpass. The posted speed limit is 35 mph and the road is lined with sidewalks and curbs on both sides of the street. Over the I-805 Freeway Overpass, Eastgate Mall transitions to a 2-lane Collector with a two-way left turn lane, no parking, bike lanes on both sides of the street, and a curb to curb width of 40 feet. The posted speed limit is 45 mph and is lined with sidewalks on the south side of the street and curbs on both sides. Eastgate Mall between Eastgate Drive and Miramar Road is classified as a 2-lane Collector with a two-way left-turn lane, and a curb to curb width of 50 feet. The posted speed limit is 45 mph and the roadway has sidewalk, curb, and parking on the north side of the street. The ultimate classification within the Adopted Community Plan for Eastgate Mall is a 4-lane Collector with two-way left turn lane between Regents Road and Genesee Avenue, a 4-lane Major Arterial between Genesee Avenue and Town Centre Drive and a 4-lane Collector with two-way left turn lane between Towne Centre Drive and Miramar Road. The City BMP proposes a Class II (Bike Lane) facility throughout the extents of the roadway.

Executive Drive functions as a two-way east-west, 4-lane Collector without a two-way left-turn lane and a curb to curb width of 60 feet from Regents Road to Regents Park Row. Between Regents Park Row and Judicial Drive, Executive Drive is a 4-lane Collector with a two-way left turn lane. Executive Drive is lined with sidewalks and curbs with parallel parking available on both sides of the street for the entire length of the street except for

the segment between Regents Park Row and Genesee Avenue. The posted speed limit is 30 mph. Executive Drive has been built to the ultimate classification within the Adopted Community Plan except for the segment between Towne Centre Drive and Judicial Drive which is classified as a 4-lane Major Arterial. The City BMP proposes Executive Drive as a Class III (Bike Route) facility.

Executive Way functions as a two-way north-south, 4-lane Collector with a two-way left-turn lane and a curb to curb width of 70 feet. Executive Way is lined with sidewalks and curbs with parallel parking available on both sides of the street for the entire length of the street. Executive Way has reached its ultimate classification within the Adopted Community Plan.

Genesee Avenue functions as a two-way north-south, 4 and 6-lane Arterial. Between North Torrey Pines Road and I-5, Genesee Avenue is a 6-lane Prime Arterial with bike lanes on both sides of the street, no parking, raised medians, and a curb to curb width ranging from 80 feet to 120 feet. Over I-5, Genesee Avenue turns into a 4-lane Major Arterial with no parking or bike lanes and a curb to curb width of 70 feet. Genesee Avenue is a 6-lane Prime Arterial between I-5 and Campus Point Drive and a 6-lane Major Arterial between Campus Point Drive and La Jolla Village Drive with bike lanes on both sides of the street, no parking, raised medians and a curb to curb width of 110 feet. Between La Jolla Village Drive and Esplanade Court, Genesee Avenue is a 4-lane Major Arterial with bike and bus lanes, raised medians, no parking, and a curb to curb width of 110 feet. Genesee Avenue between Esplanade Court and Nobel Drive is a 6-lane Major Arterial with no parking, bike lanes on both sides of the street, raised medians, and a curb to curb width of 110 feet. Between Nobel Drive and Lehrer Drive, Genesee Avenue is a 4-lane Major Arterial with parking on the West sides of the street between Nobel Drive and Decoro Street; and Governor Drive and Radcliff Lane, bike lanes on both sides of the street, raised medians, and a curb to curb width of 80 feet. Genesee Avenue is lined with sidewalks and curbs on both sides of the street for the entire length of the street. The posted speed limit is 45 mph. Access to I-5 and SR-52 is provided on Genesee Avenue. Genesee has reached the ultimate classification within the Adopted Community Plan on all roadway segments.

Gilman Drive functions as a two-way north-south, 4-lane Major Arterial between La Jolla Village Drive and Via Alicante with bike lanes on both sides of the street and a curb to curb width of 90 feet. Throughout this segment, Gilman Drive is lined with sidewalks and curbs with parallel parking available on the west side of the street between La Jolla Village Drive and Evening way, on both sides of the street between Evening Way and Villa La Jolla Drive, and on the east side between Villa La Jolla Drive and Via Alicante. Gilman Drive between Via Alicante and I-5 is also classified as a 4 Lane Major Arterial with bike lanes, raised medians, and a curb to curb width of 70 feet. Parallel parking is only available on the west side of the street in front of the housing development north of Gilman Court. Between the housing development and I-5, Gilman Drive is lined with sidewalks and curbs on the west side of the street. The posted speed limit is 45 mph. Access to I-5 is provided at the southern terminus of Gilman Drive. Gilman Drive has reached its ultimate adopted Community Plan Street Classification.

Golden Haven Drive functions as a two-way east-west, 4-lane Major Arterial with bike lanes on both sides of the street, no parking, raised medians and a curb to curb width of 74 feet. Golden Haven Drive is lined with sidewalks and curbs on both sides of the street for the entire length of the street. The posted speed limit is 35 mph. Golden Haven Drive has reached its ultimate classification within the Adopted Community Plan.

Governor Drive functions as a two-way east-west, 4-lane Major Arterial with raised medians and a curb to curb width of 70 feet. Governor Drive is lined with sidewalks and curbs on both sides of the street for the entire length of the street. Parallel parking is available on both sides of the street along most segments of the roadway west of Gullstrand Street. Bike lanes are on both sides of the street between Genesee Avenue and Gullstrand Street. The posted speed limit is 35 mph. Access to I-805 is provided at the eastern terminus of Governor Drive. Governor Drive has reached its ultimate classification within the Adopted Community Plan. The City BMP proposes Governor Drive west of Genesee Avenue as a Class II (Bike Lane) or III (Bike Route).

Judicial Drive functions as a two-way north-south, 4-lane Major Arterial with raised medians and a curb to curb width of 80 feet. Judicial Drive is lined with sidewalks and curbs on both sides of the street for the entire length of the street. Parallel parking is available north of Executive Drive with bike lanes on both sides of the street south of Executive Drive. Judicial Drive has reached its ultimate adopted Community Plan street classification. The City BMP proposes Judicial Drive as a Class II (Bike Lane) facility north of Executive Drive.

La Jolla Scenic Drive functions as a two-way north-south, 4-lane Major Arterial with raised medians and a curb to curb width of 80 feet. La Jolla Scenic Drive is lined with sidewalks and curbs with parallel parking available on both sides of the street for the entire length of the street. The La Jolla adopted Community Plan identifies La Jolla Scenic Drive as a 2-lane collector. The City BMP proposes La Jolla Scenic Drive as a Class II (Bike Lane) facility.

La Jolla Village Drive functions as a two-way east-west, 6-lane Prime Arterial between Revelle College Drive and the I-5 NB Ramps, a 6-lane Major Arterial between the I-5 NB Ramps and Towne Centre Drive, and a 7-lane Major Arterial between Towne Center Drive and the I-805 SB Ramps. La Jolla Village Drive has a curb to curb width of 120 feet and is lined with sidewalks and curbs on both sides of the street except between I-5 NB Ramps and Lebon Drive where sidewalk is only on the south side of the street. Parallel parking is available on both sides of the street east of I-5 NB Ramps to Executive Way and bike lanes are on both sides of the street west of La Jolla Scenic Drive. The posted speed limit is 45 mph. Access to I-5 and I-805 is provided along La Jolla Village Drive. The ultimate classification within the Adopted Community Plan for La Jolla Village Drive is an 8-lane Primary Arterial between Villa La Jolla Drive and the I-5 Ramps and Towne Centre Drive and the I-805 Ramps. All other segments of La Jolla Village Drive have reached their ultimate adopted Community Plan street classification. The City BMP proposes La Jolla Village Drive as a Class II (Bike Lane) facility.

Lebon Drive functions as a two-way north-south, 4 and 5-lane Major Arterial. Between Palmilla Drive and Nobel Drive, Lebon Drive is classified as a 4-lane Major Arterial with raised medians and a curb to curb width of 80 feet. Throughout this segment, parallel parking is available on both sides of the street. This segment is also classified as a Class III (Bike Route) facility. Lebon Drive between Nobel Drive and La Jolla Village Drive is classified as a 5-lane Major Arterial with raised medians, no parking, and a curb to curb width of 80 feet. Lebon Drive is lined with sidewalks and curbs on both sides of the street for the entire length of the street. The posted speed limit is 35 mph. The ultimate classification within the Adopted Community Plan for Lebon Drive has been reached. The City BMP proposes all of Lebon Drive as a Class II (Bike Facility) facility.

Miramar Road functions as a two-way east-west, 7 and 8-lane Prime Arterial. Miramar Road is classified as a 6-lane Prime Arterial between I-805 SB Ramps and I-805 NB Ramps, an 8-lane Prime Arterial between I-805 NB Ramps and Nobel Dr, and a 7-lane Prime Arterial between Nobel Dr and Eastgate Mall. The segments between I-805 SB Ramps and Eastgate Mall include raised medians, bike lanes, no parking and a curb to curb

width of 124 feet. Between Eastgate Mall and Camino Santa Fe, Miramar Road is classified as a 6-lane Major Arterial with raised medians, bike lanes, no parking and a curb to curb width of 100 feet. Miramar Road is lined with sidewalks and curbs on both sides of the street east of Nobel Drive. West of Nobel Drive, Miramar Road has sidewalks and curbs on the north side of the street. Miramar Road has buffered bike lane facilities between Miramar Mall and Camino Sante Fe. The posted speed limit is 50 mph. Access to I-805 is provided on Miramar Road. The ultimate classification within the Adopted Community Plan for Miramar Road has been reached.

North Torrey Pines Road functions as a two-way north-south, 4 and 6-lane Arterial. Between Science Park Road and Genesee Avenue, North Torrey Pines Road is classified as a 6-lane Prime Arterial with raised medians, bike lanes, no parking, and a curb to curb width of 120 feet. Between Genesee Avenue and Revelle College Drive, North Torrey Pines Road is classified as a 4-lane Major Arterial with raised medians, bike lanes, no parking, and a curb to curb width of 80 feet. North Torrey Pines Road is lined with sidewalks and curbs on both sides of the street for the entire length of the street. The posted speed limit is 45 mph. The ultimate classification within the Adopted Community Plan for North Torrey Pines Road between Genesee Avenue and Torrey Pines Scenic Drive is a 6-lane Major Arterial. The ultimate classification within the Adopted Community Plan for North Torrey Pines Road has been reached for all other roadway segments.

Nobel Drive functions as a two-way east-west, 4, 5 and 6-lane Arterial. Between Villa La Jolla Drive and I-5 NB Ramps, Nobel Drive is classified as a 4-lane Major Arterial with raised medians, bike lanes, no parking, and a curb to curb width of 80 feet. Nobel Drive between I-5 NB Ramps and Genesee Avenue is classified as a 6-lane Major Arterial with raised medians and a curb to curb width of 100 feet. Parallel Parking is available on both sides of the street between I-5 NB Ramps and Regents Road. Throughout the rest of the segments, Nobel drive has bike lanes on both sides of the street. The posted speed limit is 40 mph. Nobel Drive turns into a 4-lane Major Arterial between Genesee Avenue and Towne Centre Drive with raised medians, parallel parking available on the south side of the street between Lombard Place and Via Las Rambles, on the north side of the street between Genesee Ave and Lombard Place, on both sides of the street between Via Las Rambles and Towne Centre Drive; and a curb to curb width of 90 feet. The posted speed limit is 35 mph. Between Towne Centre Drive and Judicial Drive, Nobel Drive is classified as a 6-lane Prime Arterial with raised medians, bike lanes, no parking, and a curb to curb width of 100 feet. The posted speed limit is 45 mph. Between Judicial Drive and Avenue of Flags, Nobel Drive is classified as a 5-lane Major Arterial with raised medians, bike lanes, no parking and a curb to curb width of 100 feet. Nobel Drive from Avenue of Flags to Miramar Road is classified as a 4-lane Prime Arterial with raised medians, bike lanes, no parking, and a curb to curb width of 80 feet. Nobel Drive is lined with sidewalks and curbs on both sides of the street for the entire length of the street. Access to I-5 and I-805 is provided along Nobel Drive. The ultimate classification within the Adopted Community Plan for Nobel Drive has been reached for all segments except between Genesee Avenue and Towne Centre Drive; and between Judicial Drive and I-805 which have an ultimate classification of a 6-lane Prime Arterial. The City BMP proposes Nobel Drive as a Class II (Bike Lane) facility between Genesee Avenue and Towne Centre Drive.

Regents Road functions as a two-way north-south roadway that is divided by Rose Canyon. North of Rose Canyon between Genesee Avenue and Eastgate Mall, Regents Road is classified as a 2-lane Collector without a two-way left-turn lane, buffered bike lanes, no parking, and a curb to curb width of 40 feet. The posted speed limit is 35 mph. Between Eastgate Mall and La Jolla Village Drive, Regents Road is classified as a 4-lane Collector with a two-way left-turn lane, bike lanes, no parking, and a curb to curb width of 65 feet. Regents

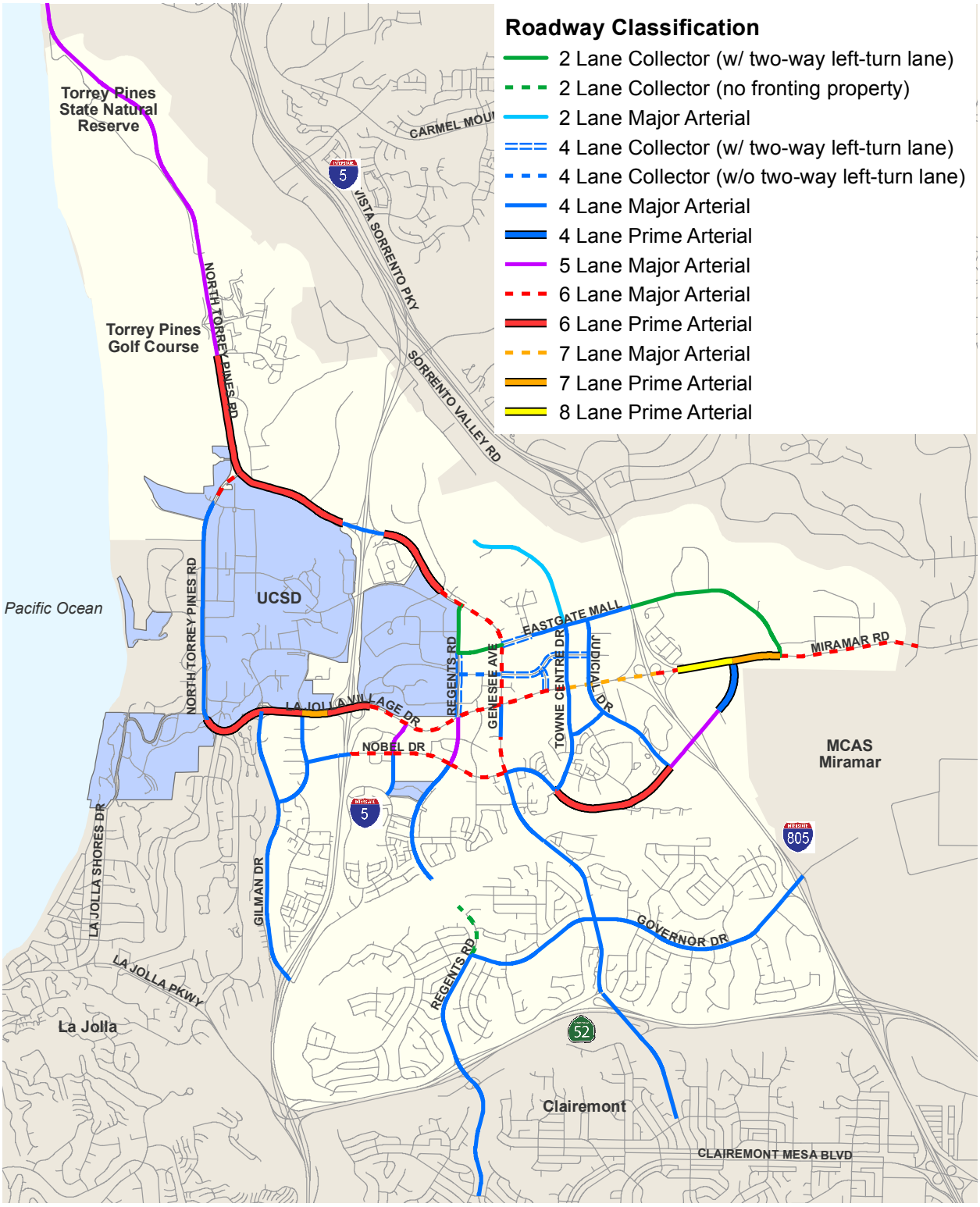
Road between La Jolla Village Drive and Nobel Drive is classified as a 5-lane Major Arterial with raised medians, parallel parking on both sides of the street south of Plaza de Palmas and a curb to curb width of 90 feet. South of Nobel Drive, Regents Road is classified as a 4-lane Major Arterial with raised medians, parallel parking on both sides of the street, and a curb to curb width of 70 feet. North of Rose Canyon, Regents Road is lined with sidewalks and curbs on both sides of the street for the entire length of the street. The posted speed limit is 40 mph. The City BMP proposes Regents Road as a Class II (Bike Lane) or a Class III (Bike Route) facility south of Nobel Drive. South of Rose Canyon and north of Governor Drive, Regents Road is classified as a 2-lane Collector with no fronting property, no parking and a curb to curb width of 30 feet. Between Governor Drive and Luna Avenue, Regents Road is classified as a 4-lane Major Arterial with raised medians, bike lanes, no parking, and a curb to curb width of 80 feet. Regents Road has buffered bike lanes between Pennant Way and Luna Avenue. South of Rose Canyon, Regents Road is lined with sidewalks and curbs on the east side of the street for the entire length of the street. The posted speed limit is 50 mph. Access to SR-52 is provided along Regents Road. The ultimate classification within the Adopted Community Plan for Regents Road is a 4-lane Major Arterial. The City BMP proposes Regents Road as a Class II (Bike Lane) or Class III (Bike Route) facility north of Governor Drive.

Torrey Pines Road functions as a two-way north-south, 4-lane Major Arterial with raised medians, bike lanes, and a curb to curb width of 60 feet. Torrey Pines Road is lined with sidewalks and curbs on both sides of the street for the entire length of the street. The ultimate classification within the La Jolla adopted Community Plan for Torrey Pines Road has been reached.

Towne Centre Drive functions as a two-way north-south, 4-lane Major Arterial with raised medians and a curb to curb width of 80 feet. Towne Centre Drive is lined with sidewalks and curbs on both sides of the street. Parallel parking available on both sides of the street for the majority of the street. Towne Centre Drive between Executive Drive and La Jolla Village Drive has bike lanes with no parking on both sides of the street. The posted speed limit is 40 mph. The ultimate classification within the Adopted Community Plan for Towne Centre Drive has been reached. The City BMP proposes Towne Centre Drive as a Class II (Bike Lane) or Class III (Bike Route) facility.

Villa La Jolla Drive functions as a two-way north-south roadway. South of La Jolla Village Drive, Villa La Jolla Drive is classified as a 4-lane Major Arterial with raised medians, parallel parking on both sides of the street, and a curb to curb width of 80 feet. Villa La Jolla Drive is lined with sidewalks and curbs on both sides of the street for the entire length of the street. The posted speed limit is 30 mph. The ultimate classification within the Adopted Community Plan for Villa La Jolla Drive has been reached.

FIGURE 7-1

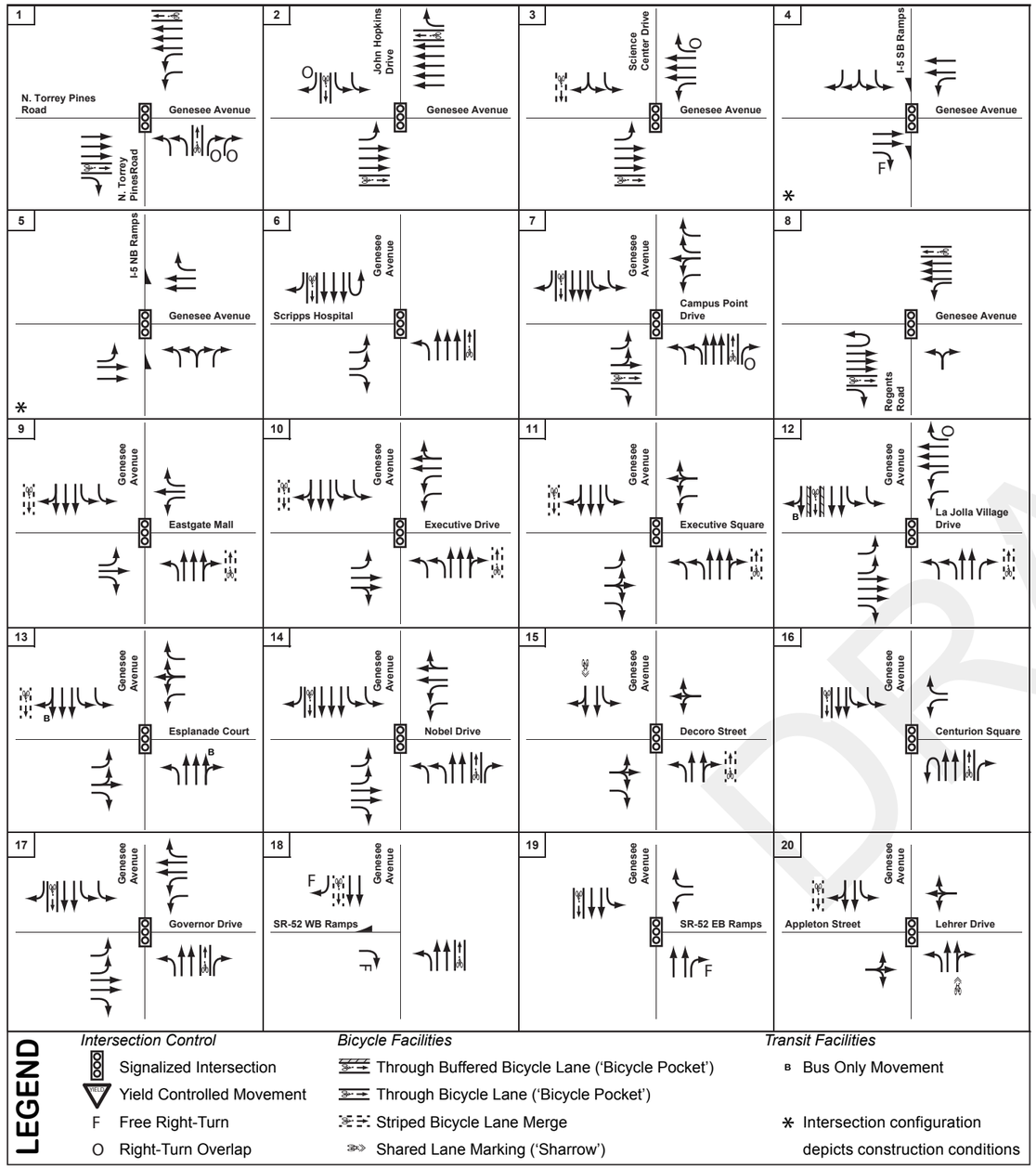


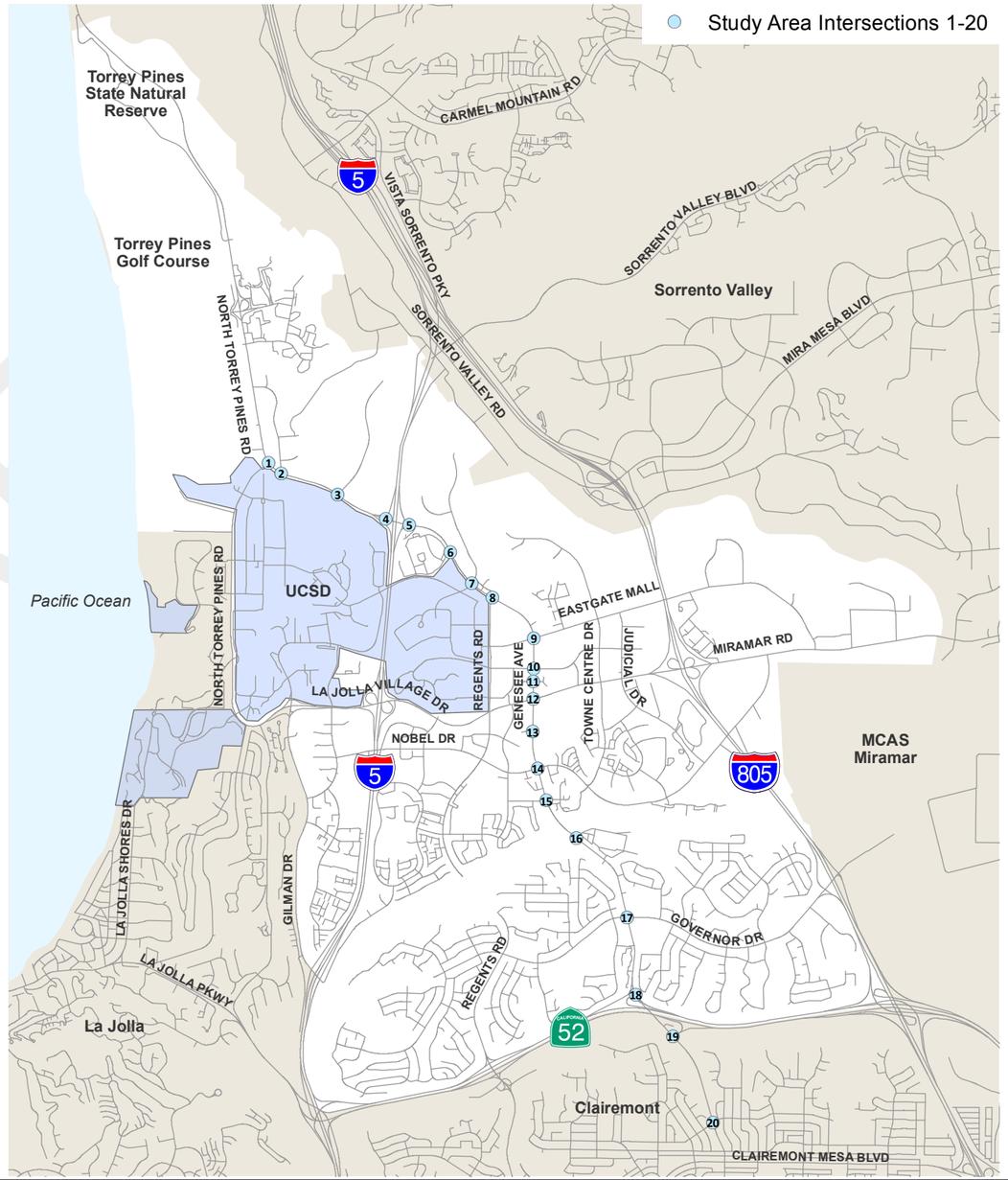
Existing Roadway Classifications

INTERSECTION GEOMETRY

Figure 7-2 through **Figure 7-5** illustrate the geometry at each intersection included in the study area as observed in the field in December 2017. These layouts were used in the existing conditions intersection analysis, except for the intersections of I-5 NB and SB Ramps with Genesee Avenue. Lane configurations at these intersections will be improved through on-going construction of the Caltrans I-5 Interchange project.

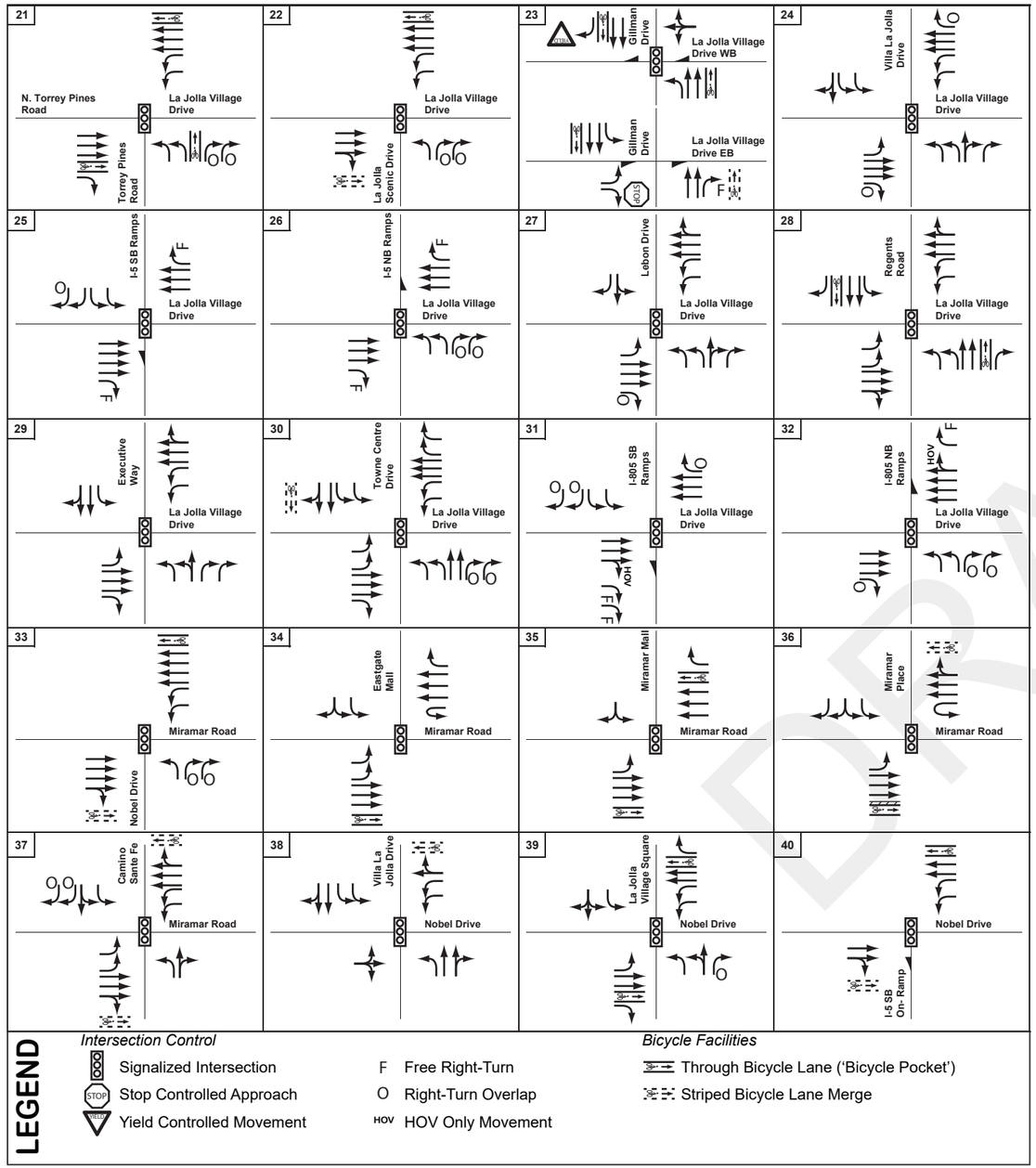
FIGURE 7-2

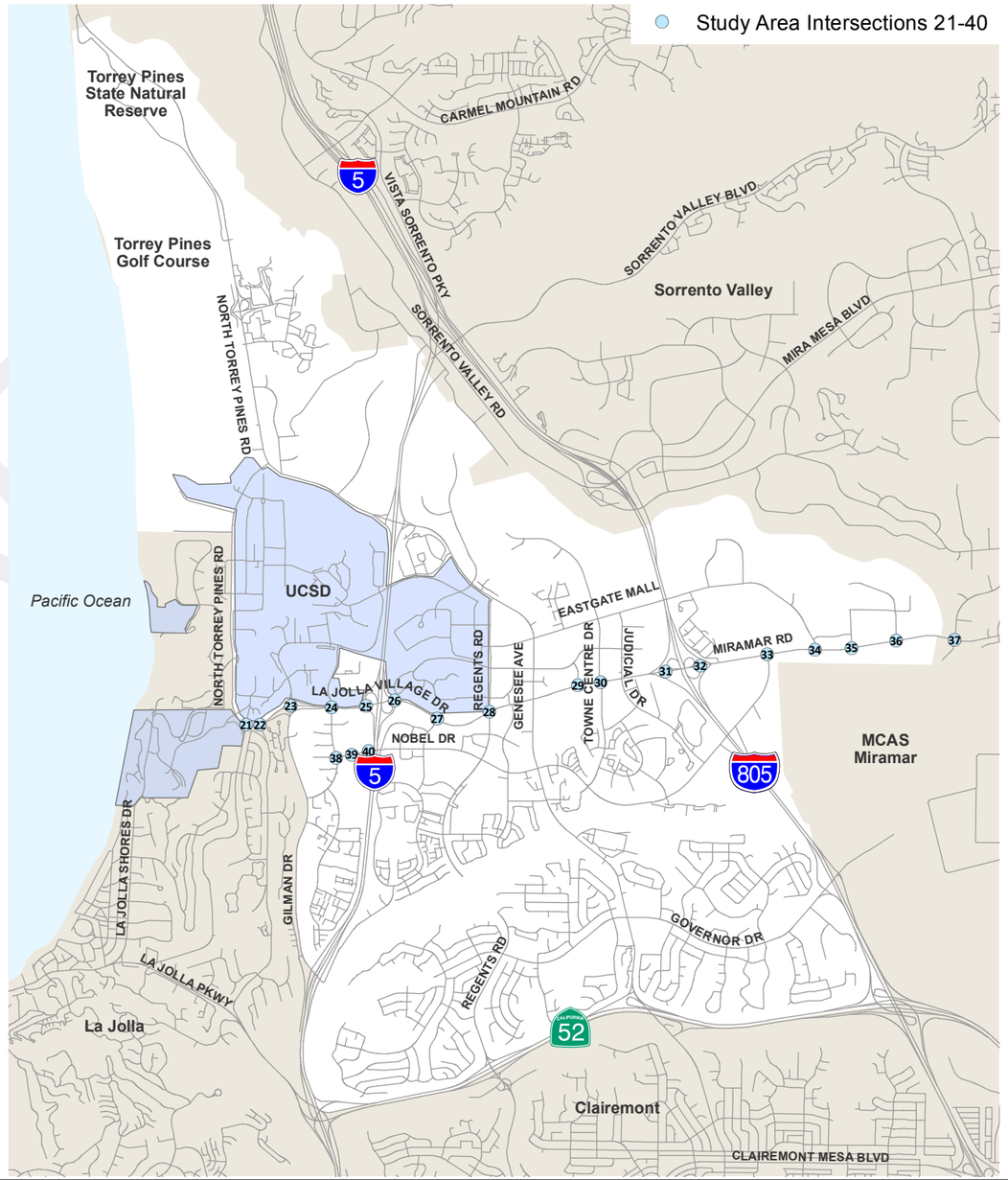




Existing Intersection Geometry
Intersections 1-20

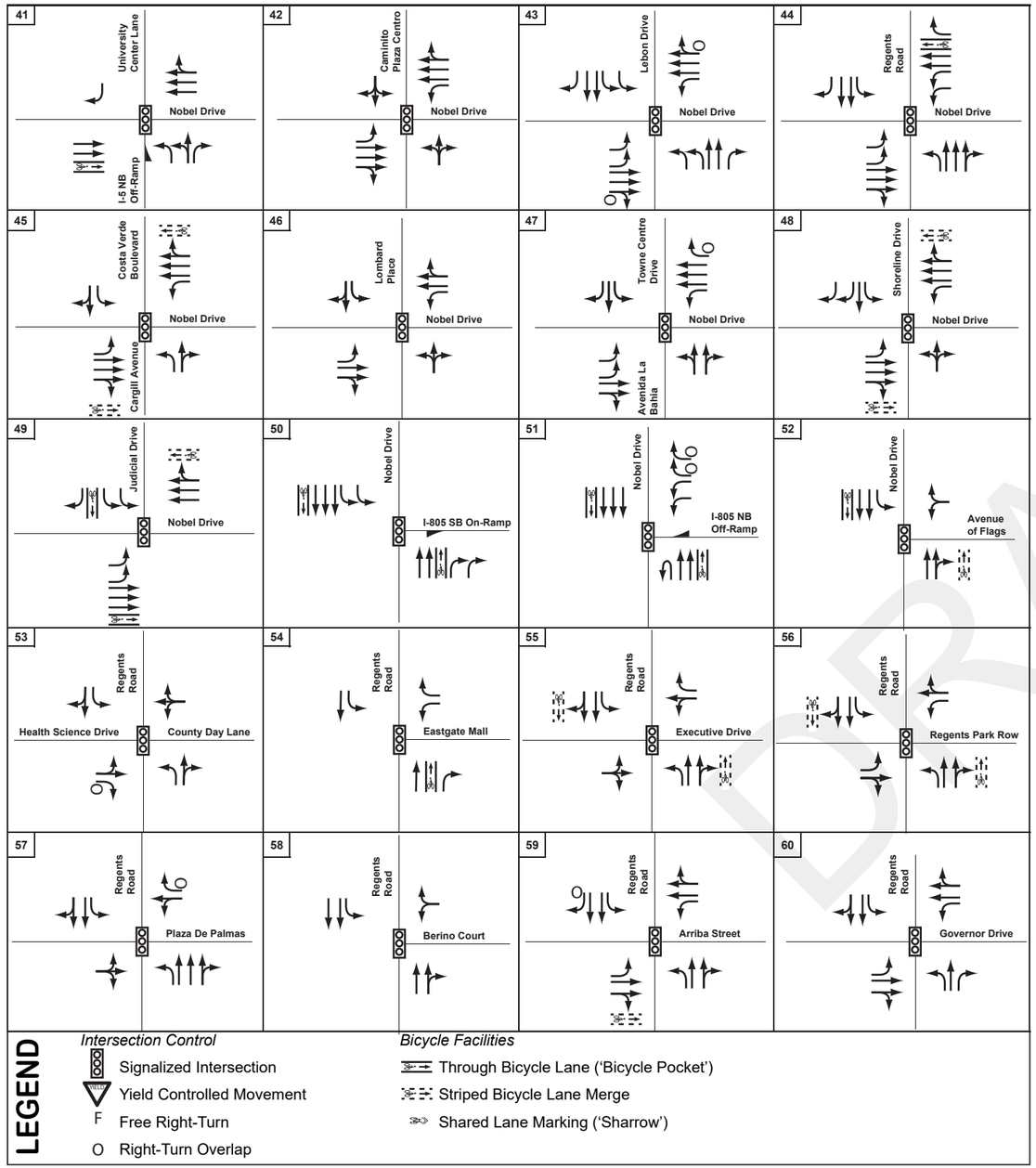
FIGURE 7-3

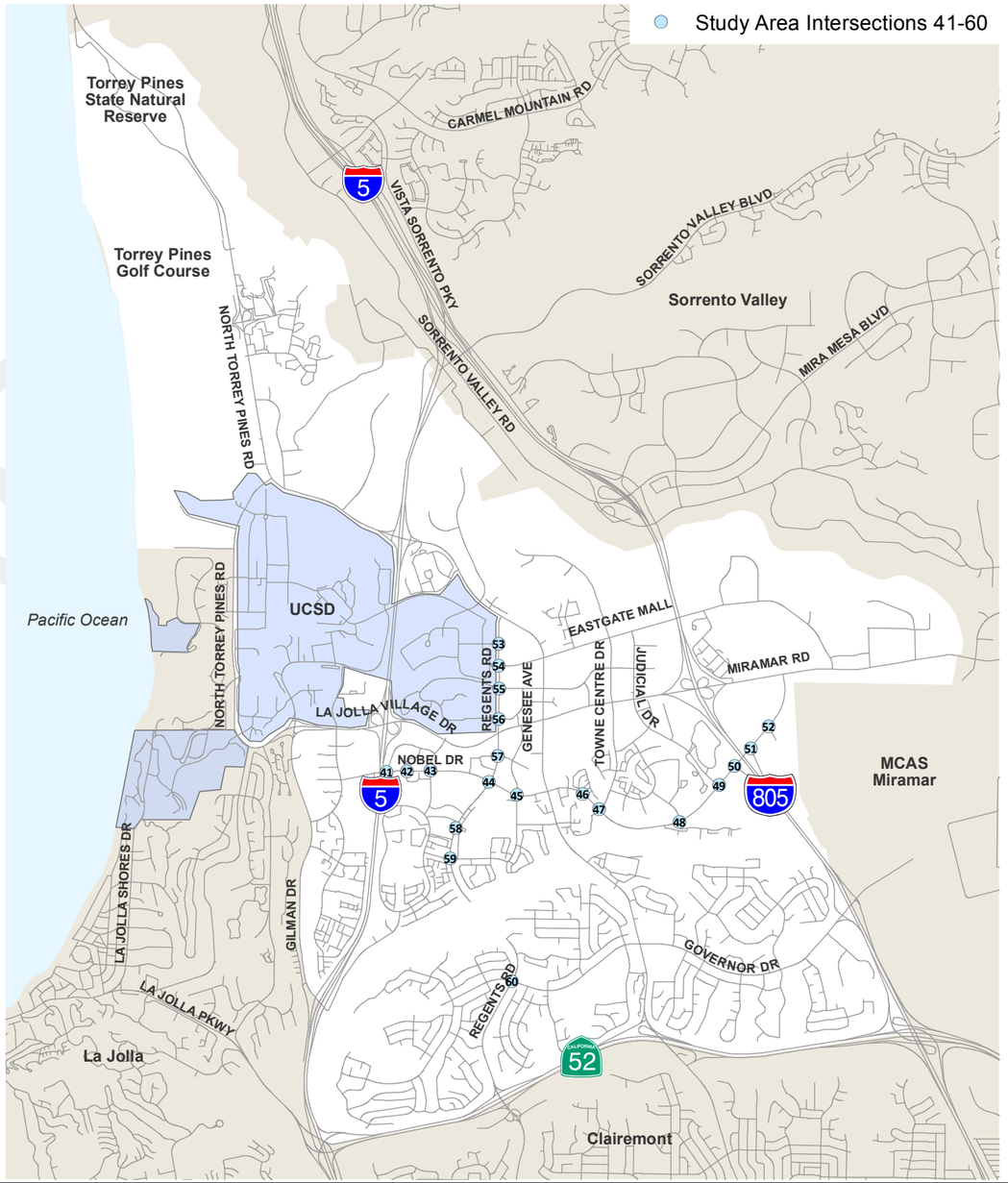




Existing Intersection Geometry
Intersections 21-40

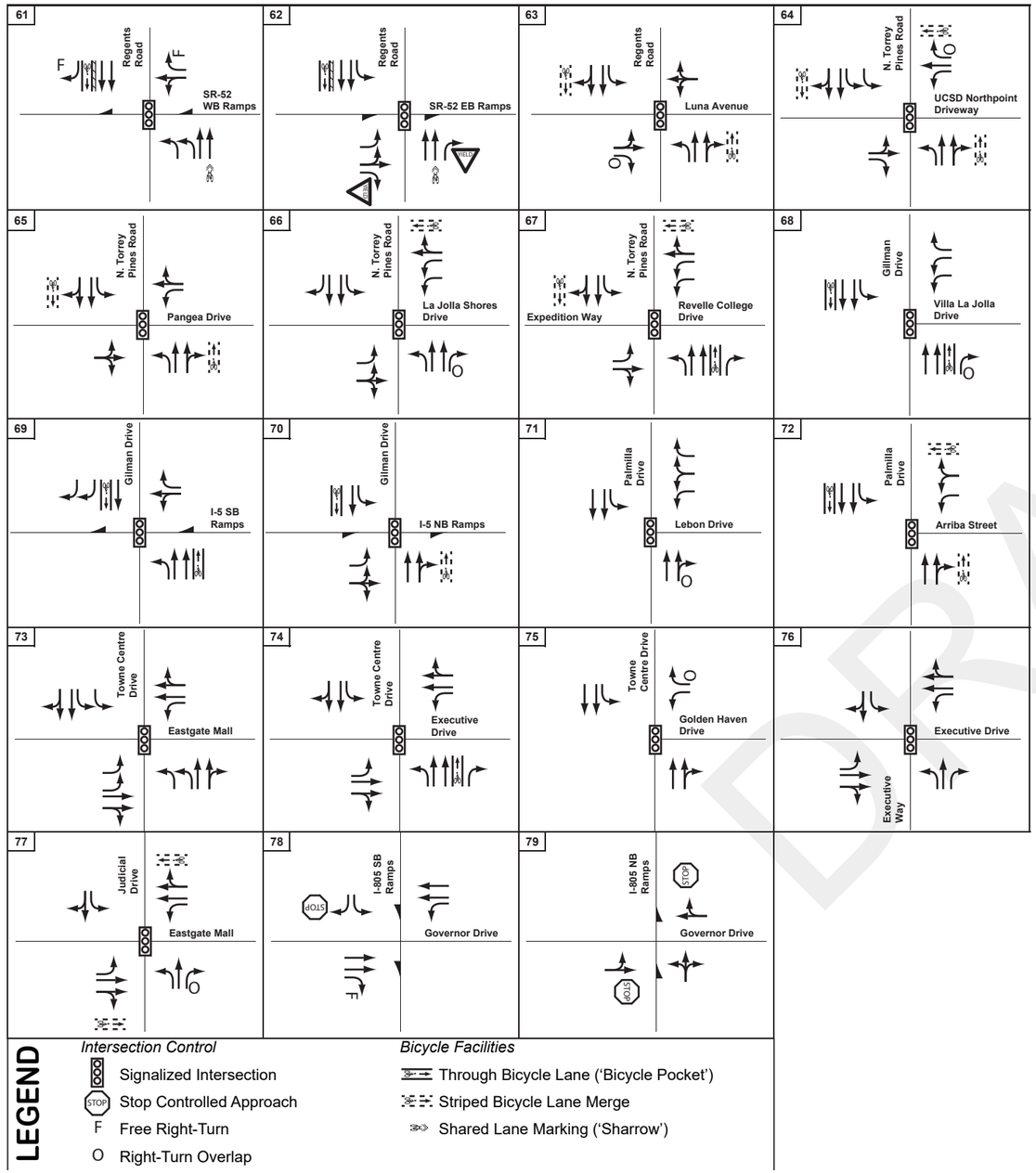
FIGURE 7-4

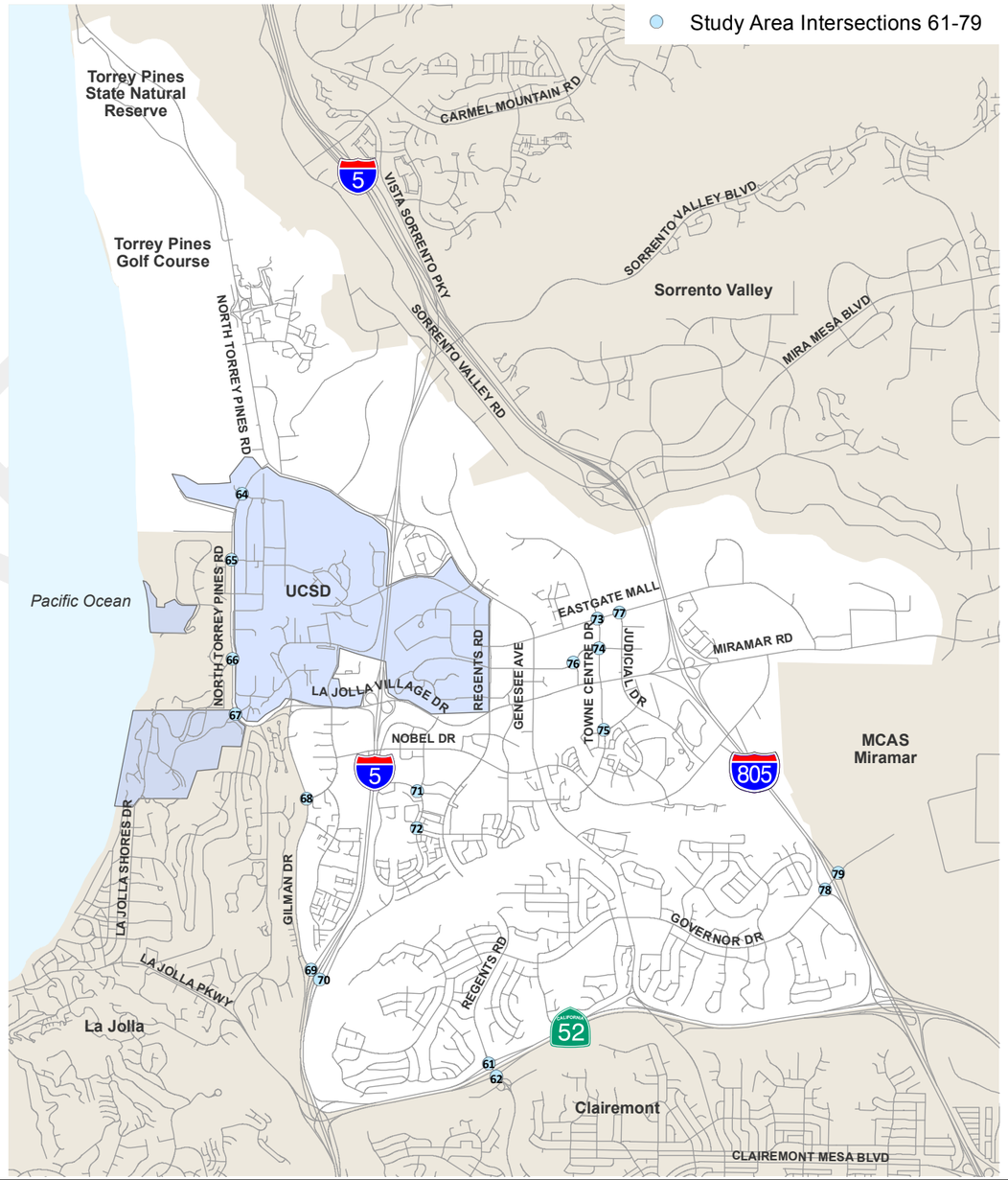




Existing Intersection Geometry
Intersections 41-60

FIGURE 7-5





Existing Intersection Geometry
Intersections 61-79

VEHIICULAR DEMAND

The peak-hour intersection turning movement and daily roadway volumes were counted in April and May 2015 by Accurate Video Counts. Counts were taken Tuesday through Thursday over a three-week period. These counts reflect typical weekday conditions when schools were in session. **Figure 7-6** through **Figure 7-9** present the AM and PM peak-hour traffic volumes for all study intersections that were used in the intersection analysis. **Figure 7-10** through **Figure 7-12** present the midday peak-hour traffic volumes for intersections along Genesee Avenue, La Jolla Village Drive, Nobel Drive and Regents Road that were used in the intersection analysis. **Appendix E** contains the existing traffic volume data and validation count memo for this report.

FIGURE 7-6

1

		949 / 240 ⇦
		443 / 494 ⇦
		Genesee Avenue
401 / 825 ⇨	N. Torrey Pines Road	
321 / 824 ⇨		
471 / 561 ⇧		
293 / 388 ⇧		

2

18 / 117 ⇦		
82 / 541 ⇦	John Hopkins Drive (S)	
		821 / 103 ⇦
		1371 / 616 ⇦
		1 / 0 ⇦
		Genesee Avenue
87 / 37 ⇨		
607 / 1176 ⇨		

3

15 / 70 ⇦		
27 / 281 ⇦	Science Center Drive	
		275 / 300 ⇦
		U 2177 / 629 ⇦
		3 / 11 ⇦
		Genesee Avenue
75 / 80 ⇨		
616 / 1637 ⇨		

4

712 / 338 ⇦		
0 / 3 ⇦		
971 / 850 ⇦	I-5 SB Ramps	
		1617 / 548 ⇦
		85 / 312 ⇦
		Genesee Avenue
419 / 1281 ⇨		
184 / 671 ⇨		

5

	I-5 NB Ramps	
		405 / 969 ⇦
		482 / 541 ⇦
		Genesee Avenue
188 / 854 ⇨		
1241 / 1277 ⇨		
1193 / 319 ⇧		
8 / 4 ⇧		
566 / 99 ⇧		

6

490 / 99 ⇦		
1458 / 1496 ⇦		
5 / 7 ⇦	Genesee Avenue	
U		
Scripps Hospital		
60 / 444 ⇨		
116 / 242 ⇨		
		208 / 85 ⇧
		824 / 1059 ⇧

7

469 / 139 ⇦		
700 / 1551 ⇦		
325 / 59 ⇦	Genesee Avenue	
		52 / 283 ⇦
		12 / 25 ⇦
		19 / 381 ⇦
		Campus Point Drive
152 / 323 ⇨		
13 / 9 ⇨		
96 / 339 ⇨		
		380 / 183 ⇧
		921 / 536 ⇧
		371 / 41 ⇧

8

		1277 / 638 ⇦
		94 / 36 ⇦
		Genesee Avenue
89 / 44 ⇨		
643 / 1574 ⇨		
99 / 649 ⇨	Regents Road	
190 / 103 ⇧		
77 / 59 ⇧		

9

96 / 60 ⇦		
371 / 889 ⇦		
206 / 482 ⇦	Genesee Avenue	
		411 / 194 ⇦
		285 / 239 ⇦
		64 / 206 ⇦
		Eastgate Mall
56 / 48 ⇨		
190 / 177 ⇨		
55 / 63 ⇨		
180 / 27 ⇧		
1110 / 423 ⇧		
249 / 101 ⇧		

10

23 / 45 ⇦		
346 / 1261 ⇦		
56 / 103 ⇦	Genesee Avenue	
		84 / 90 ⇦
		69 / 213 ⇦
		31 / 117 ⇦
		Executive Drive
21 / 21 ⇨		
113 / 105 ⇨		
22 / 66 ⇨		
61 / 72 ⇧		
1170 / 335 ⇧		
275 / 65 ⇧		

11

18 / 13 ⇦		
376 / 1435 ⇦		
12 / 6 ⇦	Genesee Avenue	
		9 / 15 ⇦
		4 / 10 ⇦
		9 / 127 ⇦
		Executive Square
13 / 29 ⇨		
3 / 2 ⇨		
36 / 172 ⇨		
		281 / 37 ⇧
		1483 / 425 ⇧
		208 / 12 ⇧

12

52 / 253 ⇦		
165 / 877 ⇦		
180 / 512 ⇦	Genesee Avenue	
		365 / 110 ⇦
		1550 / 1342 ⇦
		112 / 344 ⇦
		La Jolla Village Drive
368 / 114 ⇨		
1491 / 1122 ⇨		
79 / 197 ⇨		
170 / 233 ⇧		
1017 / 241 ⇧		
104 / 71 ⇧		

13

78 / 157 ⇦		
224 / 1031 ⇦		
96 / 288 ⇦	Genesee Avenue	
		108 / 243 ⇦
		14 / 39 ⇦
		57 / 181 ⇦
		Esplanade Court
98 / 148 ⇨		
8 / 31 ⇨		
30 / 74 ⇨		
50 / 73 ⇧		
1464 / 487 ⇧		
100 / 170 ⇧		

14

42 / 121 ⇦		
228 / 1230 ⇦		
55 / 113 ⇦	Genesee Avenue	
		45 / 65 ⇦
		263 / 554 ⇦
		79 / 277 ⇦
		Nobel Drive
106 / 202 ⇨		
466 / 323 ⇨		
86 / 204 ⇨		
156 / 191 ⇧		
1424 / 453 ⇧		
163 / 118 ⇧		

15

41 / 49 ⇦		
521 / 1851 ⇦		
8 / 16 ⇦	Genesee Avenue	
		22 / 15 ⇦
		24 / 38 ⇦
		55 / 245 ⇦
		Decoro Street
24 / 21 ⇨		
28 / 25 ⇨		
173 / 208 ⇨		
149 / 179 ⇧		
1702 / 724 ⇧		
121 / 29 ⇧		

16

578 / 2266 ⇦		
169 / 41 ⇦	Genesee Avenue	
		212 / 22 ⇦
		300 / 85 ⇦
		Centurion Square
		U ⇧
0 / 1 ⇧		
1752 / 901 ⇧		
278 / 46 ⇧		

17

256 / 464 ⇦		
499 / 1376 ⇦		
181 / 402 ⇦	Genesee Avenue	
		249 / 114 ⇦
		236 / 334 ⇦
		247 / 314 ⇦
		Governor Drive
455 / 195 ⇨		
306 / 279 ⇨		
142 / 118 ⇨		
71 / 189 ⇧		
1349 / 511 ⇧		
223 / 250 ⇧		

18

113 / 338 ⇦		
887 / 1558 ⇦	Genesee Avenue	
		852 / 351 ⇦
SR-52 WB Ramps		
131 / 422 ⇨		
420 / 331 ⇧		
942 / 455 ⇧		

19

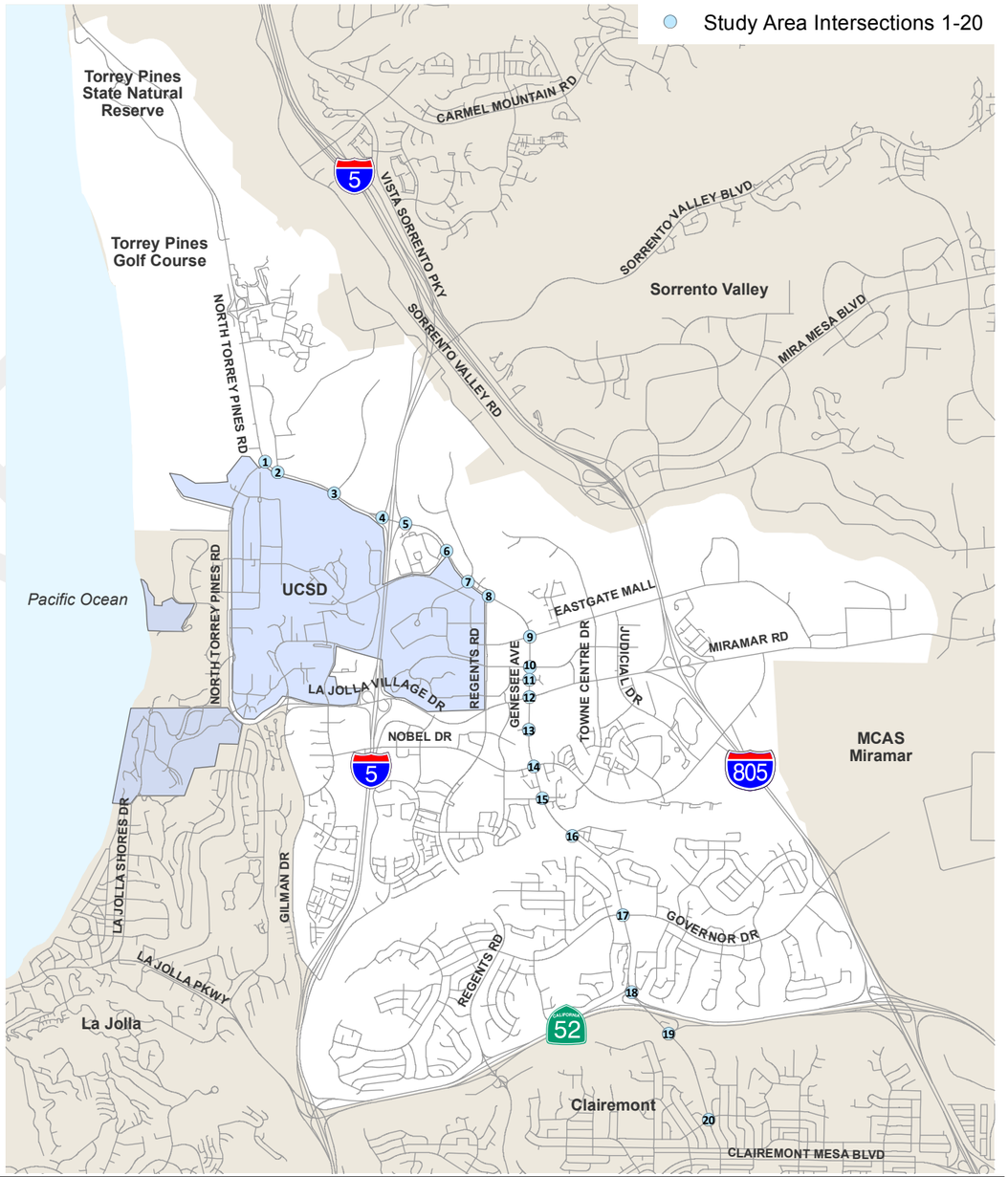
581 / 1220 ⇦		
437 / 760 ⇦	Genesee Avenue	
		170 / 225 ⇦
		132 / 352 ⇦
		SR-52 EB Ramps
1187 / 561 ⇧		
721 / 300 ⇧		

20

75 / 247 ⇦		
592 / 1180 ⇦		
46 / 144 ⇦	Genesee Avenue	
		276 / 63 ⇦
		37 / 37 ⇦
		33 / 26 ⇦
		Appleton Street
Lehrer Drive		
390 / 180 ⇨		
18 / 85 ⇨		
45 / 44 ⇨		
12 / 52 ⇧		
1242 / 614 ⇧		
8 / 17 ⇧		

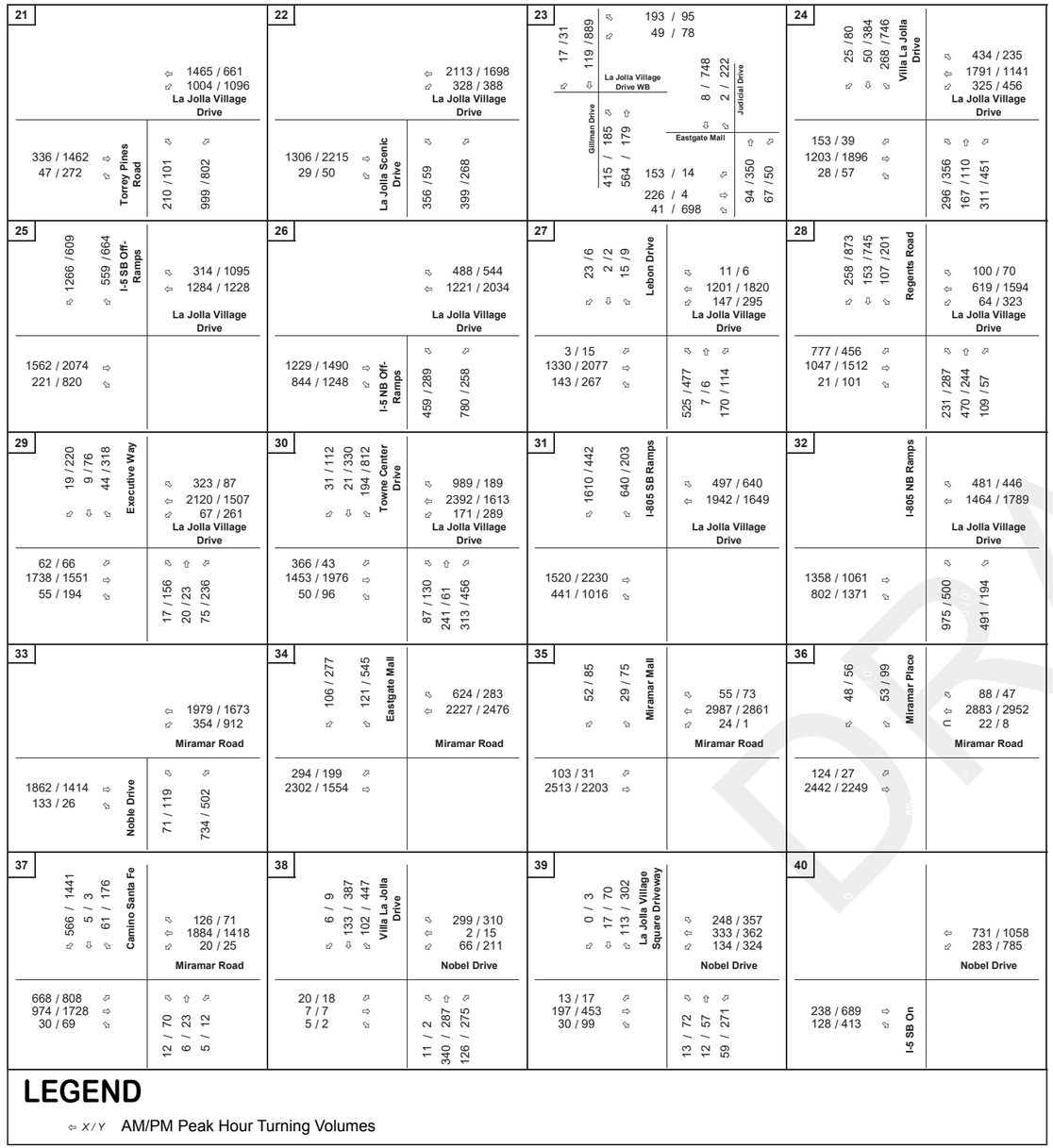
LEGEND

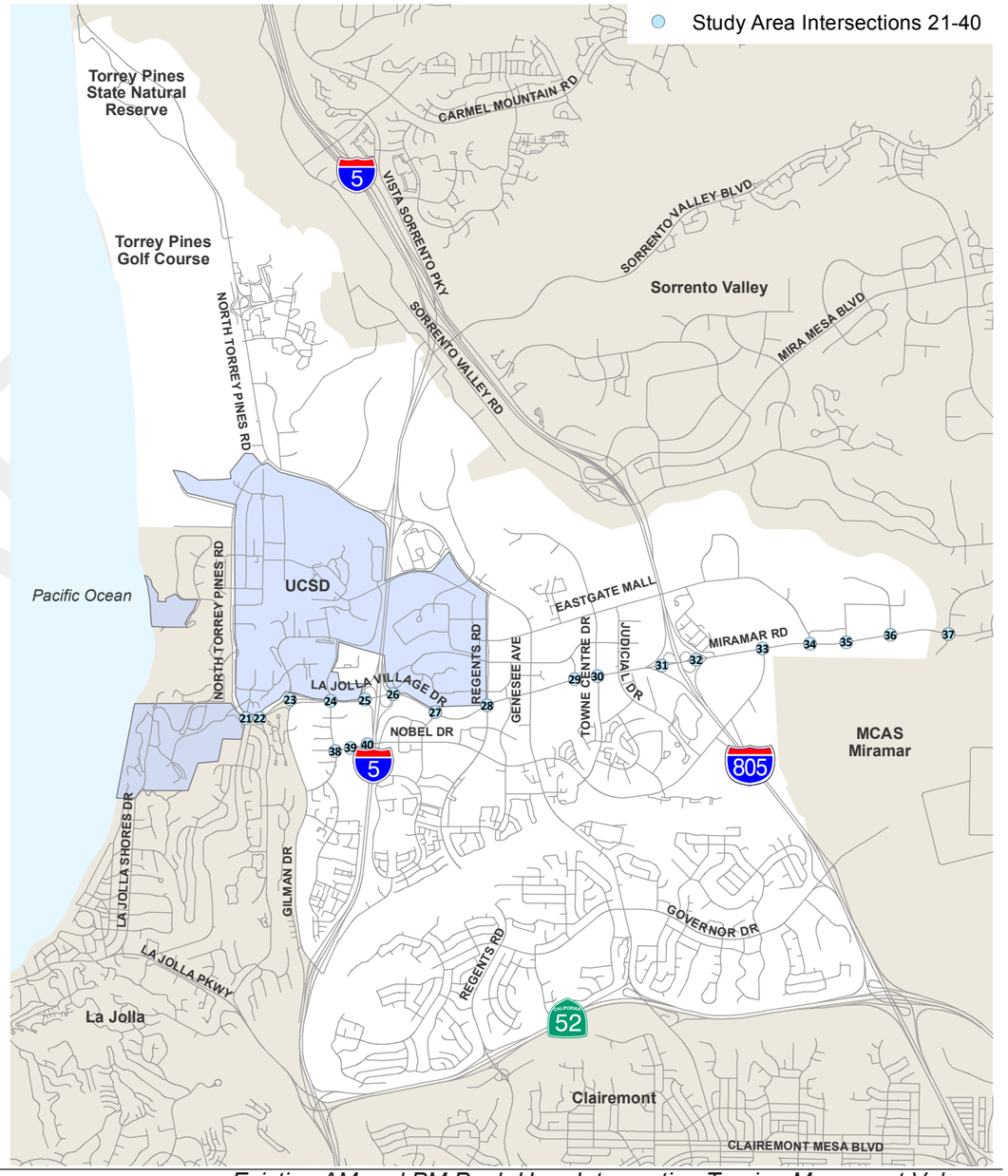
⇦ X / Y AM/PM Peak Hour Turning Volumes



Existing AM and PM Peak-Hour Intersection Turning Movement Volumes Intersections 1-20

FIGURE 7-7





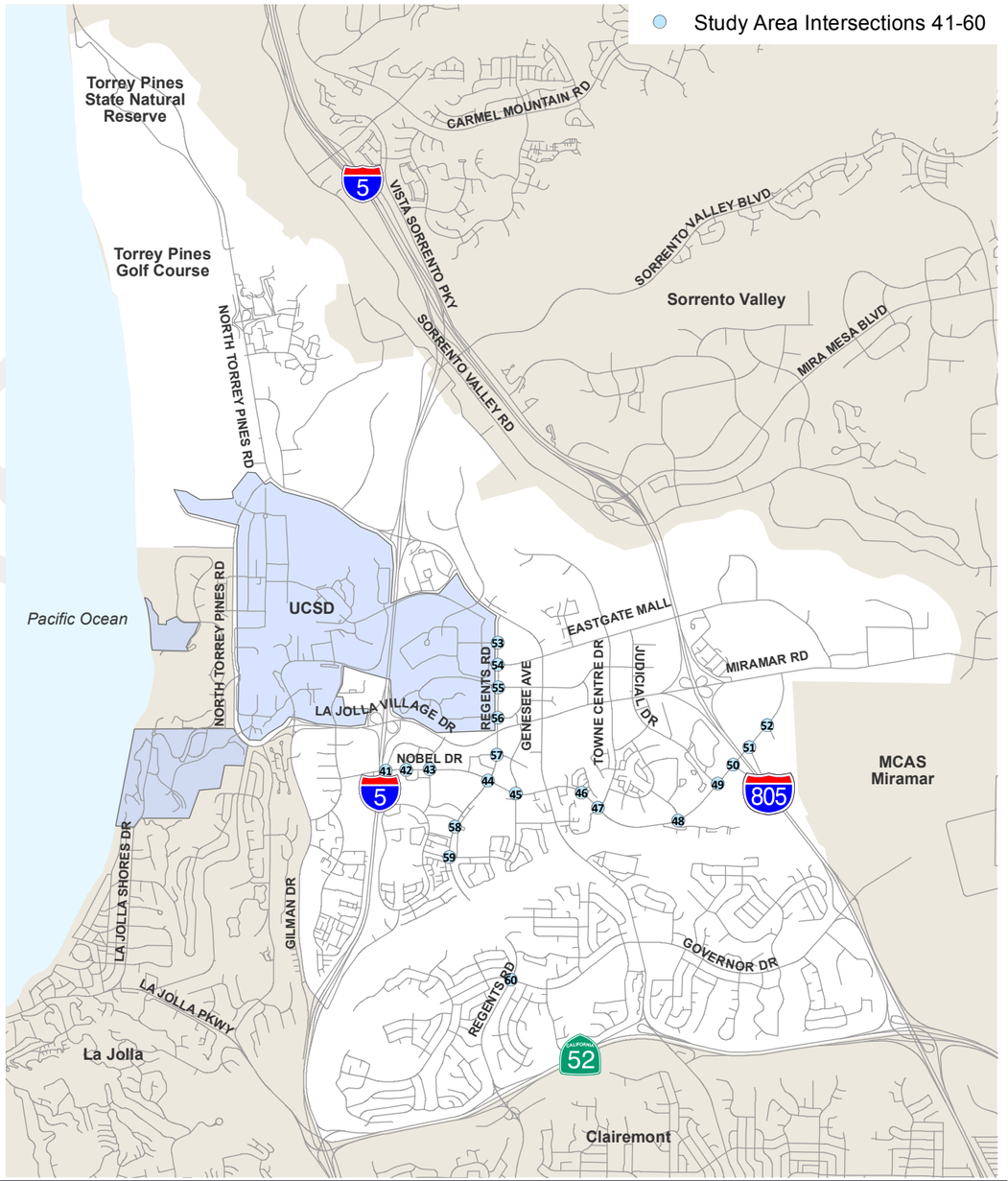
Existing AM and PM Peak-Hour Intersection Turning Movement Volumes Intersections 21-40

FIGURE 7-8

41 83 / 253 ⇦ University Center Lane/I-5 NB Off ⇨ 0 / 2 242 / 723 ⇩ 19 / 10 ⇦ 654 / 1284 ⇧ Nobel Drive 277 / 306 ⇦ 159 / 50 ⇧ 338 / 270 ⇨	**42** 36 / 41 ⇨ 4 / 2 ⇩ 3 / 7 ⇦ Caminito Plaza Centro 41 / 64 523 / 942 70 / 35 ⇧ 15 / 32 ⇦ 567 / 1123 ⇧ 46 / 20 ⇨ Nobel Drive 31 / 68 ⇦ 1 / 7 ⇧ 15 / 56 ⇨	**43** 53 / 173 ⇨ 74 / 259 ⇩ 43 / 111 ⇦ Lebon Drive 38 / 73 444 / 627 50 / 127 ⇧ 102 / 69 ⇦ 424 / 732 ⇧ 66 / 127 ⇨ Nobel Drive 144 / 115 ⇦ 287 / 159 ⇧ 96 / 65 ⇨	**44** 44 / 237 ⇨ 195 / 478 ⇩ 58 / 259 ⇦ Regents Road 167 / 166 429 / 631 42 / 66 ⇧ 125 / 82 ⇦ 348 / 762 ⇧ 145 / 203 ⇨ Nobel Drive 77 / 76 ⇦ 275 / 120 ⇧ 166 / 102 ⇨
45 77 / 105 ⇨ 29 / 53 ⇩ 81 / 107 ⇦ Costa Verde Boulevard/Cargill Ave 121 / 179 433 / 609 21 / 65 ⇧ 80 / 85 ⇦ 455 / 691 ⇧ 39 / 103 ⇨ Nobel Drive 54 / 59 ⇦ 45 / 44 ⇧ 38 / 56 ⇨	**46** 25 / 190 ⇨ 41 / 65 ⇦ Lombard Place 55 / 202 752 / 492 14 / 29 ⇧ 25 / 77 ⇦ 464 / 1142 ⇧ 7 / 21 ⇨ Nobel Drive 32 / 21 ⇦ 0 / 5 ⇧ 18 / 7 ⇨	**47** 185 / 544 ⇦ 31 / 213 ⇩ 21 / 68 ⇦ Towne Center Drive 331 / 295 500 / 304 11 / 23 ⇧ 76 / 55 ⇦ 190 / 704 ⇧ 7 / 150 ⇨ Nobel Drive 18 / 20 ⇦ 126 / 30 ⇧ 87 / 17 ⇨	**48** 23 / 38 ⇨ 1 / 7 ⇩ 144 / 68 ⇦ Shoreline Drive 9 / 56 619 / 277 6 / 32 ⇧ 44 / 205 ⇦ 202 / 811 ⇧ 7 / 37 ⇨ Nobel Drive 29 / 15 ⇦ 6 / 5 ⇧ 56 / 10 ⇨
49 28 / 223 ⇦ 206 / 471 ⇦ Judicial Drive 195 / 47 625 / 309 ⇩ 814 / 218 ⇦ 220 / 829 ⇧ Nobel Drive	**50** 988 / 974 ⇩ 157 / 286 ⇦ Nobel Drive ⇧ I-805 SB On-Ramp 313 / 369 ⇧ 523 / 385 ⇨	**51** 418 / 708 ⇩ Nobel Drive ⇧ 666 / 436 ⇦ 727 / 552 ⇧ I-805 N Off-Ramp 313 / 369 ⇧	**52** 503 / 741 ⇩ 2 / 7 ⇦ Nobel Drive ⇧ 1 / 4 ⇦ 1 / 5 ⇧ Avenue of Flags 941 / 901 ⇧ 5 / 3 ⇨
53 111 / 19 ⇨ 91 / 666 ⇩ 16 / 6 ⇦ Regents Road Health Science Drive 20 / 51 0 / 2 62 / 311 ⇧ 2 / 3 ⇦ 2 / 5 ⇧ County Day Ln 656 / 190 ⇦ 251 / 108 ⇧ 32 / 10 ⇨	**54** 145 / 872 ⇩ 47 / 132 ⇦ Regents Road ⇧ 231 / 53 ⇦ 157 / 263 ⇧ Eastgate Mall 651 / 260 ⇧ 208 / 87 ⇨	**55** 251 / 1068 ⇩ 25 / 46 ⇦ 0 / 4 ⊂ Regents Road 1 / 17 2 / 8 5 / 11 ⇧ 47 / 54 ⇦ 1 / 13 ⇧ 27 / 230 ⇨ Executive Drive 4 / 6 U ⇧ 804 / 298 ⇧ 101 / 65 ⇨	**56** 29 / 26 ⇨ 235 / 1297 ⇩ 44 / 30 ⇦ 0 / 4 U Regents Road 52 / 15 6 / 3 163 / 174 ⇧ 70 / 41 ⇦ 17 / 4 ⇧ 74 / 134 ⇨ Miramar Street Regents Park Row 174 / 125 ⇦ 776 / 378 ⇧ 228 / 82 ⇨
57 10 / 76 ⇨ 180 / ### ⇩ 16 / 78 ⇦ Regents Road 62 / 27 8 / 13 20 / 9 ⇧ 134 / 59 ⇦ 7 / 13 ⇧ 28 / 31 ⇨ Plaza De Palmas 20 / 29 ⇦ 652 / 271 ⇧ 17 / 5 ⇨	**58** 181 / 551 ⇦ 163 / 54 ⇦ 81 / 95 ⇦ Regents Road ⇧ 89 / 14 ⇦ 74 / 29 ⇧ Berino Court U 0 / 1 ⇧ 243 / 185 ⇧ 123 / 27 ⇨	**59** 79 / 303 ⇨ 6 / 39 ⇩ 95 / 164 ⇦ 90 / 78 ⊂ Regents Road 134 / 62 89 / 141 8 / 17 ⇧ 106 / 34 ⇦ 131 / 125 ⇧ 4 / 12 ⇨ Arriba Street 6 / 15 ⇦ 15 / 15 ⇧ 15 / 21 ⇨	**60** 15 / 2 ⇨ 43 / 36 ⇩ 37 / 18 ⇦ Regents Road 12 / 12 183 / 150 43 / 34 ⇧ 6 / 7 ⇦ 150 / 227 ⇧ 329 / 390 ⇨ Governor Drive 41 / 54 ⇦ 75 / 81 ⇧ 323 / 349 ⇨

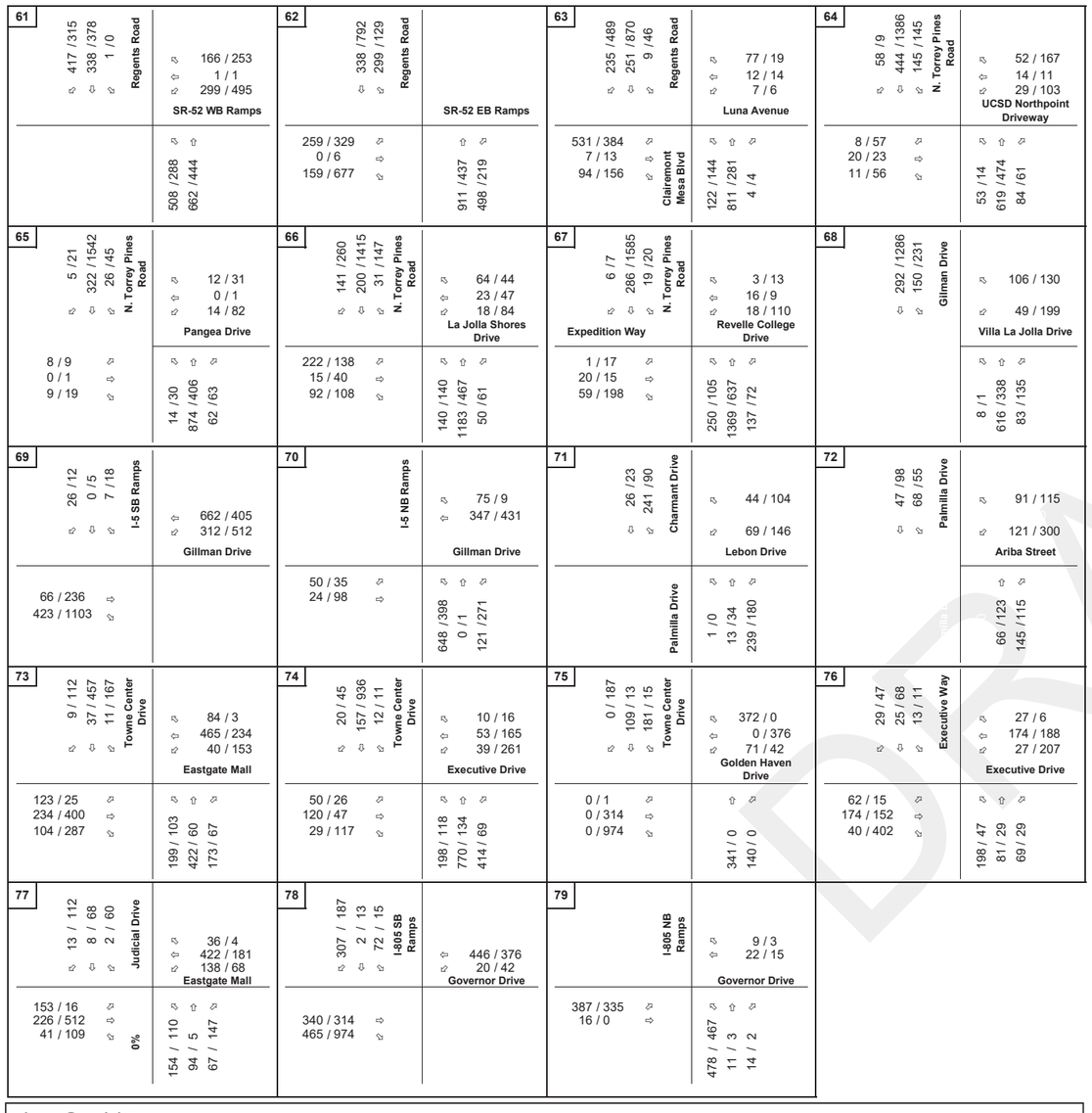
LEGEND

⇦ X / Y AM/PM Peak Hour Turning Volumes



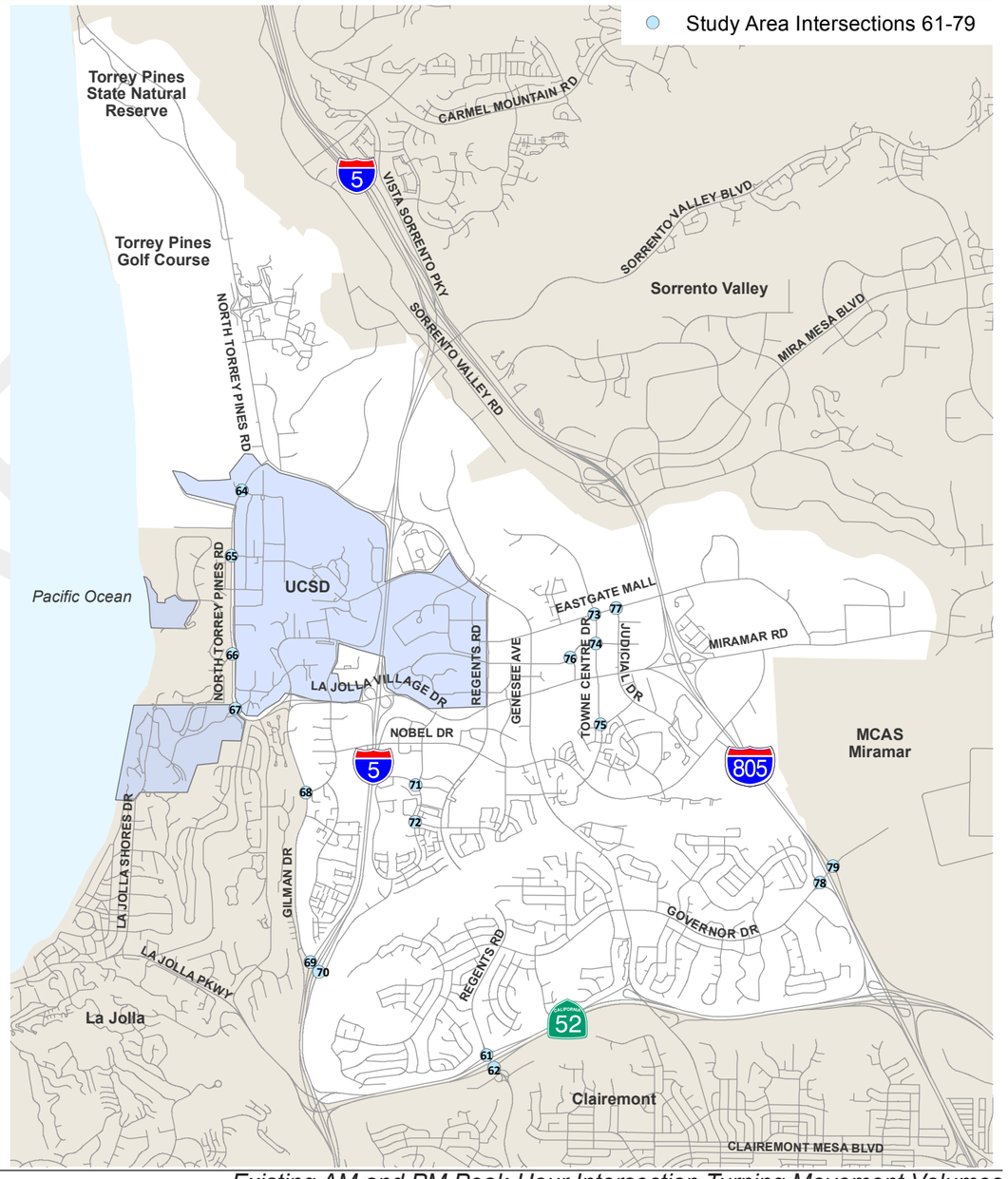
Existing AM and PM Peak-Hour Intersection Turning Movement Volumes Intersections 41-60

FIGURE 7-9



LEGEND

⇦ X / Y AM/PM Peak Hour Turning Volumes



Existing AM and PM Peak-Hour Intersection Turning Movement Volumes Intersections 61-79

FIGURE 7-10

1

		⇧ 1100 ⇦ 386 Genesee Avenue
130 285 N. Torrey Pines Road		
	235 267	

2

39 286 John Hopkins Drive (S)		⇗ 240 ⇧ 1408 Genesee Avenue
108 354		

3

13 31 Science Center Drive		⇗ 255 ⇧ 1657 ⊓ 7 Genesee Avenue
50 574		

4

522 698 I-5 SB Ramps		⇧ 1174 ⇦ 145 Genesee Avenue
436 249		

5

	I-5 NB Ramps	⇗ 887 ⇧ 1052 Genesee Avenue
800 231		
	418	286

6

302 912 28 Genesee Avenue		
Scripps Hospital		
434 217		
	114	867

7

322 669 112 Genesee Avenue		⇗ 126 ⇧ 20 ⇦ 115 Campus Point Drive
283 10 211		
	254	665 162

8

		⇧ 1226 ⇦ 50 Genesee Avenue
37 878 96 Regents Road		
	154	26

9

123 691 40 Genesee Avenue		⇗ 27 ⇧ 106 ⇦ 18 Eastgate Mall
112 103 215		
	224 668	13

10

30 734 79 Genesee Avenue		⇗ 99 ⇧ 89 ⇦ 118 Executive Drive
26 76 48		
	37 770	126

11

19 882 14 Genesee Avenue		⇗ 16 ⇧ 3 ⇦ 223 Executive Square
17 3 98		
	77 914	117

12

198 462 546 Genesee Avenue		⇗ 315 ⇧ 618 ⇦ 336 La Jolla Village Drive
218 382 191		
	195 564	212

13

146 426 251 Genesee Avenue		⇗ 200 ⇧ 30 ⇦ 133 Esplanade Court
179 21 67		
	51 525	147

14

112 698 137 Genesee Avenue		⇗ 66 ⇧ 435 ⇦ 118 Nobel Drive
206 362 138		
	211 488	120

15

16 884 95 Genesee Avenue		⇗ 122 ⇧ 5 ⇦ 17 Decoro Street
15 6 8		
	21 708	44

16

820 63 Genesee Avenue		⇗ 26 ⇦ 85 Centurion Square
		721 63

17

117 438 234 Genesee Avenue		⇗ 141 ⇧ 219 ⇦ 224 Governor Drive
152 250 96		
	117 427	170

18

181 556 Genesee Avenue		⇗ 220
SR-52 WB Ramps		
209		
	178 591	

19

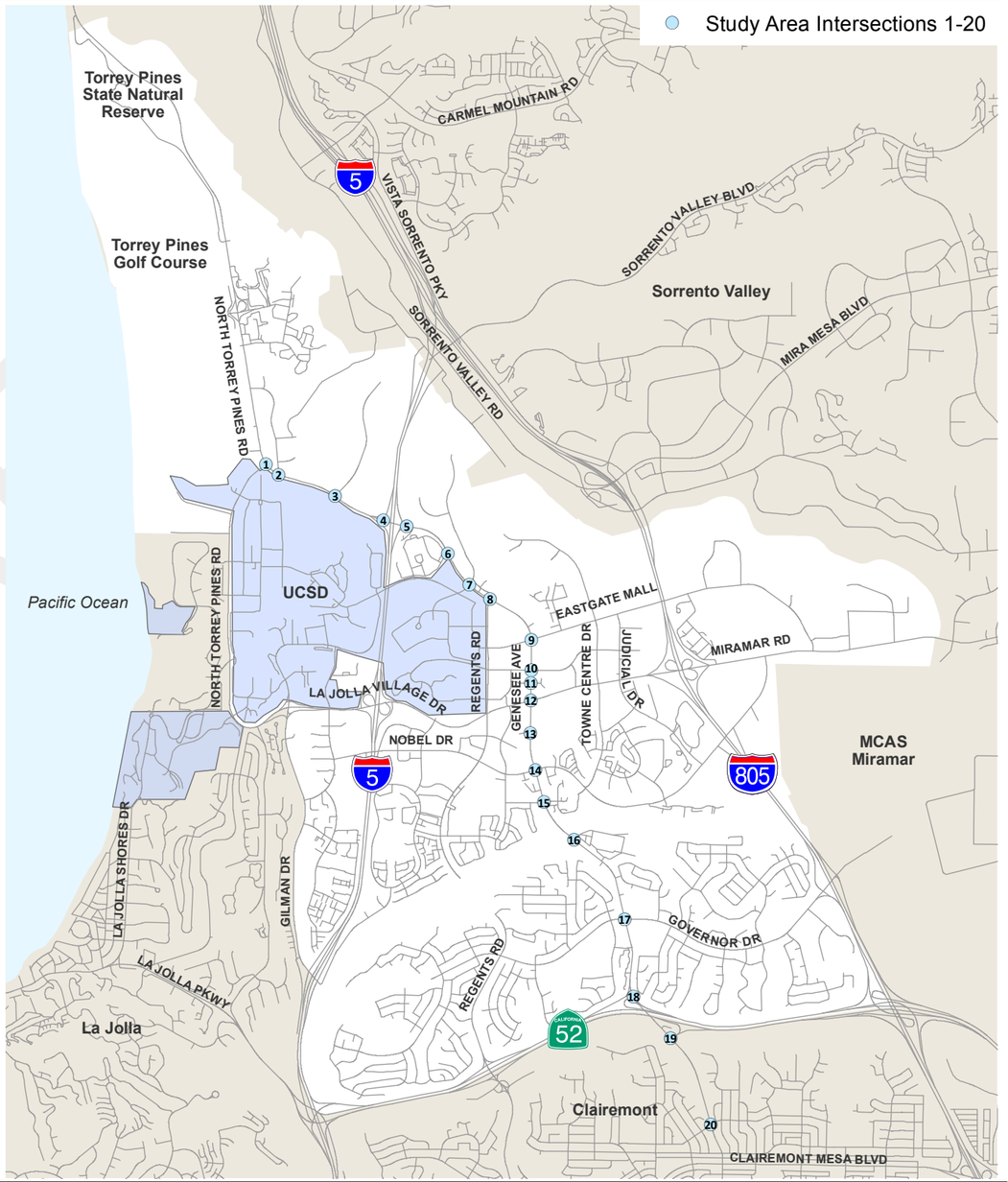
226 539 Genesee Avenue		⇗ 169 ⇦ 186 SR-52 EB Ramps
	600 309	

20

95 583 49 Genesee Avenue		⇗ 100 ⇧ 26 ⇦ 18 Appleton Street
Lehrer Drive		
206 37 34		
	21 603	15

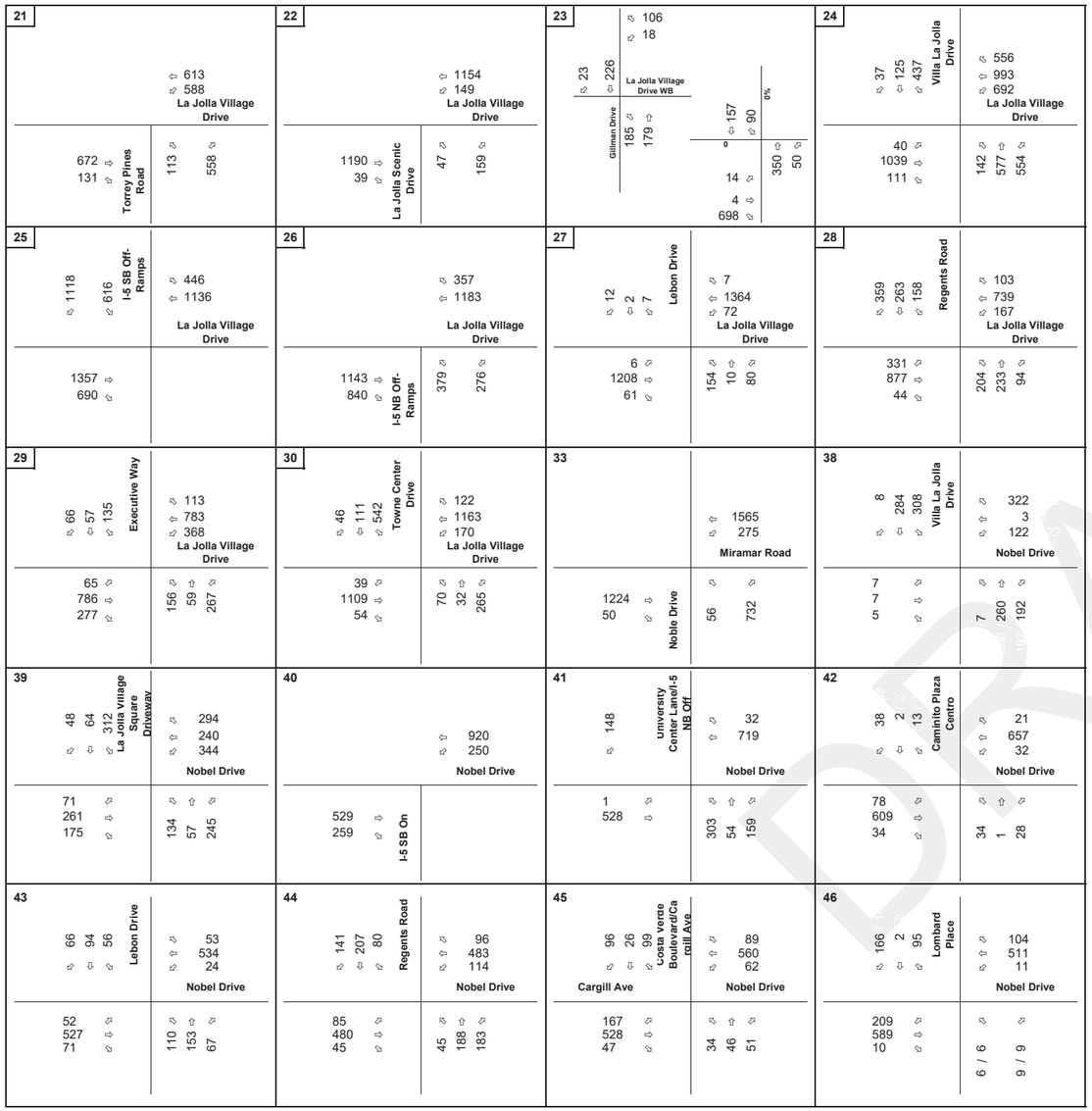
LEGEND

⇦ X / Y Midday Peak Hour Turning Volumes



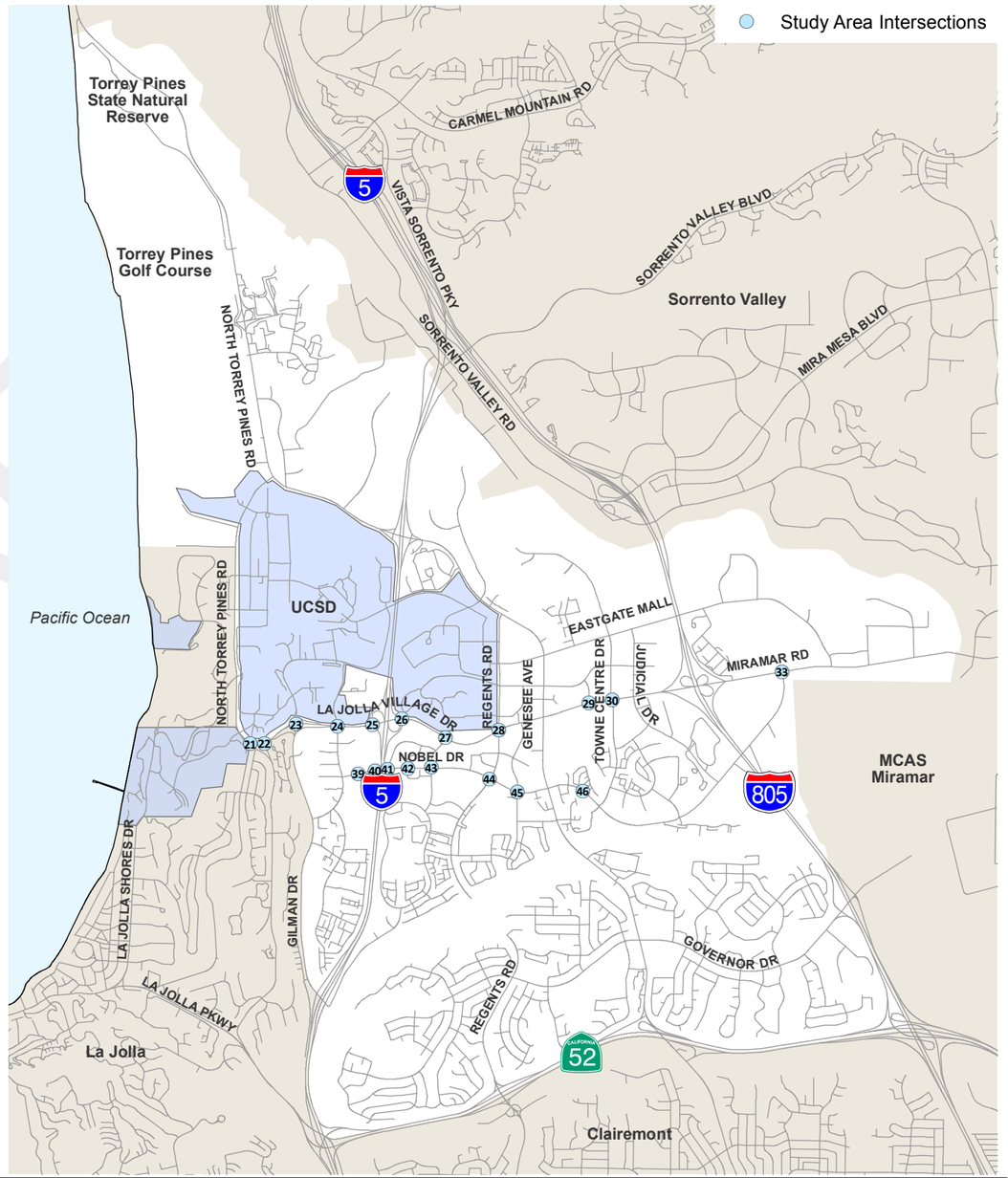
Existing Midday Peak-Hour Intersection Turning Movement Volumes Intersections 1-20

FIGURE 7-11



LEGEND

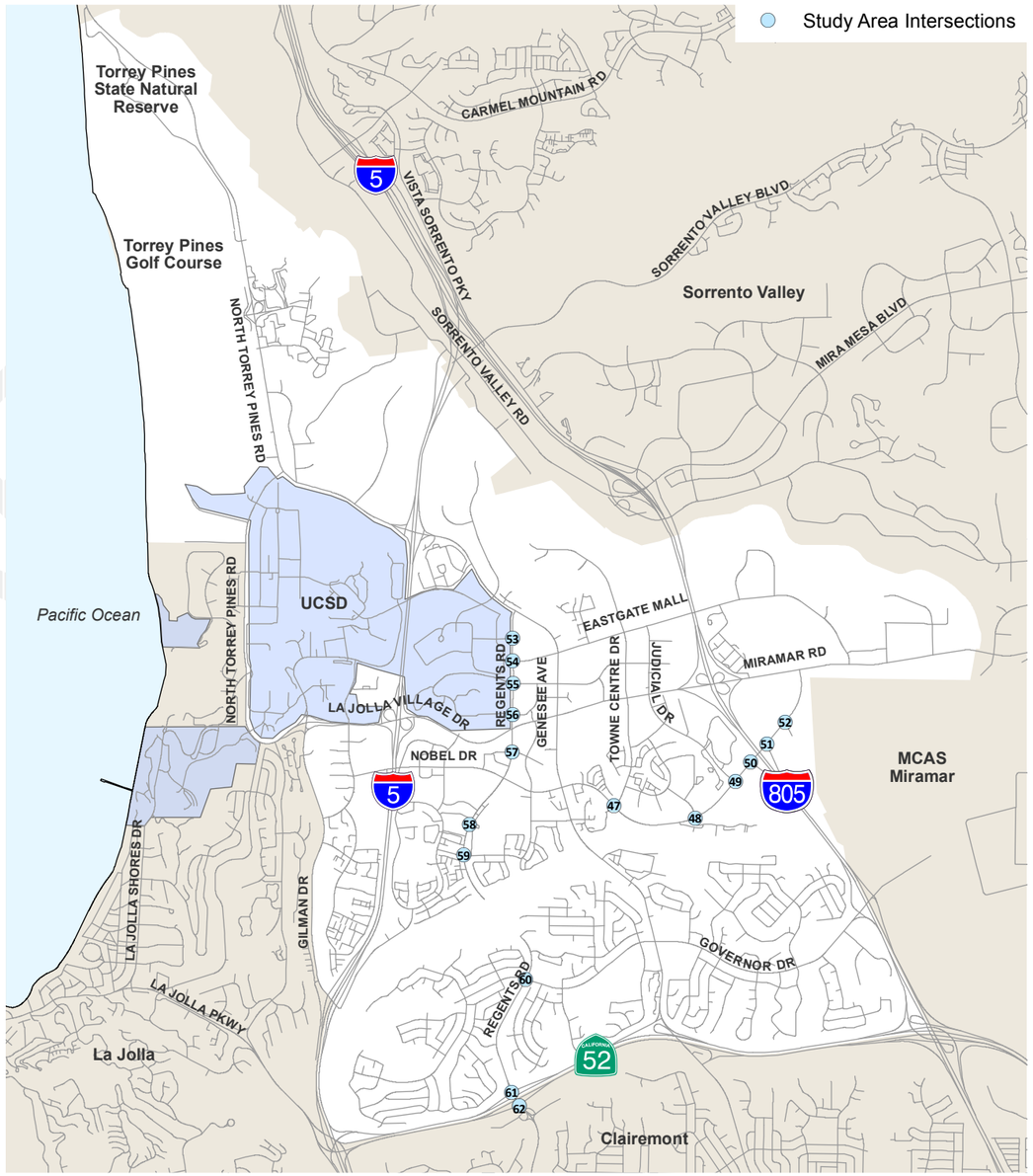
⇔ X / Y Midday Peak Hour Turning Volumes



Existing Midday Peak-Hour Intersection Turning Movement Volumes
Intersections 21-46

FIGURE 7-12

47 319 ⇦ 57 ⇩ 52 ⇙ Towne Centre Drive 303 ⇧ 331 ⇩ 17 ⇙ ⇖ 111 ⇧ 323 ⇗ 13 Nobel Drive ⇦ 12 ⇧ ⇨ 41 ⇩ 28	**48** 25 ⇦ 2 ⇩ 85 ⇙ Shoreline Drive 25 ⇧ 373 ⇩ 13 ⇙ ⇖ 78 ⇧ 410 ⇗ 12 Nobel Drive ⇦ 12 ⇧ ⇨ 4 ⇩ 16	**49** ⇖ 66 ⇙ 229 Judicial Drive 93 ⇧ 426 ⇩ ⇗ 240 ⇧ 382 Nobel Drive	**50** 616 ⇩ 174 ⇙ Nobel Drive ⇗ I-805 SB On-Ramp 208 ⇧ ⇨ 464
51 342 ⇩ Nobel Drive ⇖ 614 ⇗ 458 I-805 N Off-Ramp 198 ⇧	**52** 321 ⇩ 19 ⇙ Nobel Drive ⇖ 15 ⇗ 21 Avenue of Flags 776 ⇧ ⇗ 36		**54** 340 ⇩ 63 ⇙ Regents Road ⇖ 65 ⇗ 83 Eastgate Mall 320 ⇧ ⇗ 79
55 ⇦ 12 ⇩ 350 ⇩ 37 ⇙ Regents Road 4 ⇦ 8 ⇩ 11 ⇙ ⇖ 36 ⇧ 8 ⇗ 93 Executive Drive ⇦ 13 ⇧ ⇗ 345 83	**56** ⇦ 33 ⇦ 406 ⇙ 67 ⇙ Regents Road 24 ⇦ 5 ⇩ 73 ⇙ Miramar Street ⇖ 86 ⇧ 7 ⇗ 143 Regents Park Row 61 ⇧ ⇗ 387 126	**57** 25 ⇦ 377 ⇩ 54 ⇙ Regents Road 26 ⇦ 5 ⇩ 6 ⇙ ⇖ 119 ⇧ 19 ⇗ 32 Plaza De Palmas 13 ⇦ 343 ⇧ 33	**58** 261 ⇩ 77 ⇙ Regents Road ⇖ 2 ⇗ 11 Berino Court ⇧ 147 ⇧ ⇗ 5
59 68 ⇦ 24 ⇩ 127 ⇙ Regents Road 55 ⇦ 82 ⇩ 12 ⇙ ⇖ 26 ⇧ 80 ⇗ 2 Arriba Street 5 ⇦ ⇧ 7 ⇗ 9	**60** 7 ⇦ 25 ⇩ 21 ⇙ Regents Road 9 / 9 ⇦ 99 / 99 ⇩ 32 / 32 ⇙ ⇖ 11 ⇧ 136 ⇗ 250 Governor Drive 32 ⇧ 79 ⇗ 193	**61** 204 ⇩ 302 ⇙ Regents Road ⇖ 147 ⇧ 2 ⇗ 290 SR-52 WB Ramps 303 ⇧ 362	**62** 452 ⇩ 140 ⇙ Regents Road 235 ⇦ 3 ⇩ 297 ⇙ ⇗ SR-52 EB Ramps 430 ⇧ ⇗ 363



LEGEND

⇦ X / Y Midday Peak Hour Turning Volumes

Existing Midday Peak-Hour Intersection Turning Movement Volumes
Intersections 47-62

TRAFFIC COLLISION HISTORY

Between October 2012 and September 2017, there were a total of 1,196 reported vehicular collisions (excluding pedestrian- and bicycle-involved collisions) within the University community. In the State of California, collision reports must be generated for any collision where property damage totals 750 dollars or more, someone is injured or killed fatality occurs. As a result, it is important to note some incidents may go unreported for failing to meet one of these criteria. **Figure 7-13** displays the collisions across the community, as included in **Appendix A**, symbolized by the number of crashes at a given location. Most locations have isolated incidents, but some intersections experienced multiple collisions in the five-year period. Intersections with more than 15 vehicle collisions are identified in **Table 7-1**.

Table 7-1 Most Frequent Collision Locations

Rank	Intersections	Collisions
1	La Jolla Village Drive & Genesee Avenue	49
2	La Jolla Village Drive & Villa La Jolla Drive	46
3	La Jolla Village Drive & Towne Centre Drive	39
4	Genesee Avenue & Nobel Drive	28
4	La Jolla Village Drive & Regents Road	28
5	Genesee Avenue & Governor Drive	27
6	La Jolla Village Drive & Executive Way	23
7	La Jolla Village Drive & Lebon Drive	22
7	Miramar Road & Eastgate Mall	22
8	Genesee Avenue & Decoro Street	17
8	Genesee Avenue & Eastgate Mall	17

The location types of the reported collisions are summarized in **Table 7-2**. Types include intersection, mid-block, and approaching/departing locations. Nearly three-quarters of all collisions occurred at intersections.

Table 7-2 Collisions by Location Types

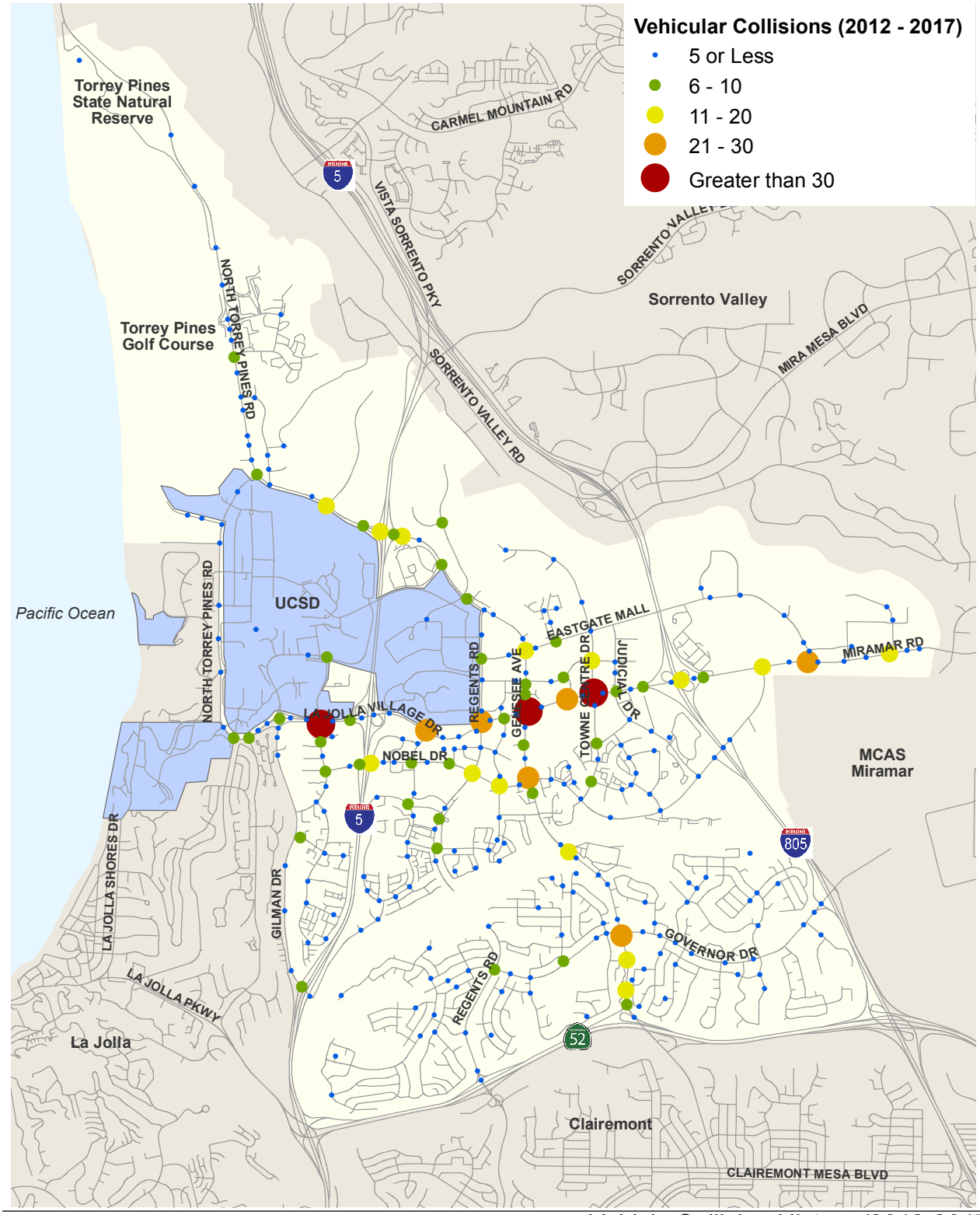
Collision Location Type	Collisions	Percent of Total
Mid-Block	113	9%
Intersection	885	74%
Approaching/Departing	198	17%
Total	***1,196***	***100%***

Table 7-3 displays the primary causes for vehicle collisions. As shown in the table, the top causes of collisions were unsafe speed, followed by improper turning and auto right-of-way violation.

Table 7-3 Primary Collision Cause (2012-2017)

Primary Collision Cause	Number of Collisions	Percent of Total
Auto R/W Violation	170	14%
Driving Under Influence	10	1%
Fell Asleep	4	0%
Following Too Closely	52	4%
Hazardous Parking	1	0%
Improper Passing	5	0%
Improper Turning	238	20%
Not Stated	148	12%
Other	16	1%
Other Equipment	2	0%
Other Hazardous Movement	23	2%
Other Improper Driving	14	1%
Other Than Driver	6	1%
Ped R/W Violation	17	1%
Pedestrian Violation	15	1%
Traffic Signals and Signs	51	4%
Unknown	47	4%
Unsafe Lane Change	63	5%
Unsafe Speed	248	21%
Unsafe Starting or Backing	57	5%
Wrong Side of Road	9	1%
Total	***1196***	***100%***

FIGURE 7-13



Vehicle Collision History (2012-2017)

ROADWAY SEGMENT ADT BASED ANALYSIS

Each roadway segment in the study area was evaluated by comparing the daily traffic volume with the roadway's theoretical capacity based on its classification. The capacity represents the maximum daily volume before the roadway is expected to begin to operate at a LOS E. This volume-to-capacity comparison (v/c ratio) is a planning tool used to determine the general traffic demand on a segment and its sensitivity to delays.

Table 7-4 presents the results of the roadway segment analysis for a typical weekday. As shown in the table, it is estimated that all roadway segments function at an acceptable LOS D or better in the study area, except for the following:

- Eastgate Mall – between I-805 Overpass and Miramar Road
  - 2 Lane Collector (w/ two-way left-turn lane) (LOS E)
- Genesee Avenue – between I-5 SB Ramps and I-5 NB Ramps
  - 4 Lane Major Arterial (LOS F)
- La Jolla Village Drive – between Genesee Avenue and Towne Centre Drive
  - 6 Lane Major Arterial (LOS E)
- La Jolla Village Drive – between Towne Centre Drive and I-805 SB Ramps
  - 7 Lane Major Arterial (LOS F)
- Miramar Road – between I-805 SB Ramps and I-805 NB Ramps
  - 6 Lane Major Arterial (LOS F)
- Miramar Road – between Eastgate Mall and Camino Santa Fe
  - 6 Lane Prime Arterial (LOS F)

Figure 7-14 illustrates the existing LOS results for each of the roadway segments in the study area based on the volume-to-capacity analysis methodology. The segments with LOS E or F have volumes above their theoretical capacity, typically resulting in periods of congestion.

Table 7-4 Existing Conditions Summary of Roadway Segment ADT Based Analysis

ROADWAY SEGMENT	ROADWAY CLASSIFICATION (a)	LOS E CAPACITY	ADT (b)	V/C RATIO (c)	LOS
Eastgate Mall					
Regents Rd to Genesee Ave	2 Lane Collector (w/ two-way left-turn lane)	15,000	6,187	0.412	B
Genesee Ave to Easter Way	4 Lane Collector (w/ two-way left-turn lane)	30,000	14,767	0.492	C
Easter Way to Judicial Dr	4 Lane Major Arterial	40,000	11,115	0.278	A
Judicial Dr to I-805 Overpass	4 Lane Major Arterial	40,000	10,096	0.252	A
I-805 Overpass to Miramar Rd	2 Lane Collector (w/ two-way left-turn lane)	15,000	14,668	0.978	**E**
Executive Drive					
Regents Rd to Genesee Ave	4 Lane Collector (w/o two-way left-turn lane)	15,000	4,397	0.293	A
Genesee Ave to Judicial Dr	4 Lane Collector (w/ two-way left-turn lane)	30,000	5,914	0.197	A
Executive Way					
Executive Dr to La Jolla Village Dr	4 Lane Collector (w/ two-way left-turn lane	30,000	5,923	0.197	A
Genesee Avenue					
N. Torrey Pines Rd to I-5 SB Ramps	6 Lane Prime Arterial	60,000	35,124	0.585	C
I-5 SB Ramps to I-5 NB Ramps	4 Lane Major Arterial	40,000	49,051	1.226	**F**
I-5 NB Ramps to Regents Rd	6 Lane Prime Arterial	60,000	48,542	0.809	C
Regents Rd to La Jolla Village Dr	6 Lane Prime Arterial	60,000	29,457	0.491	B
La Jolla Village Dr to Esplanade Ct	4 Lane Major Arterial	40,000	28,054	0.701	C
Esplanade Ct to Nobel Dr	6 Lane Major Arterial	50,000	23,744	0.475	B
Nobel Dr to Centurion Square	4 Lane Major Arterial	40,000	30,922	0.773	D
Centurion Square to SR-52 WB Ramps	4 Lane Major Arterial	40,000	30,325	0.758	D
SR-52 WB Ramps to SR-52 EB Ramps	4 Lane Major Arterial	40,000	31,170	0.779	D
SR-52 EB Ramps to Lehrer Dr	4 Lane Major Arterial	40,000	30,581	0.765	D
Gilman Drive					
La Jolla Village Dr to Via Alicante	4 Lane Major Arterial	40,000	15,095	0.377	B
Via Alicante to I-5 SB Ramps	4 Lane Major Arterial	40,000	17,138	0.428	B
I-5 SB Ramps to I-5 NB Ramps	4 Lane Major Arterial	40,000	11,873	0.297	A
Golden Haven Drive					
Towne Centre Dr to Judicial Dr	4 Lane Major Arterial	40,000	6,712	0.168	A

Notes: **Bold** values indicate roadway segments operating at LOS E or F.
(a) Existing road classifications are based on field work conducted December 2017.
(b) Average Daily Traffic (ADT) volumes for the roadway segments were provided by Accurate Video Counts Inc and measured in April and May 2015.
(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

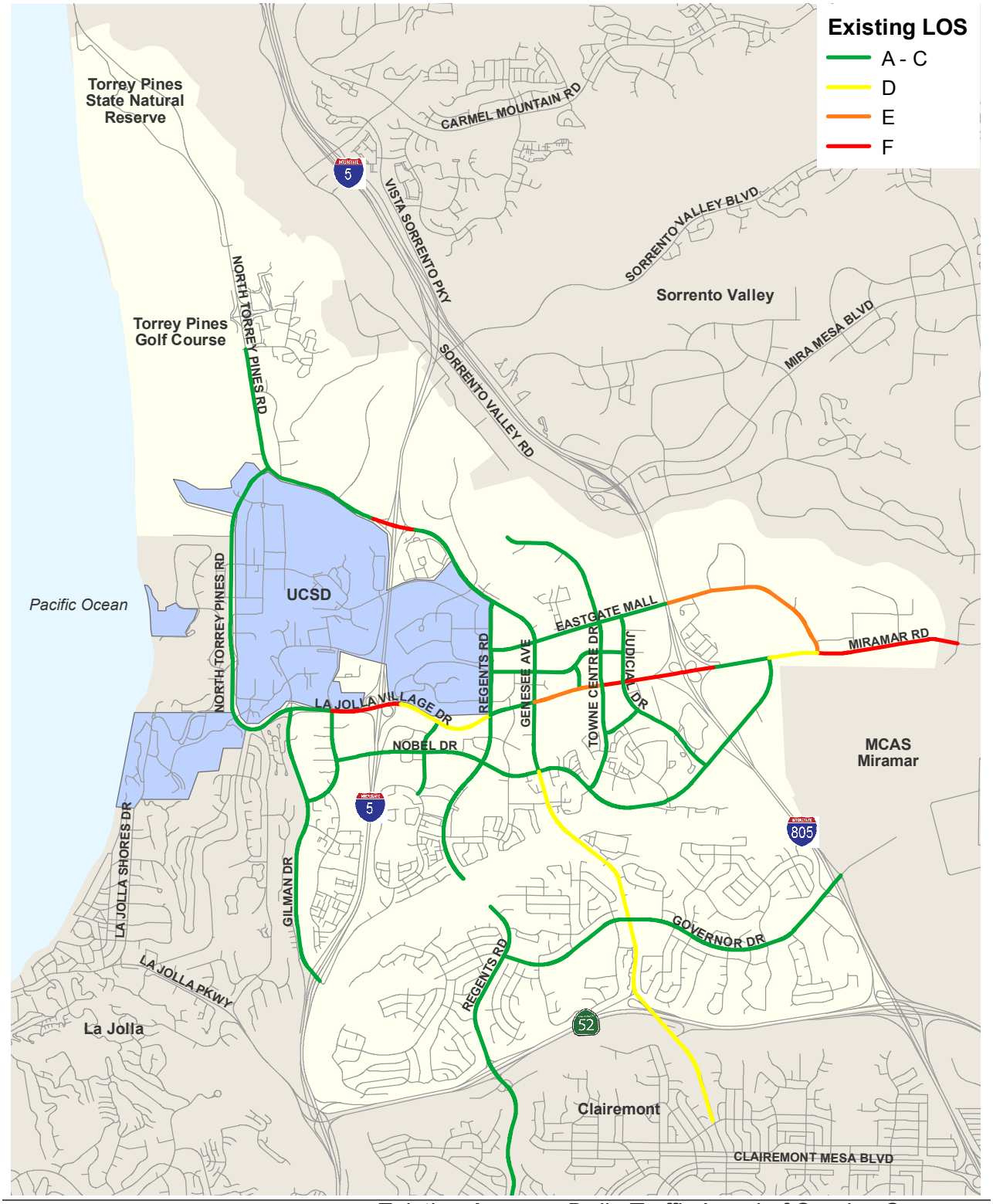
ROADWAY SEGMENT	ROADWAY CLASSIFICATION (a)	LOS E CAPACITY	ADT (b)	V/C RATIO (c)	LOS
Governor Drive					
Regents Rd to Genesee Ave	4 Lane Major Arterial	40,000	16,796	0.420	B
Genesee Ave to I-805 SB Ramps	4 Lane Major Arterial	40,000	19,737	0.493	B
I-805 SB Ramps to I-805 NB Ramps	4 Lane Major Arterial	40,000	10,417	0.260	A
Judicial Drive					
Eastgate Mall to La Jolla Village Dr	4 Lane Major Arterial	40,000	4,828	0.121	A
La Jolla Village Dr to Nobel Dr	4 Lane Major Arterial	40,000	6,574	0.164	A
La Jolla Scenic Drive					
La Jolla Village Dr to Caminito Deseo	4 Lane Major Arterial	40,000	7,928	0.198	A
La Jolla Village Drive					
Revelle College Dr to Villa La Jolla Dr	6 Lane Prime Arterial	60,000	44,520	0.742	C
Villa La Jolla Dr to I-5 SB Ramps	7 Lane Prime Arterial	70,000	62,258	0.889	D
I-5 SB Ramps to I-5 NB Ramps	6 Lane Prime Arterial	60,000	51,391	0.857	D
I-5 NB Ramps to Lebon Dr	6 Lane Major Arterial	50,000	44,335	0.887	D
Lebon Dr to Regents Rd	6 Lane Major Arterial	50,000	42,863	0.857	D
Regents Rd to Genesee Ave	6 Lane Major Arterial	50,000	38,474	0.769	C
Genesee Ave to Towne Centre Dr	6 Lane Major Arterial	50,000	45,117	0.902	**E**
Towne Centre Dr to I-805 SB Ramps	7 Lane Major Arterial	55,000	58,833	1.070	**F**
Lebon Drive					
Palmilla Drive to Nobel Dr	4 Lane Major Arterial	40,000	11,192	0.280	A
Nobel Drive to La Jolla Village Dr	5 Lane Major Arterial	45,000	9,212	0.205	A
Miramar Road					
I-805 SB Ramps to I-805 NB Ramps	6 Lane Major Arterial	50,000	66,139	1.323	**F**
I-805 NB Ramps to Nobel Dr	8 Lane Prime Arterial	80,000	47,991	0.600	B
Nobel Dr to Eastgate Mall	7 Lane Prime Arterial	70,000	64,557	0.922	D
Eastgate Mall to Camino Santa Fe	6 Lane Major Arterial	50,000	67,748	1.355	**F**
North Torrey Pines Road					
Science Park Rd to Genesee Ave	6 Lane Prime Arterial	60,000	29,303	0.488	B
Genesee Ave to Revelle College Dr	4 Lane Major Arterial	40,000	21,760	0.544	C

Notes:
Bold values indicate roadway segments operating at LOS E or F.
(a) Existing road classifications are based on field work conducted December 2017.
(b) Average Daily Traffic (ADT) volumes for the roadway segments were provided by Accurate Video Counts Inc and measured in April and May 2015.
(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

ROADWAY SEGMENT	ROADWAY CLASSIFICATION (a)	LOS E CAPACITY	ADT (b)	V/C RATIO (c)	LOS
Nobel Drive					
Villa La Jolla Dr to I-5 SB On Ramp	4 Lane Major Arterial	40,000	26,284	0.657	C
I-5 SB On Ramp to I-5 NB Off Ramp/University Center Lane	4 Lane Major Arterial	40,000	27,642	0.691	C
I-5 NB Off Ramp/University Center Lane to Lebon Dr	6 Lane Major Arterial	50,000	21,546	0.431	B
Lebon Dr to Regents Rd	6 Lane Major Arterial	50,000	21,256	0.425	B
Regents Rd to Genesee Ave	6 Lane Major Arterial	50,000	19,772	0.395	A
Genesee Ave to Towne Centre Dr	4 Lane Major Arterial	40,000	18,484	0.462	B
Towne Centre Dr to Judicial Dr	6 Lane Prime Arterial	60,000	17,261	0.288	A
Judicial Dr to Avenue of Flags	5 Lane Major Arterial	45,000	24,125	0.536	B
Avenue of Flags to Miramar Rd	4 Lane Major Arterial	40,000	20,648	0.516	B
Regents Road					
Genesee Ave to Eastgate Mall	2 Lane Collector (w/ two-way left-turn lane)	15,000	6,260	0.417	B
Eastgate Mall to La Jolla Village Dr	4 Lane Collector (w/ two-way left-turn lane)	30,000	15,245	0.508	C
La Jolla Village Dr to Nobel Dr	5 Lane Major Arterial	45,000	16,525	0.367	A
Nobel Dr to Rose Canyon (end)	4 Lane Major Arterial	40,000	10,688	0.267	A
Rose Canyon (end) to Governor Dr	2 Lane Collector (no fronting property)	10,000	1,940	0.194	A
Governor Dr to SR-52 WB Ramps	4 Lane Major Arterial	40,000	16,181	0.405	B
SR-52 WB Ramps to SR-52 EB Ramps	4 Lane Major Arterial	40,000	19,957	0.499	B
SR-52 EB Ramps to Luna Ave	4 Lane Major Arterial	40,000	21,268	0.532	C
Torrey Pines Road					
La Jolla Village Drive to Glenbrook Way	4 Lane Major Arterial	40,000	26,620	0.666	C
Towne Centre Drive					
North of Eastgate Mall	2 Lane Major Arterial	20,000	9,322	0.466	B
Eastgate Mall to La Jolla Village Dr	4 Lane Major Arterial	40,000	20,121	0.503	B
La Jolla Village Dr to Nobel Dr	4 Lane Major Arterial	40,000	13,785	0.345	A
Villa La Jolla Drive					
Gilman Dr (South) to Nobel Dr	4 Lane Major Arterial	40,000	6,896	0.172	A
Nobel Dr to La Jolla Village Dr	4 Lane Major Arterial	40,000	16,011	0.400	B

Notes: **Bold** values indicate roadway segments operating at LOS E or F.
(a) Existing road classifications are based on field work conducted December 2017.
(b) Average Daily Traffic (ADT) volumes for the roadway segments were provided by Accurate Video Counts Inc and measured in April and May 2015.
(c) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

FIGURE 7-14



Existing Average Daily Traffic Level of Service Summary

CORRIDOR SPEED BASED ANALYSIS

A speed-based travel time analysis of key corridors within the University community was conducted during peak hours of the day. This analysis evaluates the roadway segment LOS perceived by auto users based on the average speed a vehicle maintains along the corridor. The following corridors were evaluated:

- Genesee Avenue (SR-52 EB Ramps to North Torrey Pines Road)
- La Jolla Village Drive/Miramar Road (Torrey Pines Road to Camino Santa Fe)
- Nobel Drive (Villa La Jolla Drive to Miramar Road)
- Regents Road (Genesee Avenue to Arriba Street, and Governor Drive to Luna Avenue)

The travel time information along each corridor was calculated using Synchro software and actual travel time information. A comparison of the two methods is provided to depict how well the simulation reflects actual travel times. This comparison is helpful in determining the accuracy of future travel time simulations.

The "floating car" method was used in the field to document actual travel times. These travel time runs can vary depending on where the vehicle falls within the progression bands along these segments. Vehicles within a progression band do not have to stop at several consecutive traffic signals. The simulation depicts the average travel time for all vehicles, which includes those that do not fall into progression bands. Additional supporting information on the travel times is provided in **Appendix G**.

Individual corridor analysis results are provided in **Figure 7-15** through **Figure 7-19** and discussed in this section**.** A summary of speed-based LOS along all four corridors are presented at the end of the section in **Figure 7-20** through **Figure 7-22**.

In general, the simulated travel times were longer than observed travel times because the simulation uses average approach delay, which does not account for the timed signal progression that occurs in the community. Also, the observed travel times represent an average time of several runs within a 2-hour timeframe, while the simulation uses the highest 1-hour volume at each intersection.

Genesee Avenue

Figure 7-15 displays the morning and afternoon peak travel time results for Genesee Avenue using a speed-based analysis. **Table 7-5** summarizes the total travel time, average speed, and resulting LOS for traveling from one end of the community to the other on Genesee Avenue. The table includes both field observed travel times and the simulated travel times. Midday speed analysis and additional corridor speed information is provided in **Appendix G**.

The Genesee Avenue corridor is approximately 4.5 miles and goes through 18 traffic signals. The average speed along Genesee between North Torrey Pines Road and SR-52 EB Ramps is estimated in the simulation to be about 20 miles per hour during both peak periods and in both directions. Below 17 mph is equivalent to a LOS E. The travel time and the simulation were fairly consistent in their findings.

In the morning peak, congestion is shown near Executive Square, new Campus Point Drive, and at the I-5 ramps. In the afternoon peak, congestion occurs consistently from Decoro Street to Eastgate Mall.

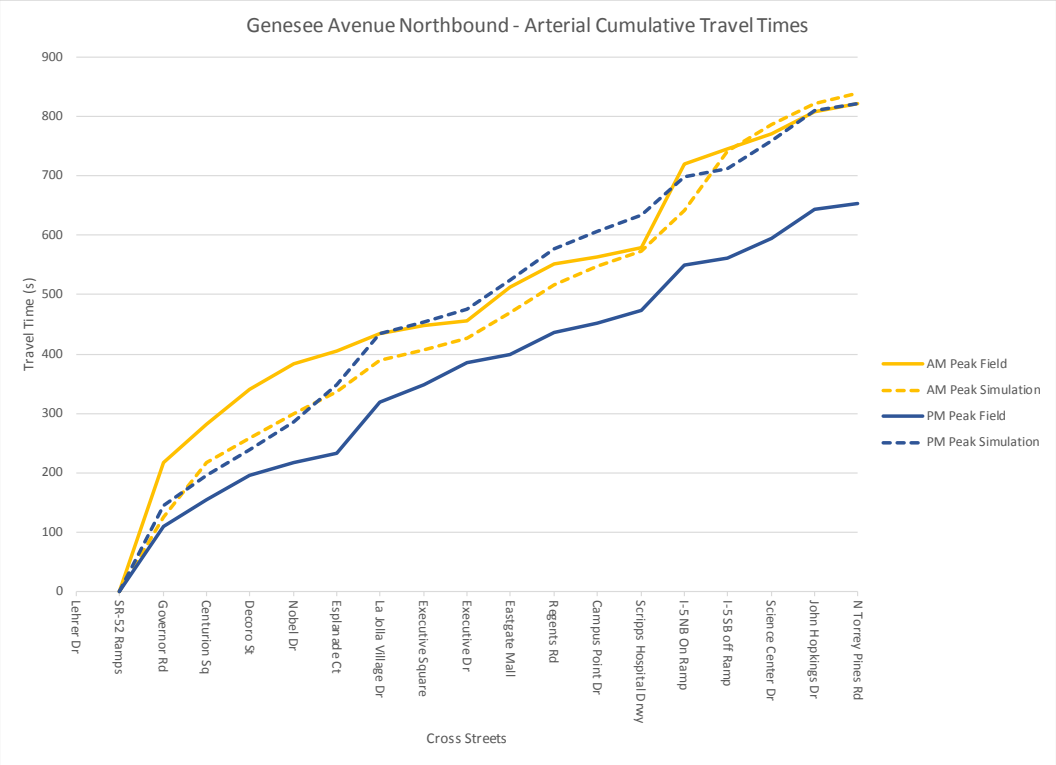
It should be noted that the interchange at I-5 was under construction at the time of these travel times for interchange improvements that will ultimately improve operations in that vicinity. However, the construction did not significantly affect the travel time runs.

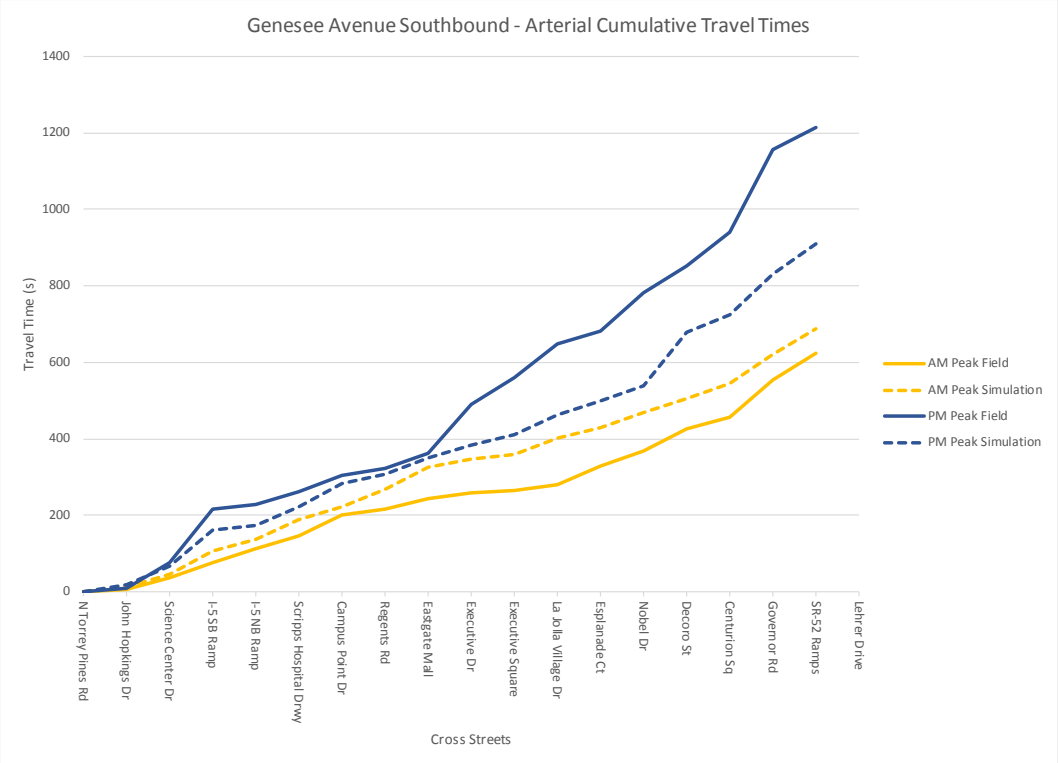
Table 7-5 Genesee Avenue Speed Based Analysis

Corridor	Direction	Peak	Travel Time (sec)	Speed (mph)	LOS
Genesee Avenue					
SR-52 EB Ramps - N Torrey Pines Road	Northbound	AM Field AM Simulation	821 840	19.6 19.2	D D
		PM Field PM Simulation	655 822	24.6 19.5	C D
N Torrey Pines Road – SR-52 EB Ramps	Southbound	AM Field AM Simulation	626 688	25.7 23.4	C C
		PM Field PM Simulation	1216 910	13.2 17.6	**E** D

Notes:
Field = Average value from field based travel time runs
Simulation = Synchro analysis value

Figure 7-15 Genesee Avenue Travel Times





La Jolla Village Drive/Miramar Road

Figure 7-16 displays the morning and afternoon peak travel time results for La Jolla Village Avenue using a speed-based analysis. **Table 7-6** summarizes the total travel time, average speed, and resulting LOS for traveling from one end of the community to the other on La Jolla Village Drive. The table includes both field observed travel times and the simulated travel times. Midday speed analysis and additional corridor speed information is provided in **Appendix G**.

The La Jolla Village Drive corridor is approximately 4.2 miles and goes through 17 traffic signals. The travel times were found to be faster than the estimated simulation times.

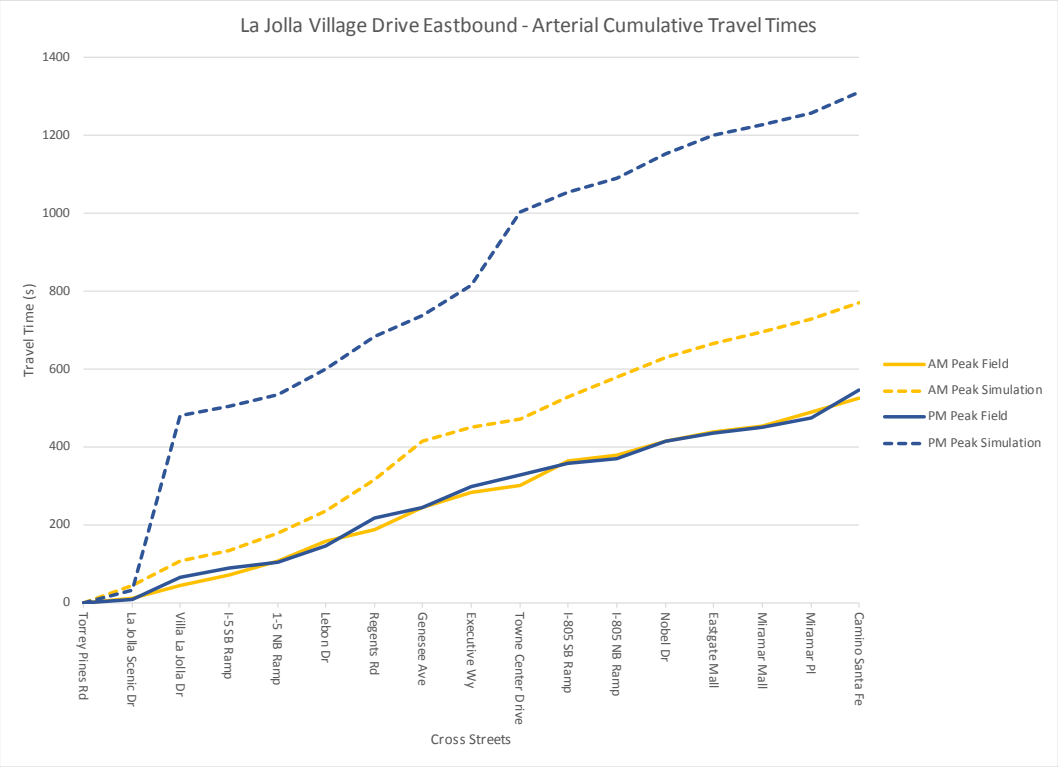
In the morning peak, the average speed along La Jolla Village Drive/Miramar Road is estimated in the simulation to be around 20 miles per hour in the eastbound direction and 14 miles per hour in the westbound direction. The actual travel times were about 9 miles per hour faster on average. The westbound direction has major congestion between the I-805 ramps and Genesee Avenue, and again near the I-5 ramps. The eastbound direction has noticeable congestion between the I-5 ramps and Genesee Avenue

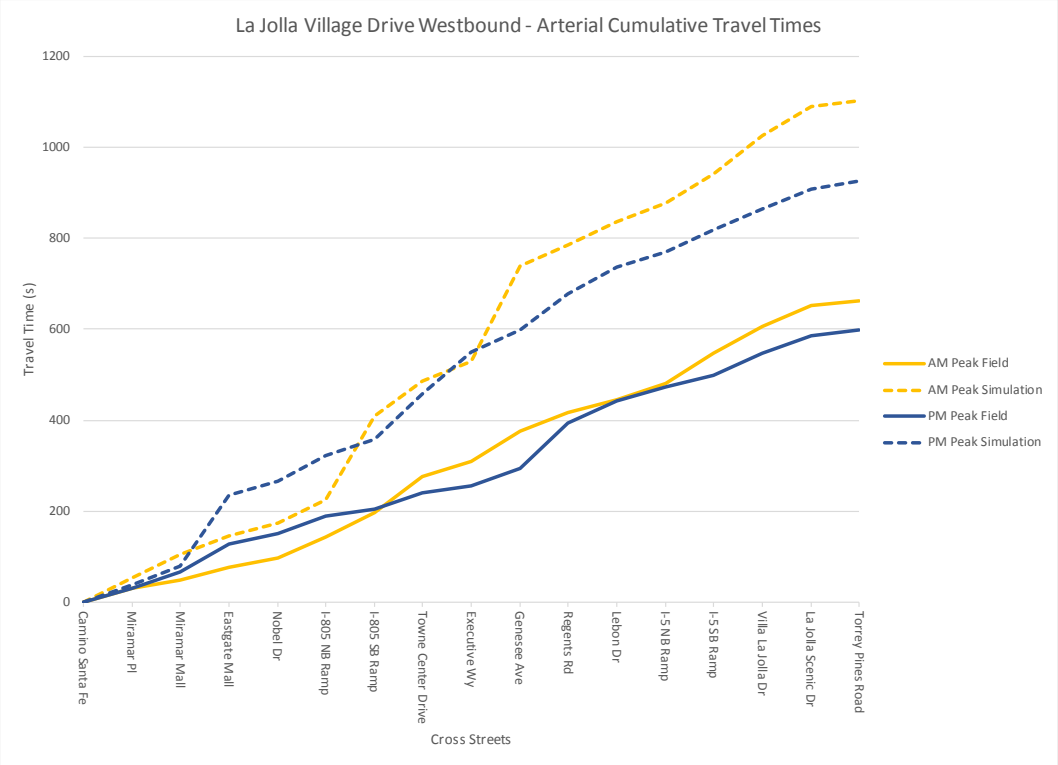
In the afternoon peak, the average speed along La Jolla Village Drive/Miramar Road is estimated in the simulation to be about 12 miles per hour in the eastbound direction and 16 miles per hour in the westbound direction. The travel times showed an average speed of just under 30 miles per hour in both directions. Congestion at a couple key intersections significantly reduce travel speeds on the corridor. In the eastbound direction, the Towne Centre Drive intersection shows extreme congestion; in the westbound direction, Miramar Mall shows extreme congestion.

Table 7-6 La Jolla Village Drive Speed Based Analysis

Corridor	Direction	Peak	Travel Time (sec)	Speed (mph)	LOS
La Jolla Village Drive / Miramar Road					
Torrey Pines Rd - Camino Santa Fe	Eastbound	AM Field AM Simulation	526 770	28.7 19.6	C **E**
		PM Field PM Simulation	546 1311	27.6 11.5	C **F**
Camino Santa Fe - Torrey Pines Rd	Westbound	AM Field AM Simulation	663 1101	22.8 13.7	D **F**
		PM Field PM Simulation	567 926	26.6 16.3	D **E**

Figure 7-16 La Jolla Village Drive Travel Times





Nobel Drive

Figure 7-17 displays the morning and afternoon peak travel time results for Nobel Drive using a speed-based analysis. **Table 7-7** summarizes the total travel time, average speed, and resulting LOS for traveling from one end of the community to the other on Nobel Drive. The table includes both field-observed travel times and the simulated travel times. Midday speed analysis and additional corridor speed information is provided in **Appendix G**.

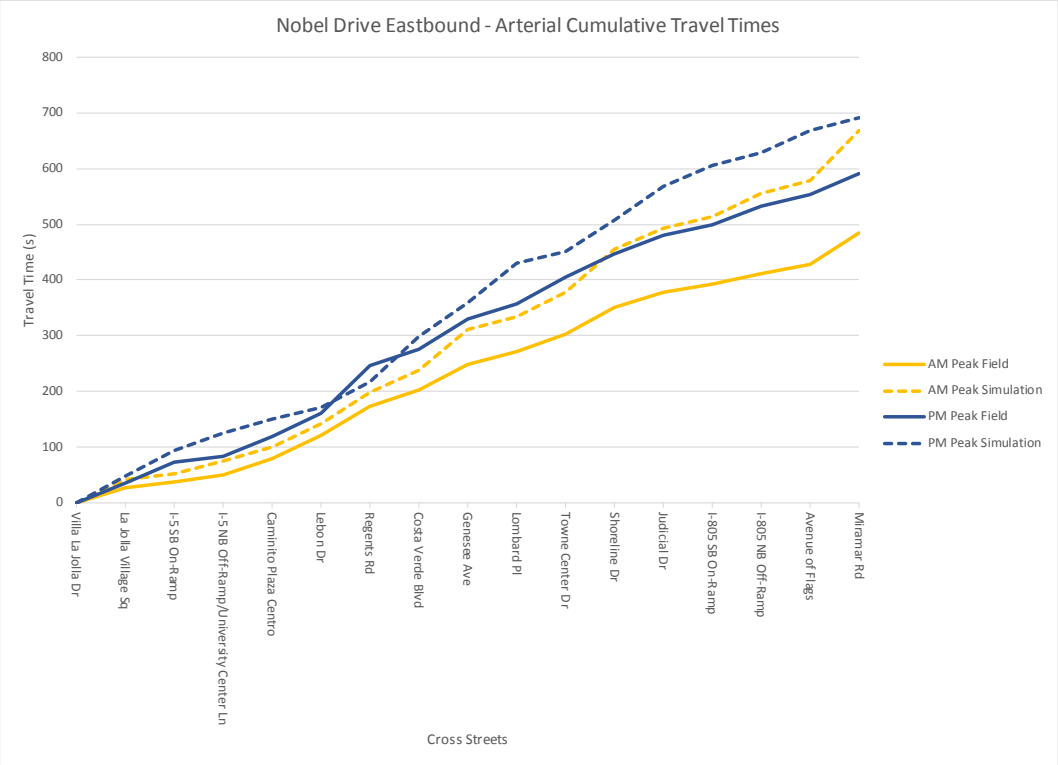
The Nobel Drive corridor is approximately 3.0 miles and goes through 17 traffic signals. The average speed along Nobel Drive between La Jolla Village Square and Miramar Road is estimated in the simulation to be about 17 miles per hour in the morning peak period and about 15 miles per hour during the afternoon peak. Below 17 mph is equivalent to a LOS E. The travel time was found to be about 3 mph faster than the simulation.

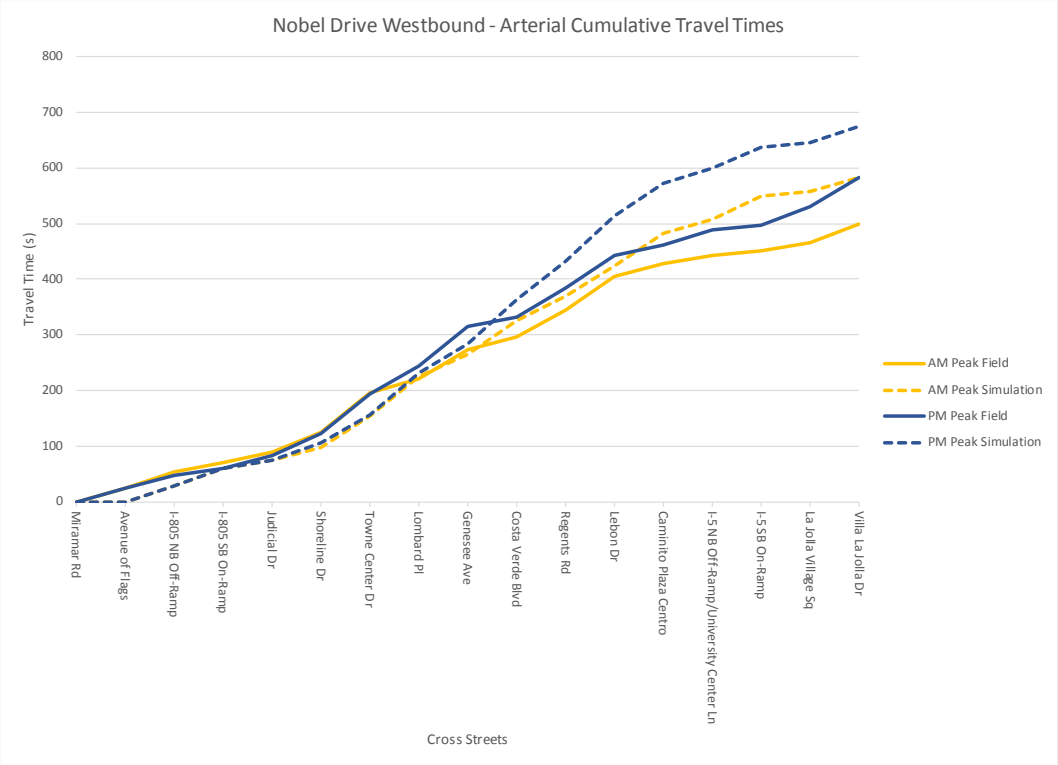
Congestion is shown near the I-5 interchange, Genesee Avenue, and the I-805 interchange during both peak periods. During the field-collected travel time runs there were additional delays and congestion along Nobel Drive during the midday peak, especially near the commercial areas near Villa La Jolla.

Table 7-7 Nobel Drive Speed Based Analysis

Corridor	Direction	Peak	Travel Time (sec)	Speed (mph)	LOS
Nobel Drive					
Villa La Jolla Drive – Miramar Rd	Eastbound	AM Field AM Simulation	485 668	22.5 16.3	C **E**
		PM Field PM Simulation	590 747	18.5 14.7	D **E**
Miramar Rd – Villa La Jolla Drive	Westbound	AM Field AM Simulation	501 607	21.8 18.0	D D
		PM Field PM Simulation	583 700	18.7 15.6	D **E**

Figure 7-2 Nobel Drive Travel Times





Regents Road

Figure 7-18 and **7-19** display the morning and afternoon peak travel time results for Regents Road using a speed-based analysis. **Table 7-8** and **Table 7-9** summarize the total travel time, average speed, and resulting LOS for traveling from one end of the community to the other on Regents Road. The tables include both field-observed travel times and the simulated travel times. Midday speed analysis and additional corridor speed information is provided in **Appendix G**.

The northern section of the Regents Road corridor is approximately 1.5 miles and goes through 10 traffic signals. The average speed along Regents Road between Arriba Street and Genesee Avenue is estimated in the simulation to be about 15 miles per hour in both peak periods and both directions. The travel time and the simulation were fairly consistent in their findings. During the field-collected travel time runs for the northern section, the travel time runs along Regents Road were slower from traffic associated with the La Jolla Country Day School and UCSD's Health Sciences building. The pavement conditions of Regents Road on the northern end was severely degraded and decreased vehicle speeds.

The southern section of the Regents Road corridor is approximately 1.5 miles and goes through 4 traffic signals. Travel times documented in the field were much lower than the simulation, resulting in field-collected speeds being 15 to 25 mph faster than the simulation.

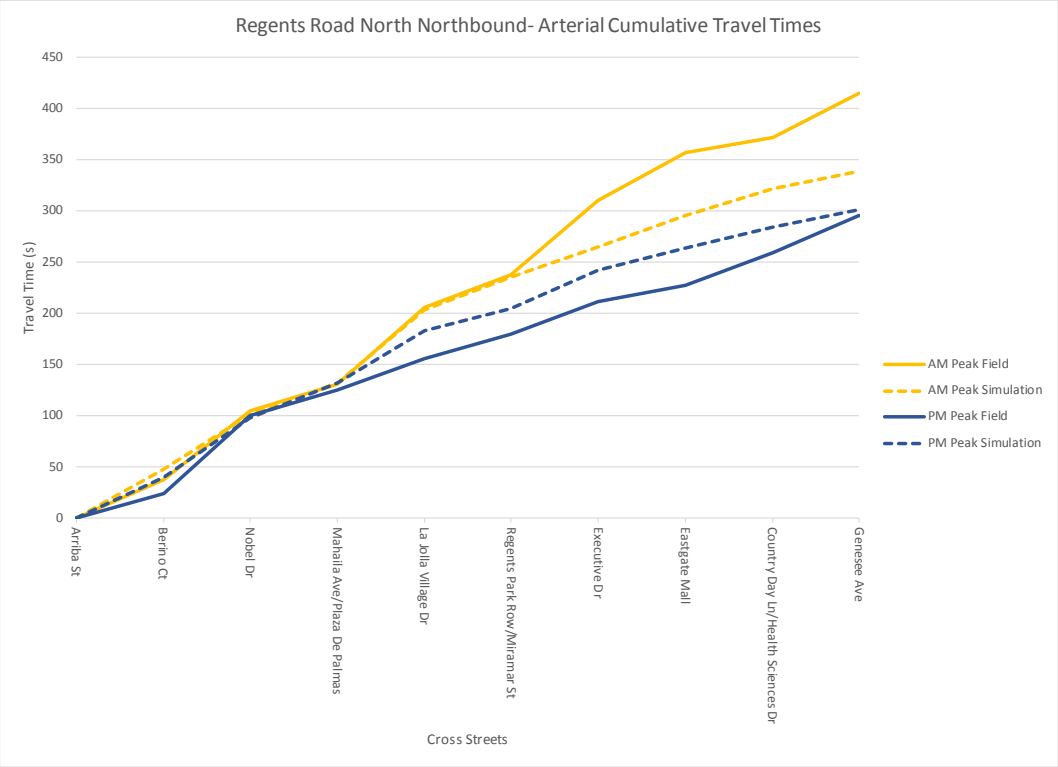
Table 7-4 Regents Road (Northern Section) Speed Based Analysis

Corridor	Direction	Peak	Travel Time (sec)	Speed (mph)	LOS
Regents Road (Northern Section)					
Arriba St – Genesee Ave	Northbound	AM Field	416	12.2	**F**
		AM Simulation	339	15.0	**E**
		PM Field	296	17.1	D
		PM Simulation	301	16.8	**E**
Genesee Ave – Arriba St	Southbound	AM Field	289	17.6	D
		AM Simulation	335	15.1	**E**
		PM Field	385	13.2	**E**
		PM Simulation	384	13.2	**E**

Table 7-5 Regents Road (Southern Section) Speed Based Analysis

Corridor	Direction	Peak	Travel Time (sec)	Speed (mph)	LOS
Regents Road (Southern Section)					
Luna Ave – Governor Dr	Northbound	AM Field	131	41.5	A
		AM Simulation	361	15.1	**F**
		PM Field	125	43.5	A
		PM Simulation	209	26.1	D
Governor Dr – Luna Ave	Southbound	AM Field	102	53.3	A
		AM Simulation	189	28.8	C
		PM Field	116	46.9	B
		PM Simulation	227	23.9	D

Figure 7-3 Regents Road (Northern Section) Travel Times



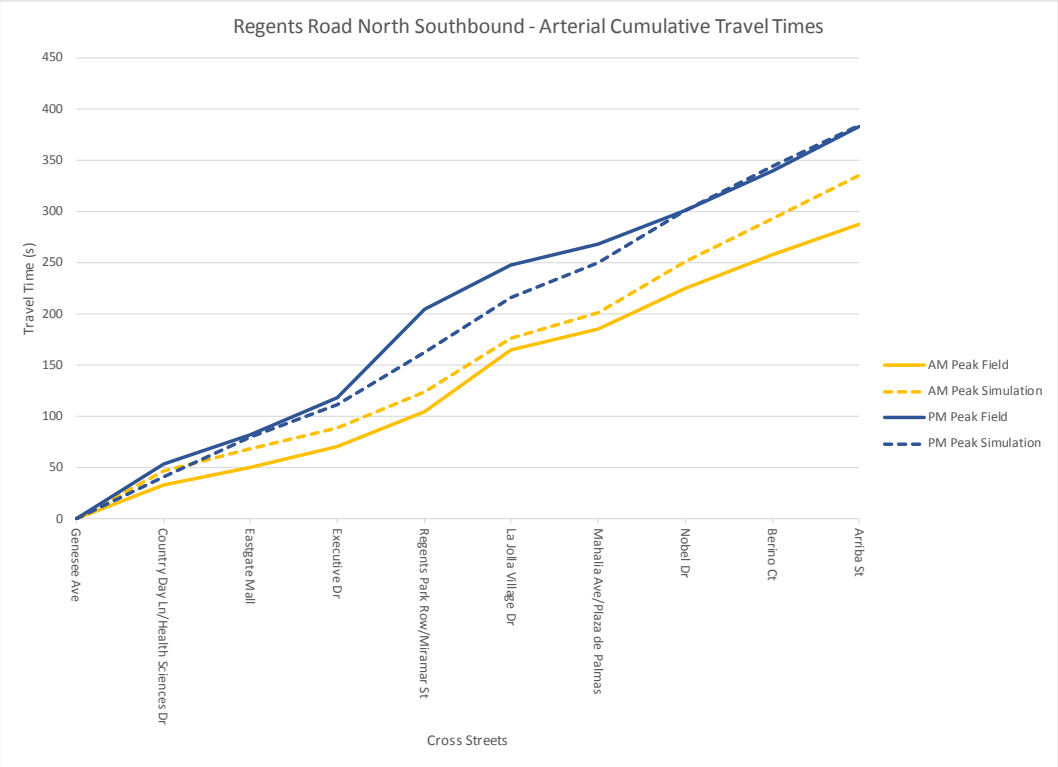
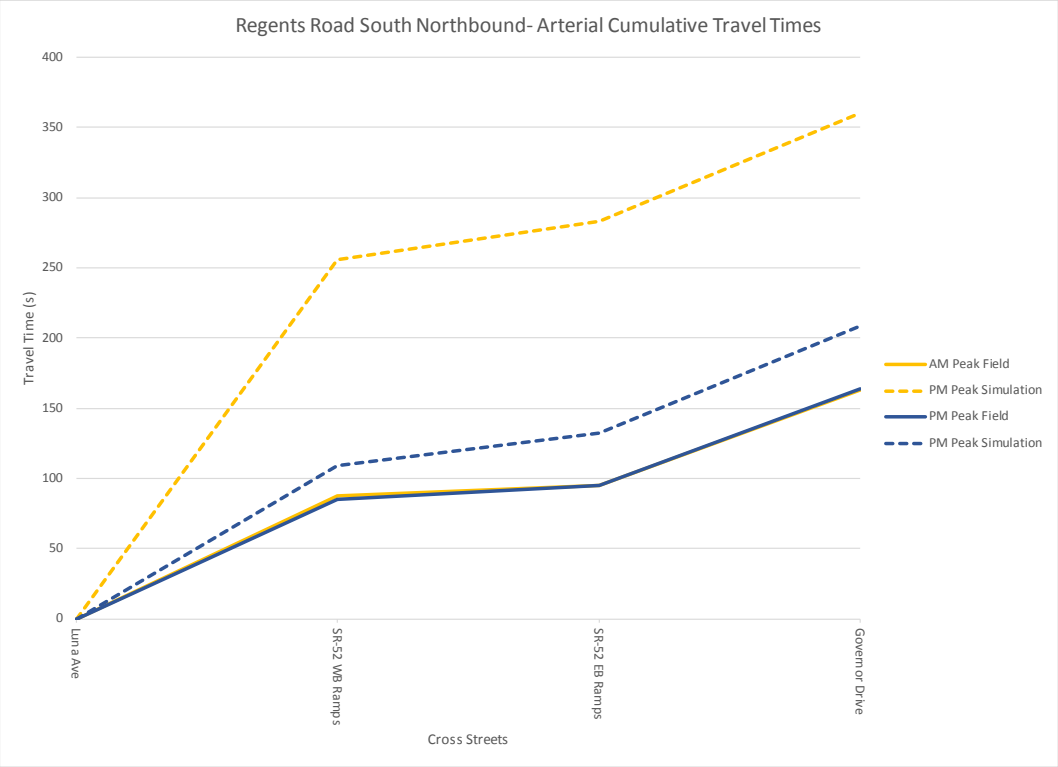


Figure 7-4 Regents Road (Southern Section) Travel Times



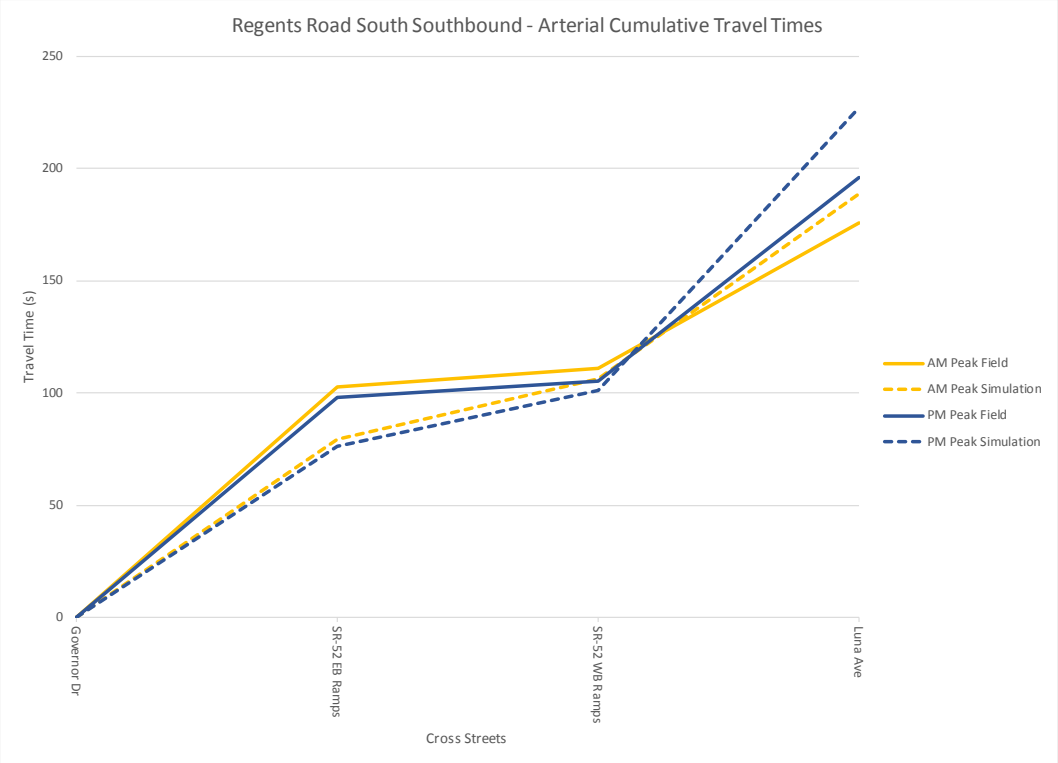
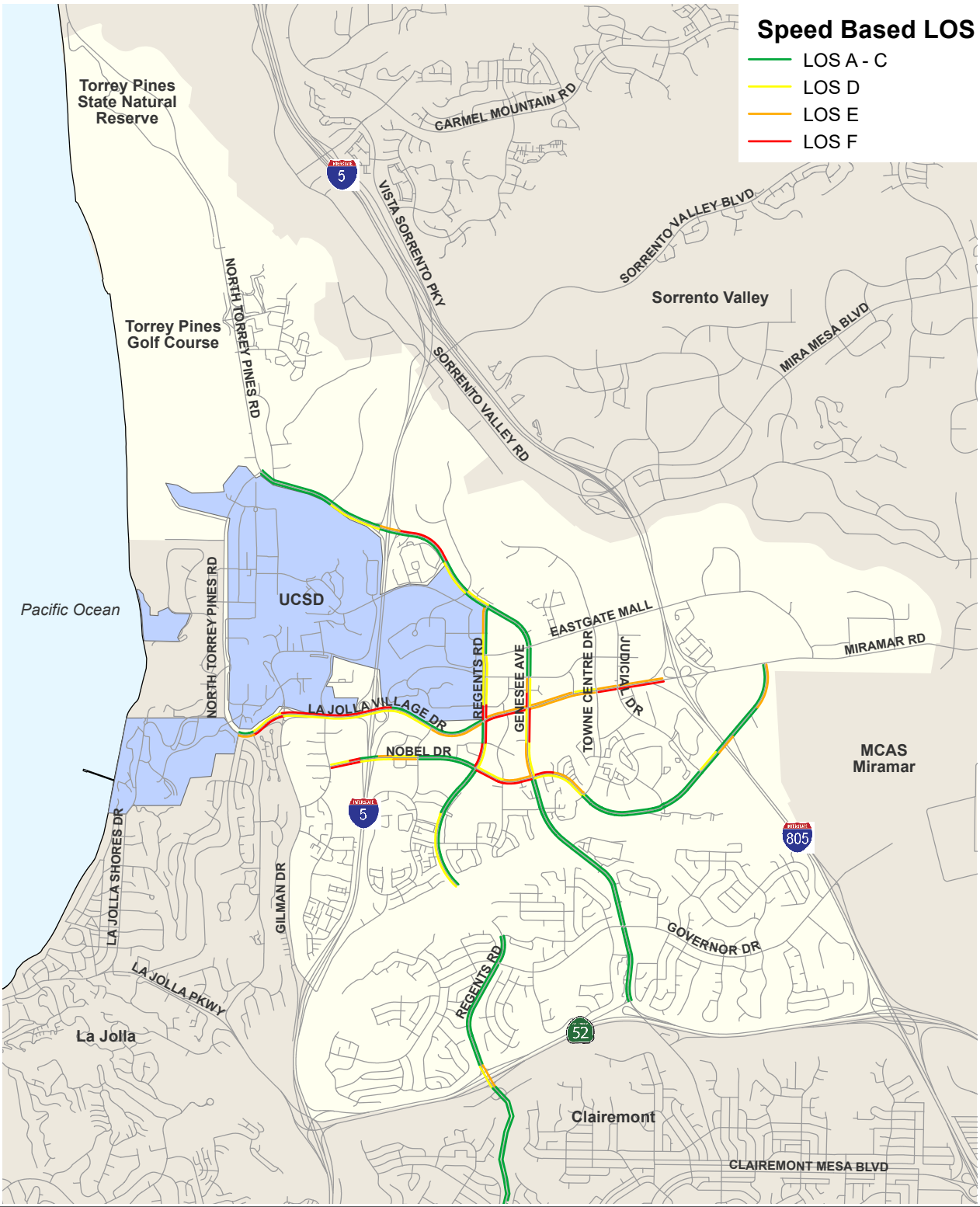


FIGURE 7-20

Existing AM Roadway Segment Speed Based Level of Service Summary

FIGURE 7-21



Existing Midday Roadway Segment Speed Based Level of Service Summary

FIGURE 7-22

Existing PM Roadway Segment Speed Based Level of Service Summary

INTERSECTION OPERATION ANALYSIS

Peak-hour LOS analyses were performed for the morning (AM) and afternoon (PM) peak hour at each of the intersections within the study area. A midday peak hour was also evaluated at intersections along Genesee Avenue, La Jolla Village Drive, Nobel Drive, and Regents Road. The analyses represent the one-hour timeframe that experiences the highest total intersection volume at each individual location.

Appendix F contains the LOS calculation worksheets. **Table 7-10** presents the LOS analysis results for the study intersections.

Figure 7-23 through **Figure 7-25** illustrate the morning, midday, and afternoon peak-hour LOS results for each of the study area intersections.

Twenty-six of the seventy-nine intersections evaluated experienced LOS E or F conditions during one or more of the peak periods including:

- Genesee Ave & N. Torrey Pines Rd (PM)
- Genesee Ave & John Hopkins Dr (S) (AM)
- Genesee Ave & I-5 SB Ramps (AM & PM)
- Genesee Ave & I-5 NB Ramps (Midday and PM)
- Genesee Ave & Eastgate Mall (AM, Midday & PM)
- Genesee Ave & La Jolla Village Dr (AM)
- Genesee Ave & Nobel Dr (AM)
- Genesee Ave & Decoro St (PM)
- Genesee Ave & Centurion Square (AM)
- Genesee Ave & Governor Dr (AM & PM)
- Genesee Ave & SR-52 WB Ramps (PM)
- Genesee Ave & SR-52 EB Ramps (AM & PM)
- Genesee Ave & Appleton St/Lehrer Dr (AM)
- La Jolla Village Dr EB & Gilman Dr (PM)
- La Jolla Village Dr & Villa La Jolla Dr (AM, Midday & PM)
- La Jolla Village Dr & Regents Rd (AM, Midday & PM)
- La Jolla Village Dr & Executive Way (PM)
- La Jolla Village Dr & Towne Centre Dr (AM & PM)
- La Jolla Village Dr & I-805 SB Ramps (AM)
- Miramar Rd & Eastgate Mall (PM)
- Miramar Rd & Camino Santa Fe (PM)
- Nobel Dr & Regents Rd (PM)
- Regents Rd & SR-52 EB Ramps (AM)
- Regents Rd & Luna Ave (AM & PM)
- N. Torrey Pines Rd & Revelle College Dr (PM)
- Governor Dr & I-805 NB Ramps (AM & PM)

Many of the intersections at freeway interchanges are operating at a poor LOS due to the commute to employment areas within the community.

Table 7-10 Existing Conditions Summary of Intersection Analysis

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
1	Genesee Ave & N. Torrey Pines Rd	Signal	AM	33.8	C
			MID	19.8	B
			PM	96.1	**F**
2	Genesee Ave & John Hopkins Dr (S)	Signal	AM	103.3	**F**
			MID	35.5	D
			PM	17.5	B
3	Genesee Ave & Science Center Dr	Signal	AM	24.8	C
			MID	6.7	A
			PM	15.3	B
4	Genesee Ave & I-5 SB Ramps	Signal	AM	57.9	**E**
			MID	25.4	C
			PM	88.3	**F**
5	Genesee Ave & I-5 NB Ramps	Signal	AM	52.3	D
			MID	ECL	**F**
			PM	ECL	**F**
6	Genesee Ave & Scripps Hospital	Signal	AM	19.1	B
			MID	19.9	B
			PM	19.5	B
7	Genesee Ave & Campus Point Dr	Signal	AM	41.3	D
			MID	30.5	C
			PM	37.9	D
8	Genesee Ave & Regents Rd	Signal	AM	26.9	C
			MID	12.4	B
			PM	12.0	B
9	Genesee Ave & Eastgate Mall	Signal	AM	60.1	**E**
			MID	64.2	**E**
			PM	63.5	**E**
10	Genesee Ave & Executive Dr	Signal	AM	13.3	B
			MID	15.9	B
			PM	28.9	C
11	Genesee Ave & Executive Square	Signal	AM	12.5	B
			MID	15.3	B
			PM	8.0	A
12	Genesee Ave & La Jolla Village Dr	Signal	AM	79.1	**E**
			MID	47.7	D
			PM	38.4	D

Notes:
Bold values indicate intersections operating at LOS E or F.
ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

Table 7-10 Existing Conditions Summary of Intersection Analysis (Continued)

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
13	Genesee Ave and Esplanade Ct	Signal	AM	15.4	B
			MID	35.3	D
			PM	29.9	C
14	Genesee Ave & Nobel Dr	Signal	AM	66.3	**E**
			MID	29.6	C
			PM	36.0	D
15	Genesee Ave & Decoro St	Signal	AM	14.1	B
			MID	11.0	B
			PM	66.3	**E**
16	Genesee Ave & Centurion Square	Signal	AM	65.3	**E**
			MID	19.7	B
			PM	4.9	A
17	Genesee Ave & Governor Dr	Signal	AM	69.3	**E**
			MID	24.2	C
			PM	58.9	**E**
18	Genesee Ave & SR-52 WB Ramps	SSSC	AM	27.5	D
			MID	10.0	A
			PM	79.0	**F**
19	Genesee Ave & SR-52 EB Ramps	Signal	AM	57.8	**E**
			MID	32.2	C
			PM	133.0	**F**
20	Genesee Ave & Appleton St/Lehrer Dr	Signal	AM	85.8	**F**
			MID	26.0	C
			PM	34.6	C
21	La Jolla Village Dr & Torrey Pines Rd	Signal	AM	9.6	A
			MID	27.0	C
			PM	52.0	D
22	La Jolla Village Dr & La Jolla Scenic Dr	Signal	AM	30.4	C
			MID	9.4	A
			PM	20.0	C
23a	La Jolla Village Dr WB & Gilman Dr	Signal	AM	15.4	B
			MID	12.2	B
			PM	17.1	B
23b	La Jolla Village Dr EB & Gilman Dr	SSSC	AM	19.2	B
			MID	13.7	B
			PM	121.1	**F**

Notes:
Bold values indicate intersections operating at LOS E or F.
SSSC = Side Street Stop Control
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

Table 7-10 Existing Conditions Summary of Intersection Analysis (Continued)

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
24	La Jolla Village Dr & Villa La Jolla Dr	Signal	AM	59.8	**E**
			MID	154.6	**F**
			PM	ECL	**F**
25	La Jolla Village Dr & I-5 SB Off-Ramps	Signal	AM	31.9	C
			MID	41.9	D
			PM	17.1	B
26	La Jolla Village Dr & I-5 NB Off-Ramps	Signal	AM	20.4	C
			MID	13.5	B
			PM	11.0	B
27	La Jolla Village Dr & Lebon Dr	Signal	AM	23.5	C
			MID	13.4	B
			PM	25.3	C
28	La Jolla Village Dr & Regents Rd	Signal	AM	58.4	**E**
			MID	80.3	**F**
			PM	128.8	**F**
29	La Jolla Village Dr & Executive Way	Signal	AM	5.9	A
			MID	27.4	C
			PM	84.5	**E**
30	La Jolla Village Dr & Towne Centre Dr	Signal	AM	81.0	**F**
			MID	37.3	D
			PM	66.2	**E**
31	La Jolla Village Dr & I-805 SB Ramps	Signal	AM	113.2	**F**
			PM	25.4	C
32	La Jolla Village Dr & I-805 NB Ramps	Signal	AM	20.1	C
			PM	28.0	C
33	Miramar Rd & Nobel Dr	Signal	AM	22.6	C
			MID	19.1	B
			PM	31.4	C
34	Miramar Rd & Eastgate Mall	Signal	AM	16.4	B
			PM	81.6	**F**
35	Miramar Rd & Miramar Mall	Signal	AM	53.3	D
			PM	13.2	B
36	Miramar Rd & Miramar Place	Signal	AM	30.4	C
			PM	5.3	A
37	Miramar Rd & Camino Santa Fe	Signal	AM	34.1	C
			PM	89.1	**F**

Notes:
Bold values indicate intersections operating at LOS E or F.
ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

Table 7-10 Existing Conditions Summary of Intersection Analysis (Continued)

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
38	Nobel Dr & Villa La Jolla Dr	Signal	AM	19.9	B
			MID	22.2	C
			PM	28.2	C
39	Nobel Dr & La Jolla Village Square Dwy	Signal	AM	16.4	B
			MID	34.0	C
			PM	38.8	D
40	Nobel Dr & I-5 SB On Ramp	Signal	AM	3.9	A
			MID	25.7	C
			PM	13.5	B
41	Nobel Dr & University Center Ln/I-5 NB Off-Ramp	Signal	AM	13.9	B
			MID	22.0	C
			PM	18.5	B
42	Nobel Dr & Caminito Plaza Centro	Signal	AM	18.2	B
			MID	17.0	B
			PM	14.6	B
43	Nobel Dr & Lebon Dr	Signal	AM	21.7	C
			MID	18.5	B
			PM	30.4	C
44	Nobel Dr & Regents Rd	Signal	AM	40.4	D
			MID	33.7	C
			PM	70.0	**E**
45	Nobel Dr & Costa Verde Blvd/Cargill Ave	Signal	AM	49.6	D
			MID	45.0	D
			PM	49.3	D
46	Nobel Dr & Lombard Place	Signal	AM	8.1	A
			MID	15.5	B
			PM	24.8	C
47	Nobel Dr & Towne Centre Dr	Signal	AM	22.6	C
			MID	21.5	C
			PM	40.7	D
48	Nobel Dr & Shoreline Dr	Signal	AM	14.4	B
			MID	11.5	B
			PM	13.0	B
49	Nobel Dr & Judicial Dr	Signal	AM	20.3	C
			MID	11.3	B
			PM	17.9	B

Notes:
Bold values indicate intersections operating at LOS E or F.
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(b) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

Table 7-10 Existing Conditions Summary of Intersection Analysis (Continued)

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
50	Nobel Dr & I-805 SB On-Ramp	Signal	AM	3.5	A
			MID	4.2	A
			PM	4.1	A
51	Nobel Dr & I-805 NB Off-Ramp	Signal	AM	17.2	B
			MID	19.5	B
			PM	16.7	B
52	Nobel Dr & Avenue of Flags	Signal	AM	3.2	A
			MID	5.5	A
			PM	3.1	A
53	Regents Rd & County Day Ln/ Health Science Dr	Signal	AM	20.7	C
			MID	12.3	B
			PM	42.6	D
54	Regents Rd & Eastgate Mall	Signal	AM	12.7	B
			MID	5.2	A
			PM	13.3	B
55	Regents Rd & Executive Dr	Signal	AM	8.0	A
			MID	9.1	A
			PM	19.9	B
56	Regents Rd & Regents Park Row	Signal	AM	17.9	B
			MID	13.0	B
			PM	30.3	C
57	Regents Rd & Plaza De Palmas	Signal	AM	9.8	A
			MID	8.8	A
			PM	11.8	B
58	Regents Rd & Berino Ct	Signal	AM	16.7	B
			MID	5.7	A
			PM	6.2	A
59	Regents Rd & Arriba St	Signal	AM	19.1	B
			MID	13.6	B
			PM	16.7	B
60	Regents Rd & Governor Dr	Signal	AM	26.1	C
			MID	14.4	B
			PM	21.4	C
61	Regents Rd & SR-52 WB Ramps	Signal	AM	35.4	D
			MID	31.3	C
			PM	43.3	D
62	Regents Rd & SR-52 EB Ramps	Signal	AM	100.1	**F**
			MID	20.6	C
			PM	31.5	C

Notes: **Bold** values indicate intersections operating at LOS E or F.

(c) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

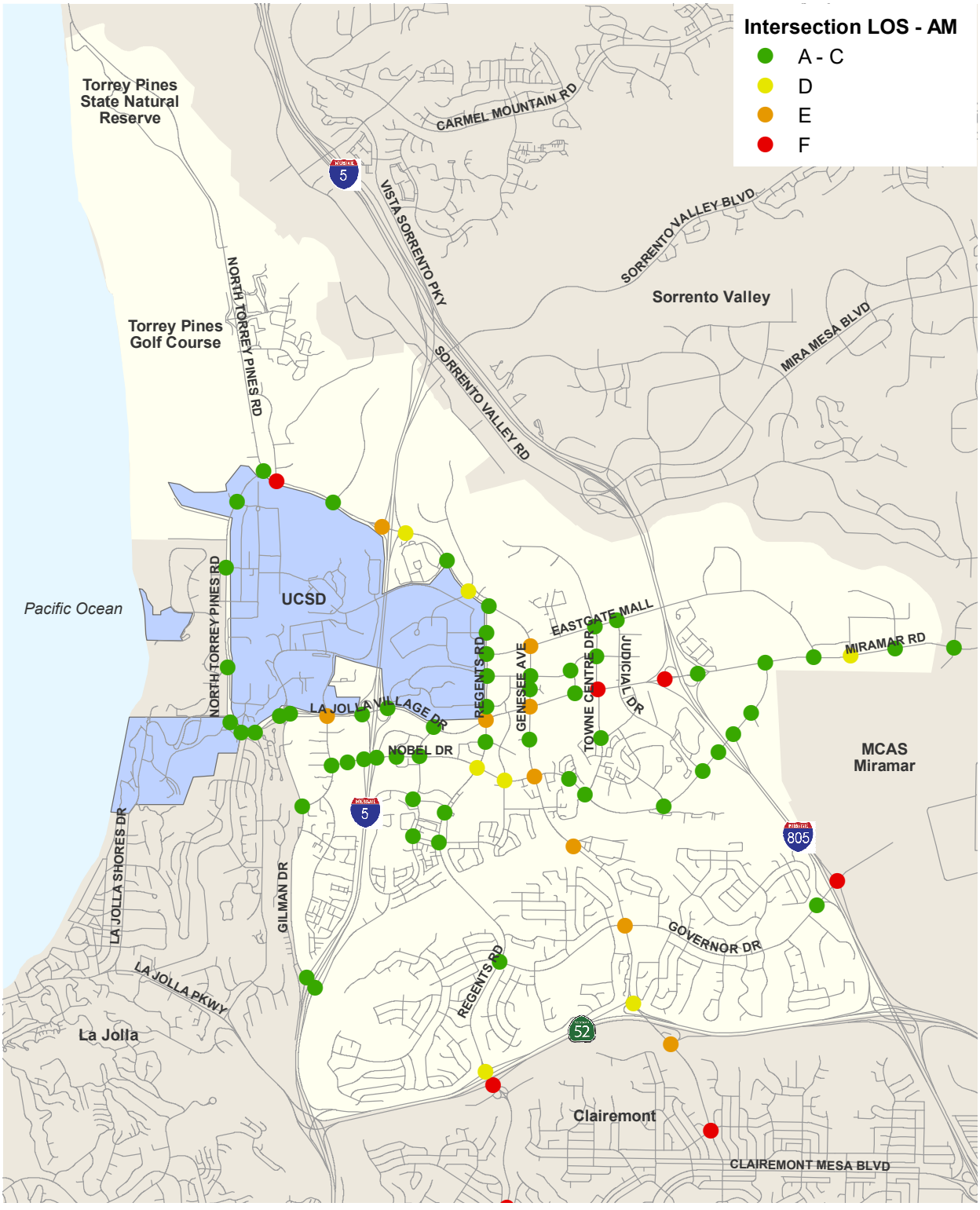
(d) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

Table 7-10 Existing Conditions Summary of Intersection Analysis (Continued)

ID	Intersection	Control	Peak Hour	Existing	
				Delay (a)	LOS (b)
63	Regents Rd & Luna Ave	Signal	AM	ECL	**F**
			PM	177.0	**F**
64	N. Torrey Pines Rd & UCSD Northpoint Dwy	Signal	AM	24.3	C
			PM	32.9	C
65	N. Torrey Pines Rd & Pangea Dr	Signal	AM	7.6	A
			PM	12.7	B
66	N. Torrey Pines Rd & La Jolla Shores Dr	Signal	AM	24.8	C
			PM	42.1	D
67	N. Torrey Pines Rd & Revelle College Dr	Signal	AM	17.9	B
			PM	94.3	**F**
68	Gilman Dr & Villa La Jolla Dr	Signal	AM	22.4	C
			PM	19.0	B
69	Gilman Dr & I-5 SB Ramps	Signal	AM	9.4	A
			PM	43.9	D
70	Gilman Dr & I-5 NB Ramps	Signal	AM	14.3	B
			PM	15.5	B
71	Palmilla Dr & Lebon Dr	Signal	AM	7.8	A
			PM	7.5	A
72	Palmilla Dr & Ariba St	Signal	AM	6.6	A
			PM	7.4	A
73	Towne Centre Dr & Eastgate Mall	Signal	AM	24.1	C
			PM	35.9	D
74	Towne Centre Dr & Executive Dr	Signal	AM	13.5	B
			PM	30.0	C
75	Towne Centre Dr & Golden Haven Dr	Signal	AM	15.9	B
			PM	12.8	B
76	Executive Way & Executive Dr	Signal	AM	10.4	B
			PM	12.9	B
77	Judicial Dr & Eastgate Mall	Signal	AM	16.7	B
			PM	18.9	B
78	Governor Dr & I-805 SB Ramps	SSSC	AM	18.6	C
			PM	17.5	C
79	Governor Dr & I-805 NB Ramps	SSSC	AM	ECL	**F**
			PM	ECL	**F**

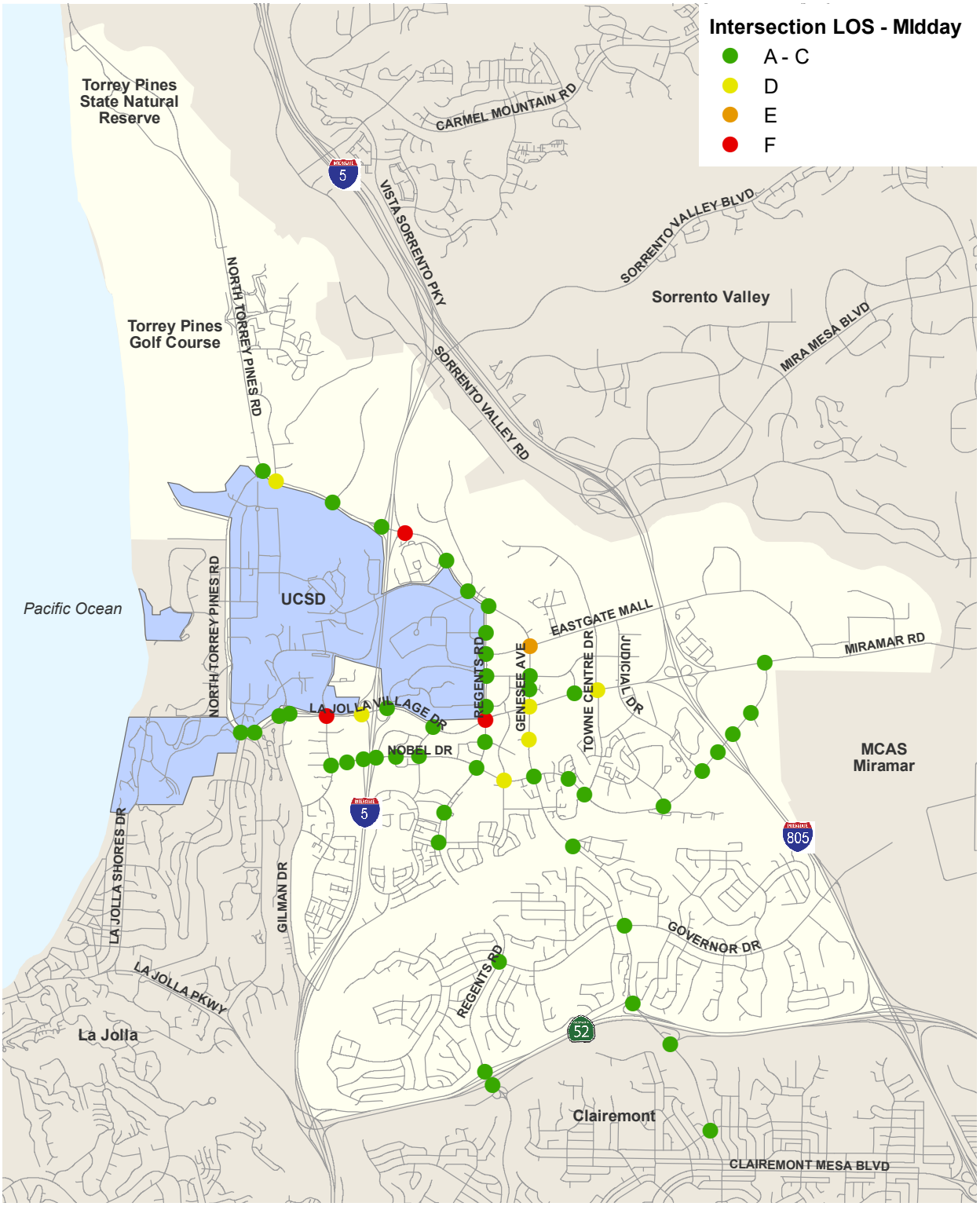
Notes:
Bold values indicate intersections operating at LOS E or F.
ECL = Exceeds Calculable Limit. Reported when delay exceeds 180 seconds.
SSSC = Side Street Stop Control
(c) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.
(d) LOS calculations are based on the methodology outlined in the *2010 Highway Capacity Manual* and performed using Synchro 9.0

FIGURE 7-23



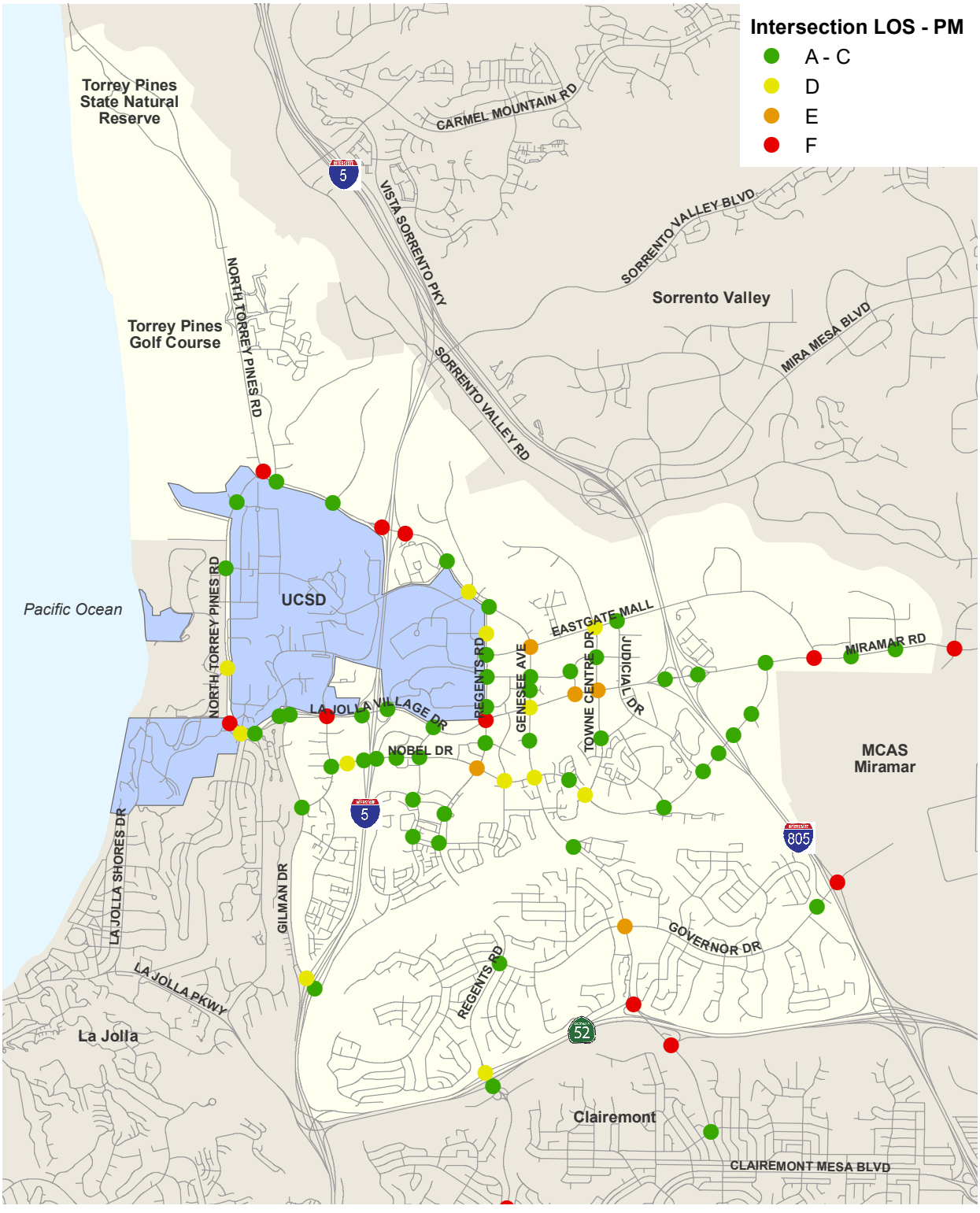
Existing AM Level of Service Summary

FIGURE 7-24



Existing Midday Level of Service Summary

FIGURE 7-25



Existing PM Level of Service Summary

INTERSECTION QUEUEING ANALYSIS

Intersection queueing analysis was performed to understand where queue volumes may cause overflows into adjacent lanes. Overflows were determined to occur where the 95th percentile of queue lengths in either the AM or PM peak periods exceeds the pocket length for that movement. For through movements, the pocket length is calculated as the distance to the preceding intersection. **Table 7-11** presents the results for all movements which produced overflow queues in the analysis. This analysis shows that queues extend beyond the turn pockets of nearly all (64 of 75) of the study area signalized intersections for at least a portion of the peak hour.

Table 7-11 Intersection Queue Overflows

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
1: N. Torrey Pines Rd. & Genesee Ave	EBR	150	50	287	-	137
2: Genesee Ave & John Hopkins Drive	WBR	200	804	23	604	-
	SBL	170	61	249	-	79
3: Genesee Ave & Science Center Drive	EBL	125	123	132	-	7
4: Genesee Ave & I-5 SB Ramps	WBT	492	577	1	81	-
	SBL	446	552	583	106	137
	SBT	446	519	628	73	182
5: I-5 NB Ramps & Genesee Ave	EBL	350	139	550	-	200
	NBL	481	693	191	212	-
	NBT	481	735	205	254	-
	NBR	481	472	42	-	-
6: Genesee Ave & Scripps Hospital	NBL	275	323	121	48	-
	SBR	160	193	45	33	-
7: Genesee Ave & Campus Point Drive	EBL	130	124	231	-	101
	EBR	130	21	252	-	122
	WBL	230	37	275	-	45
	SBR	200	387	100	187	-
8: Regents Road & Genesee Ave	WBL	90	101	59	11	-
9: Genesee Ave & Eastgate Mall	WBL	160	105	328	-	168
	NBL	150	247	56	97	-

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
10: Genesee Ave & Executive Drive	NBT	326	426	89	100	-
11. Genesee Ave & Executive Square	SBT	326	8	445	-	119
12: Genesee Ave & La Jolla Village Drive	SBL	225	130	357	-	132
13: Genesee Ave & Esplanade Court	EBL	140	97	153	-	13
	EBT	140	98	155	-	15
	WBL	131	75	231	-	100
	WBT	131	41	184	-	53
14: Genesee Ave & Nobel Drive	EBL	125	85	160	-	35
	EBR	125	14	204	-	79
15: Genesee Ave & Decoro Street	WBT	300	154	533	-	233
	NBL	165	159	377	-	212
	SBT	929	228	1458	-	529
16: Genesee Ave & Centurion Square	WBL	50	354	143	304	93
	WBR	50	86	0	36	-
	SBL	105	129	20	14	-
17: Genesee Ave & Governor Drive	EBL	110	372	177	262	67
	EBR	90	135	87	45	-
	WBL	250	217	272	-	22
	NBL	190	161	464	-	274
	NBR	125	232	235	107	110
	SBL	265	173	292	-	27
	SBR	85	231	596	146	511
19: Genesee Ave & SR-52 EB Ramps	NBR	125	527	96	402	-
	SBL	450	528	1180	78	730
20: Genesee Ave & Appleton Street/Lehrer Drive	EBT	239	724	517	485	278
	NBL	75	28	86	-	11
	NBT	439	608	195	169	-
	SBL	175	69	236	-	61

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
21: Torrey Pines Road & La Jolla Village Drive	EBT	378	65	774	-	396
	WBL	260	418	602	158	342
	NBR	265	285	219	20	-
22: La Jolla Scenic Dr & La Jolla Village Dr	EBT	362	488	799	126	437
	WBL	200	116	268	-	68
	WBT	200	632	290	432	90
23: Gilman Drive & La Jolla Village Dr WB Off	NBL	50	370	193	320	143
24: Villa La Jolla Drive & La Jolla Village Drive	EBT	318	469	1087	151	769
	WBL	270	154	297	-	27
	NBL	125	184	230	59	105
	SBL	215	140	450	-	235
	SBT	335	76	753	-	418
25: I-5 SB Off-Ramps & La Jolla Village Drive	WBR	250	123	805	-	555
	SBL	130	352	457	222	327
	SBR	130	565	282	435	152
26: I-5 NB Ramps & La Jolla Village Drive	EBR	550	408	1024	-	474
	NBL	175	210	187	35	12
	NBR	175	346	150	171	-
27: Lebon Drive & La Jolla Village Drive	NBL	200	305	307	105	107
28: Regents Road & La Jolla Village Drive	EBL	270	561	486	291	216
	WBL	175	32	273	-	98
	SBL	160	186	356	26	196
	SBT	368	88	430	-	62
	SBR	195	26	1421	-	1226
29: Executive Way & La Jolla Village Drive	WBT	654	1234	571	580	-
	SBL	105	82	654	-	549
30: Towne Center Drive & La Jolla Village Drive	EBL	145	346	25	201	-
	EBT	654	216	961	-	307
	WBT	1193	1190	626	-	-
	WBR	370	350	47	-	-
	SBL	230	140	742	-	512

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
31: I-805 SB Ramps & La Jolla Village Drive	EBT	680	513	894	-	214
	SBR	900	1002	232	102	-
32: I-805 NB Ramps & La Jolla Village Drive	EBR	720	50	1538	-	818
	WBT	310	304	454	-	144
34: Miramar Road & Eastgate Mall	WBT	1036	639	1146	-	110
	SBL	225	140	630	-	405
	SBT	451	71	609	-	158
35: Miramar Road & Miramar Mall	EBL	160	174	75	14	-
	WBT	463	1413	1307	950	844
36: Miramar Road & Miramar Place	EBL	210	216	52	6	-
37: Camino Santa Fe & Miramar Road	EBL	545	384	724	-	179
	WBT	449	845	630	396	181
	NBL	75	35	121	-	46
38: Villa La Jolla Drive & Nobel Drive	SBL	125	45	267	-	142
39: La Jolla Village Square Dwy & Nobel Drive	WBL	145	76	226	-	81
	NBL	95	25	124	-	29
	NBT	120	28	129	-	9
	NBR	95	23	251	-	156
	SBL	70	62	275	-	205
	SBT	70	64	283	-	213
40: I-5 SB Ramps & Nobel Drive	EBT	243	31	268	-	25
42: Caminito Plaza Centro & Nobel Drive	EBL	100	65	115	-	15
44: Regents Road & Nobel Drive	SBL	210	116	415	-	205
	SBR	100	0	245	-	145

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
45: Cargill Ave/Costa Verde Boulevard & Nobel Drive	EBL	270	183	328	-	58
	NBL	100	92	113	-	13
	SBL	95	148	208	53	113
46: Lombard Place & Nobel Drive	EBL	150	67	259	-	109
48: Nobel Drive & Shoreline Drive	NBT	92	104	49	12	-
53: Regents Road & Health Science Drive	EBR	200	14	226	-	26
	NBL	175	674	216	499	41
54: Regents Road & Eastgate Mall	WBL	120	100	175	-	55
	SBT	571	68	709	-	138
56: Regents Road & Miramar Street/Regents Park Row	WBL	50	58	179	8	129
	NBL	135	118	181	-	46
	SBL	60	48	64	-	4
57: Regents Road & Plaza De Palmas	SBT	599	63	923	-	324
59: Regents Road & Ariba Street	SBL	200	211	266	11	66
60: Regents Road & Governor Drive	WBL	130	310	431	180	301
61: Regents Road & SR-52 WB On/SR-52 WB OFF	NBL	160	233	199	73	33
62: Regents Road & SR-52 EB Off/SR-52 EB On	EBR	50	78	994	28	944
	NBR	50	806	219	756	169
	SBL	110	367	147	257	37

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
63: Clairemont Mesa Blvd/Regents Road & Luna Ave	EBT	101	595	495	494	394
	EBR	60	16	84	-	24
	NBL	175	241	196	66	21
	SBT	366	153	886	-	520
64: N. Torrey Pines Rd. & UCSD Northpoint Driveway	EBT	26	48	95	22	69
	WBL	130	58	145	44	15
	NBL	50	94	36	44	-
65: N. Torrey Pines Rd. & Pangea Drive	WBL	90	29	112	-	22
	NBT	296	317	137	21	-
	SBT	313	91	684	-	371
66: N. Torrey Pines Road/N. Torrey Pines Road. & La Jolla Shores Drive	EBL	75	271	194	196	119
	WBT	53	70	117	17	64
	NBL	130	228	226	98	96
	SBL	190	71	265	-	75
	SBT	272	124	1195	-	923
	SBR	165	190	334	25	169
67: La Jolla Village Drive/N. Torrey Pines Road & Expedition Way/Revelle College Drive	NBL	150	356	150	206	-
	NBT	378	731	253	353	-
68: Gilman Drive & Villa La Jolla Drive	SBL	200	119	283	-	83
69: I-5 SB On/I-5 SB Off Ramp & Gilman Drive	EBR	275	25	956	-	681
	WBL	115	151	751	-	636
70: Gilman Drive	NBL	175	245	251	70	76
71: Palmilla Drive/Charmant Dr & Lebon Drive	SBL	110	129	44	19	-
73: Towne Center Drive & Eastgate Mall	WBL	150	63	234	-	84

Intersection	Movement	Pocket Length	95% Queue Length (AM)	95% Queue Length (PM)	Excess Queue (AM) (ft)	Excess Queue (PM) (ft)
74: Towne Center Drive & Executive Drive	WBL	115	63	450	-	335
76: Executive Way & Executive Drive	NBL	105	140	45	35	-
	SBT	61	27	77	-	16
77: Judicial Drive & Eastgate Mall	NBL	150	191	140	41	-

FREEWAY SEGMENTS

Interstate 5 is a significant north-south interstate that traverses the United States from the Mexican border to the Canadian border through the states of California, Oregon, and Washington. Within California, I-5 connects the following major metropolitan areas: San Diego, Los Angeles, Sacramento, and the eastern portion of the San Francisco Bay Area. I-5 is located on the western half of the University community and has interchanges at Genesee Avenue, La Jolla Village Drive, Gilman Drive, and Nobel Drive.

Interstate 805 is largely contained within the San Diego metropolitan area. Termini are both located along Interstate 5, one near the Mexico border and the other near the Torrey Pines State Reserve and the University of California at San Diego. I-805 is located on the eastern half of the University community and has interchanges at La Jolla Village Drive/Miramar Road, Nobel Drive, and Governor Drive.

State Route 52 is an east-west state highway that connects La Jolla on the west end at the termini with I-5 within Santee on the east end. SR-52 is located on the south side of the University community and has interchanges at interstate at Regents Road and Genesee Avenue.

Freeway volumes were obtained from Caltrans and reflect the latest Year 2016 volumes that had been published at the time of this report. The freeways were evaluated using procedures for a freeway mainline as outlined in the HCM.

Table 7-12 displays the LOS analysis results for the freeway segments adjacent to the community during the morning and afternoon peak hours. As shown in the table, the freeway segments surrounding the University community operate with an LOS D or better for all segments except the following:

- Interstate 5 shows LOS F between SR-52 and Gilman Drive during the AM and PM peak, respectively. During the AM peak, the failing LOS appears in the northbound direction, in the PM peak the failing LOS appears in the southbound direction.
- Interstate 805 shows LOS F at each of the study segments in both peak periods. The failing LOS shows up in the northbound direction during the AM peak and in the southbound direction during the PM peak.
- State Route 52 shows LOS E for the segment between Genesee Avenue and I-805 during the AM peak and LOS E or F at each of the study segments during the PM peak. All failing segments are in the eastbound direction.

In general, the failing segments are those that move traffic towards the University community in the morning and away from the University community in the afternoon. **Figure 7-26** illustrates the LOS along the freeways during the AM peak. **Figure 7-27** illustrates the LOS along the freeways during the PM peak. **Appendix H** includes the “k” and “d” factors published by Caltrans that are included in the analysis.

FREEWAY ENTRANCE RAMPS

Freeway entrance ramps that currently have ramp meters installed and in operation were evaluated to determine the delay and queue associated with the ramp meters. Calculations were made using the peak hour demand at the entrance ramp and the current meter rate to quantify the number and frequency of vehicles that are processed through the meter. The excess demand not being processed is then quantified along with its respective queue length. Ramp volumes were obtained from the intersection turning movements collected in May 2015. **Appendix H** contains the ramp meter rates provided by Caltrans.

Table 7-13 displays the results of the freeway ramp meters in the study area. It should be noted that the I-5/Genesee Avenue interchange was under construction at the time of this study and ramp meters were removed and not operating. As shown in the table, the meter rate adequately controls the expected demand with delays resulting in less than 15 minutes, except at the following locations:

- I-5 SB & Gilman Drive, PM peak (21-minute delay)
- I-5 SB & La Jolla Village Drive (WB to SB), PM peak (22-minute delay)
- I-5 SB & La Jolla Village Drive (EB to SB), PM peak (55-minute delay)
- I-805 SB & Governor Drive, PM Peak (19-minute delay)

It is expected that delays over 15 minutes lead people to use an alternate route or choose to use the ramp during a different time period.

Figure 7-26 illustrates that no ramps are over capacity during the AM peak period. **Figure 7-27** illustrates the ramps that are over capacity during the PM peak period. As shown in the figures, existing freeway ramps over capacity include:

- I-5 SB & Gilman Drive
- I-5 NB & La Jolla Village Drive (EB to NB)
- I-5 SB & La Jolla Village Drive (WB to SB)
- I-5 SB & La Jolla Village Drive (EB to SB)
- I-805 & Nobel Drive
- I-805 SB and Governor Drive

Field observations were made at each of the entrance ramps. Ramp meter analysis used the most restrictive rates which may not result in queue lengths that reflect these field observations.

Table 7-12 Existing Summary of Freeway Segment Level of Service

Freeway Segment		Dir	Number of Lanes	Peak-Hour Volume (a)		Speed (mph) (b)		Density (pc/mi/ln)		LOS (c)	
				AM	PM	AM	PM	AM	PM	AM	PM
I-5	SR-52 to Gilman Dr	NB	4	8,989	5,724	49	68	52.0	23.9	**F**	C
		SB	4	5,223	8,712	68	51	23.7	48.1	C	**F**
	Gilman Dr to Nobel Dr	NB	4	6,549	6,267	65	66	28.5	26.8	D	D
		SB	4	5,315	5,529	68	68	23.7	23.7	C	C
	Nobel Dr to La Jolla Village Dr	NB	4	5,735	5,489	68	68	23.9	23.7	C	C
		SB	4	4,655	4,842	68	68	23.7	23.7	C	C
	La Jolla Village Dr to Genesee Ave	NB	4	6,278	6,008	66	67	26.9	25.4	D	C
		SB	4	5,095	5,300	68	68	23.7	23.7	C	C
I-805	SR-52 to Governor Dr	NB	4	10,585	4,863	33	68	92.4	23.7	**F**	C
		SB	4	3,368	10,253	68	36	23.7	80.1	C	**F**
	Governor Dr to Nobel Dr	NB	4	10,378	4,768	35	68	82.6	23.7	**F**	C
		SB	4	3,302	10,052	68	39	23.7	72.6	C	**F**
	Nobel Dr to La Jolla Village Dr	NB	4	9,340	4,291	46	68	57.8	23.7	**F**	C
		SB	4	2,972	9,047	68	48	23.7	52.9	C	**F**
	La Jolla Village Dr to Mira Mesa Blvd	NB	4	9,288	4,267	46	68	57.0	23.7	**F**	C
		SB	4	2,956	8,997	68	49	23.7	52.1	C	**E**
SR-52	I-5 to Regents Rd	EB	3	3,672	4,215	61	54	33.5	43.6	D	**E**
		WB	3	2,967	2,882	68	68	24.7	23.8	C	C
	Regents Rd to Genesee Ave	EB	2	3,585	4,116	62	56	32.3	41.5	D	**E**
		WB	2	2,897	2,814	67	67	25.3	25.3	C	C
	Genesee Ave to I-805	EB	2	3,845	4,414	59	51	36.7	49.1	**E**	**F**
		WB	2	3,106	3,018	67	67	26.4	25.4	D	C

Notes:

(a) Peak-hour volumes were estimated by applying the K and D factors to the published 2016 Caltrans AADT volumes.

(b) The speed was calculated from a base free-flow speed (BFFS) of 75.4 mph.

(c) The LOS for the respective freeway segments were based on the methodologies contained in Chapter 11 of the *2010 Highway Capacity Manual.*

Table 7-13 Existing Summary of Freeway Ramp Metering Operations

On-Ramp	Peak Hour	Number of Lanes		Storage Length (ft)		Meter Rate (veh/hr/ln) (a)	Ramp Volume (per lane)			Excess Demand (veh/hr)		Delay (min) (c)		Queue Length (ft/ln)	
		GP	HOV	GP	HOV		Total	GP	HOV	GP	HOV	GP	HOV	GP	HOV
I-5 SB & Gilman Dr	AM	2	1	570	570	n/a	735	294	147						
	PM					478	1615	646	323	168	0	**21**	0	4,200	0
I-5 SB & Nobel Dr	AM	2	1	490	370	n/a	411	164	82						
	PM					528	1198	479	240	0	0	0	0	0	0
I-5 NB & La Jolla Village Dr (WB to NB)	AM	1	0	715	n/a	n/a	488	488	0						
	PM					555	544	544	0	0	0	0	0	0	0
I-5 NB & La Jolla Village Dr (EB to NB)	AM	1	1	410	410	n/a	844	675	169						
	PM					n/a (b)	1248	998	250						
I-5 SB & La Jolla Village Dr (WB to SB)	AM	1	1	535	475	n/a	314	251	63						
	PM					643	1095	876	219	233	0	**22**	0	5,825	0
I-5 SB & La Jolla Village Dr (EB to SB)	AM	1	1	355	265	n/a	221	177	44						
	PM					343	820	656	164	313	0	**55**	0	7,825	0
I-805 NB & La Jolla Village Dr (WB to NB)	AM	1	1	1850	1090	804	481	385	96	0	0	0	0	0	0
	PM					n/a	446	357	89						
I-805 NB & La Jolla Village Dr (EB to NB)	AM	1	1	780	780	746	802	642	160	0	0	0	0	0	0
	PM					n/a	1371	1097	274						
I-805 SB & La Jolla Village Dr (WB to SB)	AM	1	1	1290	1290	n/a	497	398	99						
	PM					704	640	512	128	0	0	0	0	0	0
I-805 SB & La Jolla Village Dr (EB to SB)	AM	2	1	2220	920	n/a	441	176	88						
	PM					593	1016	406	203	0	0	0	0	0	0
I-805 SB & Nobel Dr	AM	2	1	915	915	n/a	680	272	136						
	PM					229	671	268	134	39	0	10	0	985	0
I-805 NB Governor Dr	AM	1	1	485	485	385	396	317	79	0	0	0	0	0	0
	PM					n/a	338	270	68						
I-805 SB & Governor Dr	AM	1	0	515	n/a	n/a	485	485	0						
	PM					768	1016	1016	0	248	0	**19**	0	6,200	0

Notes:
(a) The ramp meter rate represents the most restrictive rate obtained from Caltrans. This rates may not result in queue lengths that reflect field observations.
(b) A ramp meter rate ranging between 643 to 996 veh/hr/ln was provided, but Caltrans and field observations indicated that the ramp is not turned on during the PM peak period.
(c) Delays exceeding 15-minutes are shown in **Bold**.

FIGURE 7-26

Existing AM Freeway Operations

FIGURE 7-27

Existing PM Freeway Operations

8 INTELLIGENT TRANSPORTATION SYSTEMS

Use of Intelligent Transportation Systems (ITS) can provide many benefits to a mobility network, including improving travel time, providing transit bypass methods, helping relay valuable traffic-related information to vehicular and non-vehicular users, and providing guidance to key destinations.

Coordinated traffic signals is an example of an ITS strategy that helps improve roadway operations, and can be found in the University community. Traffic signals have coordinated timing plans and improve traffic flow along a corridor. The traffic signals typically communicate using underground copper or fiber optic wires. Having traffic signals coordinated helps to maximize the efficiency of the traffic signal system on that roadway. The following roadways within the study area have coordinated traffic signal timing plans:

- Genesee Avenue
- La Jolla Village Drive
- Miramar Road
- North Torrey Pines Road

Transit signal priority is an ITS strategy that allows a public transit vehicle, such as an MTS bus, to send information to an upcoming traffic signal to activate advanced transitioning to a green signal for its approach. Queue bypass lanes for transit are another form of transit signal priority that can be coupled with signal priority. There are a few instances of transit priority measures currently in place in the community.

As part of the SuperLoop rapid bus route, a total of 40 intersection have transit signal priority capability. This includes 31 City operated intersections, seven UCSD operated intersections, and two Caltrans operated intersections. Although equipped, transit signal priority is not operating at these intersections along the SuperLoop route within the University community. A list of the intersections with transit signal priority along the SuperLoop route is included in Appendix D.

9 TRANSPORTATION DEMAND MANAGEMENT

The goal of the City's Transportation Demand Management (TDM) program is to improve mobility, reduce congestion and air pollution, and provide options for employees and residents to commute to and from work. Typical TDM strategies include promoting teleworking, alternative work schedules, walking, bicycling, carpooling, vanpooling, transit, carsharing, mixed-use development, and other transportation options. TDM measures improve the efficiency of our transportation system by helping to reduce vehicle trips during peak periods of demand. **Figure 9-1** displays the existing mode split percentages collected by the US Census Bureau for 2014.

The San Diego Association of Governments (SANDAG) performed a survey of some of the major employers in the community to help assess effectiveness of TDM measures currently in place and to help strategize future TDM efforts for the community. The survey provided an insight to the current mode split in the community:

SANDAG has an established program called iCommute that serves as the administrator for TDM in the region. iCommute provides the following services:

- RideMatcher – resources for finding carpool partners or available vanpool seats
- SchoolPool – a program that enrolls schools to encourage parents to carpool
- Transit Information - provides a linkage to transit service provider web pages
- Bicycle Information – provides a link to SANDAG's Regional Bikeway Master Plan, which has been updated to show bicycle paths, lanes and routes in the region.
- Guaranteed Ride Home – a program that allows vanpool riders affordable rides home to deal with emergency meetings or illness

The City of San Diego's Municipal Code requires new development to provide sufficient bicycle parking stalls, carpool parking and motorcycle facilities to encourage the use of alternative modes of transportation. As new developments enter the community, TDM measures most likely will be required. Examples of recent TDM measures requested for development in the community include:

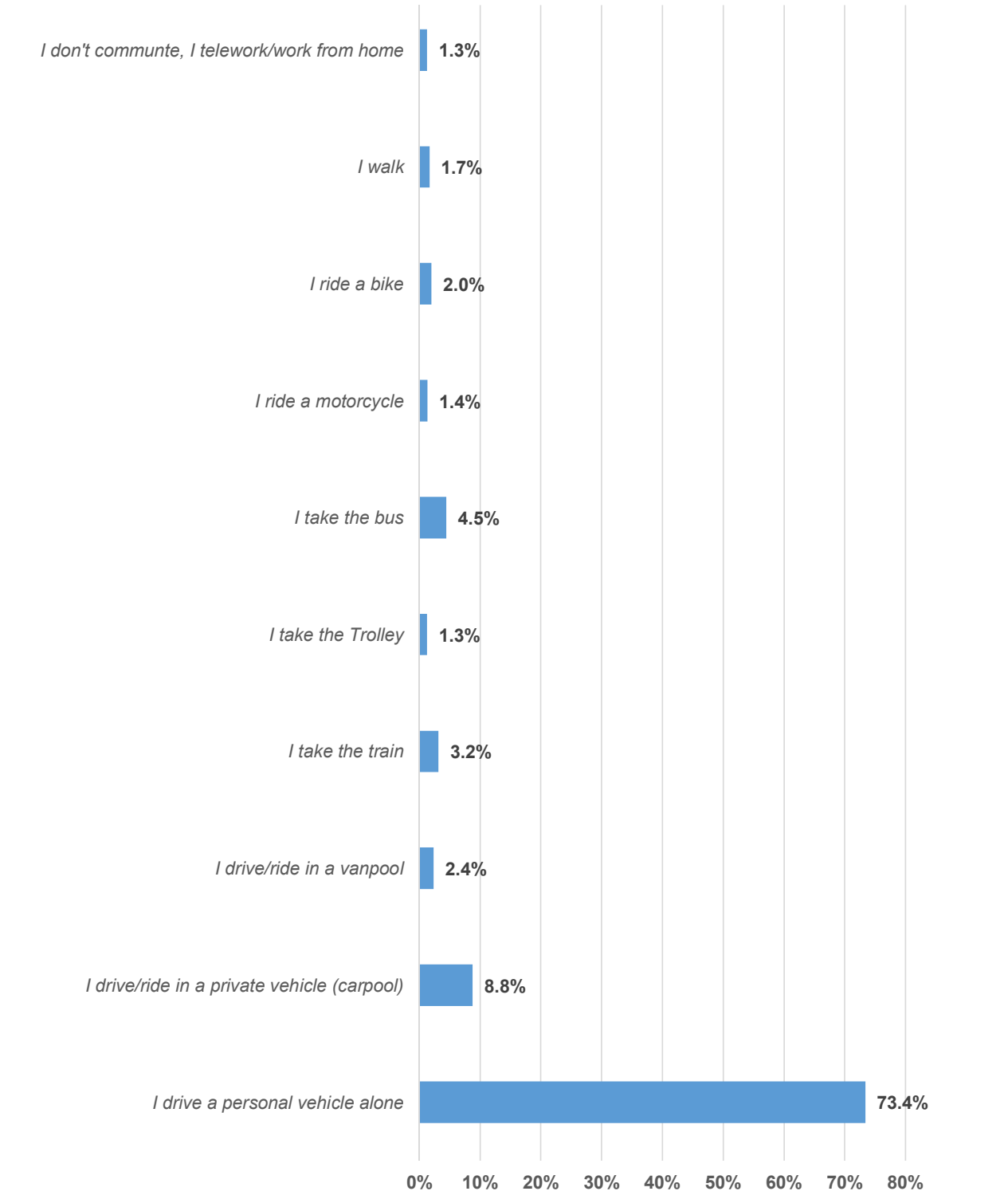
- Partially (or fully) subsidize transit passes
- Provide bicycle lockers
- Provide on-site shower facilities
- Provide reserved parking spaces for carpool/vanpool/low emission vehicles
- Provide transit/carpool/vanpool information kiosks

Caltrans owns and/or maintains several park-and-ride lots in the region that are used to promote carpool activity. There are currently two park-and-ride locations within the community, located at:

- Gilman Drive, just west of Interstate 5 and
- Governor Drive, just west of Interstate 805

Pricing strategies are also used to reduce demand on the transportation system. Managed lanes along Interstate 805 and Interstate 5 adjacent to the community are included in the 2050 RTP. These facilities will be available for carpools, vanpools, buses, and for single occupant drivers who pay a toll. The amount of carpooling activity is expected to increase as the system of high occupancy lanes and managed lanes increase in the region.

FIGURE 9-1



Source: U.S. Census Bureau 2014

Existing Mode Split Based on Survey Data

10 PARKING

PARKING MANAGEMENT

Parking in the University community is primarily off-street parking. In the commercial areas, off-street parking lots are provided for the adjacent uses. In residential areas, off-street parking is mostly provided as well, with on-street parking sparingly used as overflow parking for residents and visitors. For on-street parking in the community, there are no permit parking areas and time-restricted and metered parking is used infrequently.

Portions of some of the key corridors in the community currently provide on-street parking:

- La Jolla Village Drive
- Governor Drive
- Regents Road
- Nobel Drive

Connectivity in the community may benefit from the conversion of on-street parking to transit or bicycle facilities. Providing enough off-street parking to accommodate the adjacent land uses and repurposing the roadways to accommodate other modes of travel may be needed to capture future growth. The effect of removing on-street parking will need to be considered on an individual project basis.

The number of off-street parking spaces for future development should follow the municipal code regulations, including requirements for reserved parking spaces for carpool and zero emission vehicles. Bicycle parking should also be provided for commercial uses. Near major transit stations and stops, reduced parking requirements should be considered to encourage transit use and discourage single occupancy vehicle use.

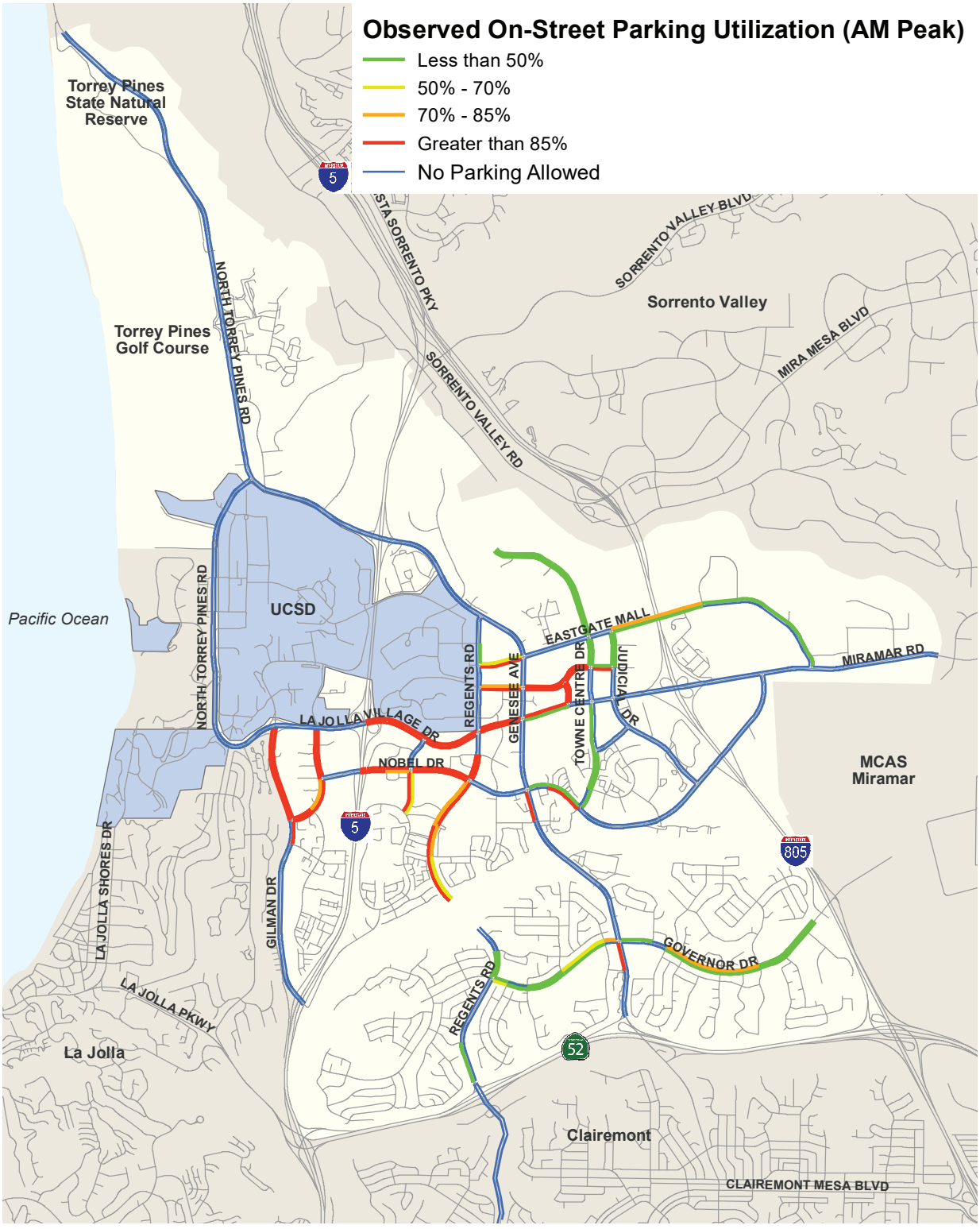
ON-STREET PARKING UTILIZATION

On-street parking is present on several study roadway segments in the University community. Occupancies for on-street spaces were measured during the AM Peak (7am – 10am), the Mid-day period (11am - 2pm), and the PM Peak (4pm – 7pm). Observed on-street parking utilization for AM Peak, Mid-day, and PM Peak are presented in **Figure 10-1**, **Figure 10-2**, and **Figure 10-3**, respectively.

Parking occupancies were observed to be highest for roadways adjacent to multi-family residential developments. Interestingly, occupancies did not decrease significantly between the AM and Mid-day periods, indicating that many residential parkers may be storing their vehicles on the street over the course of the day, rather than simply using on-street spaces for overnight parking. Parking around the UCSD campus could also be a result of students and/or faculty not wanting to pay or not being able to find parking on UCSD's campus. Parking occupancies of 85 percent or greater are typically considered to be full operationally and indicate where it may be difficult to find a parking space. High on-street occupancies can cause increased congestion and emissions associated with vehicles circling the block, looking for open parking spaces.

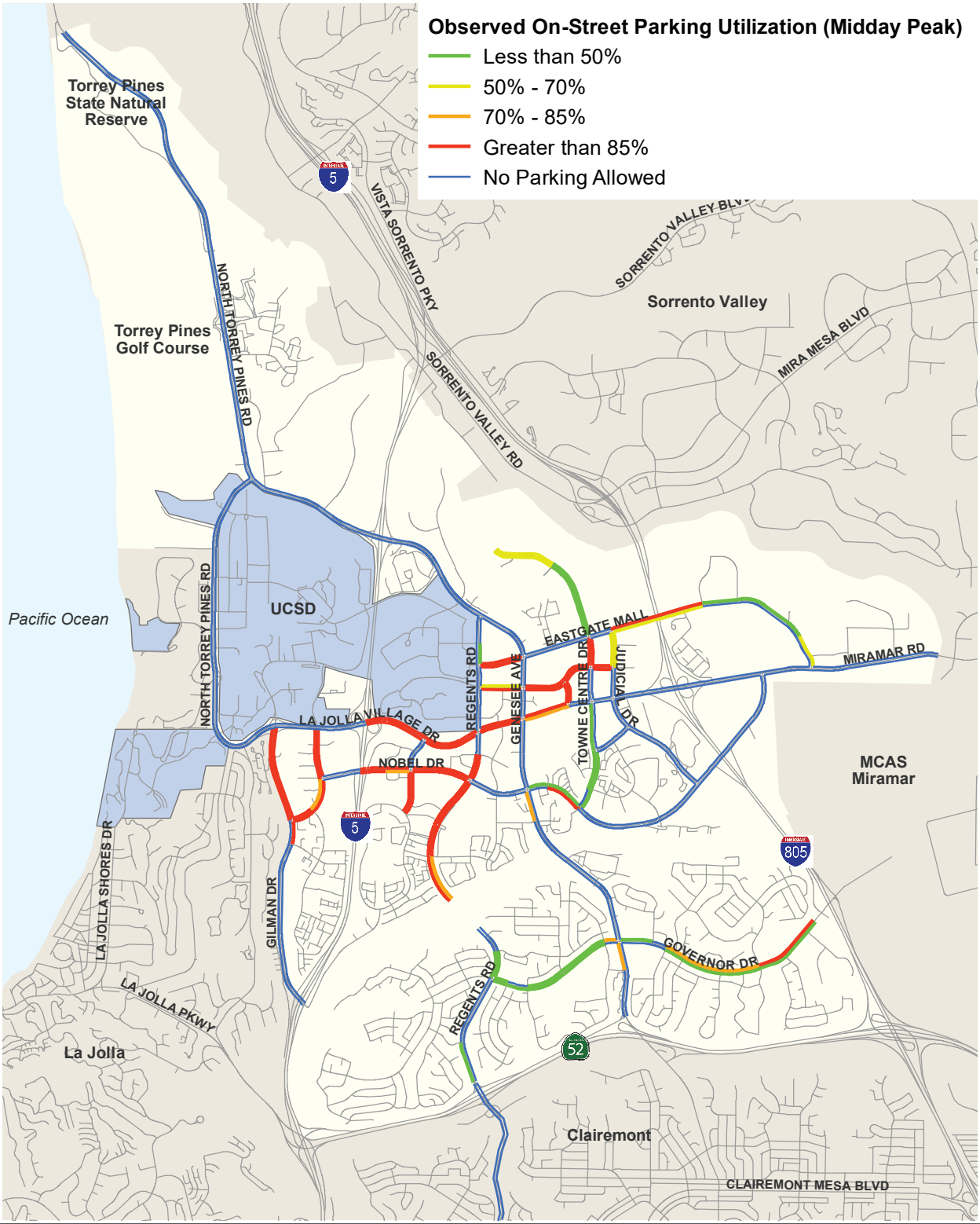
Another reason for parking being occupied during mid-day periods could be due to UCSD students and staff from outside of the community avoiding paying for on-campus parking by using free on-street parking and riding the SuperLoop to reach the campus.

FIGURE 10-1



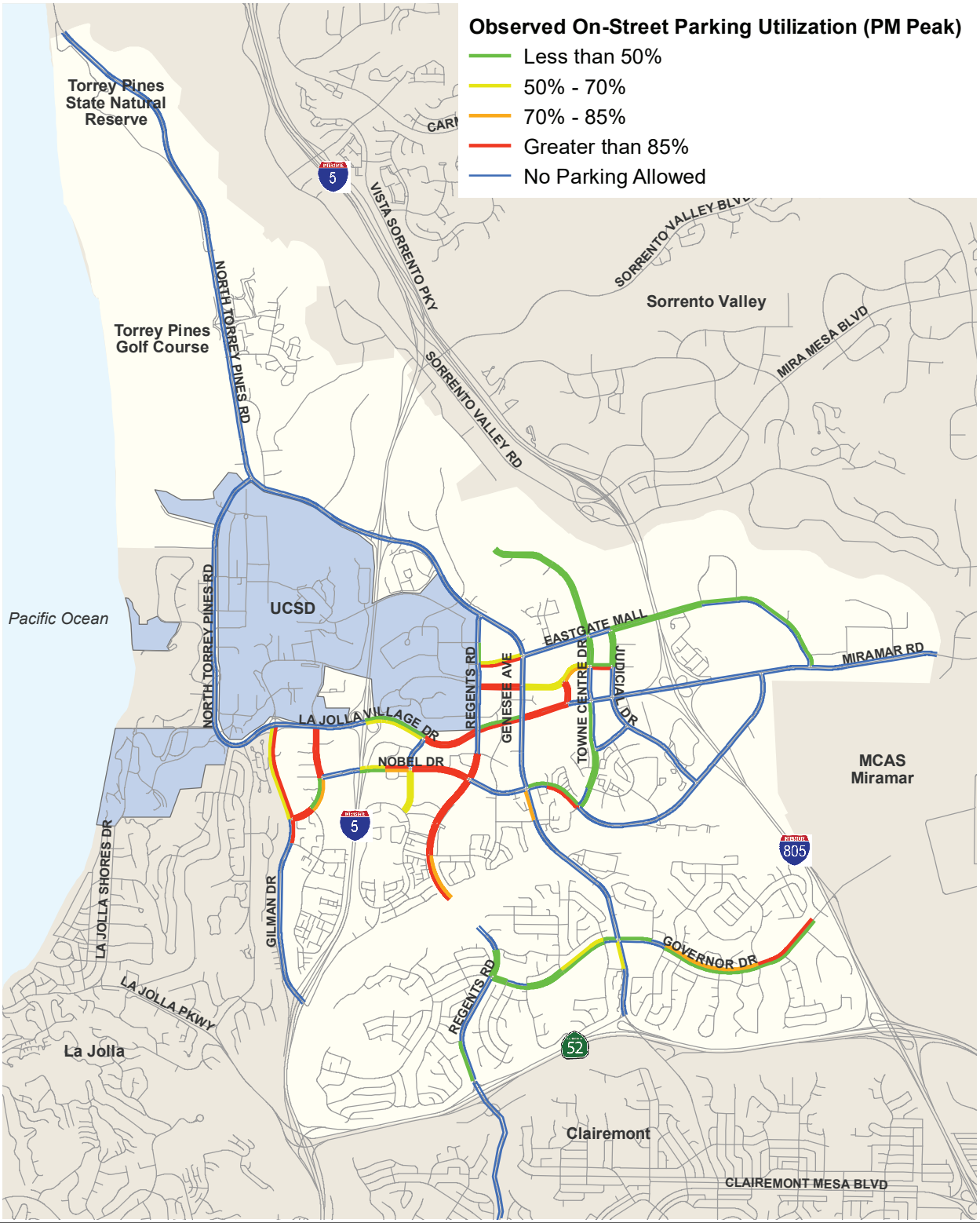
Observed AM Peak Hour Parking Utilization

FIGURE 10-2



Observed Midday Parking Utilization

FIGURE 10-3



Observed PM Peak Hour Parking Utilization

11 AIRPORTS

The closest passenger airport serving the University community is the San Diego International Airport (Lindbergh Field). There currently are not any direct public transit options that connect the community to the airport. Commuter air travel and corporate air travel is also available at McClellan-Palomar Airport, in Carlsbad, California to the north of the community. Montgomery Field is a general aviation airport located southeast of the community in Kearny Mesa. Miramar Marine Corps Air Station, is a military air field located adjacent to the eastern portion of the University community.

12 PASSENGER RAIL

Passenger rail is defined as train serving destinations outside of the San Diego Region. AMTRAK provides train service from San Diego to other parts of California and a majority of the United States. The main route serving San Diego is the Pacific Surfliner, which travels via Orange and Los Angeles Counties to the California central coast. The Pacific Surfliner stops in Los Angeles, which functions as a transfer point to access destinations across the nationwide AMTRAK service area. The main AMTRAK station in San Diego is Union Station (commonly known as Santa Fe Depot), located in downtown San Diego. The closest AMTRAK station to the University community is the Sorrento Valley station. Only three trains per day (in each direction) stop at this location on both weekdays and weekends.

NCTD provides commuter rail service (the COASTER) from Oceanside to downtown San Diego through the University community. The closet COASTER station to the University community is also the Sorrento Valley Station. Eleven trains per day (in each direction) stop at this location during the week and four trains per day (in each direction) stop on the weekend.

13 GOODS MOVEMENT & FREIGHT

The movement of goods in San Diego and the region is supported by an integrated intermodal freight infrastructure consisting of the use of trucks/roadways, rail/railroads, ports/maritime shipping, and air cargo/airports. The University community has no freight rail service, ports, or airports located within their boundary. However, freight service is provided along the LOSSAN corridor through the community, but does not stop within the community. Commercial good movements are limited to local deliveries to businesses and through travel on freeways.

14 MOBILITY OPPORTUNITIES AND CONSTRAINTS

This chapter provides a summary of pedestrian, bicycle, transit, and street and freeway mobility needs determined through the existing conditions analyses.

PEDESTRIAN OPPORTUNITIES AND CONSTRAINTS

Nearly all trips involve a pedestrian connection – either simply walking from a parked car to a building or something more direct such as walking to transit, a store, school, or employment. The surrounding environment can either encourage or discourage walk trips depending on the availability of sidewalks, trees for shading, lighting, interesting buildings or scenery to look at, other people outside, neighborhood destinations and a feeling of safety. Pedestrian environments that are inviting and land uses that promote pedestrian activities can help to increase walking as a means of transportation and recreation. Land use and street design recommendations that benefit pedestrians also contribute to the overall quality, vitality, and sense of community within a neighborhood.

Future improvements to the pedestrian environment in University should focus on areas where need is the greatest. Pedestrian areas for improvement identified in University include locations with high pedestrian counts and collisions, sidewalk connectivity issues; as well as high existing pedestrian activity, and high pedestrian priority as identified by the City of San Diego Pedestrian Priority Model. Pedestrian opportunities and constraints are identified in **Figure 14-1**

Pedestrian Safety

Facilitating the safe movement of pedestrians is key to increasing the propensity of walking in an area. Locations with three or more collisions involving pedestrians over a 5-year period are concentrated at the intersections of one of the community's major east-west roadway, La Jolla Village Drive. The following intersections each have 3 or more collisions between October 2012 and September 2017:

- Executive Way and La Jolla Village Drive
- Genesee Avenue and La Jolla Village Drive
- Towne Centre Drive and La Jolla Village Drive
- Lebon Drive and La Jolla Village Drive
- Genesee Avenue and Governor Drive
- Regents Road and Nobel Drive

These intersections are in the denser, central part of the community, with high pedestrian activity due to adjacency to retail, office, residential, and schools. These intersections have wide crossings and are heavily travelled by pedestrians and vehicles experiencing delay, making both pedestrians and motorists more aggressive in their decision-making.

Sidewalk Connectivity

Connectivity within the pedestrian network is important to facilitate the safe and efficient movement of pedestrians in an area. Missing sidewalks discourage walking trips and may cause pedestrians to take

longer routes to get to their destinations. The majority of the University community has a complete sidewalk network, including pedestrian bridges at busy intersections.

The north side of La Jolla Village Drive between I-5 and Lebon Drive stands out as one missing sidewalk link that would benefit the community by connecting student housing to the main campus west of I-5.

The southern half of Eastgate Mall between the I-805 overcrossing and Miramar Road is undeveloped land and does not provide sidewalks. As vacant land there is not much pedestrian attraction to walk along that side of Eastgate Mall as there is a completed connection on the north side. The missing sidewalks should be completed when that land is developed.

Sidewalks along Gilman Drive and Regents Road are missing in areas that traverse long distances with no fronting properties. These sidewalks would provide safety benefits for people walking along these roadways, but the pedestrian demand is minimal due to the lack of fronting properties and distance between connections on either end. Alternative routes in distance provide sidewalks and can be utilized.

Pedestrian Activity

The University community has a high level of pedestrian activity, in general. Locations with peak hour pedestrian counts greater than 100 were considered notable. These occurred primarily at locations near retail, office, residential, and schools:

- Lebon Drive and Nobel Drive (adjacent to retail center)
- Regents Road and La Jolla Vilage Drive (near retail and residential)
- Regents Road and Nobel Drive (surrounded by retail and residential)
- Regents Road and Berino Court (adjacent to Doyle Elementary School)
- Regents Road and Arriba Street (near retail and residential)
- Genesee Avenue and Esplanade Court (surrounded by retail)
- Genesee Avenue and Governor Drive (near schools, residential, and retail)
- Executive Way and La Jolla Village Drive (surrounded by retail)
- North Torrey Pines Road and La Jolla Shores Drive (adjacent to UCSD)
- Villa La Jolla Drive and Nobel Drive (surrounded by retail)
- La Jolla Village Square and Nobel Drive (surrounded by retail)

As shown in this list and the pedestrian volumes figures, the corridors along Nobel Drive between Villa La Jolla Drive and Regents Road and Regents Road between La Jolla Village Drive and Arriba Street have high pedestrian activity.

Pedestrian Priority Model

Pedestrian priority areas were determined using the City of San Diego's Pedestrian Priority Model. The model evaluates community characteristics including demographic data, traffic volumes and speed, pedestrian collisions, presence of street lighting, location of transit stations, and land uses such as residential, office, commercial/retail, schools, and parks. The model uses these factors to identify areas

where both pedestrian demand and detractors are high, thereby indicating a need to focus resources in these locations.

The Model identifies the area east of Gillman Drive, south and west of Genesee Avenue, and north of Rose Canyon as having the highest pedestrian priority. The area contains the UCSD campus, VA Hospital, UCSD medical campus, Scripps Hospital, Westfield UTC, La Jolla Village Square, parks, schools, and high-density housing complexes.

Planned Pedestrian Improvements

Pedestrian Route Typology

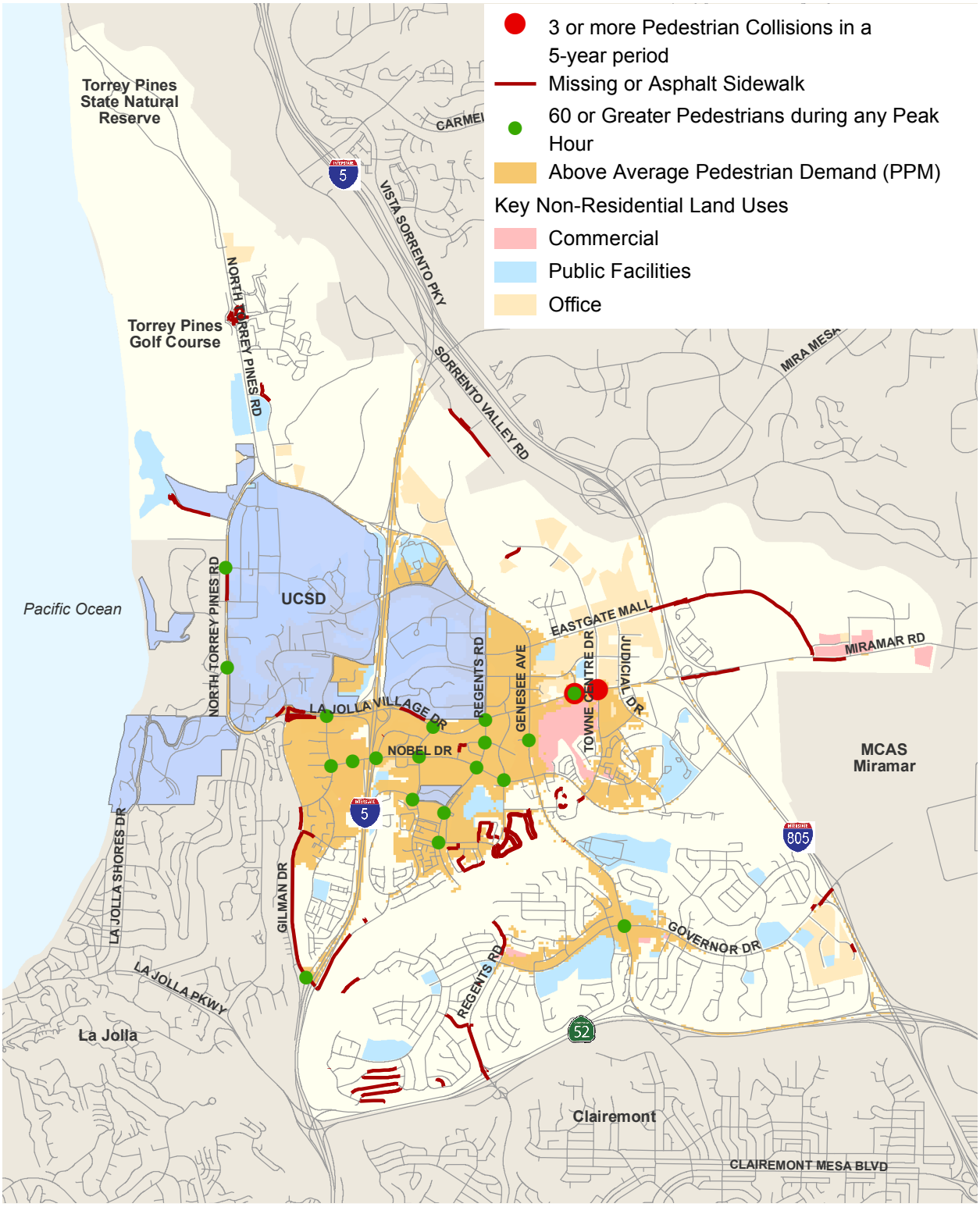
The City of San Diego Pedestrian Master Plan – City-wide Implementation Framework Report (2006) established pedestrian route typologies to categorize sidewalks by function and environment. These typologies work to define the function which a route serves and establishes a hierarchy for the development of priority pedestrian improvements.

As shown in **Figure 14-2**, route types are divided into seven categories ranging from Districts to Trails. The route type purpose, adjacent street classifications, and adjacent land uses are identified for each typology. **Figure 14-3** shows a route typology assessment for the pedestrian study area within the University community.

Additionally, the Framework Report acknowledges there should be flexibility in the treatments and amenities for pedestrian facilities. **Figure 14-4** describes four treatment levels to consider for pedestrian facilities, including premium, enhanced, basic, and special use walkway improvements. Each feature is labeled as required, suggested, suggested if conditions or standards met, or not applicable.

Districts, corridors, and connectors are the most typical pedestrian route types in communities; however, there are no district routes identified in the University Community. University community has connectors, neighborhood, ancillary facilities (pedestrian bridges) and trails, which make this community unique and desirable for pedestrian travel.

FIGURE 14-1



Pedestrian Opportunities and Constraints

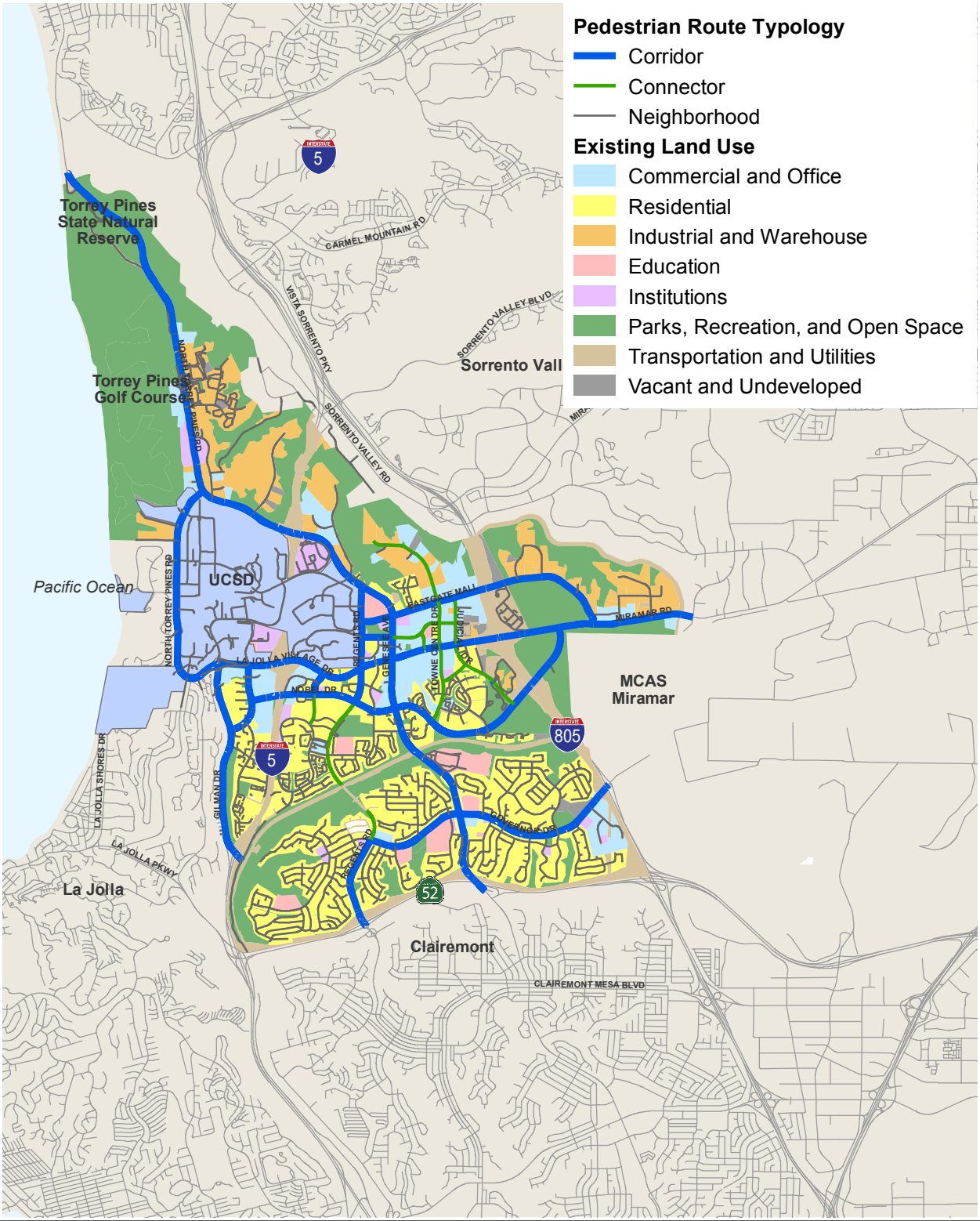
Figure 14-2 City of San Diego Pedestrian Route Typologies

Table 26: Route Types

ROUTE TYPE:	1. District Sidewalks	2. Corridor Sidewalks	3. Connector Sidewalks	4. Neighborhood Sidewalks	5. Ancillary Pedestrian Facilities	6. Path	7. Trail (Included for Reference Only, not a Focus of this Plan)
Purpose	Sidewalks Along Roads that Support Heavy Pedestrian Levels in Mixed-use Concentrated Urban Areas	Sidewalks Along Roads that Support Moderate Density Business & Shopping Districts with Moderate Pedestrian Levels	Sidewalks Along Roads that Support Institutional, Industrial or Business Complexes with Limited Lateral Access & Low Pedestrian Levels	Sidewalks Along Roads that Support Low to Moderate Density Housing with Low to Moderate Pedestrian Levels	Facilities Away or Crossing Over Streets such as Plazas, Paseos, Promenades, Courtyards or Pedestrian Bridges & Stairways	Walkways and Paved Paths that are not Adjacent to Roads that Support Recreational and Transportation Purposes	Unpaved Walk Not Adjacent to Roads Used for Recreational Purposes
Typical Adjacent "Street Design Manual" Classifications	All types of adjacent streets are possible	Commercial, Urban Collector, Urban Major & Arterial	Commercial, Industrial, Urban Major, Rural Collector & Arterial	Rural, Low Volume Residential, Residential Local & Sub-collector	Not associated with a street	Not associated with a street	Not associated with a street
Cross Reference to Related "Strategic Framework Plan" Definitions	Existing: Regional Centers, Urban Villages & Neighborhood Villages	Existing: Sub-regional Districts and Transit Corridors	Existing: Sub-regional Districts, Transit Corridors, & Suburban Residential along Major Arterials	All other Residential Areas not Classified under the Strategic Framework Plan	Most common in Regional Centers, Urban or Neighborhood Villages but can be in any area	Can occur in any area, but most often found in Recreation, Tourist or Open Space Areas	Can occur in any area, but most often found in Recreation or Open Space Areas
Typical Adjacent Land Uses	Mixed-use Housing, Commercial, Office & Entertainment with Urban Densities	Multiple Land Uses but may be Separated. Often Strip Commercial or Office Complex.	Open Space, Industrial Uses, Institutional Uses or other Pedestrian Restricted Uses	Single-family and Moderate Density Multi-Family with Limited Supporting Neighborhood Commercial	Adjacent Land Uses Vary	Adjacent Uses Vary, Often Recreational or Open Space or Housing	Open Space, Parks and Natural Areas

Source: City of San Diego Pedestrian Master Plan – City-Wide Implementation Framework Report (2006)

FIGURE 14-3



Pedestrian Route Typologies

Figure 14-4 Pedestrian Route Type Treatment Levels and Potential Improvements

TREATMENT LEVEL:	Treatment Level 1 "Premium" Walkway Improvements	Treatment Level 2 "Enhanced" Walkway Improvements	Treatment Level 3 "Basic" Walkway Improvements	Treatment Level 4 "Special Use" Walkway Improvements
Route Types Receiving These Treatment Levels (Unless Special Circumstances Exist*)	District Route Type / Special Pedestrian Zone	Corridor Route Type	Connector and Neighborhood Route Type	Path & Ancillary Route Types
*Special Circumstances that Warrant a Higher Treatment Level than Normal. Requirements in Each Column would Increase to the Column on its Left	Already Uses Highest Treatment Level	If within 1/4 mile of Transit/ School/ Ped. High Use/ Major Arterial	If within 1/4 mile of Transit/ School/ Maj. Commercial Facilities/ Maj. Arterials	Case-by-Case Basis
Provide Accessible Facilities Such As:				
1A) Curb ramps	!	!	!	?
2A) Audible/visual crosswalk signals	!	!	?	?
3A) Walkways & ramps free of damage or trip hazards	!	!	!	✔
4A) Pedestrian paths free of obstructions and barriers	!	!	!	✔
5A) Sidewalks with limited driveways and minimal cross-slope	!	✔	✔	✔
6A) Re-grade slope of walkway to meet ADA / Title 24 standards	?	?	?	?
7A) Repair, slice or patch lifts on walk surfaces or reset utility boxes to be flush	?	?	?	?
Provide Safety Features Such As:				
1S) Median refuges (a safe place to stand in the street)	!	✔	-	-
2S) Pedestrian popouts (curb / sidewalk extensions into street)	✔	✔	-	-
3S) High visibility crosswalk striping	!	✔	-	?
4S) Raised crosswalks or special paving materials to denote crosswalks	✔	✔	-	?
5S) Advance stop bars >10 feet from crosswalk	✔	✔	!	?
6S) Radar Speed Monitor & Display	?	?	?	?
7S) Reduced curb radii	✔	✔	✔	-
8S) Early pedestrian start at crossing signal (Lead Pedestrian Interval)	✔	?	-	?
9S) No Turn on Red at Intersection	?	?	?	?
10S) Mid-block crosswalks with ped. flashers but no traffic control	-	-	✔	-
11S) Automatic pedestrian detection & signal control	✔	-	-	?
12S) Mid-block crossing with signs, median or curb ext. & flashing lights in road	?	?	-	?
13S) Mid-block crosswalks with ped. actuated traffic control device	✔	?	-	-
14S) 1-Lane Mid-block with high contrast crossings, signs & center lane marker	?	?	✔	?
15S) Parkway planting for buffer between sidewalk and cars	!	!	!	?
16S) On-street parking for buffer between sidewalk and cars	!	✔	✔	-
17S) Adequate levels of pedestrian lighting	!	!	✔	✔
18S) Various traffic calming measures	✔	✔	✔	-
19S) Enforcement, education or encouragement solutions	?	?	?	?
20S) Missing sidewalks added or provide adeq. walk width clear of obstructions	?	?	?	?
Improve Walkability by Providing:				
1W) Above minimum walkway widths (> 5')	!	✔	?	?
2W) Trees that provide shade on walkways	!	!	✔	✔
3W) Street furnishings for comfort and enjoyment	!	✔	?	✔
4W) Countdown display crosswalk signals	✔	?	?	-
5W) Traffic control for crossings such as traffic signals or "All way stops"	!	✔	✔	✔
6W) Pedestrian scrambles (cross all directions of street)	?	-	-	?
Ensure Connectivity by Adding:				
1C) Missing sidewalk segments in areas where sidewalks mostly exist	!	!	✔	✔
2c) Missing sidewalks in areas where no sidewalks exist at all	!	✔	?	✔
3C) Connection pathways between streets	!	✔	✔	✔
4C) Narrow street widths or adding features to narrow for pedestrians	!	✔	✔	✔
5C) Destinations within walking distance of origins	!	✔	✔	✔
6C) Pedestrian bridges that avoid excessive ramp lengths	?	-	-	?
7C) Pedestrian crossing opportunities for all sides (legs) of an intersection	!	✔	✔	-
8C) Verify that pedestrian distances between land uses are reasonable & direct	?	?	?	?
LEGEND	("!"= required, "4" = suggested, "?"= suggested if conditions or standards met & "-" = not applicable)			

Source: City of San Diego Pedestrian Master Plan – City-Wide Implementation Framework Report (2006)

City of San Diego Transportation Unfunded Needs List (TUNL)

The following pedestrian facility improvements are identified by the City of San Diego Transportation Unfunded Needs List (TUNL) as desirable enhancements to the pedestrian environment in the University community:

- 10675 John Jay Hopkins Dr – install crosswalk with two pedestrian access ramps, street lighting, and median modification
- Via Mallorca at Via Marin – install new crosswalk with Pedestrian Activated Flashing Beacons and curb ramps.
- Executive Dr at midblock east of Judicial Dr – install Pedestrian Hybrid Beacon (HAWK)
- Stadium St from Governor Dr to Stadium Pl – install one (1) electronic V-Calm sign facing NB traffic
- Gilman Dr from Gilman Ct to Via Alicante – install two (2) electronic V-Calm Signs
- Lakewood St from Corlita Ct to Lakewood Ct – install one (1) electronic V-Calm sign
- Mercer St from Governor Dr to Mercer Ln – install two (2) electronic V-Calm signs, one sign per direction
- Radcliffe Dr from Governor Dr to Dennison St – install one (1) electronic V-Calm sign
- Radcliffe Dr from Radcliffe Ln to Syracuse Ave – install one (1) electronic V-Calm sign
- Renaissance Ave from Towne Centre Dr to Golden Haven Dr – install two (2) electronic V-Calm sign, one sign per direction.
- Soderblom Ave/Stresemann St from Lamas St to Barkla St – install two (2) electronic V-Calm signs, one sign per direction
- Stresemann St from Pennant Wy to Bragg St – install two (2) electronic V-Calm Signs
- Governor Dr from Radcliffe Dr to Stadium St – install two (2) electronic V-Calm Signs, one sign per direction.
- Arriba St from Regents Rd to Camino Tranquilo – install two (2) electronic V-Calm Signs
- Radcliffe Dr from Governor Dr to Dennison St – install two (2) electronic V-Calm Signs
- Stadium St at Eton Ave – install two (2) pop outs and a new school crosswalk on the north leg of the intersection
- Via Alicante from Gilman Dr to Via Malorca – install two (2) electronic V-Calm Signs
- Governor Dr at Mercer St – install 8 pedestrian countdown timers
- La Jolla Village Dr at Towne Centre Dr – install Polara APS
- Governor Dr at Gullstrand St – install 8 pedestrian count down timers
- Governor Dr at Agee St – install pedestrian countdown timers
- Governor Dr at Edmonton St – install 8 pedestrian countdown timers
- Genesee Ave at Esplanade Ct – install Polara APS for all legs
- Executive Way at La Jolla Village Dr – upgrade existing APS to Polara system and upgrade 1 pedestrian ramp to ADA
- La Jolla Shores Dr at North Torrey Pines Rd – replace (1) pedestrian head and install (7) pedestrian countdown timer
- Genesee Ave at La Jolla Village Dr – install pedestrian crossings on north and east legs and install (8) pedestrian countdown timers

- Governor Dr at Radcliffe Dr – install new signal mast-arm for NB/SB Radcliffe Dr, install pedestrian countdown timers and upgrade pedestrian ramps
- Governor Dr at Regents Rd – install right turn overlap (5-section signal head) for NB Regents Rd and install pedestrian countdown timers.
- Genesee Ave at Nobel Dr – install pedestrian countdown timers for all directions
- Governor Dr at Scripps St – install pedestrian count down timers and ADA Ped ramps
- Genesee Ave at Decoro St – install one signal head at SW and NE corners
- Governor Dr at Agee St – install two (2) Pedestrian Push Button (PPB) posts/foundations on north side

Opportunities

Pedestrian connections are an important part of this community to improve access to residential, employment, retail, and schools, particularly locations within proximity of each other. With the current transit use and upcoming expansion of transit services, connections between transit centers and nearby attractions are vital to transit ridership.

Connections along the high-speed, wide roadways in the community should consider alternatives to standard at-grade pedestrian crossings. Minimizing conflict points between pedestrians and vehicles reduces the risk of collisions and can improve the efficiency of the roadway system and pedestrian experience, encouraging pedestrian travel within the community. There are currently two existing pedestrian bridge structures within the community that provide a pedestrian connection across the community's major roadways. These crossings are ideal for the University community by providing an alternative to crossing multiple lanes of high speed and heavy vehicular volumes.

Providing efficient pedestrian connections internal to large private developments also helps improve the pedestrian experience. In addition to alternatives to crossings, best efforts to improve the quality of the pedestrian facilities such as providing wider walkways, pedestrian amenities, street trees for shade, accessibility to transit, and buffers from vehicles will be considered in this update.

Constraints

It is important to take into consideration existing barriers within the University community. As previously mentioned in Chapter 4, freeways and topography create barriers to connectivity within the community. The University community is essentially bounded by Interstate 805 to the east and State Route 52 to the south. Canyons present challenges in connecting to major areas of employment within the community and in Sorrento Valley. Wide street crossings and freeway interchanges at Nobel Drive, La Jolla Village Drive and Genesee Avenue create barriers for walking. Lack of sidewalks may be another barrier for pedestrian connectivity; however, this community plan update will look at ways to improve connections both within the community and across freeways to neighboring communities.

BICYCLE OPPORTUNITIES AND CONSTRAINTS

Bicycle infrastructure should provide for the safety and comfort of its users, and the bicycle network should be well connected across a community. Safety and comfort are paramount considerations, given that active travelers are more exposed and vulnerable than those inside a vehicle. Residential roadways are generally inviting to bicyclists. The wider, high-speed roadways and intersections typically discourage bicycle trips. These areas are often where a community needs to focus its bicycle infrastructure efforts. Network connectivity is also important, as gaps in the bicycle network can also discourage bicycle travel within the community.

The University community has several areas for improvement based on the analyses performed. They are identified by locations with a high number of bicycle collisions, the amount of stress likely to be experienced by a bicyclist, lack of existing bicycle facilities, and high cycling demand. Bicycle opportunities and constraints are identified in **Figure 14-5**.

Bicycle Safety

The following four locations in the community had three or more collisions involving a bicycle in the 5-year period analyzed:

- North Torrey Pines Road at John J Hopkins Drive
- Villa La Jolla Drive at La Jolla Village Drive
- Regents Road at La Jolla Village Drive
- Regents Road at Nobel Drive

These intersections have wide crossings, lack bicycle intersection treatments, and are along the major thoroughfares within the community, such as North Torrey Pines Road, Regents Road, Nobel Drive and La Jolla Village Drive.

Bicycle Level of Traffic Stress

Bicycle Level of Traffic Stress (LTS) is high (LTS 3 or 4) on all major roadways in the University community. These roadways are nearly all higher speed, high volume arterials with little or no accommodations made for bicyclists. Due to the land use patterns and barriers in the community, traveling between areas of the community requires the use of these roadways. Thus, finding opportunities to introduce low-stress facilities along some major roadways to allow for safe bicycle travel within the community is necessary to improve the overall bicycle experience in the community. Not every roadway will be able to accommodate bicycle facilities, but an integrated east-west and north-south route near the residential, school, and retail areas should be determined.

Bicycle Demand

Bicycle demand was quantitatively established by collecting bicycle count data during the AM, Mid-day, and PM peak periods. The community has high levels of bicycle activity, especially near UCSD campus. The following eight intersections experience volumes of 50 or greater during any peak period:

- North Torrey Pines Road and Genesee Avenue
- North Torrey Pines Road and UCSD Northpoint Driveway
- North Torrey Pines Road and Pangea Drive
- North Torrey Pines Road and La Jolla Shores Drive
- Gilman Drive and La Jolla Village Drive
- Regents Road and Executive Drive
- Regents Road and La Jolla Village Drive
- Regents Road and Nobel Drive

Volumes were highest along the major roadways of Regents Road, La Jolla Village Drive, and North Torrey Pines Road. These roads provide crucial access to UCSD as well as the employment centers.

Bicycle Demand Model

Bicycle demand was assessed using the City's Bicycle Demand Model (BDM). Demand is highest along the major roadways in the study area. Streets including Genesee Avenue, Nobel Drive, and La Jolla Village Drive were found to be in the top 25 percent of bicycle demand in the University community. These streets are continuous across the community, crossing barriers such as I-5, and thus are highly desirable for making connections throughout the University community.

Bicycle Connectivity

Canyons, freeways and large parcels create barriers resulting in low connectivity in many areas throughout the community. Moderate connectivity is observed at the future Mid-Coast station locations. Although not ideal, connectivity in the central part of the community, which has a more grid-like street network, is higher than the rest of the community.

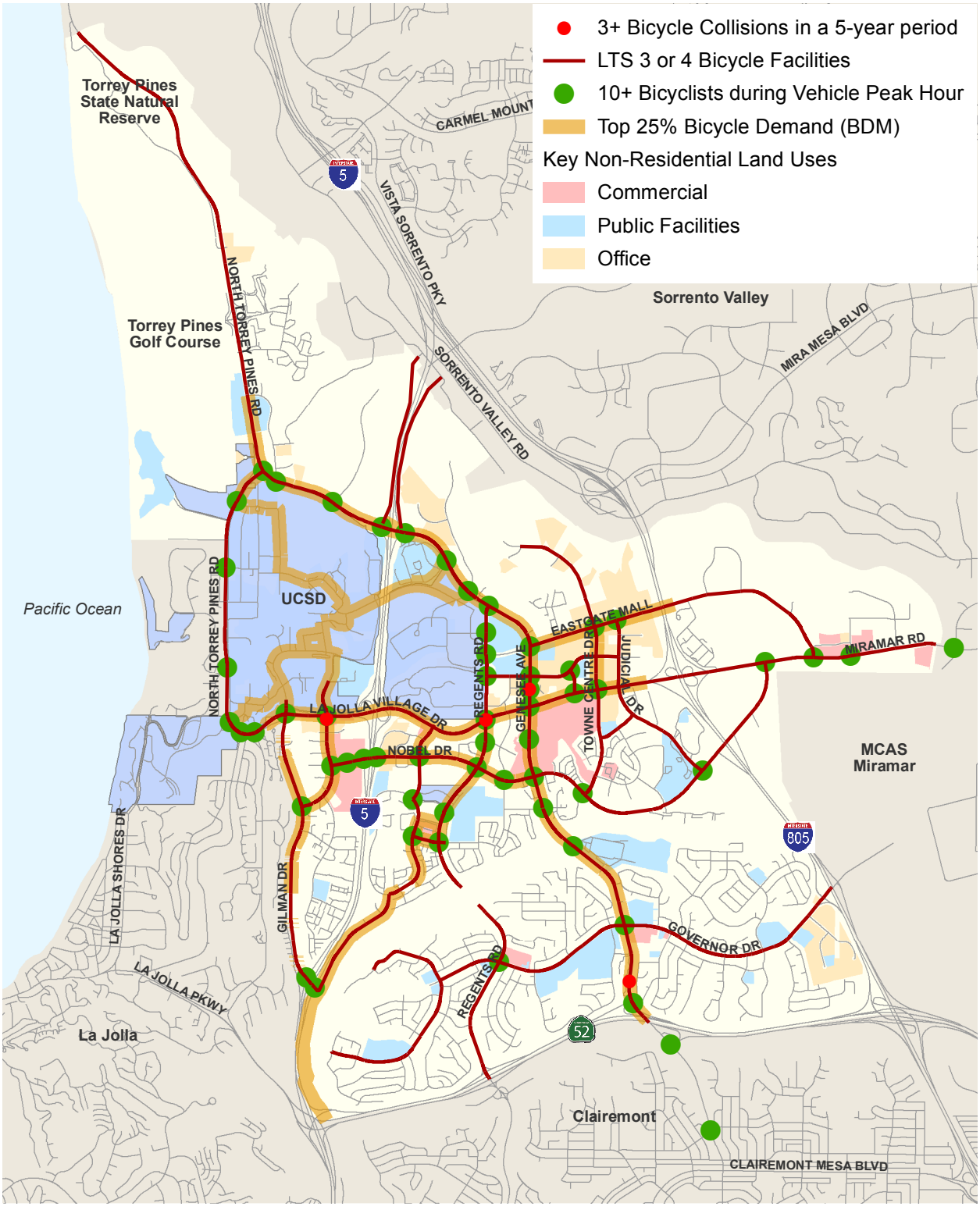
Opportunities

To increase bicycling, it is important to create a low-stress bicycle network which can connect retail, office, residential uses and schools. Major arterials are the only roadways that connect these land uses in the University community. Low-stress facilities would need to be implemented along the major arterials to increase comfort and connectivity which encourages more bicycling within the community. Genesee Avenue provides the primary north-south connection within and beyond the community. Considerations should be made to improve Genesee Avenue for cyclists. This community plan update should focus on treatments to facilitate travel across freeways, driveways, and intersections. First/last mile connections to transit and other future considerations will be made to identify routes for cyclists that can tie into enhanced facilities that are planned or currently under construction, such as the Interstate 5-Genesee Avenue bike path that will provide a direct connection from the transit center and employment hub at Sorrento Valley to the University community. In addition, a Class IV cycle track along Gilman Drive that will connect to the Rose Creek Bike Path and improve connectivity to the southern portion of the community. Planned bicycle facilities are shown in **Figure14-6**.

Constraints

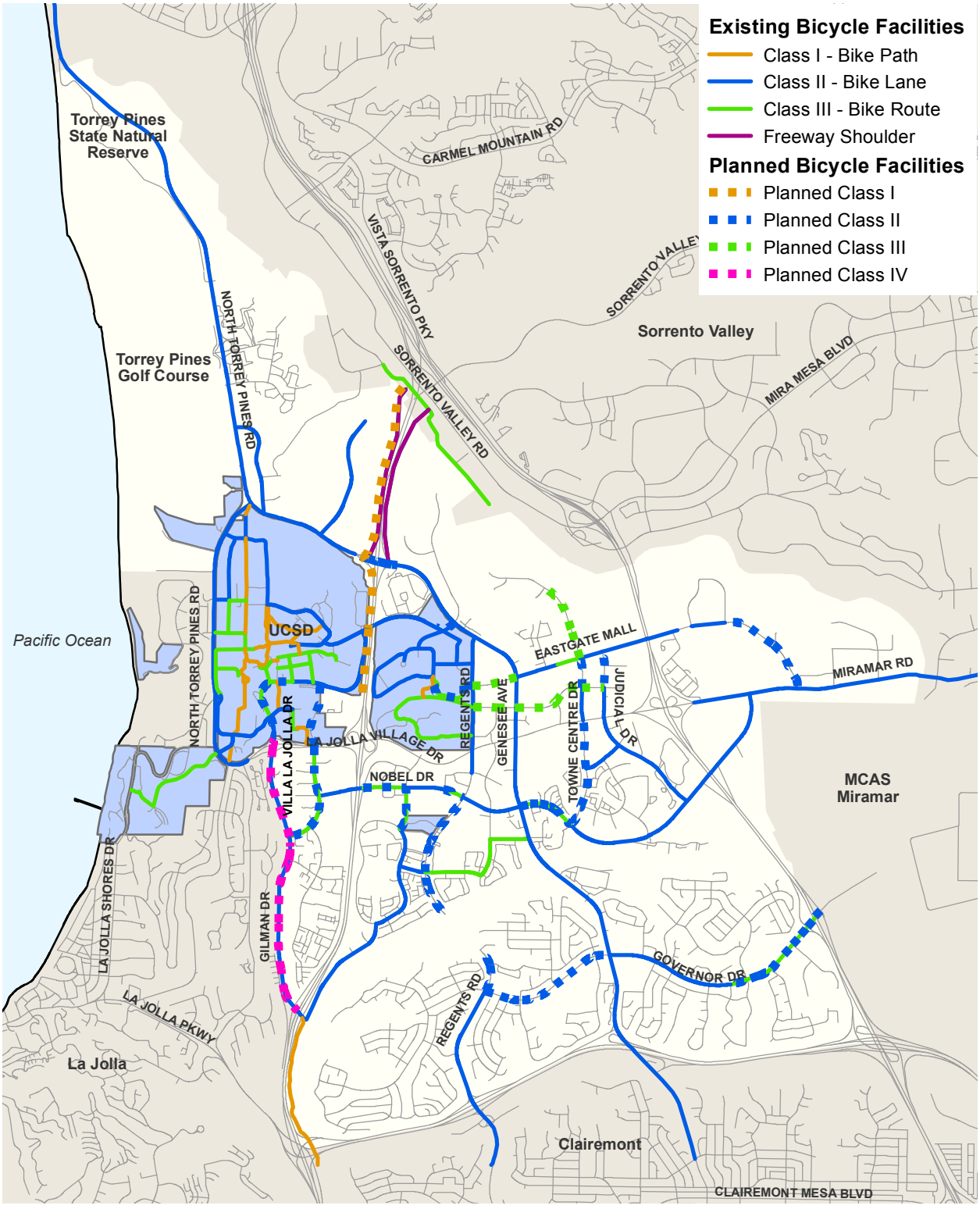
Freeways, canyons and gaps in the bicycle network create barriers for cycling for the University community. Examples include: Interstate 5, Interstate 805, State Route 52, Rose and San Clemente Canyons as well as portions of Nobel Drive, Governor Drive, and Eastgate Mall. Similar to pedestrians, lack of continuous facilities can cause an existing barrier for bicycle connectivity. Due to right-of-way constraints and existing development conflicts, in specific areas, considerations will need to be made for parallel facilities to balance the needs of all modes and identify key connections and facilities needed to encourage cycling within the community.

FIGURE 14-5



Bicycle Opportunities and Constraints

FIGURE 14-6



Planned Bicycle Facilities

TRANSIT OPPORTUNITIES AND CONSTRAINTS

The City of Villages strategy supports expansion of the transit system by encouraging multi-family housing, employment centers, and other higher-intensity uses to be located in areas that can be served by high quality transit services. This will allow more people to live and work within walking distance of transit. The University community is relatively well served by transit and experiences high transit ridership. The highest public transit ridership levels in the community are along SuperLoop Routes 201 and 202.

Transit opportunities and constraints are identified in **Figure 14-**.

Transit Area Safety

Since most transit trips begin and end on foot or by bike, it is crucial that users can safely access transit stops. High bicycle- and pedestrian-involved collisions near a transit stop may indicate safety concerns for transit users, Transit area safety was assessed by looking at the number of pedestrian- and bicycle-involved collisions which occurred within 500 feet of transit stops. Locations with three or more collisions near a transit stop were primarily in the northern half of the community, with the exception of the intersection of Governor Drive and Genesee Avenue which is located south of Rose Canyon. These locations include:

- North Torrey Pines Road at John J Hopkins Drive
- Villa La Jolla Drive at La Jolla Village Drive
- Villa La Jolla Drive at Gilman Drive
- Lebon Drive at La Jolla Village Drive
- Lebon Drive at Charmant Drive
- Regents Road at La Jolla Village Drive
- Regents Road at Nobel Drive
- Genesee Avenue at Executive Square
- Genesee Avenue and La Jolla Village Drive
- Genesee Avenue and Governor Drive
- Executive Way and La Jolla Village Drive
- Towne Centre Drive and La Jolla Village Drive

Transit Access

Transit access was assessed using the quality bike and quality pedestrian connectivity to major transit stops. The Gilman Transit Center has a relatively high quality bikeshed, due to the low-stress bicycle facilities on the UCSD campus. By contrast, the UTC Transit Center does not have any low-stress bicycle facilities which provide access to the station, due to its location along Genesee Avenue between La Jolla Village Drive and Nobel Drive (both with high levels of traffic stress due to high speeds of vehicular traffic).

Transit Demand

Transit demand was assessed through a combination of existing ridership as well as U.S. Census data showing concentrations of housing and jobs. Housing density is highest in the center of the community, and is concentrated between Regents Road and Genesee Avenue, south of Eastgate Mall and north of Nobel Drive. Employment density is focused on the northern ends of the community, with jobs concentrated north

of Genesee Avenue as well as on the UCSD campus. Planned light rail transit extensions will serve the high employment areas in the community.

Opportunities

As further discussed in Section 3, SANDAG's San Diego Forward: The Regional Plan (2015) identifies the following transit improvements within the project study area:

- **Trolley Route 510 (Mid-Coast Trolley Blue Line Extension) (2021):** extend the existing Blue Line service from America Plaza to the University Towne Centre (UTC) Transit Center.
- **Trolley Route 561 (2035):** provide a COASTER connection from the UTC Transit Center via the Sorrento Valley station.
- **Trolley Route 562 (2050):** provide a connection from Kearny Mesa to Carmel Valley.
- **Rapid Bus Route 30 (2035):** conversion of existing MTS Route 30 to a rapid bus route would connect Old Town to Sorrento Mesa via Pacific Beach, La Jolla and UTC/University.
- **Rapid Bus Route 41 (2035)**: connect Fashion Valley to UTC/UC San Diego via Linda Vista and Clairemont.
- **Rapid Bus Route 473 (2035)**: connect Solana Beach to UTC/UC San Diego via Hwy 101 Coastal Communities and Carmel Valley.
- **Rapid Bus Route 689 (2035)**: connect Otay Mesa Port of Entry (POE) to UTC/Torrey Pines via Otay Ranch/Millennia and I-805 Corridor (Peak Only).
- **Rapid Bus Route 870 (2050):** connect El Cajon to UTC via Santee, SR-52 & I-805.

On-time performance is an important piece of getting and maintaining transit ridership. The reliability of services is directly affected by the amount of congestion and level of service of intersections and roadway segments. Improving reliability can be accomplished with technology improvements such as adaptive and transit signal priority at traffic signals, and/or striping dedication such as transit only lanes or transit queue jump areas at intersections. Also providing adequate bus stop facilities at appropriate locations can reduce delays. The following are operational improvements in the community that are identified by the San Diego Metropolitan Transit System (MTS):

- Bus-only lane along Genesee Avenue between SR-52 and Nobel Drive. Especially southbound in PM. To be used by Routes 41 and 50 (up to 12 buses/hr/direction in peak).
- Sidewalk and bus stop improvements along west side of Gilman Drive (southbound) from north of Villa La Jolla to Via Alicante. (To be used by Route 150)
- Infrastructure to allow buses to turn right onto southbound I-5 on-ramp HOV lane from Gilman Drive #2 through-lane. (To be used by Route 150)
- Infrastructure to allow buses to turn right onto southbound I-805 on-ramp HOV lane from Nobel Drive #2 through-lane. (To be used by Route 60 and other future RTP services)

As part of the community plan update, future considerations will be made for improvements at key intersections and roadways that are experiencing congestion and delay to reduce delay for transit users and encourage more transit use. The construction of the Mid-Coast Trolley service to UTC provides great opportunity to connect University community to the major employment center in Downtown San Diego as well as to the US-Mexico Border. This will allow for the implementation of mobility hubs at the Mid-Coast Trolley stations to facilitate transit use.

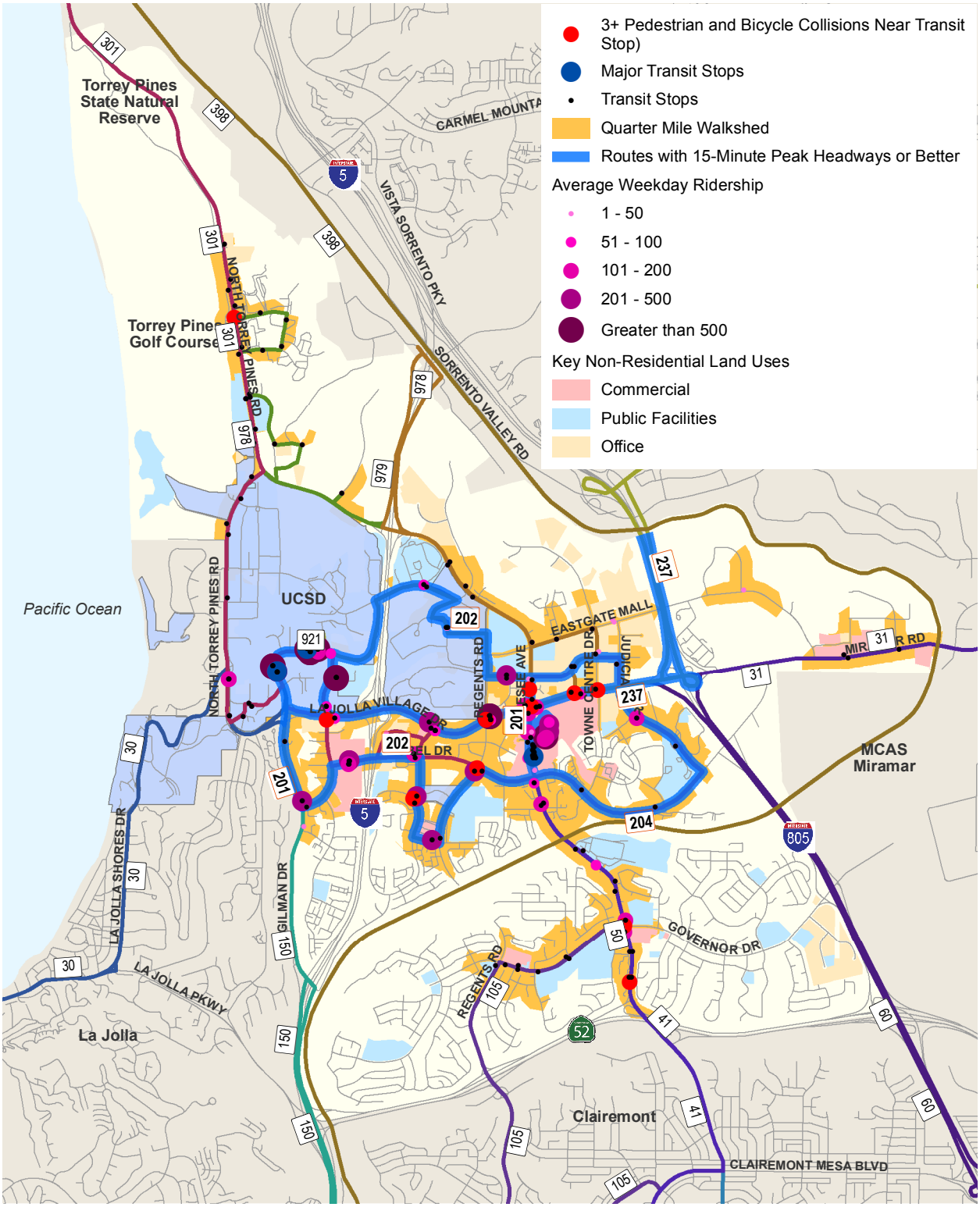
Constraints

Based on input from MTS and roadway and freeway analyses presented in Chapter 7 of this study, five key chokepoints were identified that cause delays for buses in the community. The locations of these key chokepoints are illustrated in **Figure 14-8**.

- La Jolla Village Drive to I-805 Southbound: The on-ramp from eastbound La Jolla Village Drive to southbound I-805 has excessive delays during the PM peak. Additionally, the southbound I-805 off ramp is a choke point during the PM peak.
- Gilman Drive to Southbound I-5: The right lane leading to the on-ramp to southbound I-5 during the PM peak is has excessive delays.
- Genesee Avenue and La Jolla Village Drive intersection: The left turn from northbound Genesee Avenue to westbound La Jolla Village Drive creates abnormal delays for buses making this left turn movement.
- Genesee Avenue between Nobel Drive and Governor Drive: Delays occur frequently during peak periods and there is no alternative route to cross Rose Canyon.
- La Jolla Village Drive and the Interstate 5 Southbound Ramp: Heavy through movement demand on La Jolla Village Drive leads to large queue development on all approaches

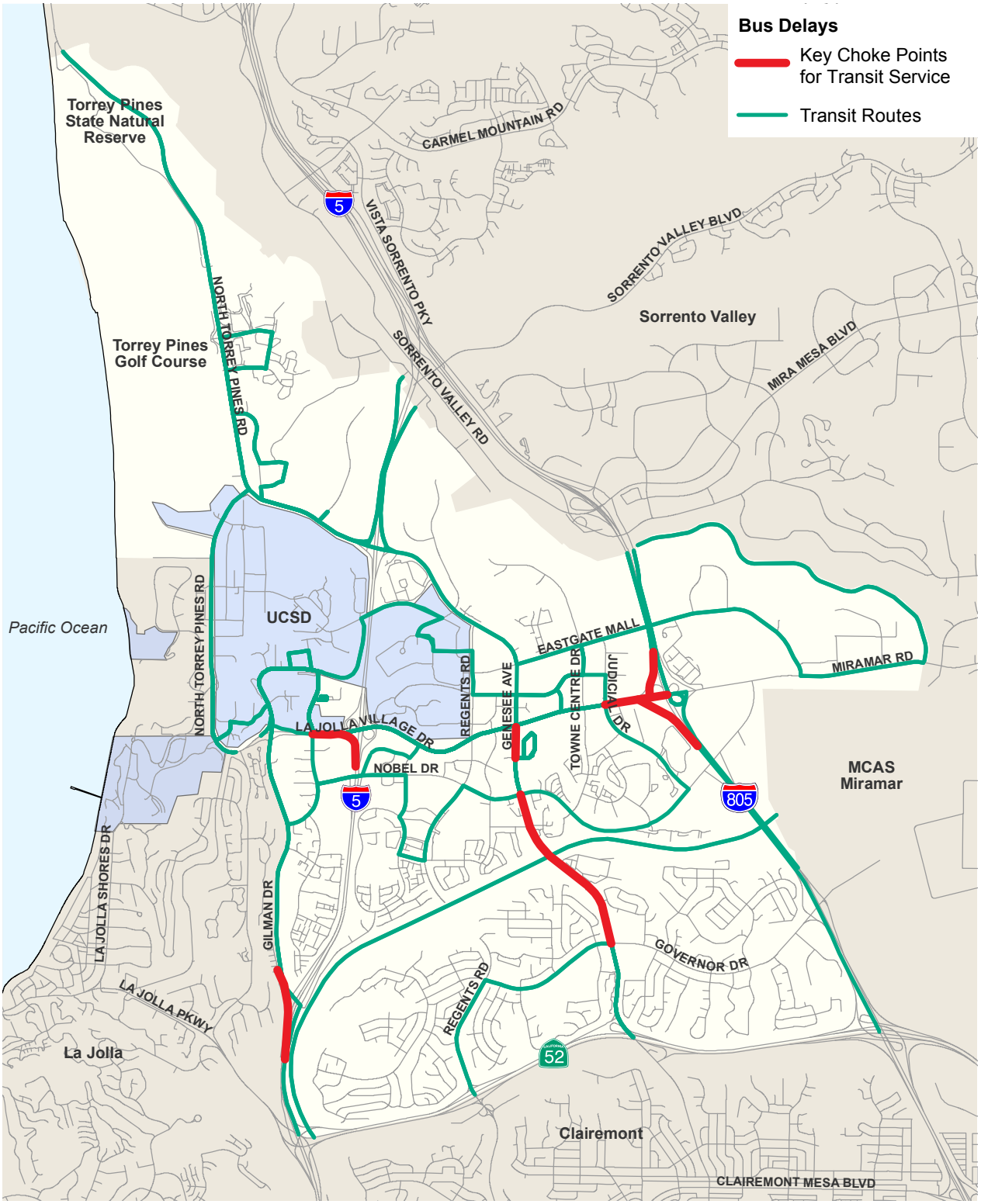
Due to congestion at on-ramps, considerations should be made to determine if a High Occupancy Vehicle (HOV) lane is feasible at specific locations which will allow buses to bypass the congestion at freeways. This in addition to existing and planned managed lanes along I-5 and I-805 will improve transit efficiency.

FIGURE 14-7



Transit Opportunities and Constraints

FIGURE 14-8



Existing Transit Choke Points

VEHICULAR OPPORTUNITIES AND CONSTRAINTS

Street and freeways comprise the framework of our transportation system and play a major role in shaping the community and quality of life. Vehicular opportunities and constraints are identified in **Figure 14-9**.

Safety

Vehicular safety was assessed by looking at the vehicular collisions which occurred in the study area in the 5-year period analyzed. Intersections with fifteen or more collisions are identified in the figure and listed below:

- Villa La Jolla Drive and La Jolla Village Drive
- Lebon Drive and La Jolla Village Drive
- Regents Road and La Jolla Village Drive
- Genesee Avenue and La Jolla Village Drive
- Executive Way and La Jolla Village Drive
- Towne Centre Drive and La Jolla Village Drive
- Eastgate Mall and Miramar Road
- I-5 Northbound Off-Ramp/University Center Lane and Nobel Drive
- Regents Road and Nobel Drive
- Genesee Avenue and Nobel Drive
- Genesee Avenue and Decoro Street
- Genesee Avenue and Governor Drive
- Genesee Avenue and Eastgate Mall

These locations are largely concentrated in the core of the community along La Jolla Village Drive, Nobel Drive, Regents Road and Genesee Avenue. These roadways are high speed, multi-lane facilities which may be conducive to speeding and other dangerous behaviors. Roadway and intersection safety measures may be beneficial in reducing the number of collisions along these facilities.

Roadway Segments

The University community has inter-community travel disbursed along its major east-west and north-south thoroughfares. Volumes are highest along roadway segments near freeways. Travel along La Jolla Village Drive and Genesee Avenue, specifically, can be difficult. The traffic demand is carried over several hours in the morning and afternoon as the community serves a variety of different travel patterns for office, retail, residential, UCSD, and schools.

Roadway segments with LOS D or worse were identified and are shown in the figure. These segments include the majority of La Jolla Village Drive from Villa La Jolla to I-805, Genesee Avenue between I-5 and SR-52, Miramar Road from I-805 to the east of Eastgate Mall, and Eastgate Mall from Miramar Road to Judicial Drive.

Freeways

The three freeways that serve University community are I-5, I-805, and SR-52. There is a merge of I-5 and I-805 at the northern portion of the community which can create significant congestion. Freeway operations for the adjacent Interstate 5, Interstate 805, and State Route 52 facilities are at or above capacity and many of the major corridor connections in the community experience significant congestion. On and off-ramps to I-5 and I-805 were also found to have high levels of delay.

Intersections

Nearly half of the study intersections (37 of 79) currently operate at Level of Service D or worse during at least one peak period. Intersections with high levels of delay are focused along Genesee Avenue and La Jolla Village Drive. The following 26 intersections currently operate at an unacceptable level of service (LOS E or F) during at least one peak period:

- Genesee Ave & N. Torrey Pines Rd – PM LOS F
- Genesee Ave & John Hopkins Dr (S) – AM LOS F
- Genesee Ave & I-5 SB Ramps – AM/PM LOS E/F
- Genesee Ave & I-5 NB Ramps – PM LOS F
- Genesee Ave & Eastgate Mall – AM/PM LOS E
- Genesee Ave & La Jolla Village Dr – AM LOS E
- Genesee Ave & Nobel Dr – AM LOS E
- Genesee Ave & Decoro St – PM LOS E
- Genesee Ave & Centurion Square – AM LOS E
- Genesee Ave & Governor Dr – AM/PM LOS E
- Genesee Ave & SR-52 WB Ramps – PM LOS F
- Genesee Ave & SR-52 EB Ramps – AM/PM LOS E/F
- Genesee Ave & Appleton St/Lehrer Dr – AM LOS F
- La Jolla Village Dr EB & Gilman Dr – PM LOS F
- La Jolla Village Dr & Villa La Jolla Dr – AM/PM LOS E/F
- La Jolla Village Dr & Regents Rd – AM/PM LOS E/F
- La Jolla Village Dr & Executive Wy – PM LOS E
- La Jolla Village Dr & Towne Centre Dr – AM/PM LOS F/E
- La Jolla Village Dr & I-805 SB Ramps – AM LOS F
- Miramar Rd & Eastgate Mall – PM LOS F
- Miramar Rd & Camino Santa Fe – PM LOS F
- Nobel Dr & Regents Rd – PM LOS F
- Regents Rd & SR-52 EB Ramps – AM LOS F
- Regents Rd & Luna Ave – AM/PM LOS F
- N. Torrey Pines Rd & Revelle College Dr – PM LOS F
- Governor Dr & I-805 NB Ramps – AM/PM LOS F

Parking

Parking in the University community is primarily off-street parking. In the commercial areas, off-street parking lots are provided for the adjacent uses. In residential areas, off-street parking is mostly provided as

well, with on-street parking sparingly used for overflow of residents and visitors. Parking should continue to be reliant on off-street parking supplies to utilize the roadway space for bicycle, pedestrian, and transit travel.

For on-street parking in the community, there are no permit parking areas and time-restricted and metered parking is used infrequently. Parking is highly utilized in the core of the community where it is provided along La Jolla Village Drive, Nobel Drive, Gilman Drive, Villa La Jolla Drive, Executive Drive and Executive Way. Roadways such as Towne Centre Drive, Eastgate Mall, and Governor Drive have less demand.

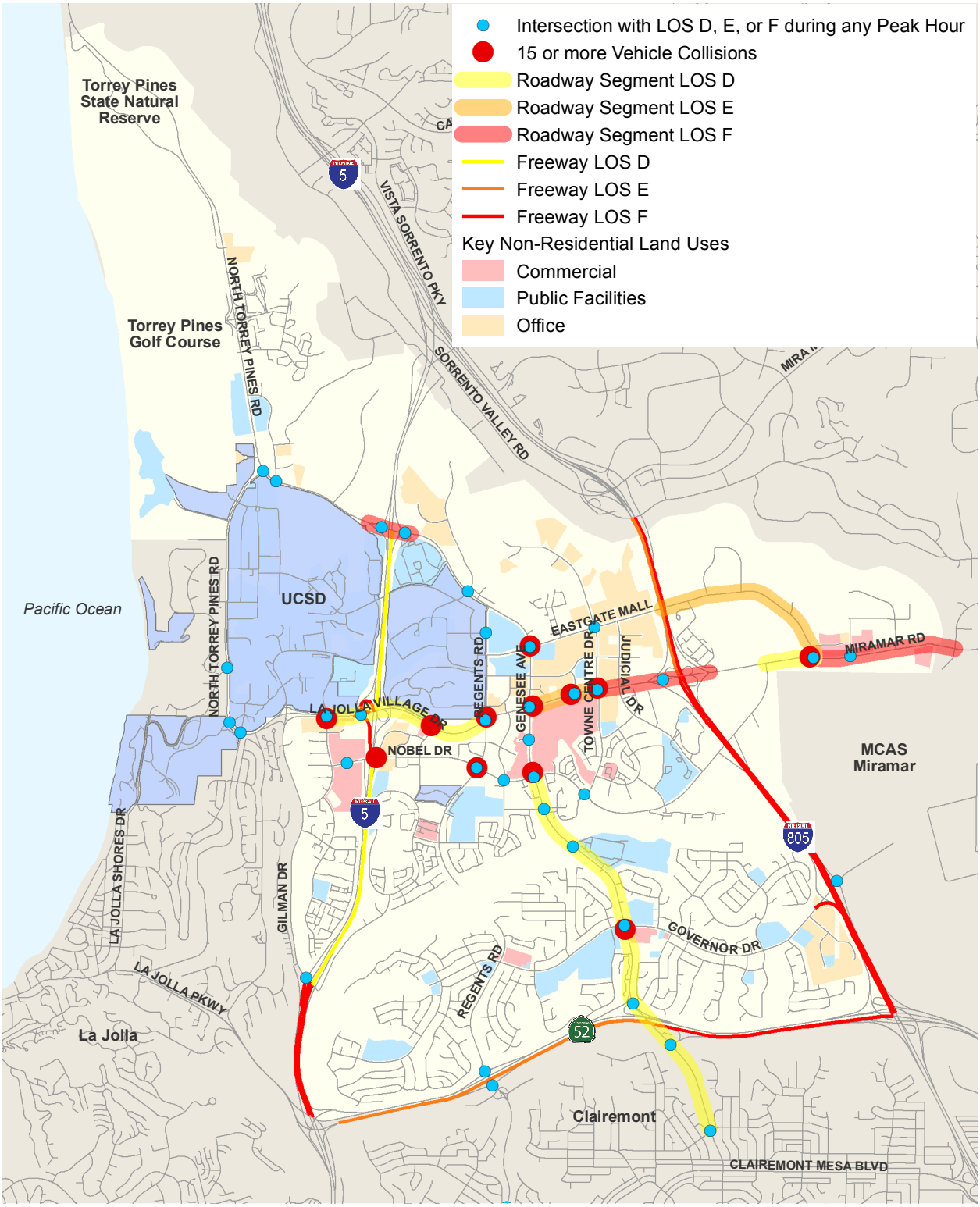
Opportunities

The roadways in the University community are primarily built out, with only a few locations where capacity improvements would be reasonable and beneficial. Mode shift away from single occupancy vehicles will be important to maintaining or decreasing vehicle operations in the community. Vehicle traffic along La Jolla Village Drive and Genesee Avenue would continue to be priority when balancing the needs of all users in the community as these are major roadways within the community that provide direct access to freeways, employment areas, and school campuses. The Mid-Coast trolley extension is currently under construction and will provide opportunities for additional travel within the community without relying on the automobile for travel. The community plan update can look at opportunities in areas where parking is in less demand to repurpose that right-of-way for more efficient use. For example, connectivity in the community may benefit from the conversion of on-street parking to transit or bicycle facilities. Providing enough off-street parking to accommodate the adjacent land uses and repurposing the roadways to accommodate other modes of travel and future travel demand may be needed. The effects of removing on-street parking will need to be considered on an individual project basis.

Constraints

As previously mentioned, the University community is primarily built out with few opportunities for constructing additional travel lanes. Many considerations should be given to identify opportunities to facilitate the shift from vehicle to other modes of travel. In addition, the community is comprised of canyons and freeways creating barriers and limiting roadway access in certain areas. Commute into and out of the community can be difficult during peak hours as congestion occurs on many of the community's roadways as well as adjacent freeways.

FIGURE 14-9



Vehicle Opportunities and Constraints