OJAI COMPLETE STREETS MASTER PLAN

June 2017

Adopted by the City Council on September 18, 2017

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1. Background | Ojai's Complete Streets Policy

In February 2012, the Ojai City Council adopted a Complete Streets Policy. The policy was adopted in recognition of Ojai's unique and appealing small town quality of life with an eye toward careful coordination of land use and circulation planning.

The policy includes transportation principles including the provision of safe and comfortable routes for walking, bicycling, and public transportation to increase use of these modes of transportation, enable convenient and active travel as part of daily activities, reduce pollution, and meet the needs of all users of the streets, including children, families, older adults and people with disabilities.

One part of the charge included in this adopted policy was the development of area specific design characteristics for specific corridors.

A Plan for Ojai

This document is a master plan for Ojai's streets to meet the needs of today's residents and visitors. Over the years, standards and needs have changed and the community's streets must change to accommodate them. The residents of Ojai have communicated a desire for balanced streets that allow driving to be complemented by safe options for walking, biking, and transit. This plan is a guide to achieve those goals.

The informations in this document is intended to provide guidelines and recommendations. The recommendations represent a starting point for attaining the goals of this and related documents. The details of the plan will be resolved in project development and planning and may be modified with further analysis in implementation.

The document is in part, a conceptual update of the February 1999 'City of Ojai Bicycle and Pedestrian Master Plan' with the addition of Complete Streets language and philosophy. It is created as an implementation strategy for the city's 2012 Complete Streets policy.

A Living Document

As conditions and desire change over time, this document may be added to or changed to incorporate approaches that best reflect Ojai.

What Are Complete Streets?

Complete Streets are planned, designed, operated, and maintained with consideration of the needs of all travelers. Every street and its environs are different, so the physical manifestation of this principle will change based on context. Howerver, ensuring the provision of safe facilities for all users (pedestrians, cyclists, transit users, and vehicles) is a core tenet of Complete Streets.

Complete Streets in the context of this document are both a process and a product. The process being the steps and decisions that lead to a specific street or intersection design; the product

being the result of this process and the street designs that are implemented in our local communities.

Complete Street are often considered mainly as a product (as the photos in this document convey). However, this document will focus on creating the appropriate process that will lead to a Complete Streets product - streets which may look very different from one another depending on the context.

You may have heard of names similar to Complete Streets (Livable Streets, Living Streets, Context-Sensitive Streets, Multimodal Streets), these all essentially point to the same idea - of creating streets and spaces that balance the needs of a range of transportation users.

Complete Streets are not:

- a specific design prescription
- a mandate for an immediate retrofit
- a silver bullet solution for other transportation issues

Complete Streets is not a new concept in some ways, it's a revival of a more traditional way of moving through our communities, from an era when most streets were shared by all users equally. Yet, the concept of designing our streets to be 'complete' is becoming more common again throughout the country, including in Southern California.

"Why would Complete Streets be prioritized over our existing methods and processes in creating our streets?" This section will present a number of reasons:

- **Providing Transportation Choices:** Providing transportation choices is an important goal for numerous reasons including meeting the needs of different types of users and providing alternatives to traffic congestion. Complete Streets help support this goal by developing facilities that can acommodate a wide variety of users including cars, bicycles, and those who want to walk from point A to point B. In many parts of the region, walking or biking is simply not an option as a result of the existing built environment.
- **Users Already Exist:** A mantra in building any type of new facility is 'If you build it, they will come.' However, in the case of Complete Streets, users are often already present and are being underserved. Complete Streets will help better meet the needs of those currently using the street and can also encourage new users.
- **Community Benefits and Values:** The benefits provided by Complete Streets are numerous, some direct and some indirect. Some direct benefits that communities can expect are safer travel options for those who wish to walk, bike, or take transit within the community. Drivers maybe be presented with better clarity and ease in navigating city streets (through improved signage and/or signal timing). Complete Street designs can also reduce potential collision points on roadways.

Indirect benefits include the opportunity for placemaking on residential and retail corridors, increased retail spending (through improved pedestrian facilities) and increases in physical activity by providing the space for active transportation.

Numerous additiona resources are available that highlight the benefits of Complete Streets, some of the most noted benefits include:

- Safety
- Public Health benefits (through active transportation)
- Improving the sense of place

- Meeting needs of and providing independence for special populations
- Gaining additional utilization of public space from our streets, and
- Environmental mitigation

These considerations lead to a preliminary list of goals for Complete Streets:

- Provide safety and convenience for all modes of transportation
- Identify where accidents occur frequently in areas of high trafic and prioritize adding safety features at these locations.
- Identify and improve safe, efficient and convenient routes into and out of every neighborhood in the City.
- Identify and improve safe, efficient and convenient routes into and out of all substantial destinations in the City.
- Identify the most significant limiting elements to the safe use of bicycles to get from the neighborhoods to the key destinations and prioritize resolving the issues creating those limits.
- Create better bicycle and pedestrian features for safe and convenient travel so that they accommodate the needs of as many bicycle riders and pedestrians as possible and practical.
- Develop Bike Routes in Coordination with the County and the MAC that connect adjacent communities to businesses and cultural events in the City.
- Develop a plan for adequate bicycle parking at all key destinations and for work place needs.
- Create bicycle and pedestrian facilities that minimize conflicts with vehicles under both present usage and pontential future conditions.

Complete Streets Master Planning Process

The planning process illustrated in Figure 1

Figure 1

Complete Streets Master Planning Process

Tradeoffs are inherent in the design of Complete Streets. A part of getting those right is understanding the community and its needs and desire. The master plan employed a simple four-step process with the intention of developing a community-driven, technically-sound plan.
Those four steps were.

1- Discovery: During the discovery phase of the project, the team collected data on existing conditions, street dimensions and safety.

2 - Desire: During this phase, on January 30, 2015, the team had discussions with stakeholders and had community stakeholder interviews from throughout the community to better understand current issues and what Ojai's citizens aspire for the community to become.

3 - Design: During a three-day design workshop, April 14-16, 2015, the team worked with the community to develop design ideas to change the streets to be more safe and complete.

4 - Documentation: The outcomes of the previous meetings and analyses have been documented in this report.

Existing Conditions

Driving

One of the aspects that many Ojai residents cite as a reason for living here is the relatively unhurried way of life. Part of that feeling has undoubtedly been tied to a relative lack of traffic congestion, yet some residents feel this is changing for the worse. Traffic is being affected by:

- Tourism
- Elimination of school transportation
- Intradistrict school transfers
- Changing commuter traffic patterns

Walking

Ojai is a very compact town filled with many residents who are connected to nature and to their own health. As such, walking is a practical and popular way to get around the City.

Transit

There are two transit operators in Ojai, the Ojai Trolley which provides local circulation and Gold Coast Transit Route 16 which provides connections to Ventura. Both operators serve the SR33/SR150 intersection (the 'Y') and downtown Ojai.

On weekdays Ojai Trolley Route A and Route B each operate every 60 minutes offset from one another. They operate almost identical alignments, providing 30 minute service at the majority of stops. Both routes begin at the arcade on Ojai Avenue and travel west via Ojai Avenue, Highway 33, El Roblar Drive, La Luna Avenue, and then operate a counterclockwise loop via West Lomita Avenue, Rice Road, Woodland Avenue, Ventura Avenue, and Loma Drive. Both routes return to downtown Ojai via the reverse alignment, though Route B deviates to serve the Ojai Valley Inn via Country Club Road. Both routes terminate with a clockwise loop east of the arcade via North Signal Street, Matilija Street, Montgomery Street, and Grand Avenue. Route A operates on Grand Avenue to Gridley Road, serves the Whispering Oaks apartments, and ends at the park-and-ride at Ojai Avenue and Fox Street. Route B operates on Grand Avenue to Park Street and ends at the park-and-ride. Weekday service operates between 5:30 am and 9:30 pm. Weekend service operates hourly, alternating between Route A and B between 6:00 am and 8:30 pm on Saturday and between 7:00 am and 8:30 pm on Sunday.

Gold Coast Transit Route 16 operates hourly on weekdays only between the Ojai park-and-ride and the Ventura Transit Center via Ojai Avenue, North Ventura Avenue, and Thompson Boulevard. Route 16 runs between 5:00 am and 9:45 pm. Most stops along major arterials have improvements and adequate pedestrian access. Where transit routes operate on local roads stop improvements and pedestrian access can be inconsistent.

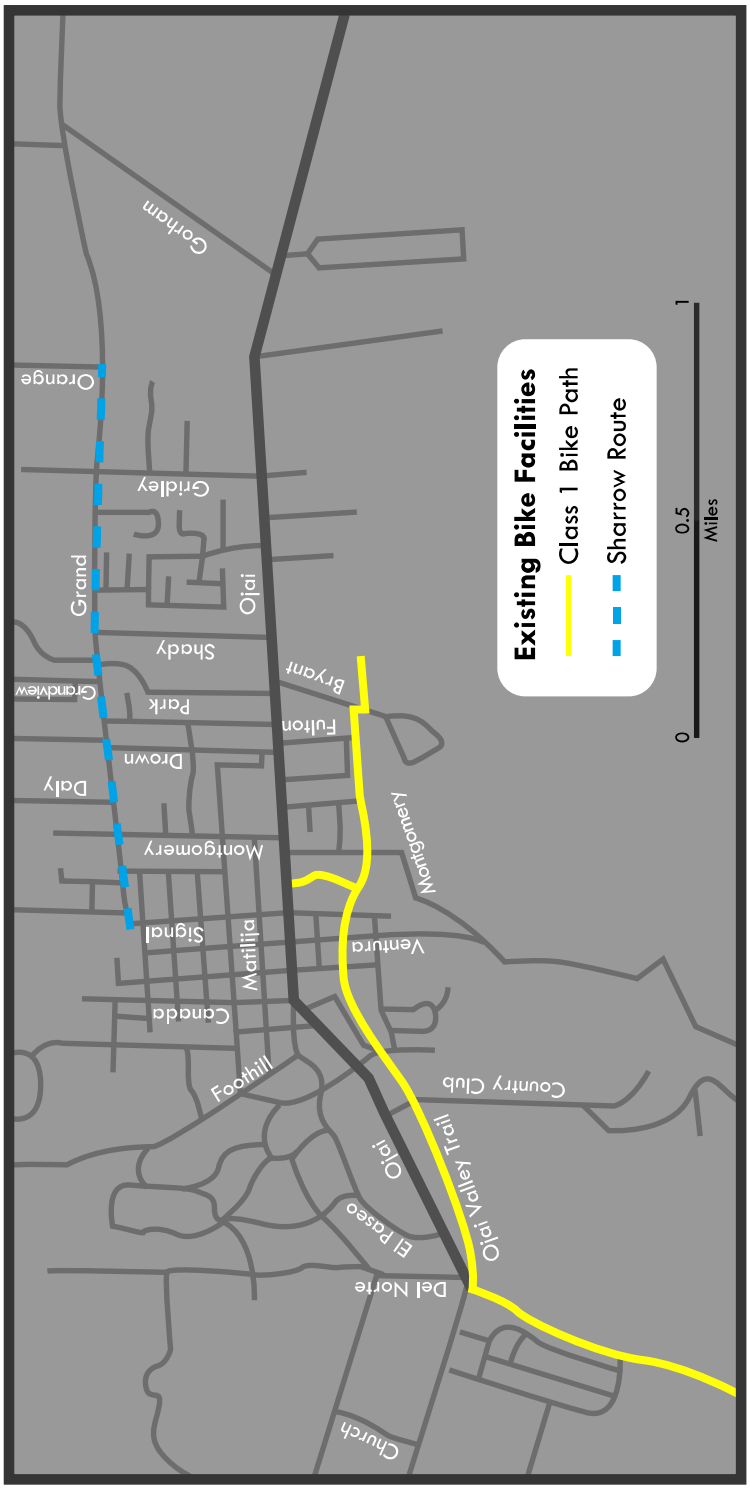
Biking

Ojai currently has a limited network of dedicated bike facilities, shown in Figure 2. The two primary shared use routes are along Grand Avenue and the Ojai Valley Trail - a reclaimed rail corridor that has been converted to an off-street, multi-use path south of Ojai Avenue. While the Ojai Valley Trail is a facility that is comfortable for bicyclists of a wide range of abilites, shared

use bicycling can be uncomfortable for some users such as families with small children. Also, it is not efficient for commuting or long-distance bicycling, due to stop signs at street crossings and numerous pedestrians

Figure 2

Existing Bike Facilities



Active Transportation Facilities Design Best Practices

Most cities follow some established standards for designing streets. There is often confusion regarding what standards must be followed, what is merely guidance, or when local communities can deviate from existing standards. The most relevant of those standards and guides are:

- The American Association of State Highway and Transportation Officials' (AASHTO) A Policy on Geometric Design of Highways and Streets (the "Green Book")
- The Manual on Uniform Traffic Control Devices (MUTCD)
- Area Jurisdiction Street Manuals and street design standards
- California Highway Design Manual
- National Association of City Transportation Officials (NACTO) Guides
- The California Fire Code
- The California Vehicle Code

Sometimes the application of these standards comes down to jurisdictional control and professional judgment. Decisions about a locally funded project on a locally owned street can conform to whatever standards that community deems appropriate. However, local governments that wish to use certain federal funds or make changes to streets and roads that are on the federal-aid system will have to work with partner agencies (Caltrans and Federal Highway Administration (FHWA)) and their standards and processes. Only Ojai Avenue and Maricopa Highway are on this system.

AASHTO Green Book

The Green Book provides guidance for designing street curvature, lane width, shoulders and medians, and other street features. While application of the Green Book is required only for streets and roads that are part of the National Highway System, some cities apply its guidance to all streets. Further, the Green Book provides guidance that cities often unnecessarily treat as standards. The Green Book encourages flexibility in design. For example, 10-foot lanes, which cities often shun out of concerns of deviating from standards, are well within AASHTO guidelines.

Area Jurisdiction Street Manuals

Some local jurisdictions follow the Green Book or design guidance from organizations such as the Institute of Transportation Engineers (ITE) based on liability concerns. Neither federal nor state law mandates adoption or adherence to these guides. However, municipalities often adopt them to protect themselves from lawsuits. Cities are authorized to adopt or modify their own practices, standards, and guidelines (one such nearby example is the LA County Model Design Manual for Living Streets), but in reality many don't have the resources to develop their own, so they adopt those in the Green Book or another previously adopted manual, or those of other cities.

Working within previously established regional guidelines generally should result in a design that is protected from liability. However, the Green Book, ITE and other resources are silent on many design features, and do not consider the needs within unique city contexts. In these cases, it is common practice for agencies to develop their own approaches that incorporate international equivalents or practices from other cities. It is important in such cases that cities demonstrate due diligence and reasonable action in their street development process.

California Highway Design Manual

The California Highway Design Manual (HDM) applies only to State Highways, two of which (33 and 150) are partly within Ojai city limits. If cities deviate from the minimum widths and geometric criteria spelled out in the manual they must follow the exemption process or experimental process. The HDM does not establish legal standards for designing local streets.

National Association of City Transportation Officials (NACTO) Guides

NACTO has published two significant manuals - the Urban Street Design Guide and the Urban Bikeway Design Guide. These manuals are a response by cities to fill the gaps and inadequacies of the largely rural and suburban-focused Green Book. The Urban Street Design Guide focuses on the design of city streets and public spaces. In contrast to the general discussion of street design in an urban context included in the Green Book, the Urban Street Design Guide emphasizes city street design as a unique practice with its own set of design goals, parameters, and tools. The purpose of the NACTO Urban Bikeway Design Guide is to provide cities with state-of-the-practice solutions that can help create Complete Streets that are safe and enjoyable for bicyclists.

Manual on Uniform Traffic Control Devices (MUTCD)

The MUTCD provides standards and guidance for the design and application of traffic control devices including roadway markings, traffic signs, and signals. The Federal Highway Administration oversees application of the MUTCD. As opposed to the Green Book, local agencies have limited flexibility to deviate from the provisions of the MUTCD because adhering to the MUTCD is codified in California State law. The provisions of the MUTCD and related state laws make it difficult to deploy new traffic control devices, which can hinder options in the areas of speed management, pedestrian crossings, and bikeway treatments. In implementing the California MUTCD one should pay close attention to the instructions in the Introduction, and particularly to the "Standard, Guidance, Option, Support" distinctions and advice that states that professional engineering judgment is required in applying general standards to specific situations.

Tradeoffs in Street Design

Complete Streets are not a one-size fits all treatment.[1] On the contrary, the end products of a Complete Street process may look very different from one another. In some ways, Complete Streets can be considered to be both a "product" (the actual on-the-ground Complete Streets improvements) and a "process" (how local jurisdictions go about changing their planning protocols, design standards, and funding priorities for delivering Complete Streets). The process of arriving at that product should be an ongoing one that strives for continuous improvement, is

[1] For example photos of numerous types of Complete Street treatments, please see the National Complete Streets Coalition's Gallery on "Many Types of Complete Streets" at http://www.flickr.com/photos/completestreets/sets/72157617261981677/

inclusive of specific community values and needs, and reflects the needs of current and future facility users.

Complete Streets can often be conveyed in photographs in "best of all worlds" situations. However, often, the space and funding may not be available to develop these types of facilities. Communities could instead focus on developing facilities that best meet their needs and are realistic given their budgets and right-of-way constraints.

Pursuing Complete Streets does not inherently mean that all streets in Ojai will need to be modified or changed. There are many streets that function well for all users in their present state without need for modification or retrofit. This master plan is intended to ensure that both new and existing streets are considered whenever roads are constructed, reconstructed, or repaved.

Stormwater Management

Sustainable and Low Impact Development (LID) design strategies can be successfully applied to streets to improve water quality and enhance livable communities. A sustainable strategy to address water quality considers designing stormwater runoff systems that are cost effective and integrated with complete streets improvements. When feasible, features such as vegetated gutters and bioswales should be included in complete streets improvements.

Biofiltration is typically the most cost-effective most commonly used roadside stormwater treatment best management practice (BMP). In urbanized settings there often isn't enough space for conventional biofiltration strips and swales. Instead, the best urban solutions are often biofiltration BMPs that have been adapted for main street and parking lot applications. These non-proprietary LID techniques include sidewalk stormwater planters, sidewalk stormwater tree trenches, parking lot stormwater planters, and permeable paving*. These treatments may be appropriate for urbanized conditions because they provide stormwater treatment benefits in limited space and provide communities with desirable landscape amenities.

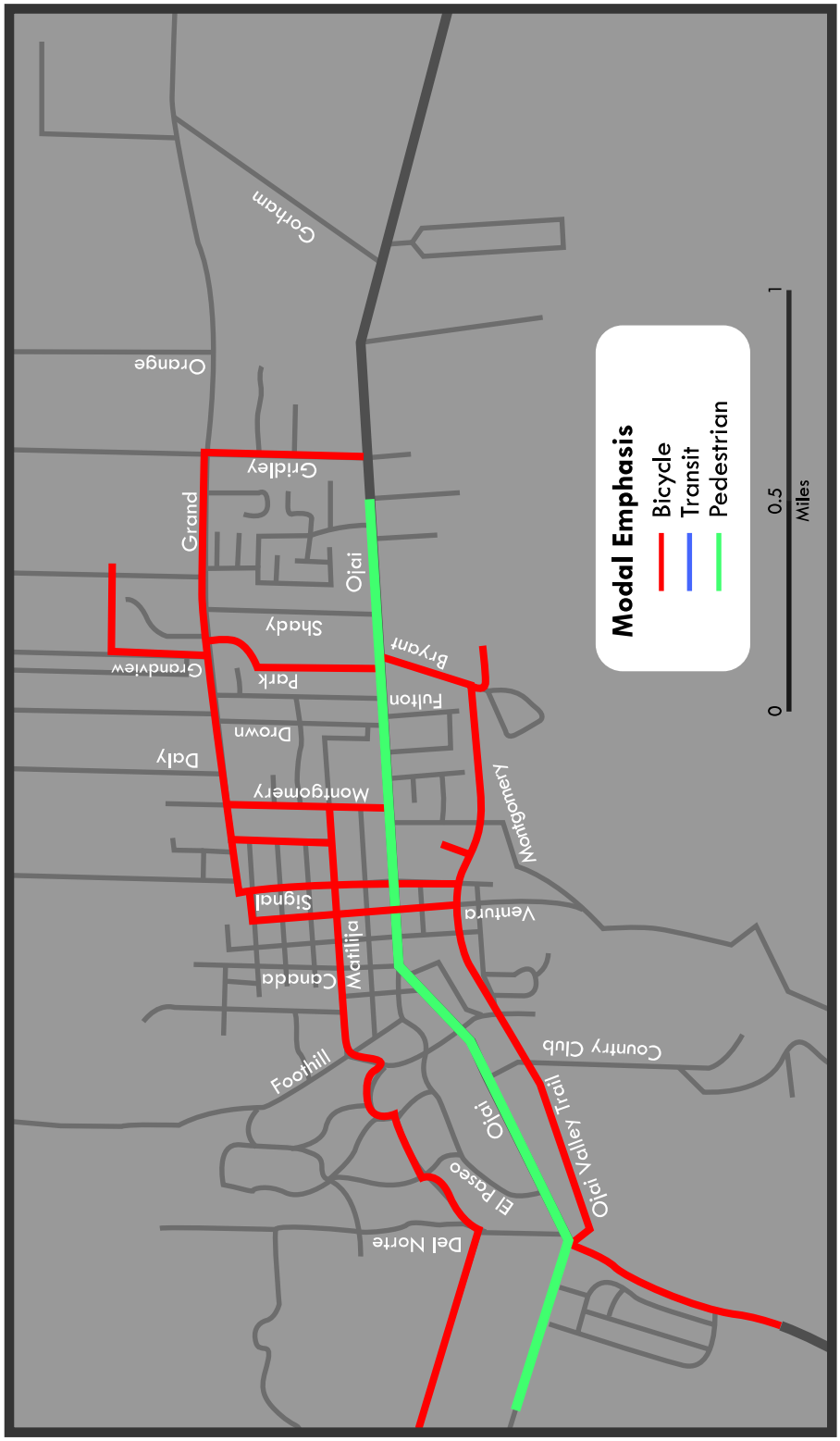
Modal Emphasis

Since not all streets have enough space or enough funding available to serve every possible desire, many communities have found it useful to develop a system of modal emphasis. This simply means that, although every mode of travel (walking, driving, biking or transit) will be accommodated safely, some streets' primary purpose is serving one mode of travel. This might mean, for example, that a street with a pedestrian emphasis will allocate more space to sidewalks and street trees rather than dedicated bike lanes, but that street design elements that slow traffic for pedestrian safety will also make shared use bicycling safe.

Figure 3 illustrates the modal emphasis for significant corridors in Ojai. The idea is that each of these modal emphasis layers forms a connected network or system. In presenting the systems in this way, drivers can clearly see why some streets need to have a pedestrian or bike emphasis in order to keep those systems connected. Bicyclists can see that the transit system is dependent on corridors that serve its routes, etc.

This modal emphasis map forms the basis for the complete street recommendations in the following section. Again, all streets will be safe for any mode, but those shown have a special emphasis.

Figure 3
Map of Modal Emphasis



2. RECOMMENDATIONS

BIKE RECOMMENDATIONS

Ojai's connection to the natural environment and the active lifestyle of many of its residents have made biking a significant part of daily life in the community. Many of those who bike in the community now, expressed a desire for a more complete bike system and solutions to some of the barriers and safety concerns that face them in their travels. The system recommended in this plan hewed to three basic tenets:

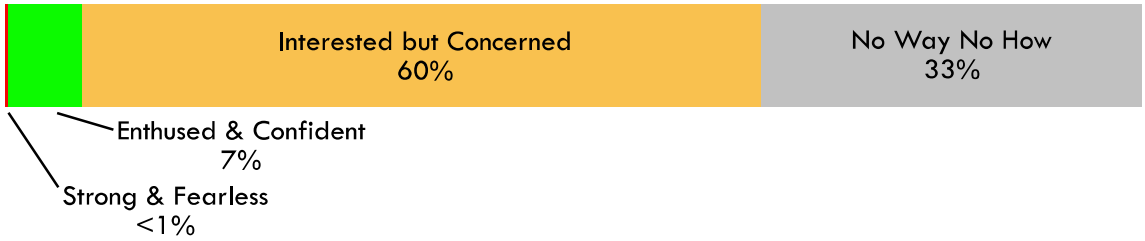
1. Ojai desires a complete and connected system for biking;
2. The community wants a connected low-stress network that can serve a broad spectrum of riders; and
3. Recommendations should be cost effective. As such, most of the on-street recommendations can be achieved without the costly moving of curbs and utilities. Among the highest impact and most cost-effective bicycle safety enhancements are:
   - Speed limit reduction, and
   - Restriping to add bicycle lanes, and
   - Safer and more bicycle-efficient intersections

Differing Cyclist Needs

Many of the residents who participated in the process also expressed a desire to bike, but had concerns about its safety or practicality. This is consistent with feedback in other communities, such as the survey results below from Portland, Oregon, about how people see their own level of biking comfort and interest.

Figure 4

Portland Bike Survey Results



The first two categories (strong & fearless, enthused & confident) are the people that are out there riding now. They don't necessarily need bike lanes to get out and around. It is clear, however, that a majority of people fall into the "interested but concerned" category. Tapping into this market has been the key to accommodating large numbers of cyclists in very successful biking communities. This group includes many older riders and families with children.

The bike facilities that appeal most to this "interested but concerned" group are those that are buffered in some way from car traffic. Families with children, for example, are often much more comfortable letting the kids ride if there is that separation in place. In cities that have

implemented such separated facilities, there have been very large increases in bike ridership observed – confirming the appeal to the big "interested but concerned" group.

Integrated Networks

The community in Ojai has expressed a strong desire for all members of the community to feel comfortable biking including the ability for kids to safely bike to school. Therefore, as par of an extensive overall bike network, this plan includes the development of a connected "low-stress" bike network of facilities that are either buffered from traffic or are on very low-speed, low-traffic-volume streets. As is often the case in developing Complete Streets, implementing some of this system will involve tradeoffs.

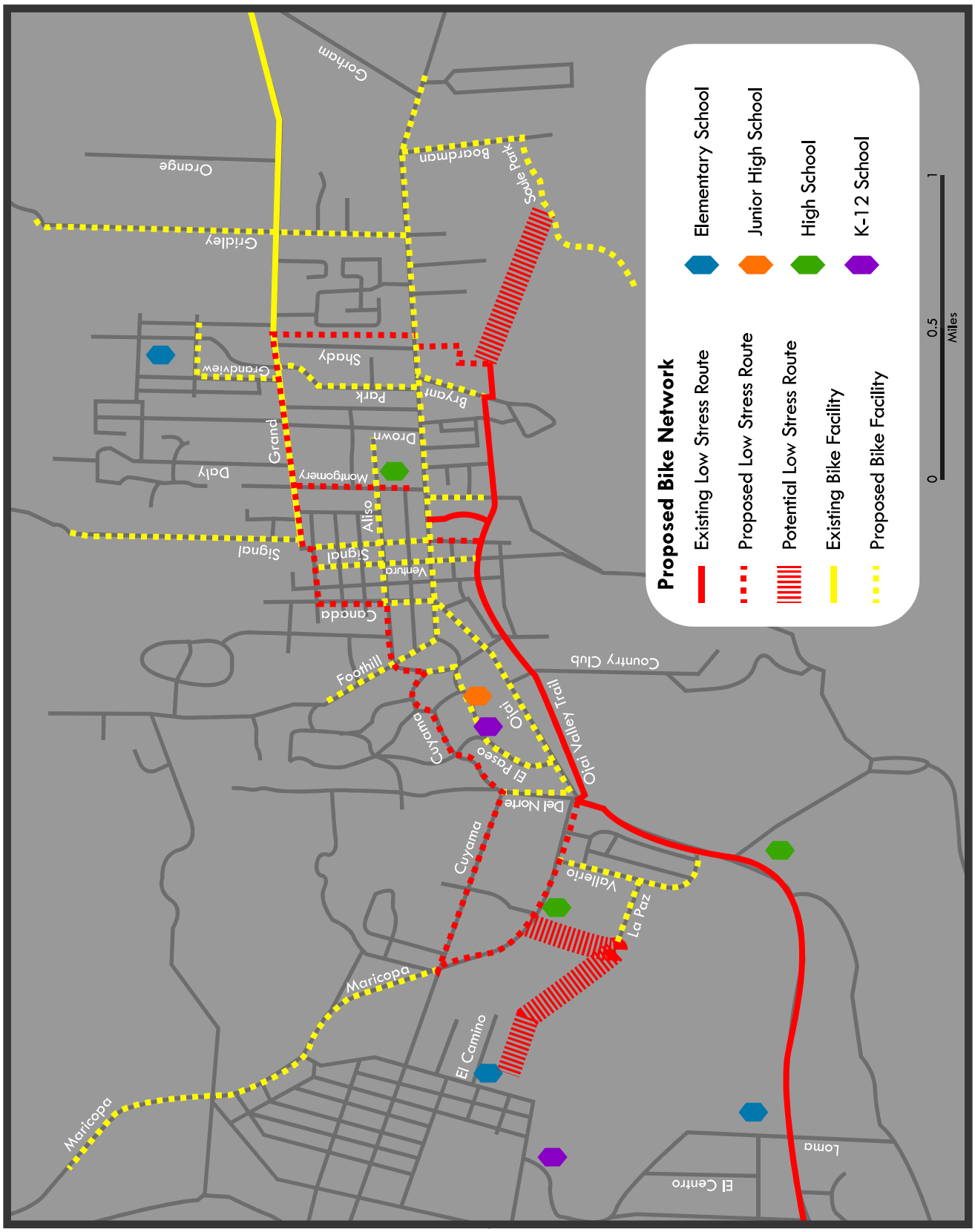
Figure 5 illustrates the planned networks. It is evident that the system, when implemented, will provide a high level of bike connectivity and opportunity – making Ojai one of California's most bike-friendly communities.

System Details

While Figure 5 is useful for gaining a sense of the overall connectivity and coverage of the bike network, the following paragraphs provide some detail of the facilities and tradeoffs across the community – beginning with the northeast part of Ojai shown in Figure 6.

Figure 5

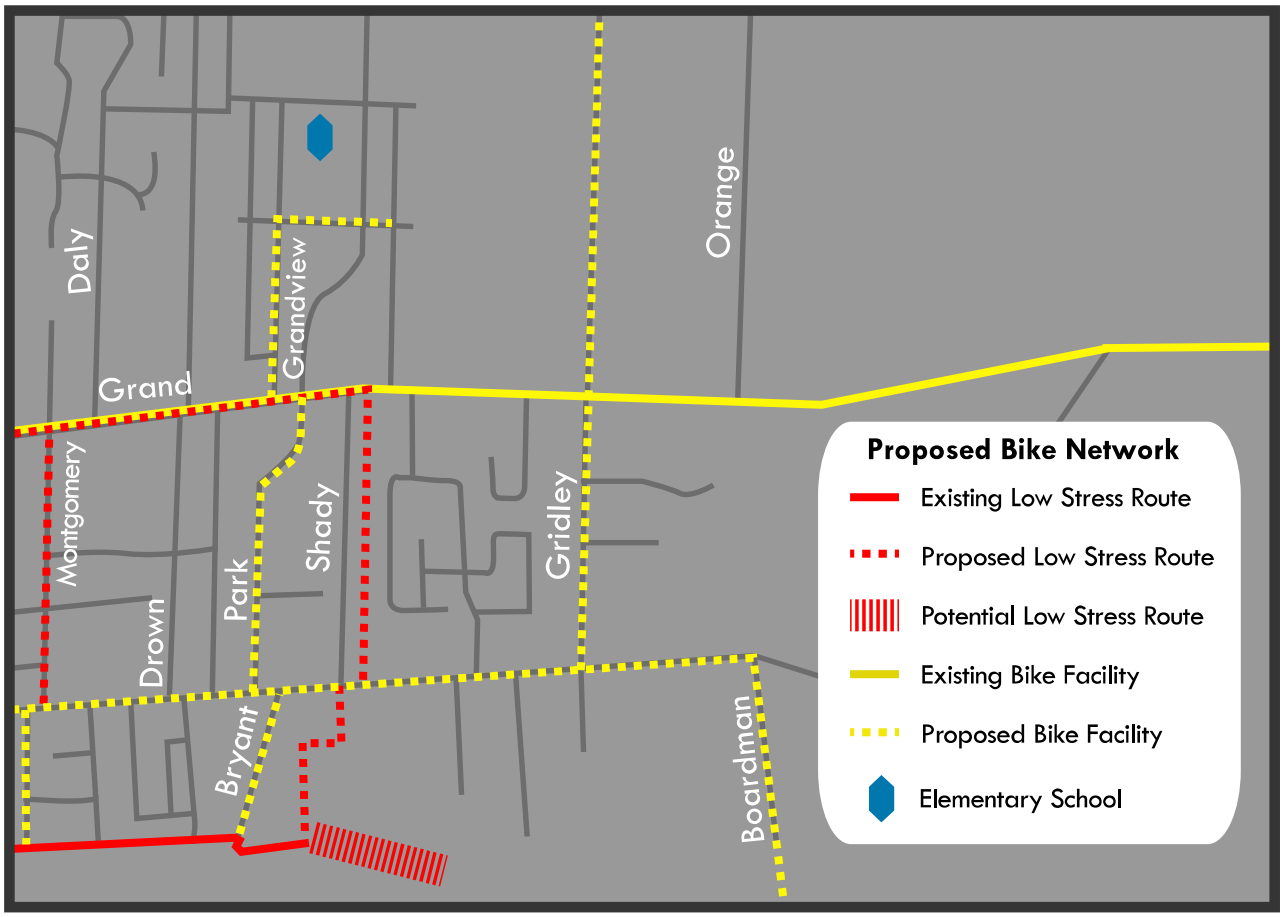
Proposed Bike Route Network



Northeast Ojai

Figure 6

Detail of Proposed Bike Route Network: Northeast Ojai



East-west connectivity represents a primary challenge in Ojai. This is a simple reality of sitting in a valley with an east-west orientation. There are essentially only three corridors that provide a great deal of east-west connectivity – Ojai Avenue, the Ojai Valley Trail and Grand Avenue. Grand, in the northeast part of the City already has shared bike markings (sometimes called "sharrows"). However, the automobile volumes (this is one of only two significant east-west driving routes) and speeds fostered by a long, straight street make biking along Grand uncomfortable for most potential riders. Very few residents who participated in the outreach process felt that this status quo represented an acceptable solution.

Grand Avenue

A number of potential upgrades to the bike facilities on Grand Avenue were considered, as Figures 7a and 7b. Based on discussion with the community, the potential solutions fall into two broad categories:

- Using the existing 40-foot paved roadway: While the on-street parking along Grand Avenue does not appear to be fully utilized or needed, restricting parking to one side of the street would represent a disadvantage to those residents or visitors on the other side

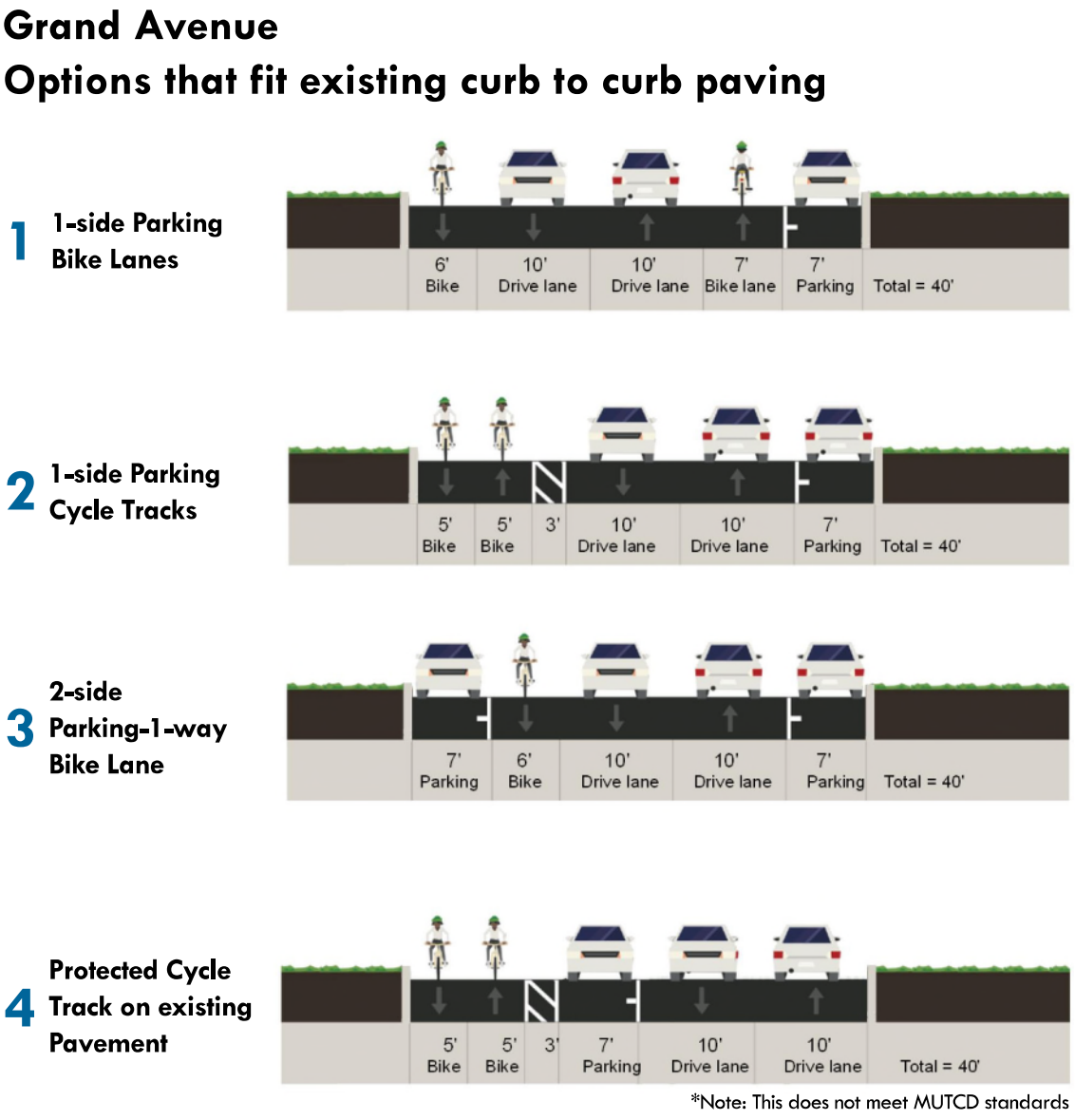
who would then need to walk across the street to park. Pedestrian safety enhancements in the area may be adequate to alleviate this concern.

- Using more of the 66-foot Right-of-Way: While utilizing this easement for an off-street multi-use path eliminates the need to reduce on-street parking, there are some difficulties. Sections of the easement have power poles or other obstructions that will have a significant cost to move.

Figures 7a and 7b are likely to be appealing to different users, with the most concerned riders being much more comfortable with the off-street solution and riders who want to commute quickly preferring the on-street asphalt bike lanes. In the end, both approaches have value. Trees, sidewalks and multi-use trails should be considered for each option.

Figure 7a

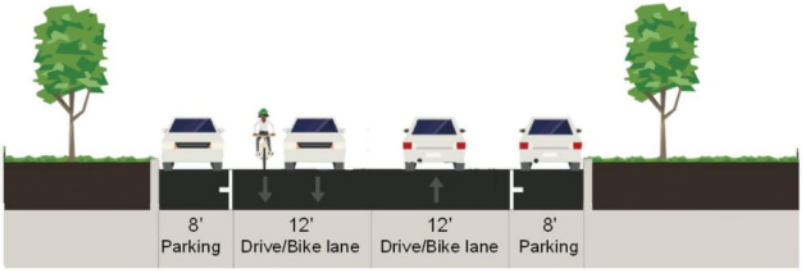
Grand Avenue Concepts (facing east) Using the Existing 40-foot Paved Roadway



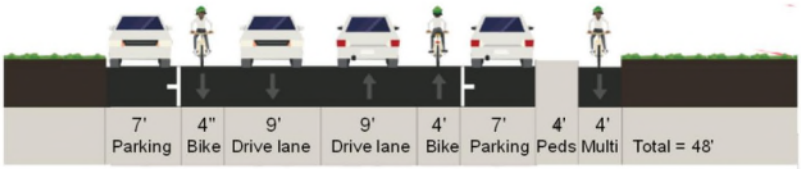
*Note: This does not meet MUTCD standards

Figure 7a *Continued*

5 **Existing Shared Use Lanes with Sharrows and 40 feet curb to curb**



6 **Narrow bike lanes within existing curbs**



*Note: This does not meet MUTCD standards

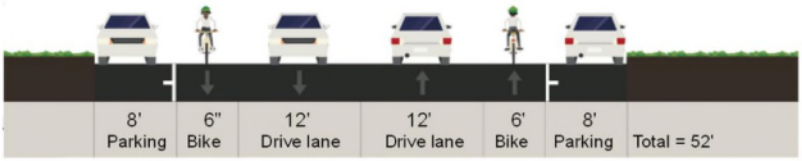
Figure 7b

Grand Avenue Concepts (facing east) Using more of the Full 66-foot Right-of-Way

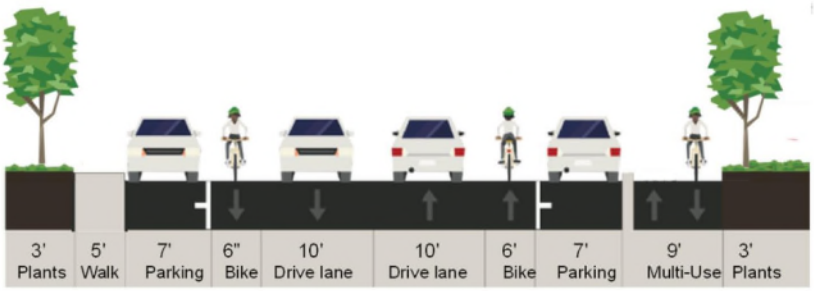
Grand Avenue

Options that fit existing 66 foot right of way, but move curbs

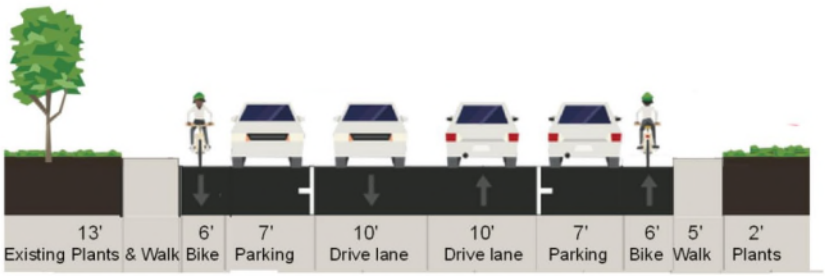
1 **Full Size lanes for all elements (width 52 feet from moving curbs)**



2 **Full use of 66 foot right of way (by moving both curbs)**



3 **Full use of 66 foot right of way (by moving one curb)**



Recommendations:

- Grand Avenue (west of Allison Lane): Needs safe bike lanes as a top priority.
- Dirt Path (aka Allison Lane) Between Shady Lane and Oriole Street: Construct a full, multi-use path from Ojai Avenue to Grand Avenue, and connect the south end of Allison Lane to the Ojai Valley Trail (see recommendations below Figure 8).
- Grandview Avenue and Mountainview Avenue: Add shared use markings (sharrows) to indicate access to Topa Topa Elementary School.

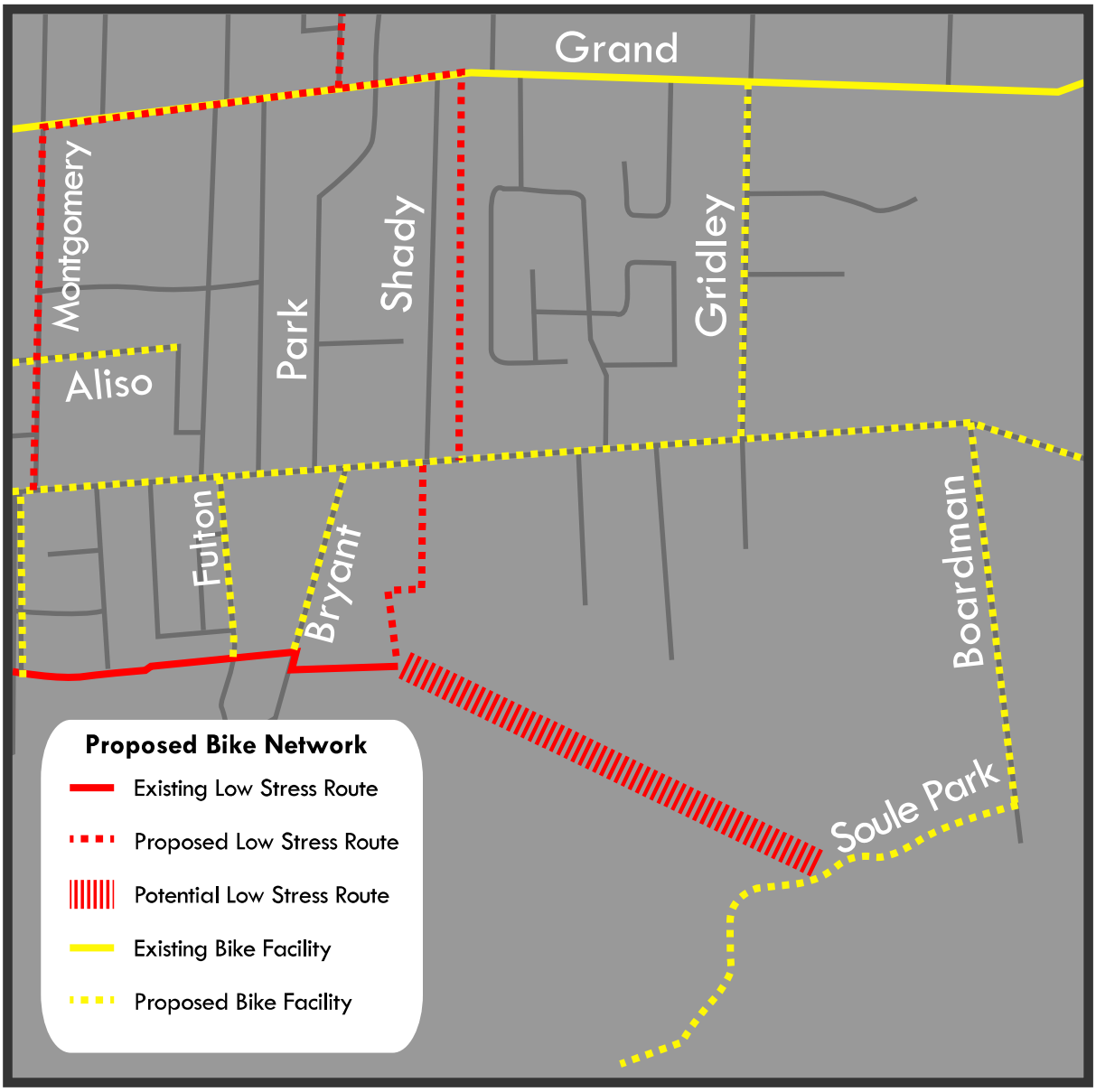
Southeast Ojai

Here, analysis focused on ways to extend the Ojai Valley Trail east and north. Between Grand and Ojai Avenue, there is an existing easement east of Shady Lane (aka Allison Lane) that could be converted to a bike path. Between Ojai Avenue and the existing Ojai Valley Trail terminus at Bryant a short distance to the southwest, two options were developed:

- Upgrade the existing unimproved trail east of Bryant Street. This would be off-street, and a direct extension of the existing Ojai Valley Trail. However, the route is somewhat circuitous. (Note: this segment is shown as "proposed" in Figure 8. This Right-of-Way is 10' wide and currently used for equestrian. If this option were pursued, a signalized, bike-actuated crossing of Ojai Avenue would need to be provided.
- Make improvements to Bryant Street or Fulton Street and East Ojai Avenue. Bryant Street and Fulton Street are low-volume, light-industrial and commercial streets on which bicycle boulevard/greenway treatments could be made. On Ojai Avenue bicycle lanes could be striped in both directions between Bryant Street or Fulton Street and Allison Lane. This option would be consistent with addition of bicycle lanes east and west of this segment, as recommended in the following pages.

Figure 8

Detail of Proposed Bike Route Network: Southeast Ojai



Recommendations:

Ojai Valley Trail: **1.** Construct the Ojai-Grand path via Allison Lane and provide a connection to the existing Ojai Valley Trail via either the path extension or Ojai/Bryant on-street improvements.
2. Connect Ojai Valley Trail to Soule Park

West Ojai

The east-west connectivity issue is even more evident in west Ojai since Grand Avenue is no longer present as a companion to Ojai Avenue. In the west Ojai neighborhoods such as the Arbolada, the streets are curving and discontinuous (by design) which can help to calm traffic, but makes connectivity a challenge. West Ojai is also home to a number of the schools that families expressed a desire to bike to. The two best street candidates for bike connectivity west of Foothill are Cuyama and El Paseo.

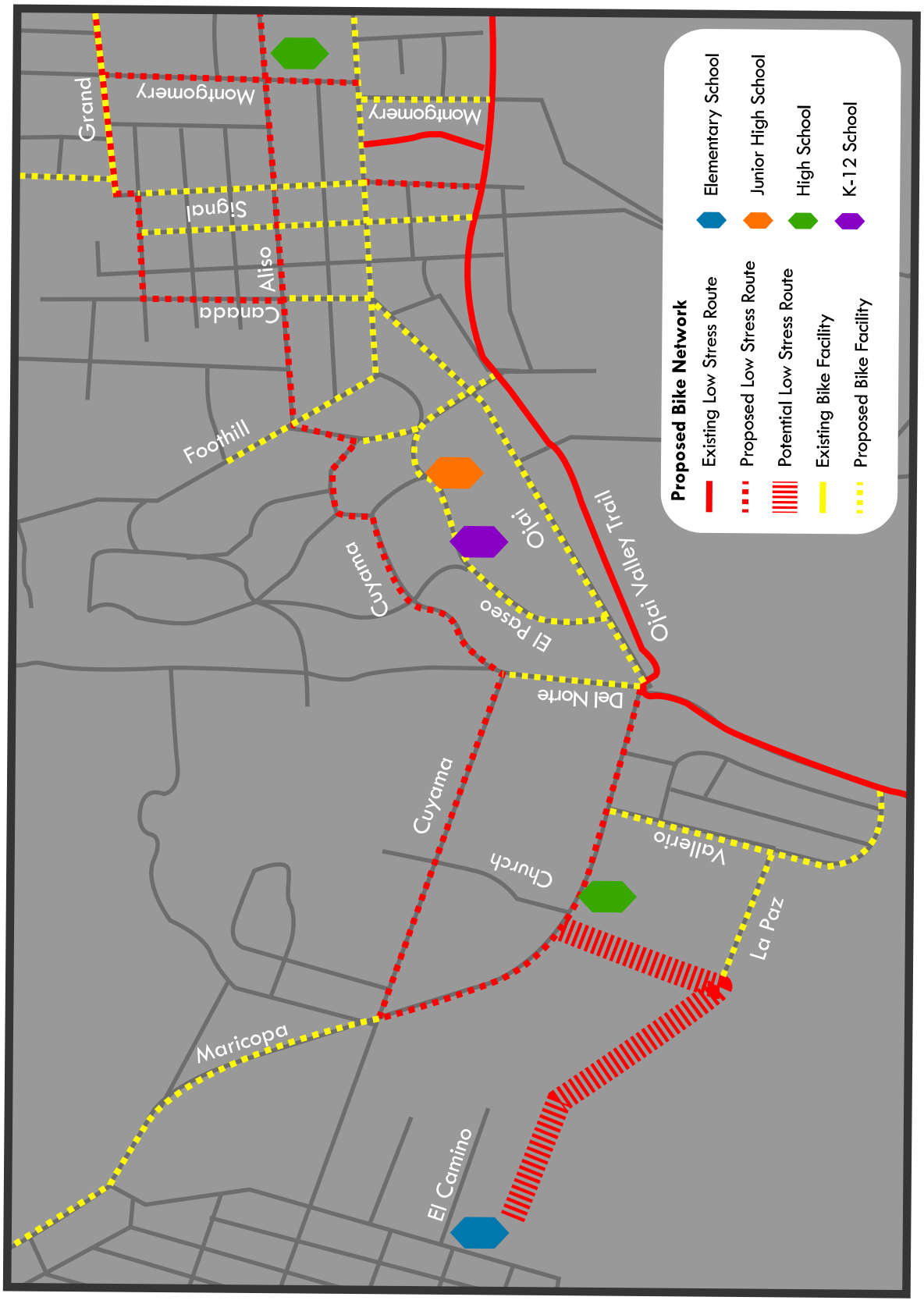
These streets each have an inherent disadvantage:

- Cuyama: Cars sometimes drive too fast along this street, making it uncomfortable for most cyclists.
- El Paseo: School drop-off/pickup activities occur along this street, making it already chaotic without adding the element of bike facilities.

Potential solutions exist for overcoming both of these issues. School drop-off/pickup operations could be shared with Ojai Avenue in addition to El Paseo. Coordination would be required with the school and permitting required with Caltrans for Ojai Ave.

Figure 9

Detail of Proposed Bike Route Network: West Ojai



On Cuyama the solution is relatively simple – slow the cars down. A solution that has been deployed in other communities on such neighborhood streets is a traffic diverter (example shown in Figure 10). This device causes cars who reach a certain point to either turn left or right. It does not eliminate cars from the street, it simply disallows cars traveling the full distance of the street – therefore reducing its appeal as a cut-through route and removing speeding cars. The downside, of course is some Arbolada residents would have a less convenient drive to and from their homes. Their access would not disappear, they would just need to take a different route.

Figure 10

Traffic Diverter Example

The unique street network design in the Arbolada neighborhood actually presents an opportunity to accomplish this diversion function. At the intersection of Cuyama and Chico along the low-stress bike route is a triangle intersection that could be subtly modified. If the north side of the triangle were closed to vehicular traffic, a safe space for bikes could be created and a logical diversion of car "through" movements could be accomplished via signage and the acute intersection angle created. As shown in Figure 11, a simple modification to the existing intersection can create a type of diverter effect along the Cuyama route. Other modifications are available and may be preferred solutions.

Figure 11

Conceptual Chico/Cuyama Traffic

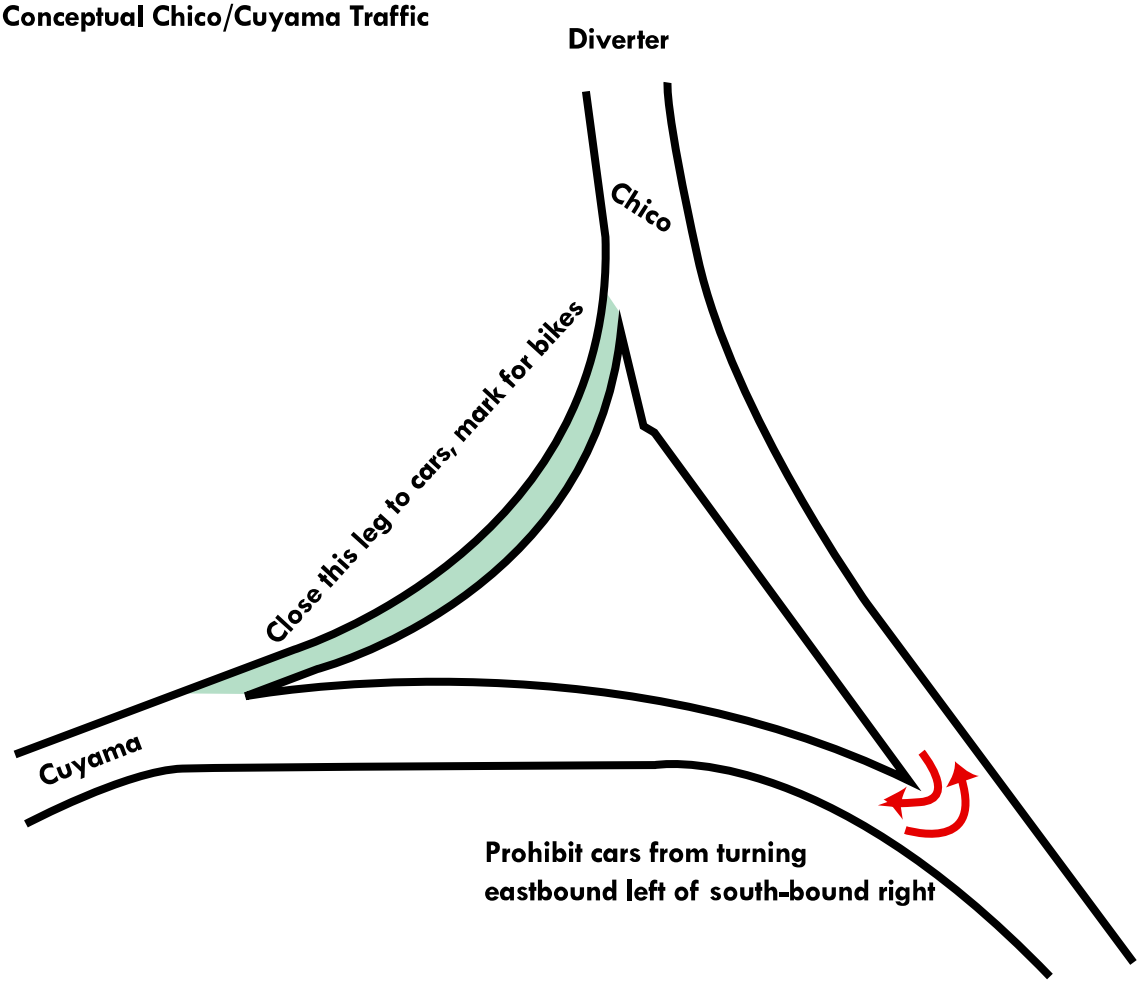


Figure 12

Existing and Possible Chico/Cuyama Intersection (facing east). A. Existing

B. Possible (artist rendering)

Context-sensitive design such as the rendering above can help to calm and divert cars to make biking comfortable.

Recommendations:

1. Cuyama: Consider reconfiguring , for example at the intersections of Cuyama/Del Norte, Chico/Cuyama, and/or Palomar/Chico.
2. Cuyama (Del Norte to Foothill): Provide 4' bike lanes and yield street with no lane striping.
3. Cuyama (El Roblar to Del Norte) :Provide 4' bike climbing lane on uphill, sharrow on downhill

Ojai Avenue

From the west city limit, through the Y-intersection at Maricopa Highway, to San Antonio Creek in the east, bike lanes could be striped on Ojai Avenue continuously with little impact on other users of the street. West of downtown, there are few opportunities for left turns and thus little need for left-turn lanes, so most of the existing two-way center turn lane could be repurposed. To the east, travel lanes are generally unnecessarily wide and could safely be narrowed enough to provide space for bike lanes in most segments without changing other elements of the street (west of Gridley and between Bryant and Shady Lane, some on-street parking would need to be removed). Lanes could be protected or buffered from traffic in most locations, using painted barriers and potentially soft-hit posts or another form of vertical separation. Existing and proposed cross-sections are shown in the following pages, from west to east. Note that the existing cross-section of the street varies, in some cases from block to block. In addition, the spacing for trees varies from block to block.

Figure 13

Ojai Avenue: Del Norte to Country Club. A. Existing; B. Proposed

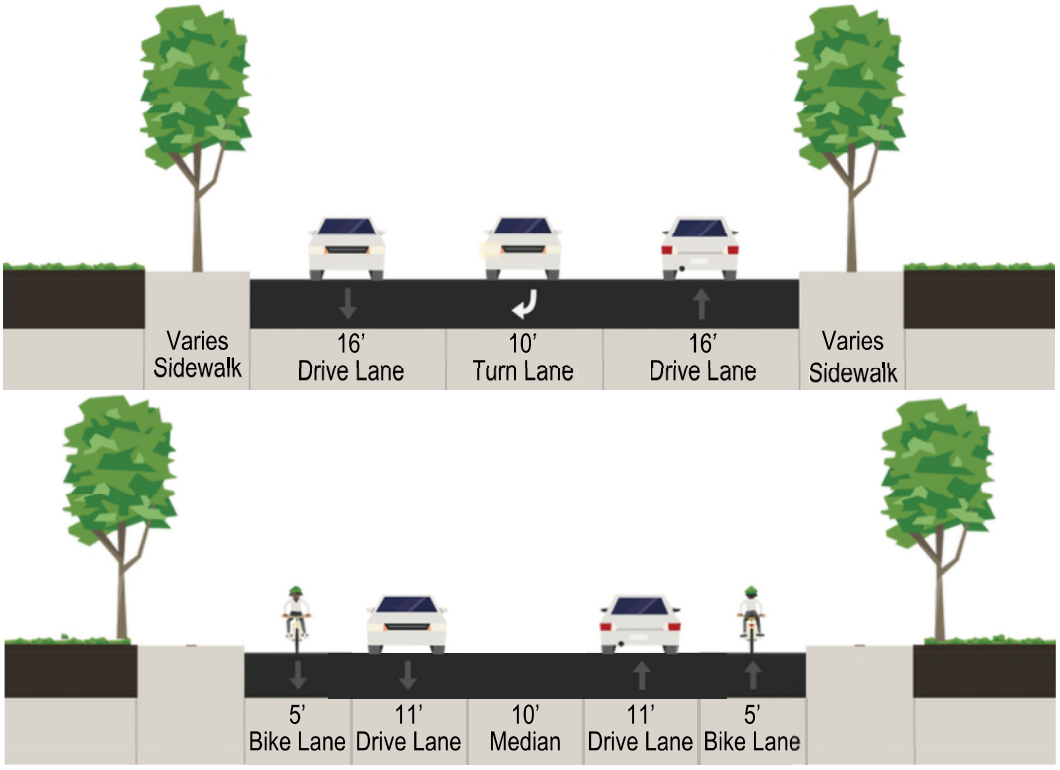


Figure 14

Ojai Avenue: Country Club to Canada. A. Existing; B. Proposed

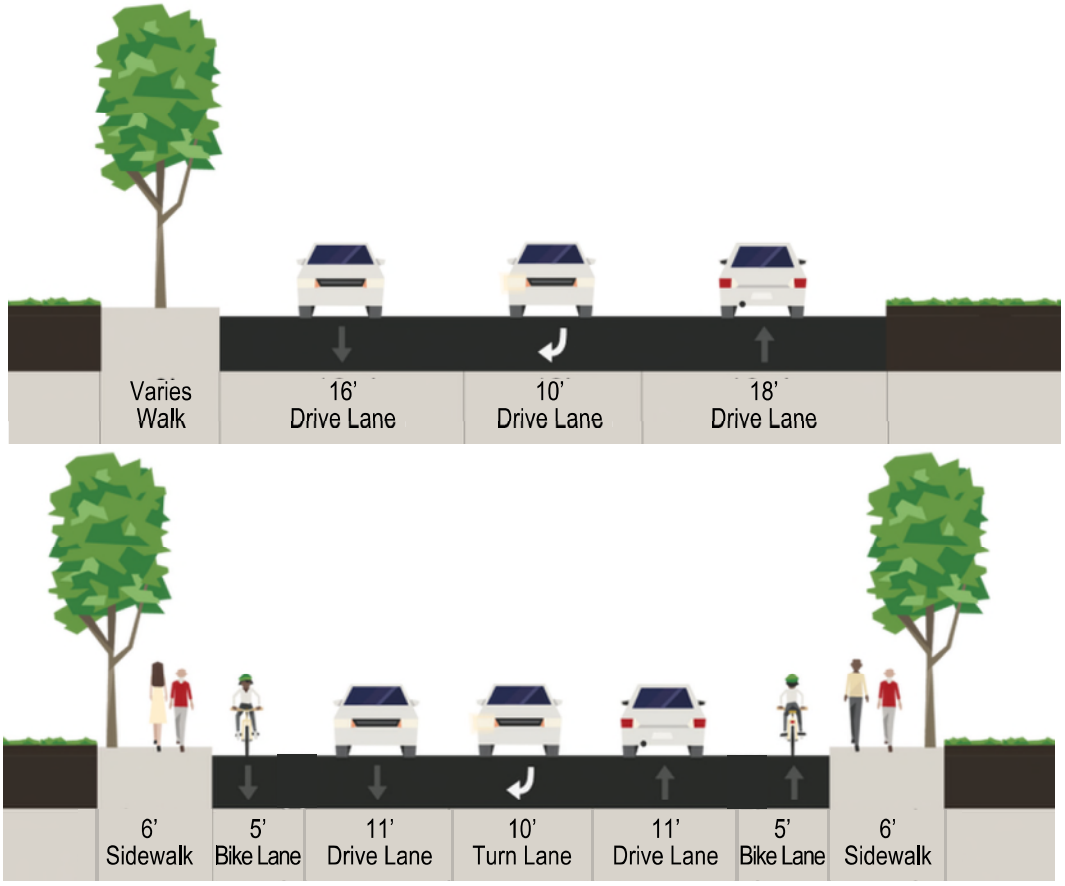


Figure 15

Ojai Avenue: Canada to Ventura. A. Existing; B. Proposed

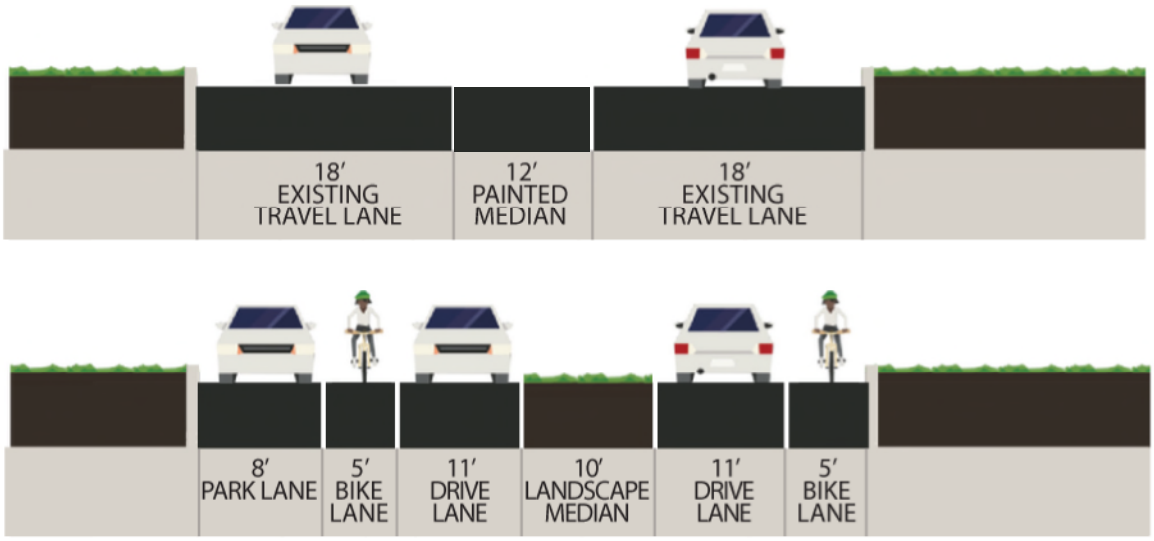


Figure 16

Ojai Avenue: Ventura to End of Arcade. A. Existing; B. Proposed

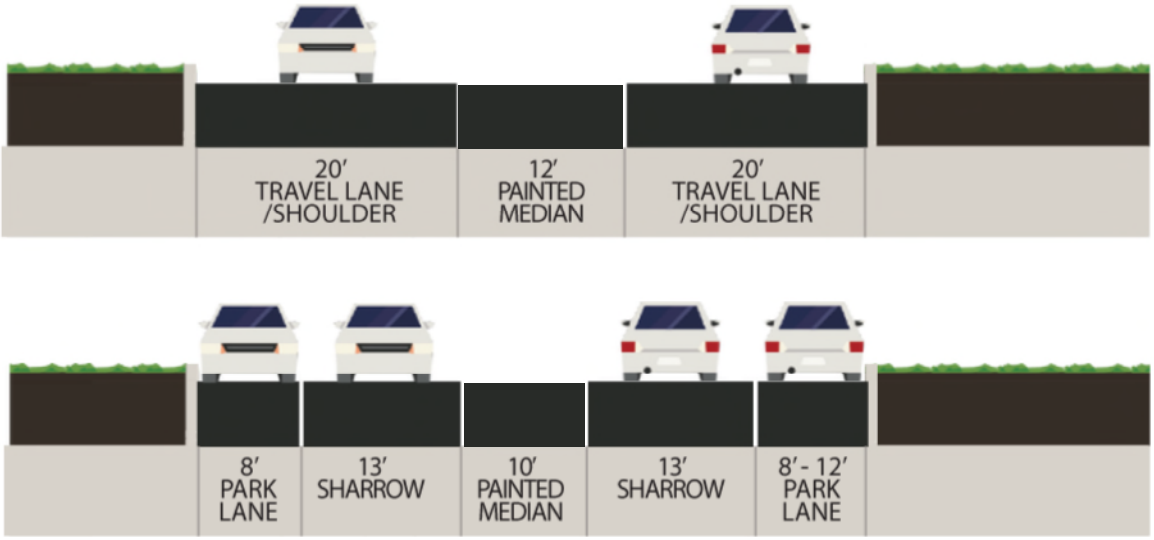
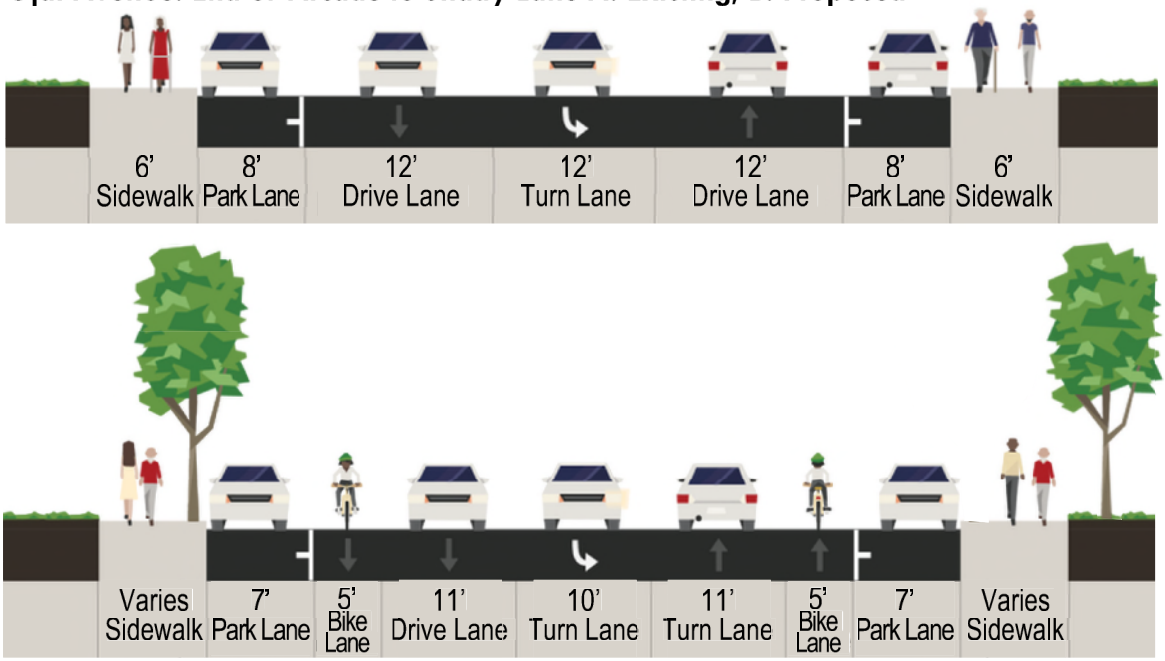


Figure 17

Ojai Avenue: End of Arcade to Shady Lane A. Existing; B. Proposed



While 7 foot parking lanes are tight for some vehicles, they will accommodate even trucks, and the additional space to make 5 foot bike lanes will be important so that cyclists riding between moving traffic and potentially opening doors have as much space to maneuver as possible. The paved roadway width varies from 52 to 56 feet; the details will be worked through in cooperation with Caltrans, as this is a Caltrans right of way, and all proposed changes must be approved by Caltrans.

Figure 18

Ojai Avenue: Shady Lane to Golden West: A. Existing; B. Proposed

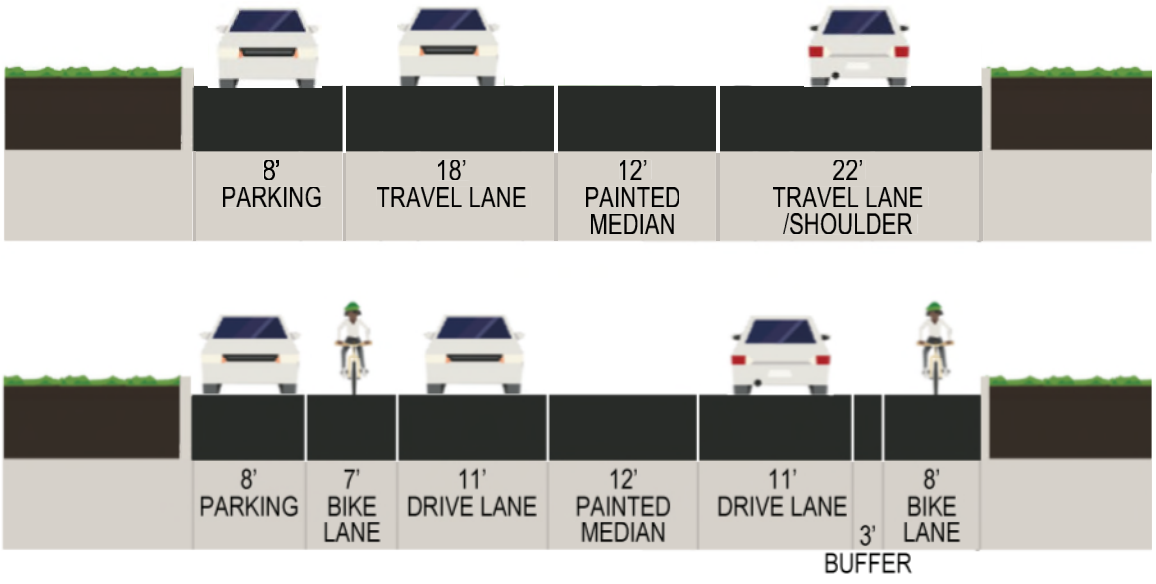
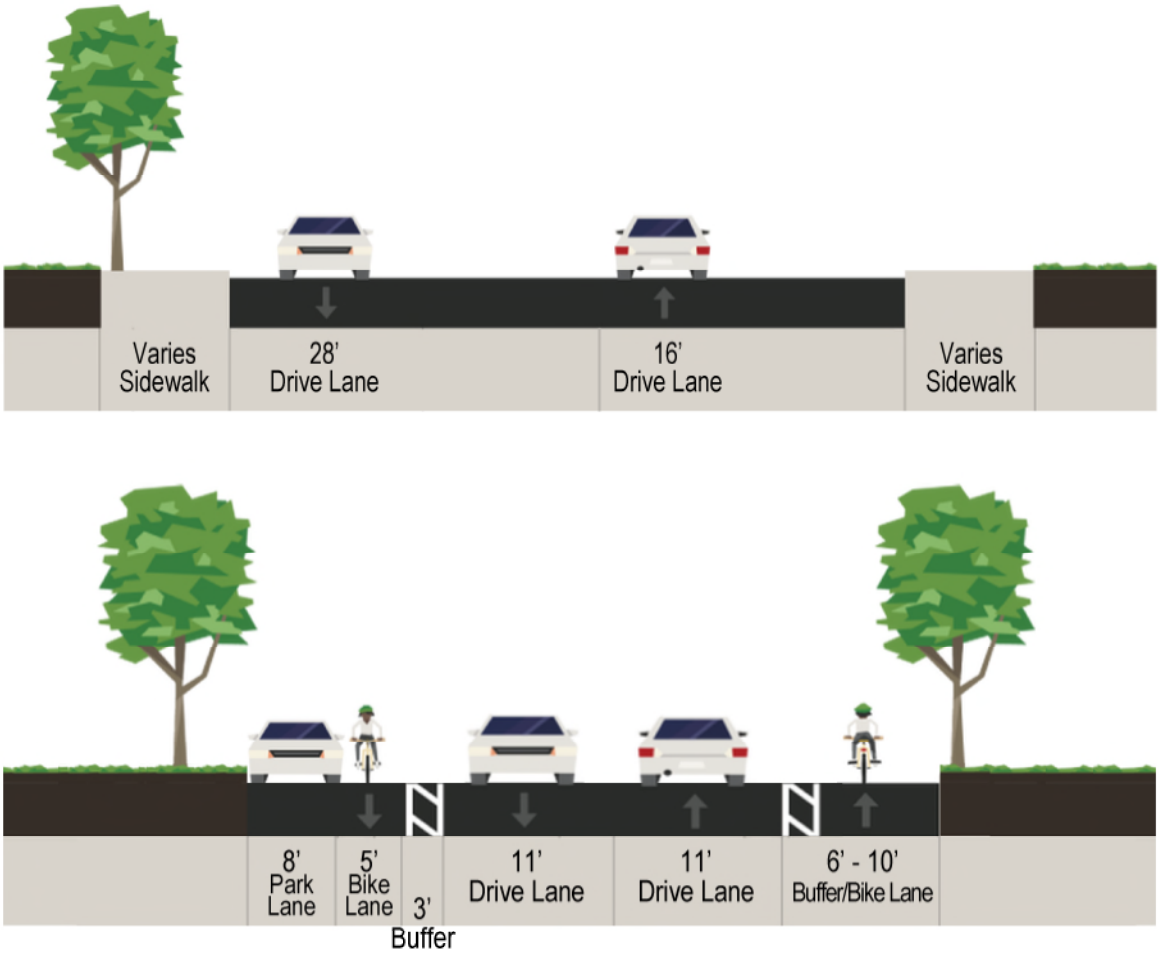


Figure 19

Ojai Avenue: Golden West to Gridley: A. Existing; B. Proposed



In central Ojai, while the modal emphasis is pedestrian, the allocation of pavement could possibly be altered slightly to accommodate bike lanes.

Recommendations:

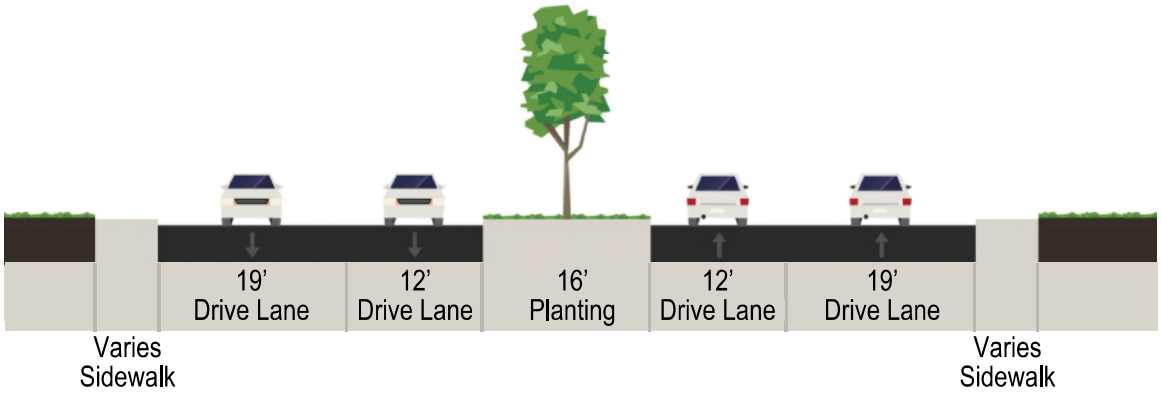
Ojai Avenue: Stripe bicycle lanes on Ojai Avenue from west city limits to east city limits.

Maricopa Highway

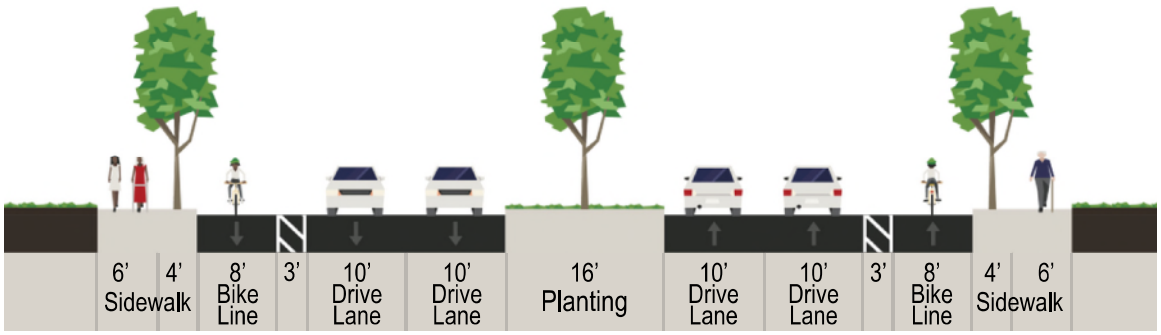
Maricopa Highway is overbuilt. Even though the fewer than 12,000 cars per day that use the road could be comfortably accommodated in two lanes, the road is built with four lanes. Further, those four lanes are needlessly and dangerously wide. All of this extra space, while wasteful, can be looked at as an opportunity. Figure 21 shows the existing cross section of Maricopa Highway from Vallerio Avenue to the Cuyama Road/El Roblar Drive intersection. Maricopa Highway from the Y to Vallerio Avenue will be reconfigured separately.

Figure 20

Maricopa Highway A. Existing B. Possible Four-Lane Concept



By reallocating the way the pavement is used without moving the curbs, safe buffered bike lanes can be added.

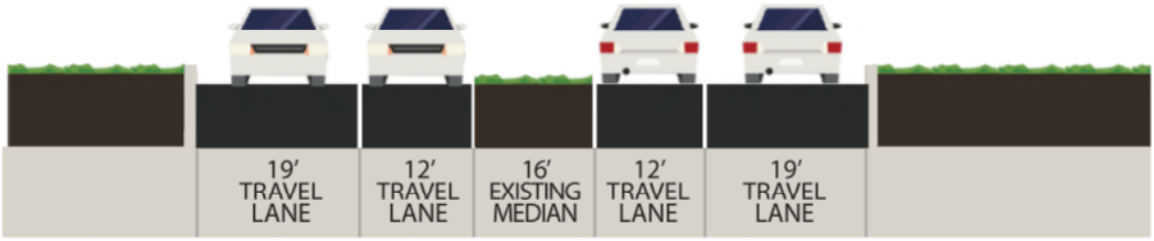


This low-cost solution will connect more residents safely to the multi-use Ojai Valley trailhead at Ojai Avenue.

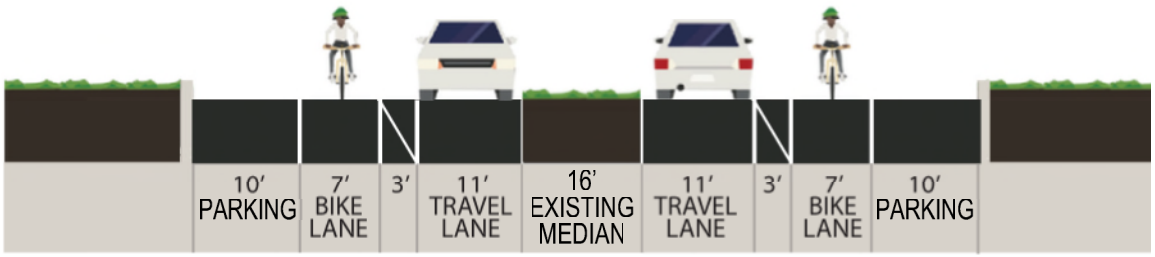
The option shown on the following page represents another configuration that could be implemented if the moving car lanes were reduced from four to two. The outside lane could simply be striped out (or marked for parking) to slow traffic and create safer conditions for cyclists and pedestrians. Or, a bike lane could be located adjacent to the curb, protected by a parking lane. (Figure 22a)

Figure 21

Maricopa Highway (two-lane concept) A. Existing B. Proposed



Protected Bike lane concept



Existing Conditions
Maricopa Highway Bike Lane Retrofit Striping
Mid-Block Location

If at some point more substantial funding became available, rebuilding Maricopa Highway to be a narrower complete street could add to the safety, comfort and value of the corridor to the community. The 16-foot allocation in the Figure 22 concept can be used for parking, buffer striping, and/or right-hand turn-pockets

Recommendations:

Maricopa Highway: Create appropriate bike facilities, including throughout the Y intersection and north and west to the Cuyama Road/El Roblar Drive/Maricopa Highway intersection ("five points") and reduce drive lanes from four to two.

Bike Parking

Biking, like driving, requires parking at the end of a trip in order to be practical. Currently bike parking in Ojai is undersupplied and sometimes challenging to find. A proactive program of placement of bike parking should be undertaken throughout the city.

Promoting Biking

A bike is town has significantly less impact to traffic, parking, and pollution. To help ease these impacts, the City may consider:

- Creating bike riding incentive programs, including bike route and wayfinding signage, bike rental locations, etc.
- Advocating that all hotels/motels in the City provide bikes. This could be addressed to some degree in hotel/motel Design Review Permit conditions by the Planning Commission.

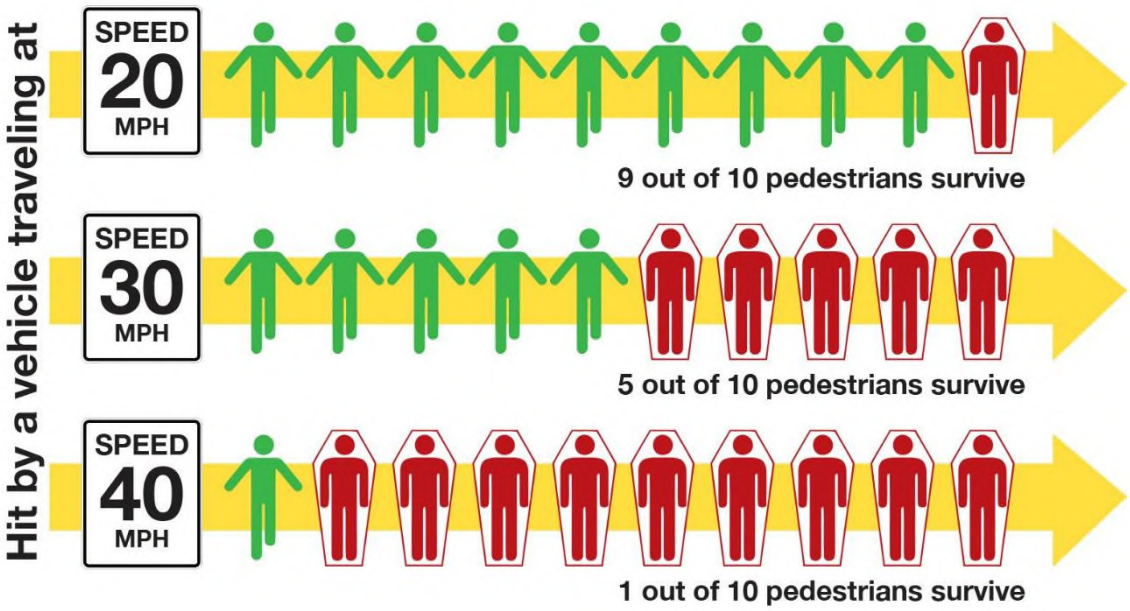
PEDESTRIAN RECOMMENDATIONS

Pedestrian Safety

The central portion of Ojai Avenue is a walkable street, as are many of the streets in the residential neighborhoods throughout the city. This walkability is valued by many in the community. Most wish these characteristics were present more broadly. In order to be walkable, an area must feel safe and comfortable, and there must be a reason to walk. One of the factors that can detract from safety and comfort is the speed of car traffic. Fast cars along your walk path feel uncomfortable for good reason:

Figure 22

Vehicle Speed and Pedestrian Fatality Relationships



Given these statistics, it is imperative that high-speed traffic be calmed along Ojai Avenue and the neighborhood streets. Consider reducing speed limits to enhance pedestrian safety, including working with Caltrans to reduce speeds on Ojai Ave and Maricopa Highway, and/or extending the 25 mph limit further on the east and west existing limits on Ojai Ave. The following section presents the plan's analyses and recommendations for this calming program.

Recommended Projects

Downtown Ojai

Ojai Avenue serves as a major thoroughfare for through movement in Ojai as well as a major destination. In downtown there are businesses and public spaces on both sides of the street in a dense area, making it desirable to walk between destinations. However, with higher traffic volumes than any other street, Ojai Avenue can also be a barrier to pedestrian circulation. Currently there are three intersections with protected (signalized in some form) crossings on Ojai Avenue, at Ventura, Signal, and Fox. Unprotected crossings are spaced roughly every 300-350 feet. In order to improve the safety and comfort of downtown pedestrian circulation, the density of protected crossings should be increased as shown in the figure on the following page.

Figure 23
Pedestrian Crossings on Ojai Avenue

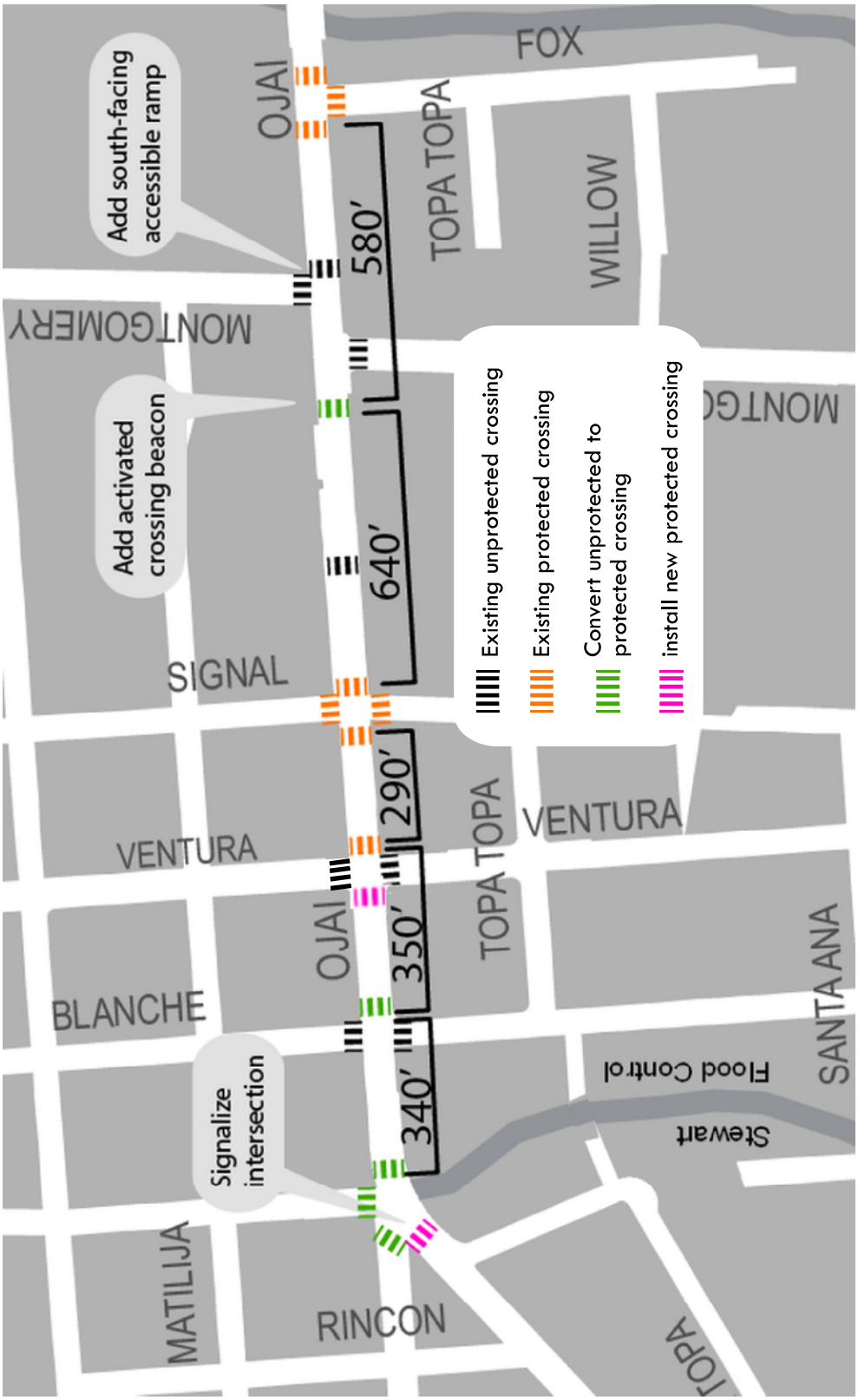
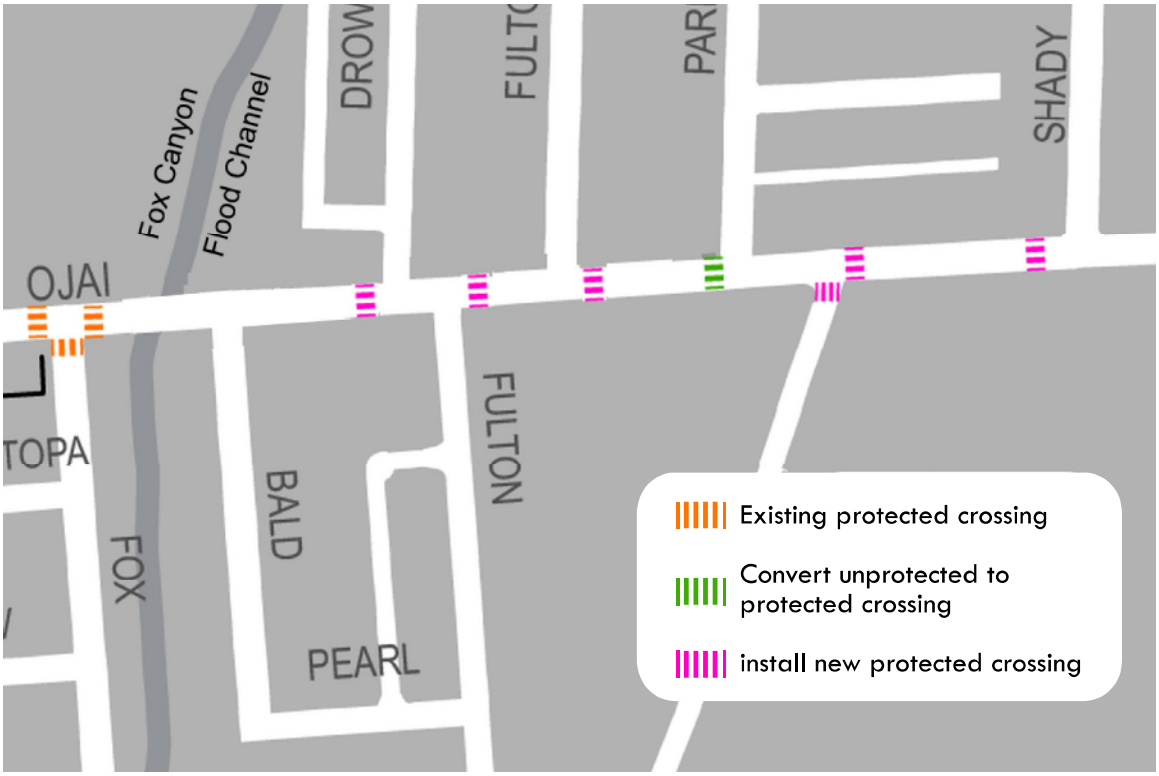


Figure 24

Pedestrian Crossings on Ojai Avenue. B. East



Recommendation: Per Figure 24 convert existing unprotected crossings to protected crossing (i.e., pedestrian activated RRFB or signal), and add unprotected crosswalks at the cross streets between Bald Street and Shady Lane.

Y Intersection

The existing configuration of the major "Y" intersection of Ojai Avenue and Maricopa Highway is shown in Figure 25. Pedestrian crossing distances could be greatly reduced and pedestrian comfort and safety improved simply by removing unnecessary travel lanes. Eastbound and westbound, Ojai Avenue consists of two through lanes on approach to the intersection, but the roadway narrows to a single lane immediately thereafter. This serves to increase queuing capacity at the signal, but has little ultimate benefit in terms of delay reduction and travel times for autos. Similarly, two lanes turn left from southbound Maricopa Highway onto eastbound Ojai Avenue, despite the fact there is only one lane on the receiving end of the movement. Simply by removing these unnecessary second lanes, crossing distances at crosswalks could be greatly narrowed.

Crossing distances could further be narrowed by reducing corner radii, which would have the added benefit of slowing right-turning cars, further improving safety for pedestrians and motorists. Additionally, a crosswalk could be added on the east side of the intersection, and a short segment of sidewalk could be added connecting to the existing Ojai Valley Trail intersection with Ojai Avenue, improving access to the path for those coming from north of Ojai and east of Maricopa.

Figure 24

Aerial View of "Y" Intersection: Ojai Avenue and Maricopa Highway (existing)

Alternatively, the intersection could be converted to a modern roundabout, as has previously been proposed. Further analysis would need to be conducted to determine whether existing traffic volumes could reasonably be accommodated in a roundabout with a single lane, or whether a dual-lane configuration with a larger footprint would be necessary.

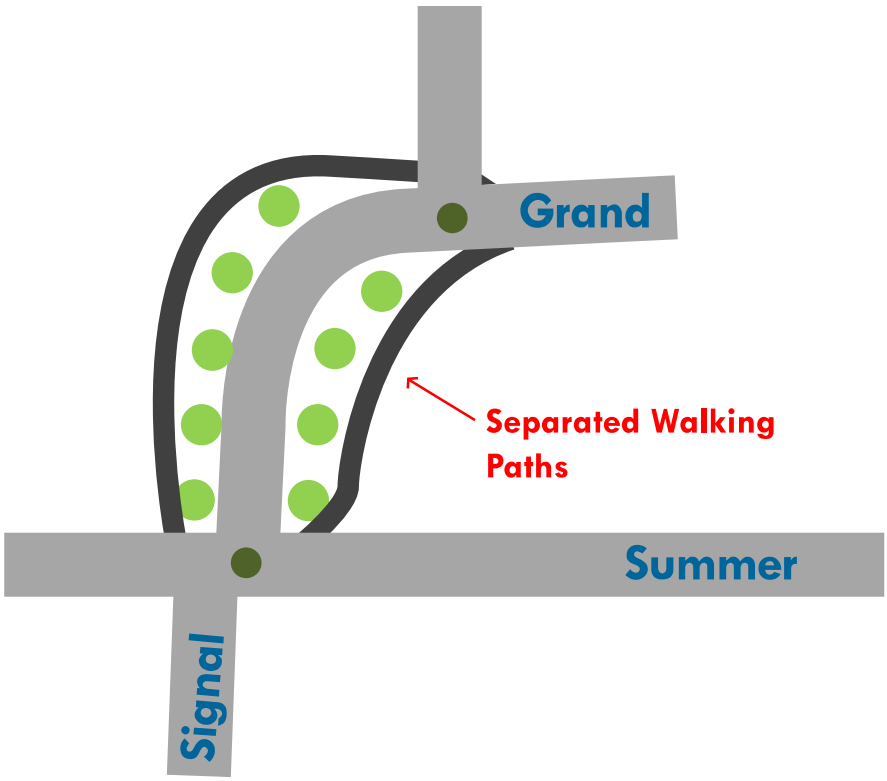
Recommendation: Reconfigure intersection of Ojai Avenue, either by retaining the existing signal and making it more compact, or by converting it to a roundabout configuration.

Intersection at Grand Avenue/Signal Street/Summer Street

The combined intersection of Signal Street, Grand Avenue and Summer Street is problematic from a pedestrian safety perspective. This is for two reasons. First, its irregular configuration reduces sightlines for motorists. Second, the approach to the intersection from the north is downhill and uncontrolled, so motorists may approach the stop sign at Grand Avenue at high speed. In order to address these issues, two strategies were developed. The first is to place traffic circles within the intersections of Signal Street and Grand Avenue and of Signal Street and Summer Street, in order to slow traffic both approaching and through the intersections. Second, the existing sidewalks would be replaced by off-street paths located behind new trees to be planted alongside the roadway, and the existing, missing segment of sidewalk on Grand east of Signal would be added, thus narrowing the visual field for motorists (which in turn discourages speeding) and placing a buffer between motorists and pedestrians. These concepts are shown in Figure 26.

Figure 25

Signal, Grand and Summer Reconfiguration Concept



Recommendation: Reconfigure the intersection of Signal Street, Grand Avenue and Summer Street using traffic circles, new off-street paths and/or sidewalks.

NEIGHBORHOOD TRAFFIC CALMING RECOMMENDATIONS

Neighborhood Character

Ojai's unique neighborhoods are a key part of its charm. There are some interventions that will likely make sense for reasons of safety and comfort, but it will be important that these solutions not just function, but feel and look aesthetically right for Ojai. While a neighborhood planning study is underway concurrently with this master plan, discussions with neighborhood residents have shed light on what are likely some context-appropriate calming solutions.

Toolbox

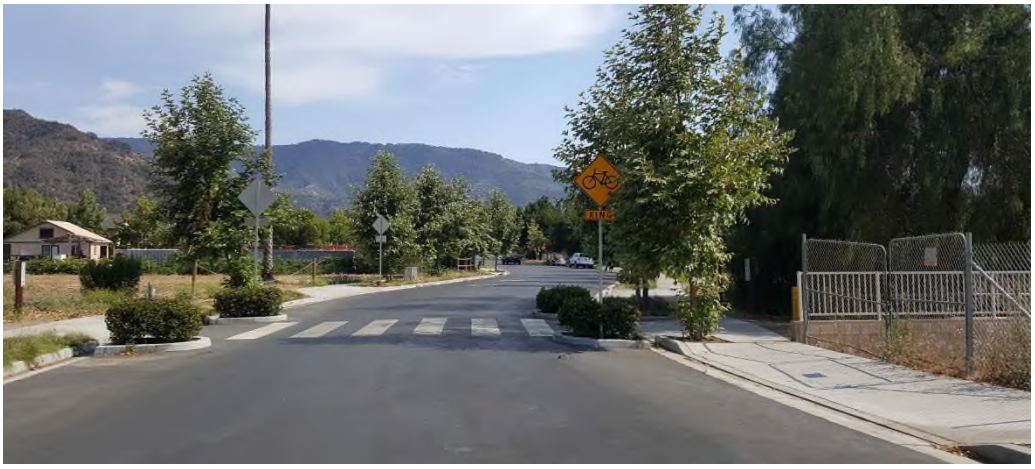
A number of traffic calming methods, measures and strategies are recommended as part of the Neighborhood Traffic Calming Program, or have previously been recommended as part of the recommended improvements for cyclists and pedestrians. Examples of each of these improvements can be found in the figures in the following pages. Locations and additional details related to traffic calming recommendations can be found in the Neighborhood Plans section in the following pages.

Figure 26

Curb Extension Examples

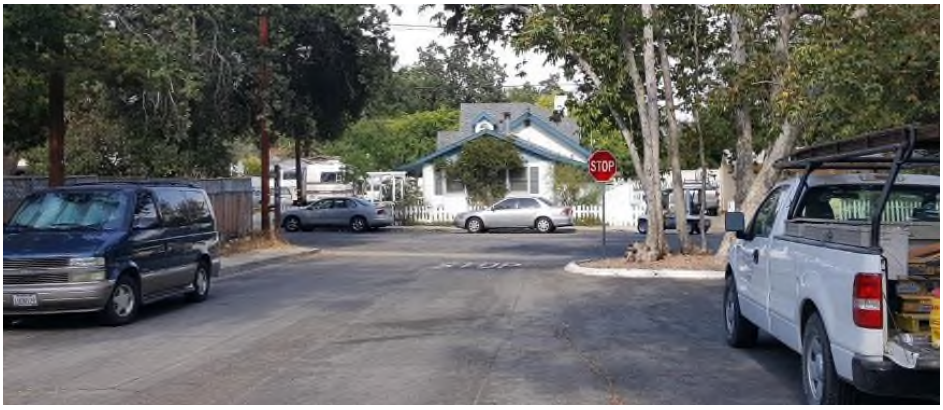
a. Topa Topa Street at Ventura Street (facing east)

b. Fulton Street (facing south)



c. Aliso Street at Lion Street (facing east)

d. Summer Street at Lion Street (facing east)



e. Matilija Street at Blanche Street (facing west)

f. Canada Street at Matilija Street (facing south)

g. Canada Street at Matilija Street (facing south)

h. Canada Street at Matilija Street (facing east)

Figure 27

Traffic Circle Example

Figure 28
Diverter Example

Figure 29
Chicane Example

Figure 30
Pedestrian Crossing Beacons/Signals Example

Figure 31
Neighborhood Greenway/Bicycle Boulevard Example

Figure 32
Speed Cushion Example

Figure 33
Parklet Example (reclaimed parking spaces)

Figure 34
Tree in Road Examples

a. South Blanche Street (facing south)

b. South Blanche Street (facing north)

c. South Ventura Street (facing north)

d. Topa Topa Street at Signal Street (facing east)

e. Lion Street at Grand Avenue (facing north)

f. Grand Avenue at Montgomery Street (facing west)

Figure 35
Creative Corner Destination Examples

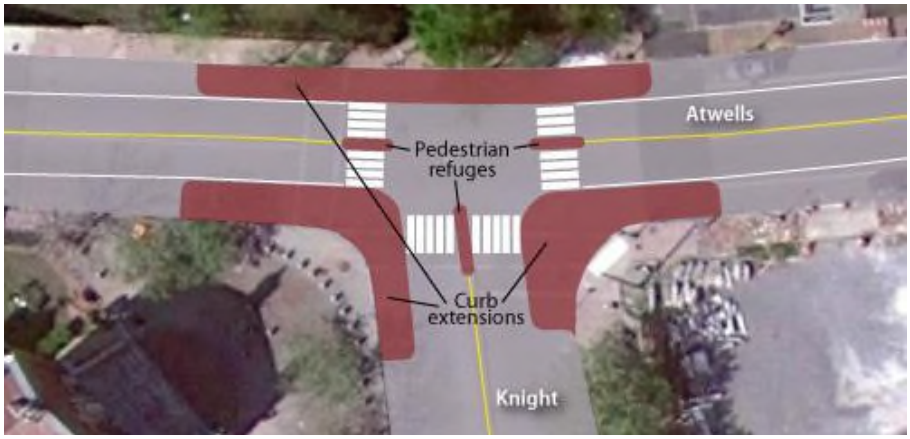


Figure 36
Flexible Stanchions in Road

Road Diet

Most drivers base their travel speed on what feels comfortable given the street design. The wider the road, the faster people tend to drive and, the faster the car, the more severe the injuries resulting from a crash. Research suggests that injuries from vehicle crashes rise as the width of a road increases. To protect both pedestrians and drivers, many communities are putting their roads on "diets" by reducing street widths and vehicle lane widths. The gained space can be reallocated toward place-making and improving the experience for bikers and walkers.

When done properly, a road diet improves the performance and livability of the street and makes it safer for all users. For instance, by shortening the distance for pedestrians to cross the street, a road diet reduces the risk of crashes and serious injuries. At the same time, motorists experience a shorter delay while waiting at crossings.

A road diet can help a neighborhood become a more desirable place to live, work and shop, which in turn can be a boost to businesses and property values. Wider sidewalks lined by trees and dotted with benches, bicycle racks, streetlights and other useful additions help create a lively, attractive streetscape. Bike lanes, on-street vehicle parking, curb extensions and "parklets" (tiny parks created from former parking spots) can be used to provide a buffer between people who are walking and motor vehicles on the move.

Road diets on Ojai local streets.

A typical local street in Ojai has a 50 foot right-of-way with 40 feet of paving and 5 feet of walking paths on each side. The excessive paving width contributes to high speed driving and leaves no room for street trees. An appropriate paving width for most local low-volume streets is 32 feet (9 foot drive lanes and 7 foot parking lanes). The 8 feet that is salvaged can be allocated to tree planting strips and/or wider sidewalks.

Traffic Calming With Zero Pollution

Traffic calming and reduced air pollution are two keys to creating a safe environment for bicycles and pedestrians. Both of these are reasons to encourage and support the use of Neighborhood Electric Vehicles (NEVs) and Low Speed Vehicles (LSVs). NEVs (Figure 37) are electric vehicles that can resemble golf carts but that have a range of safety enhancements that make them street legal. They are designed to go 25 – 30 mph for use on roads with speed limits up to 35 mph. They are typically smaller and narrower than full speed vehicles. As electric vehicles (EVs) they have zero tail pipe emissions and can reduce greenhouse gases by even more than the 65% reductions attributed to full speed EVs. They are about twice as energy efficient as full speed EVs so when they are charged by a Solar Electric System they become one of the cleanest vehicles, second only to two wheel modes of transportation.

Figure 38

Neighborhood Electric Vehicle Example

Accommodating Automated vehicles

Automated vehicles (auto-autos) are fast-approaching: a technology that could have benefits as a properly regulated sharer of Complete Streets. Unregulated, though, they could be disruptive to all other users. A key method of taming the vehicles could be speed controls, such as a 20 mph maximum within the city limits for auto-autos, as shown in Figure 39.

Figure 39

Speed Control of Automated Vehicles

The Street as a Place in the Public Realm

Historically (before the post WWII dominance of the automobile), streets have been places where people go, not to just get somewhere else, but for the experience of the street itself: to promenade, to have chance encounters, or to simply rest and enjoy themselves. Streets were a place to BE, not just travel through. Studies have shown that the form of a street has everything to do with

whether people want to be there or not, and part of it is that the form should be scaled for people, not just machines. A key way to accomplish this is to form the street so that it feels like an outdoor room.

Figure 39

The Street as a Place in the Public Realm

Each of the recommended traffic calming improvements is designed to discourage speeding and to increase motorists' awareness of their surroundings, including pedestrians, cyclists and other motorists, using physical/visual cues, and to do so in ways that create a sense of place that captures the essence of the Ojai community character.

Neighborhood Plans

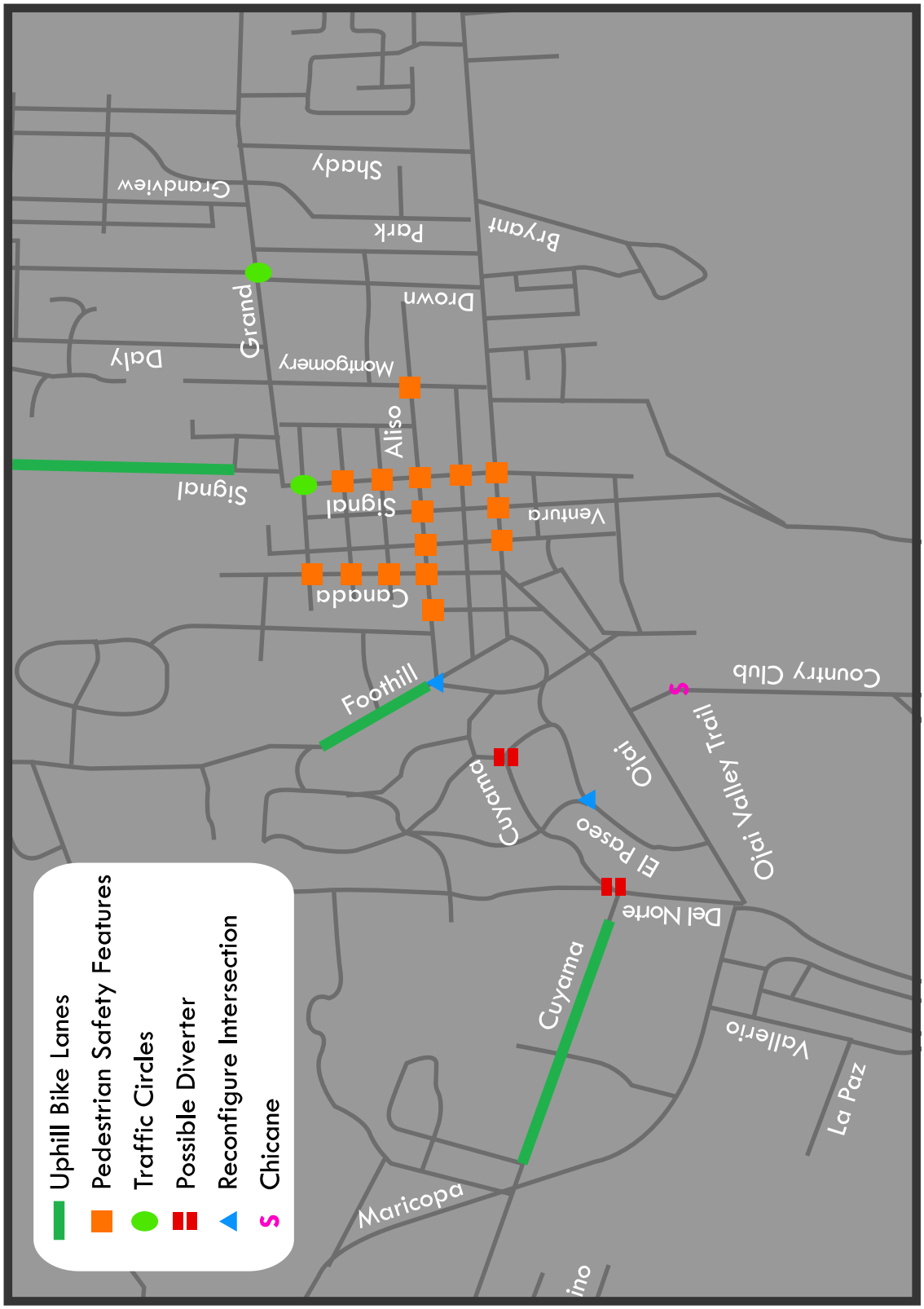
Figure 41 shows neighborhood locations where traffic calming improvements are recommended. In the image:

- orange squares represent locations where pedestrian safety improvements or neck-downs are recommended
- green circles are traffic circles
- the blue triangle is an intersection recommended for reconfiguration to make it more angular and compact (the red stripe at this location represents a steep segment on Foothill on which speeds would be reduced by making this improvement)
- the red bars represent one location at which a diverter might be located along Cuyama (see previous recommendation)
- the pink S is a chicane
- the green stripe is an uphill bike lane that might be added to Cuyama in addition to the previously described diverter

Each of the locations and strategies were selected on the basis of analysis of the role of intersections in the street network, their design, and the land use and urban design context. At some locations, alternative strategies could be deployed. Use of speed cushions is generally not recommended unless all other strategies are found to be problematic.

Figure 40

Traffic Calming Improvement Examples



The intersection of Foothill Road, Bristol Road and Aliso Street is proposed for reconfiguration as the existing pavement area is excessive.

Figure 42

Aerial View: Foothill/Bristol/Aliso Intersection Concept

The yellow areas show space that is available to create bicycle and pedestrian safety features. An alternative would be to create a traffic circle.

3. IMPLEMENTATION

CAPITAL PROGRAM/FUNDING

Historically, Ojai has successfully pursued grant programs and funding that have allowed for implementation beyond what the local tax base might otherwise have supported. While it is recommended that this successful approach continue, it may be worth consideration of adjusting more sustainable local budgets for items such as sidewalk maintenance and ADA accessibility.

As an option to street improvements required by Ojai Municipal Code Title 9, Chapter 7, for areas needing improvements (i.e., sidewalks/curbs/gutters not needed in a rural area or neighborhood), an in-lieu fee may be considered to provide funding for complete streets projects. This should be coordinated with the Neighborhood Planning efforts also underway.

AWARENESS AND TRACKING

To the degree possible, understanding how well some of these projects have achieved objectives will be useful in assuring that the plan can continue implementation in the long term. Examples of some useful before and after tracking might be:

For a separated or buffered bike facility

Number of peak hour bicyclists now versus number of cyclists one month after implementation.

For a traffic calming installation

Vehicle speed and volumes now versus following implementation. Pedestrian counts, that is, are more pedestrians using the street.

Not only can such studies help to shore up local support, but can be useful in future grant applications.