Figure 2-4: Street Classification

TRAFFIC VOLUMES

Peak AM and PM hour traffic counts were conducted in 2014 and 2016 at key intersections throughout Goleta in support of the City's Congestion Management Program. The highest counts were observed along the City's major arterials, which also host most of the City's bicycle infrastructure.
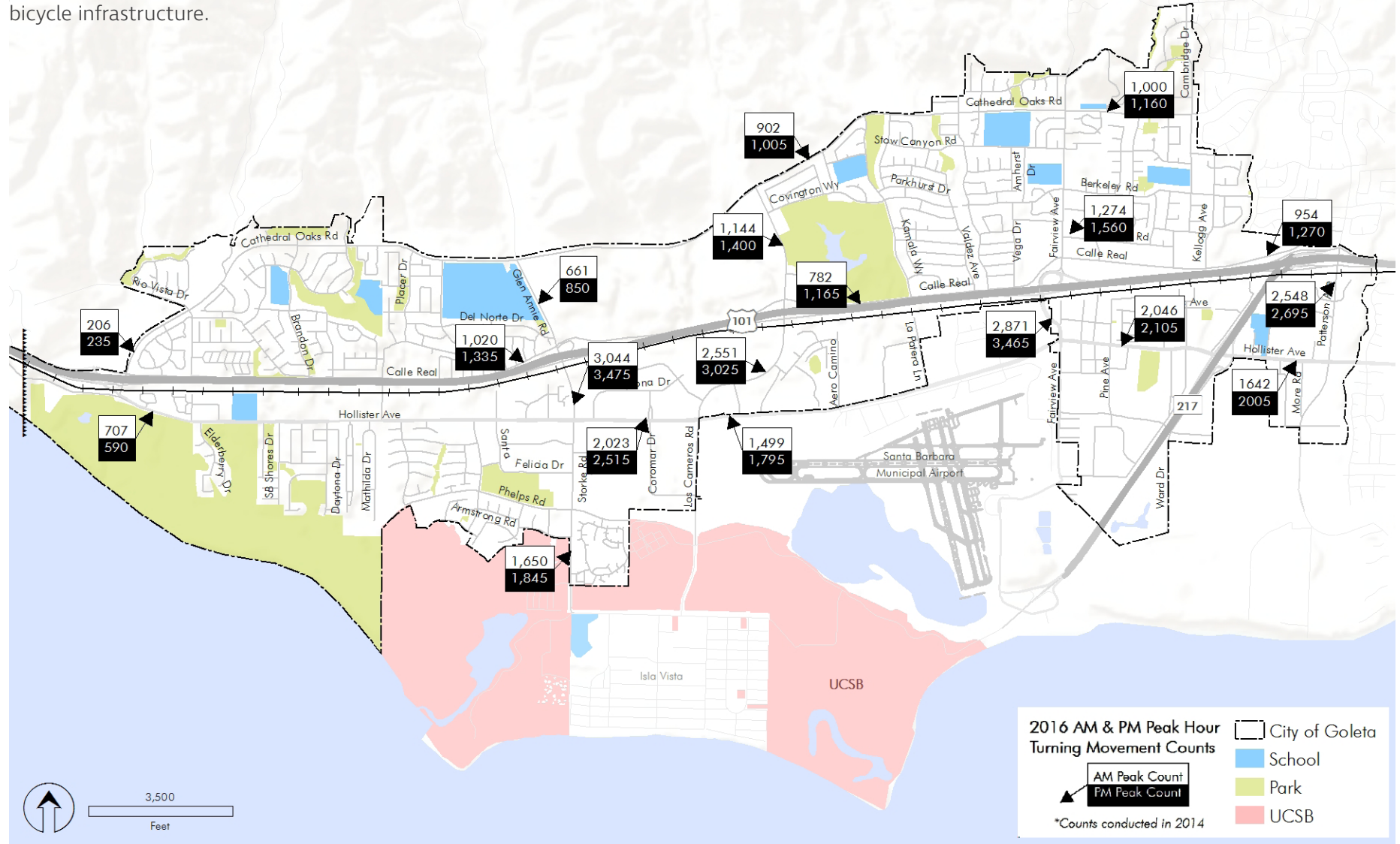

Figure 2-5: Traffic Volumes

GOLETA BICYCLE AND PEDESTRIAN MASTER PLAN

MOBILITY BARRIERS

The major barriers to active transportation in Goleta include US 101, UPRR, high volume inter-sections, high volume roadways, and gaps in bicycle and pedestrian infrastructure. Areas of major concern exist mostly along the US 101 corridor at crossing points. Given limited crossing opportunities, those that do exist experience high traffic volumes and high collision rates. Gaps in existing and previously proposed infrastructure are addressed in a later section.

Figure 2-6: Mobility Barriers

TRANSPORTATION MODE SHARE

According to the U.S. Census 2016 American Community Survey *"Transportation to Work"* estimates, the majority of Goleta's resident commuters (73 percent) rely on driving alone in personal vehicles to and from work. This mode is followed in prevalence by carpooling (12 percent), bicycling and walking (four percent each), transit and working from home (three percent) and finally by motorcycle (one percent).

Walking Mode Share

The walking mode share measures the percentage of workers aged 16 years and over who commute to work by foot. Mode share reflects how well infrastructure and land-use patterns support travel to work by foot. In the City, walking mode share patterns are connected to the relative proximity of housing to employment centers.

Bicycling Mode Share

Similar to the walking mode share, bicycling mode share measures the percentage of resident workers aged 16 years and over who commute to work by bicycle. In the City, moderate bicycling mode share levels are evenly distributed, with peaks observed near high residential concentrations and retail commercial centers.

Public Transit Mode Share

Transit mode share measures the percentage of workers aged 16 years and over who commute to work by transit. This mode share reflects how well first mile-last mile infrastructure, transit routes, and land-use patterns support travel to work by transit.
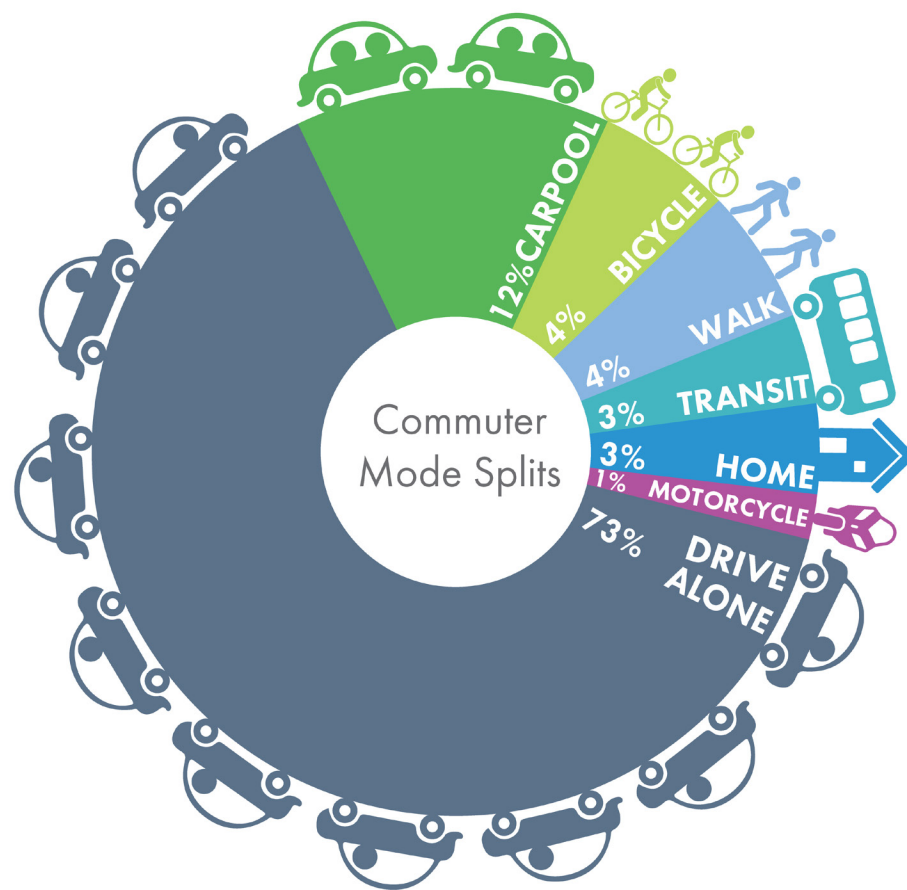

Figure 2-7: Transportation Mode Share

ANALYSIS

Analysis – of existing and future conditions, as well as latent demand – is an essential step in any transportation project planning process. For this project, analysis included spatial (GIS) analysis, fieldwork, and community and stakeholder input. This multi-pronged approach allowed for maximal data capture and cross-referencing of findings. For example, bicycle and pedestrian safety concerns were analyzed through collision data, including locations, frequencies and causes. Cross-referencing these collision data with public input helped to confirm safety issues and identify areas for new or improved infrastructure.

This section is primarily concerned with explanations and discussions of the various spatial analyses employed in this project. Brief discussions of the role of fieldwork and community/stakeholder input are provided below, while the remainder is devoted to spatial analysis.

FIELDWORK

The project team conducted fieldwork, using measuring tools and georeferenced photos, on several occasions. Fieldwork was conducted at project kick-off (to better understand existing conditions) and during project development (to verify data obtained from GIS and community/stakeholder input).

COMMUNITY/STAKEHOLDER INPUT

Community and stakeholder input played a very important role in developing infrastructure and program recommendations. A summary of community and stakeholder input obtained and its impact on project recommendations is included in Chapter 3, "Outreach Summary."

SPATIAL (GIS) ANALYSIS

Spatial analysis included simple, data-driven analyses and more complex analyses, requiring evaluations of layered information and multiple inputs. Data-driven topics include existing bicycle infrastructure, proposed bicycle infrastructure, average daily trips, activity centers, transit routes, safety analysis and bicycle-pedestrian suitability. Topics requiring more complex analysis (safety/collisions and bicycle-pedestrian routing) are discussed in more detail in their respective sections.

SCHOOL ZONE INFRASTRUCTURE

To assess the safety of walking and bicycling routes to schools and bus stops in Goleta, pedestrian and bicycle deficiencies were analyzed in the quarter-mile service area around each school property based on aerial imagery, Google Streetview services, and feedback from the City. The bulk of roadways in Goleta's school zones, 83 percent, are equipped with sidewalks on both sides. Ten percent of the remaining roadways host sidewalks on one side and seven percent are completely missing sidewalks. Of the missing infrastructure, two percent have plans for construction. Additional gaps in existing pedestrian infrastructure include 15 missing curb ramps and 356 curb ramps lacking tactile domes throughout the school zones. Crosswalks are generally present, but vary considerably in type. Bicycle infrastructure exists within 40 percent of the school zone network, leaving 60 percent of these zones without dedicated bikeways.

Figure 2-8 depicts the infrastructure deficiencies within the pedestrian school zones, as well as the crossing barriers. The analysis also highlights the Old Town neighborhood because most students attend schools outside the neighborhood. All school-aged residents must therefore travel to different parts of the region to reach their respective schools over a mile away, many having to cross barriers such as the Fairview Avenue-101 interchanges and arterial corridors. Storke Road/Glen Annie is another corridor that experiences heavy school traffic because Dos Pueblos High School can be found at the north end and Isla Vista Elementary School and UCSB can be found at the southern end. Between these schools, there are major commercial centers that are frequented by City residents and visitors. Storke Road/Glenn Annie shares many of the same challenges students and others experiences at the Fairview Avenue/101 interchange.
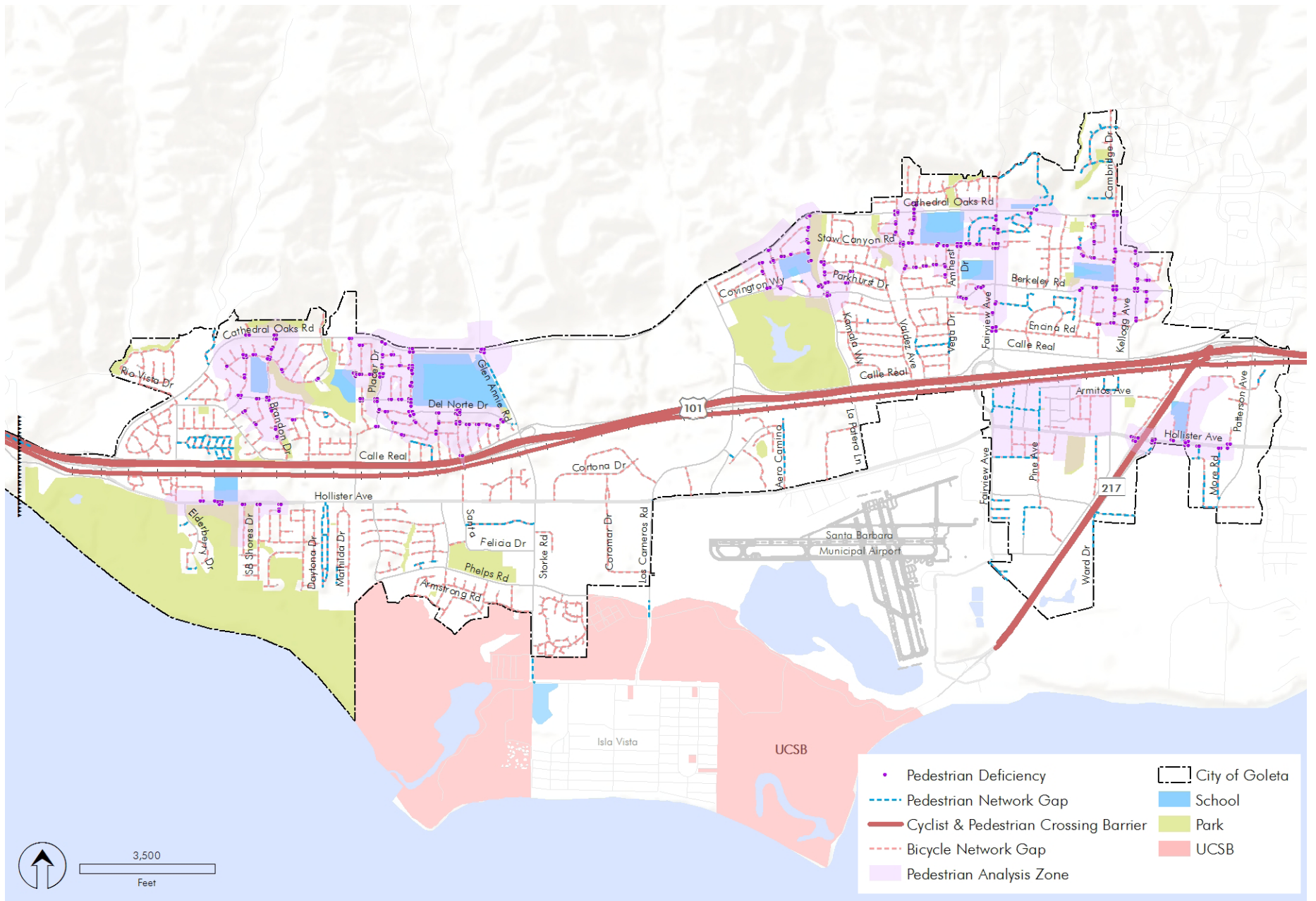
Figure 2-8: School Zone Infrastructure

EXISTING BICYCLE INFRASTRUCTURE

Goleta's existing bicycle infrastructure network consists of roughly 33 miles of multi-use paths, bicycle lanes, and shared bicycle routes within City limits. Over 60 percent of existing infrastructure is bicycle lanes and most of them are on major arterials. The existing infrastructure was reviewed for potential upgrades and missing sidewalk data helped guide future infill project recommendations.
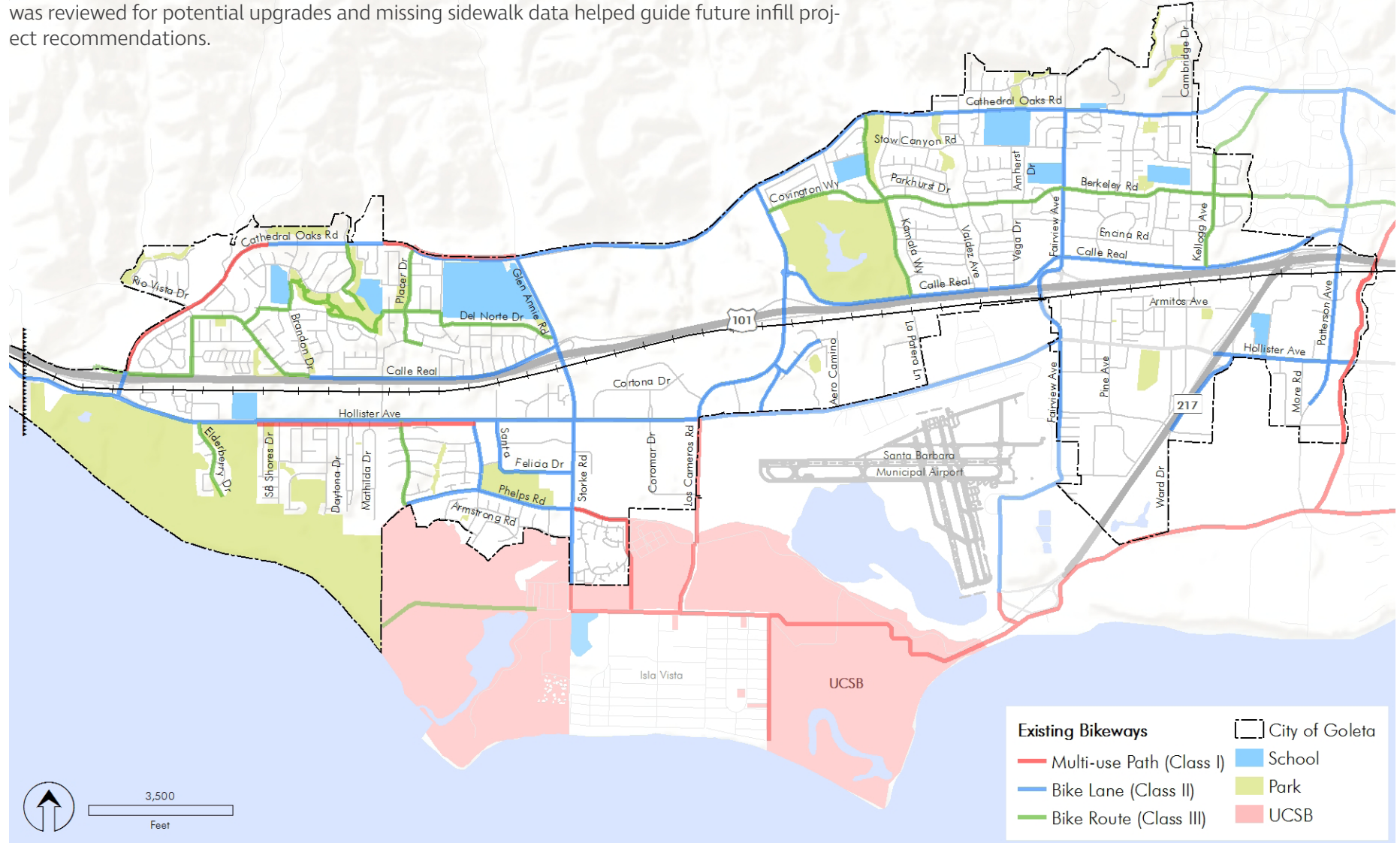

Figure 2-9: Existing Bicycle Infrastructure

GOLETA BICYCLE AND PEDESTRIAN MASTER PLAN

PREVIOUSLY PROPOSED BICYCLE AND PEDESTRIAN INFRASTRUCTURE (CIP)

Between the 2009 General Plan and the City's Capital Improvement Plan (CIP) projects list, over 10 miles of additional bikeways and almost seven miles of pedestrian infrastructure are planned. Proposed bicycle infrastructure predominantly include Class I multi-use path construction, while pedestrian improvements address many existing infrastructure upgrades, as well as new construction.
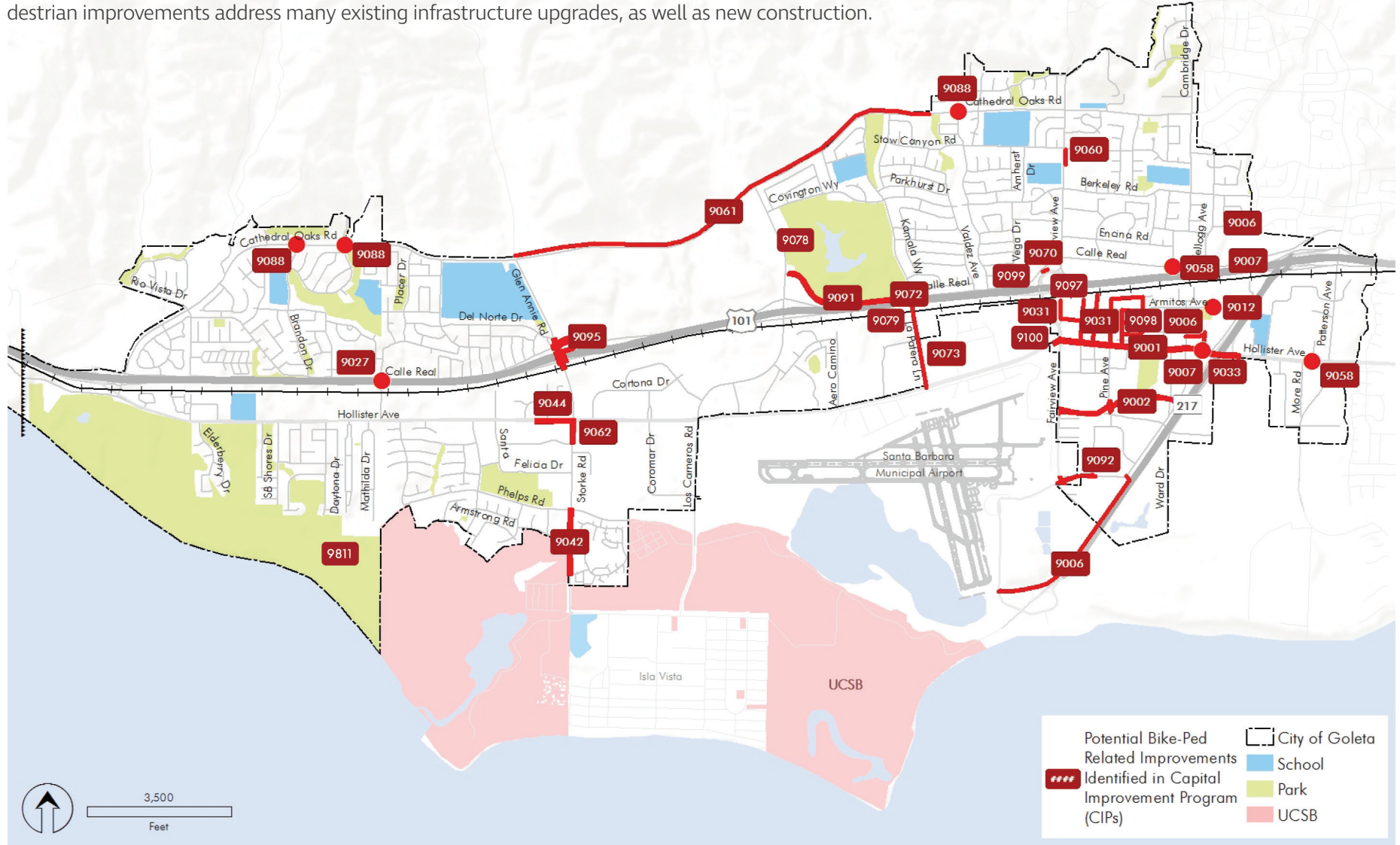

Figure 2-10: Previously Proposed Bicycle and Pedestrian Projects (CIPs)

INFRASTRUCTURE COMPARISON ANALYSIS

Data from a collection of California cities was analyzed to gain a general understanding of how Goleta's bicycle infrastructure compares to other cities. Cities were chosen based on availability of data, completion of a bicycle plan, and proximity to the coast. Data used to help provide context for the comparison included demographic statistics such as population, household income, and race. In addition, the cities' roadway and most recent bicycle network data was collected using open data portals and individual cities' bicycle plans.

The extent of existing bikeways and proposed bicycle improvements were compared to the overall size of road network to calculate percent coverage. The results offer a unique comparison between cities both similar and different to Goleta in demographics and size. It reveals that if Goleta were to implement all proposed bicycle improvements, 58 percent of its total roadway network would have bicycle infrastructure, second only to Davis in this analysis.

The analysis also revealed that in top performing cities like Davis, San Luis Obispo, Burlingame, and Eastvale, median income ranged from $46K to $110K, showing no discernible relationship. Top performing cities differed in racial diversity, with percentages of "white alone" citizens spanning from 45 to 85 percent. Population comparisons revealed that all cities analyzed fell into the same category of under 100,000 residents. Figures 2-11 through 2-15 illustrate the supporting data used in the analysis.

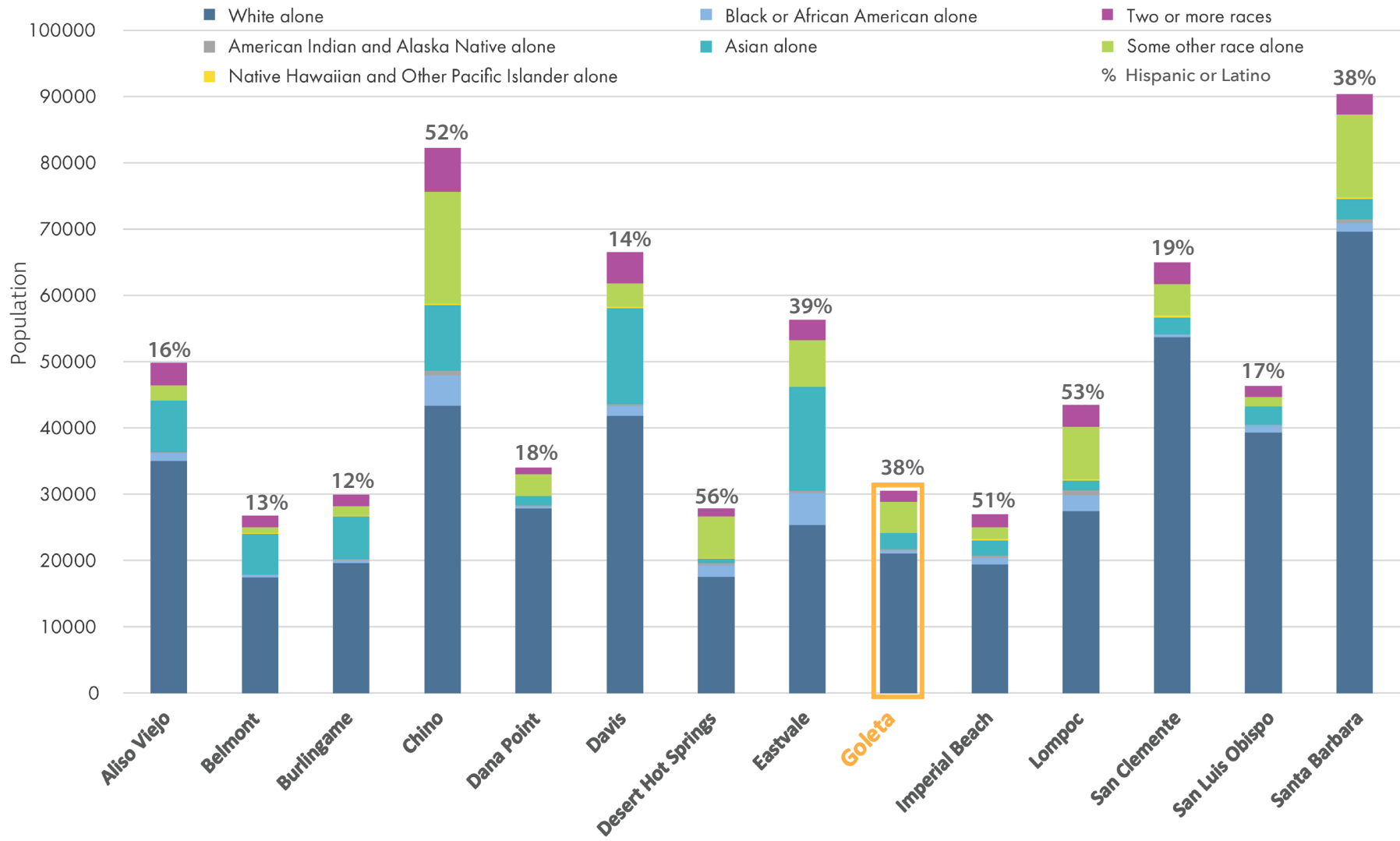Figure 2-11: Bikeway Comparison Cities

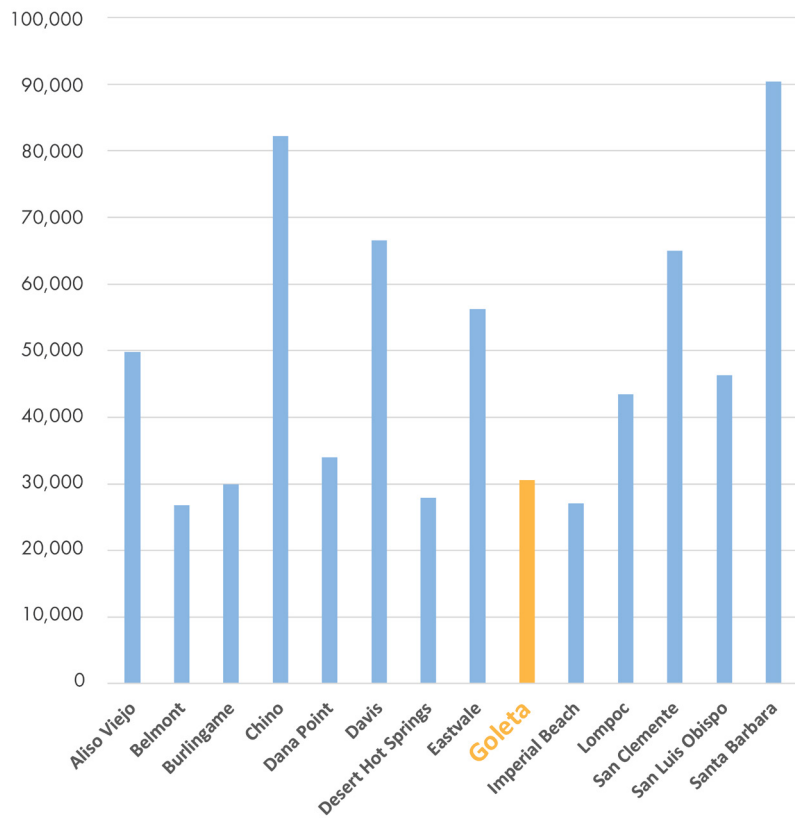GOLETA BICYCLE AND PEDESTRIAN MASTER PLAN

Figure 2-12: Infrastructure Comparison—Race

Figure 2-13: Infrastructure Comparison—City Population
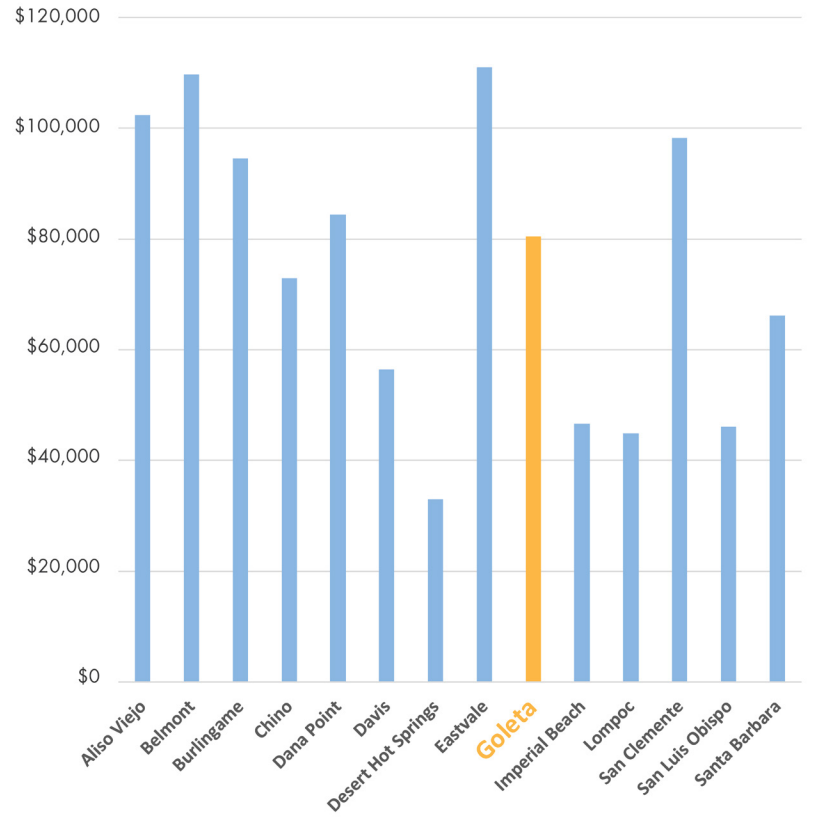
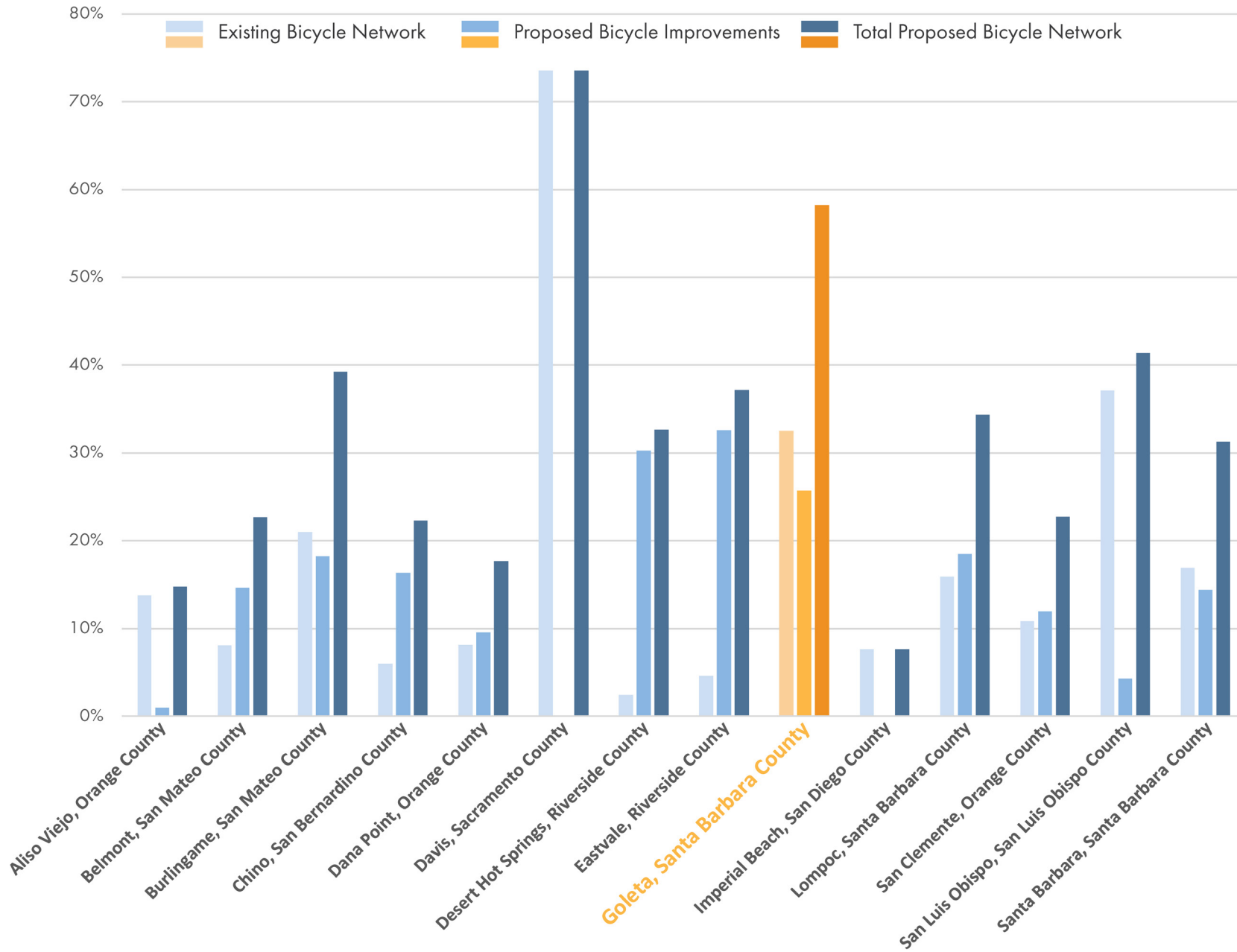Figure 2-14: Infrastructure Comparison—City Household Income

GOLETA BICYCLE AND PEDESTRIAN MASTER PLAN

Figure 2-15: Infrastructure Comparison—Bicycle Network Coverage

BICYCLE AND PEDESTRIAN COLLISIONS

Bicycle and pedestrian collision data were obtained from the Statewide Integrated Traffic Records System (SWITRS) collision dataset managed by the California Highway Patrol (CHP). This dataset captures all reported bicycle-vehicle, pedestrian-vehicle, and bicycle-pedestrian collisions that resulted in injury or property damage in Goleta in the 10 year period of 2007 through 2016. Collisions that occurred on US 101 and UPRR are displayed on Figure 2-17, but were not included in the subsequent analysis. Additionally, collisions on off-street paths are not reported in the data. It is important to note that collisions involving bicyclists and pedestrians are known to be under-reported, and therefore such collisions are likely under-represented in this analysis.

During this ten-year period there were a total of 157 bicycle-related collisions and 58 pedestrian-related collisions—four of which resulted in fatalities. Bicycle-related collisions fluctuated throughout this time period with peaks in 2010 and 2014, while pedestrian-related collisions remained relatively steady from year to year. The bulk of both collision types resulted in injury or complaint of pain (82 percent), with 18 percent resulting in severe injury or death. Most collisions (75 percent) occurred in daylight conditions, or in lighted conditions (15 percent), with only ten percent occurring in either unlighted conditions or at dawn/dusk.

Most bicycle collisions (60 percent) were caused by bicyclists traveling on the wrong side of the road and both bicyclists and drivers making unsafe or improper turns. The remainder of collisions were caused by a variety of driver and bicyclists violations, with roughly 50 percent of total collisions being the fault of bicyclists and 41 percent the fault of drivers. Remaining bicycle collisions were caused by parked vehicles, at two percent, and unknown causes, at seven percent.

Most pedestrian collisions (59 percent) were caused by pedestrians and drivers violating the other party's right-of-way. Overall, 64 percent of pedestrian collisions were the fault of drivers, and only 29 percent the fault of pedestrians. Remaining pedestrian collisions were caused by bicyclists, at two percent, and unknown causes, at five percent.
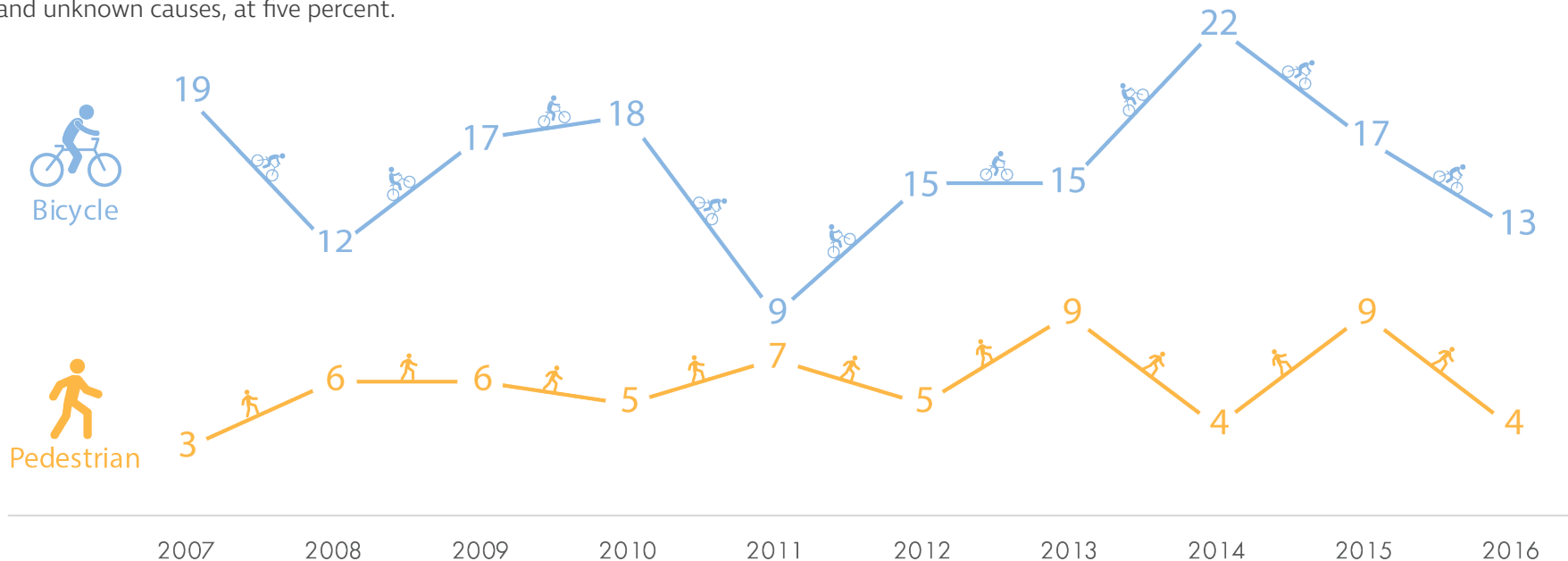

Figure 2-16: Bicycle and Pedestrian Collisions by Year
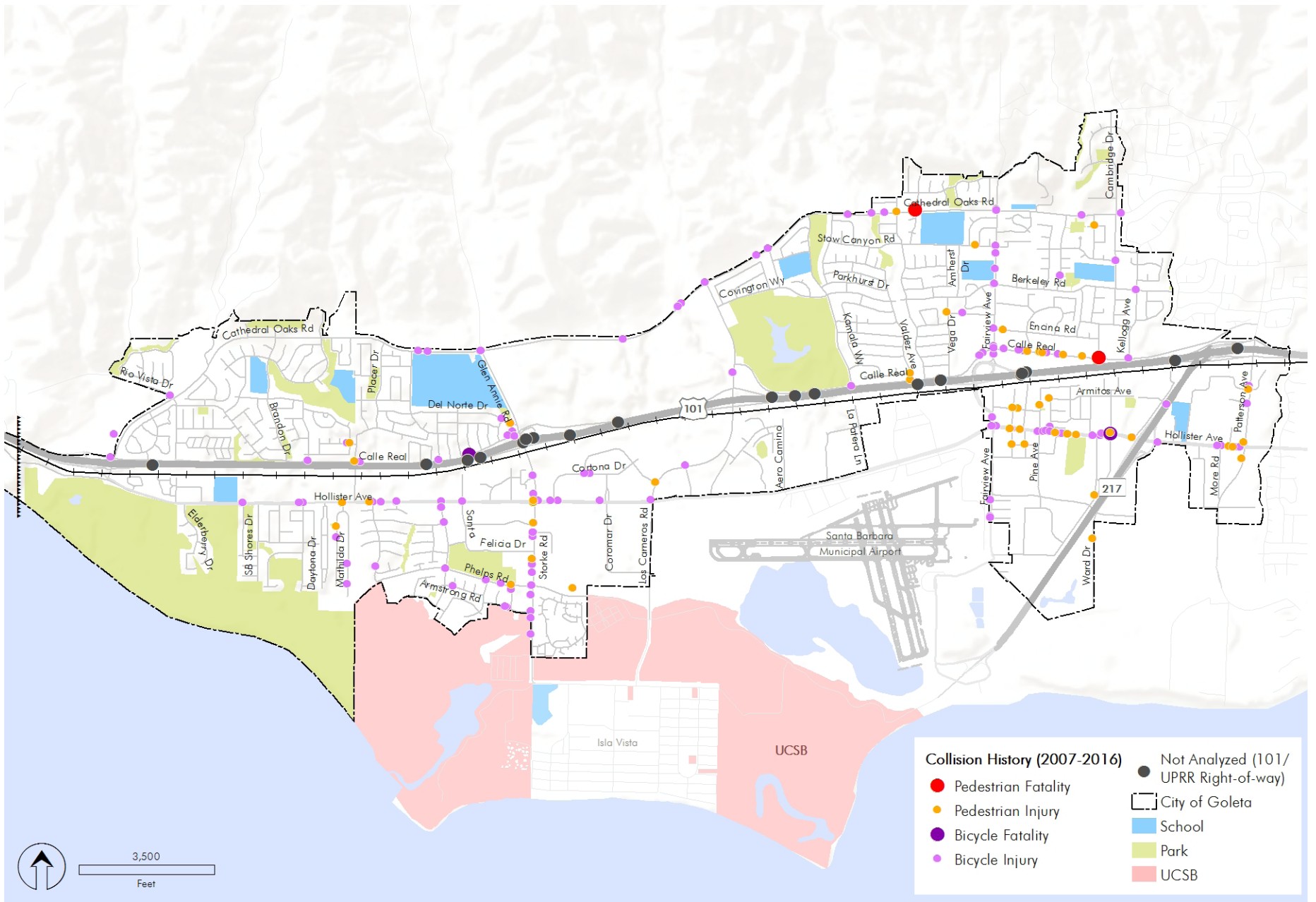
GOLETA BICYCLE AND PEDESTRIAN MASTER PLAN

Figure 2-17: Bicycle and Pedestrian Collisions