Live Oak SR99 Streetscape, Safety and Rehabilitation Project
Ad-Hoc Committee Meeting
Agenda

August 30, 2017 – 4:00 pm
Live Oak City Hall

COMMITTEE:	Jason Banks, Mayor Aleksandar Tica, Vice Mayor Diane Hodges, Council Member Alternate Eric Souza, CA Dept. of Transportation Peter Fortune, CA Dept. of Transportation Sung Moon, CA Dept. of Transportation Aaron Eller, Planning Commissioner Malcolm Weston, Planning Commissioner Danielle Coleman, LO Chamber Michael Eastridge, LO Chamber Betty Tica, Business Owner Bob Woten, Business Owner Karen Stam, Business Owner Linda Lang, Business Owner Palmira Nava, Business Owner Reyes Nava, Business Owner	Shane Bridges, Community Member Kathleen Melton, Business Owner Hortensia Alvarado, Business Owner Taisha Thiara, Community Member Mohinderjit Thiara, Community Member Al Kannely, Community Member Craig Berry, Community Member Joe Griffin, Community Member Jackie Griffin, Community Member
STAFF:	Jim Goodwin, City Manager Alison Schmidt, Management Analyst Scott Rolls, City Engineer	

1. **Call Meeting to Order**

2. **Self Introductions**

3. **Updates**

4. **New Business/Discussion Items**
   - Discussion regarding clarification of required project elements
     - Project Memo to Ad-Hoc Committee
     - 2011 Collaborative Streetscape Master Plan attached
     - 2016 TIGER Funding Application attached

5. **Topic for Next Meeting**
   - Next meeting 9/14

6. **Misc. Requests**

7. **Adjournment**

DATE: August 25, 2017

TO: Highway 99 Corridor Project Ad-hoc Committee for Implementation

FROM: Caltrans and City of Live Oak Staff

RE: Areas of Flexibility with Project Design

The Ad-hoc Committee has had several discussions regarding the current project design and the desire to revisit some or all of the design characteristics for the project included in the original 2011 Collaborative Highway 99 Streetscape Master Plan. During the discussion, some participants have communicated a position that a 6-year-old master plan is naturally dated and should be updated.

It is important to consider the significant amount of time required to implement highway improvement projects. From initial concept to construction, these projects often take years. As a result, initial planning documents like the *2011 Collaborative Highway 99 Streetscape Master Plan* are crafted carefully to withstand the long timeline for implementation. The master plan was crafted over a 14-month period with significant public and technical input. A copy of the plan is attached.

For this project, very little substantive change has occurred within the community since the City Council's adoption of the plan 6 years ago. Only two new commercial structures have been added to the corridor since that time, Dollar General Market and most recently Dutch Bros. The anticipated signal at Elm Street was installed. The 100-ft. right of way has not changed. There has been no significant change in population. The mix of businesses requiring curb cuts and parking has not changed. The significant pedestrian traffic has not changed, and the traffic volumes on the highway have not changed.

The Master Plan was not only the first step in moving the project forward, but the foundation upon which all subsequent steps are built. After completion of the master plan, Caltrans completed a Project Study Report (PSR) for the full length of the project area from Paseo Avenue to Riviera Road. After that, Caltrans began work on a Project Approval & Environment Document (PA&ED) for Phase 1 of the project which is the downtown core. That work is essentially done with environmental review complete, clearing the way for final design and construction.

The City was successful in securing TIGER and Caltrans funding for completion of these Phase 1 improvements. The funding commitment is based on delivering the project features described in the TIGER application and grant agreement, and Caltrans must deliver the improvements required by the other funding sources. All of this must be completed on an accelerated timeline required to meet the TIGER grant milestones.

With that stated, as the project moves towards completion of final design, Caltrans is committed to working with the City to resolve as many concerns as possible and the Ad-hoc Committee is a valuable partner in the process. Success is a result of each team member respecting the project development process. Mutual respect is a basic requirement and a quality of successful partnerships. It must be understood that not all suggestions or requests can be included in final design. The following information summarizes the issues and concerns brought up during discussion, our opinion of whether or not the requested action can be included at this time, and the reasons for that opinion.

It is imperative that following this meeting Caltrans design staff has a clear understanding of project design so that the design work can proceed in a timely manner.

REQUIRED ELEMENTS OF PROJECT

Based on the funding commitments of both TIGER and Caltrans, the following elements are required:

- Four traffic lanes, curb, gutter and sidewalks on both sides of Highway 99 from Ash and Ramsdell. Sidewalks are Americans with Disabilities (ADA) compliant. Construct a 12' wide median lane between Ash and Ramsdell and a continuous two-way left hand turn lane from Elm Street to Kola Street with raised median islands where appropriate. No U-turns will be allowed on SR 99 in the project limits.
- Traffic calming measures to reduce vehicle speeds are located on SR 99 between Ash and Ramsdell. The project target speed is 25 mph between Elm and Kola. The project target speed between Ash to Elm and Kola to Ramsdell is 35 mph.
- Transition zones to reduce vehicle speeds are from 0.1 miles south of Coleman Avenue to Ash Street (post mile 39.4 to 39.84) and from Ramsdell Drive to Nevada Street (north intersection) (post mile 40.81 to 41.4).
- Improved SR 99 connections with local streets and businesses.
- Rehabilitate and replace traffic signals at Elm and Pennington. Place a new traffic signal at Kola. Traffic signals will include accessible pedestrian signals, and intelligent transportation system elements. Un-signalized pedestrian crossings will use continental high visibility treatment crosswalks. Place highly visible and ADA compliant crosswalks and other pedestrian upgrades (Archer Avenue, Elm Street, Pennington Road, Ivy Street, Kola Street, Nevada Street).
- Reduce the crown on the highway and lower the centerline of SR 99. Rehabilitate the SR 99 structural section to a 40-year design.
- Construct on-street parallel parking on both sides of Highway 99.
- Drought tolerant and California native landscaping between the street and the sidewalk is identified in the TIGER Grant.
- Safety and ornamental street lighting, furniture, bicycle parking, and other "place making" amenities (wayfinding signs, decorative pavement, special paving of crosswalks, intersections, left turn lanes, and driveway turning lanes). Coordinated directional signage.
- Replace or rehabilitate existing drainage facilities. Eliminate ponding on SR 99 and adjacent properties. Treat stormwater on-site through low-impact stormwater strategies.
- Eliminate continuous driveways. Eliminate head-in angled parking on State R/W. Utilize State R/W for public use. Eliminate unintended illegal encroachments by individual private properties on the State right-of-way.
- The project addresses SR 99 multiple functions as regional and statewide thoroughfare, a main street for Live Oak, inviting and pleasing gateway to the City, and a catalyst for economic development.

ALLOWABLE ADJUSTMENTS DURING FINAL DESIGN

- The locations and pleasure form types and characteristics of "place making" amenities.
- The locations and types of landscaping.
- Minor reductions in landscaping due to design constraints, however the project will manage and treat the maximum amount of stormwater possible through low-impact development techniques as required by the Caltrans Statewide Stormwater Management Permit with the State Water Resources Control Board.

ADJUSTMENTS NOT ALLOWED IN PROJECT

- On-street head-in angled parking is not allowed.
    - Existing head-in angled parking is located on State property and allowed due to the existing 20' to 28' wide shoulder. With the project utilizing existing state right-of-way and increasing SR 99 from three lanes to five lanes, vehicles reversing from head-in angle parking will now conflict with a live traffic lane. Head-in angled parking along SR 99 in the City of Live Oak will not be permitted by Caltrans per Vehicle Code 22503.
    - Traffic reversing out of an on-street parking space into a live traffic lane decreases the safety of SR 99 and is not permitted by the Caltrans 3 District Division Chief of Traffic Operation. Traffic reversing into an on-street parking space from a live traffic lane is safer than the alternative scenario and should be permitted by the Caltrans District 3 Division Chief of Traffic Operation.
- Center median landscaping in place of landscaping located between the curb and the sidewalk is not allowed for the following reasons:
    - Landscaping between the curb and sidewalk improves the pedestrian environment by providing a buffer area between pedestrians and vehicles.
    - A center median island with or without landscaping will impact access to businesses by restricting left turn movements into and out of businesses driveways and may not be in the best interest of the businesses. However, center median islands will be considered at specific, appropriate locations to create a refuge at un-signalized pedestrian crossings and to restrict left-turn movements across SR 99.
    - The TIGER Grant was judged competitively using landscaping as a buffer between vehicles and pedestrians, any removal of that buffer would diminish the competitiveness of the application and would require FHWA approval and a contract amendment. It is anticipated that such a change would be denied at Federal level.
- Removal of sidewalk to allow alternate parking arrangements is not allowed.
    - Caltrans Deputy Directive 64-R2 reads "State and federal laws require Caltrans and local agencies to promote and facilitate increased bicycling and walking." Sidewalks address these requirements. If sidewalks were omitted for parking, there would not be a continuous path for pedestrians through the corridor.
    - The grant was approved on the promise to provide continuous sidewalks on both sides of the SR 99 project. Any gap in sidewalks greatly diminishes the competitiveness of the application and would require FHWA approval and a contract amendment. It is anticipated that such a change would be denied.
- Any extension to the length and width of the project limits which would cause more environmental impacts to the project. The environmental review has been completed using a set project limit surrounding the project. Any suggestions for work outside of the currently approved environmental limits will create significant delays that would jeopardize funding.
- The termination of Rule 20. Rule 20 underground utility relocation will be complete before construction of the Live Oak SR 99 Project.

ADDITIONAL CONSIDERATIONS NOT YET EVALUATED

- Addition of a traffic signal at Nevada Street
- SR 99 pedestrian crossing aids at Archer/Larkin Road, Ivy Street, and Nevada Street un-signalized crossings such as rectangular rapid flashing beacon (RRFB) signs.
- Multiple use of the existing landscaping area at SR 99 & Archer/Larkin for parking or storm water treatment.

- Adding on-street parking at side streets such as Kola, Ivy, and Juniper. Depending on the potential environmental impacts, this may not be possible at this time but could be a future City project.
- Construct on-street ADA parking.
- Limited substitution of on-street 45 degree reverse angle parking in place of on-street parallel parking where appropriate. Placement of on-street 45 degree reverse angle parking requires the property owner to donate property for public use and must meet traffic safety, engineering, environmental, and right-of-way requirements.

Collaborative Highway 99
STREETSCAPE MASTER PLAN

Funded by a Community-Based Transportation Planning Grant from the California Department of Transportation.

CITY OF LIVE OAK

Collaborative Highway 99 Streetscape Master Plan

Final
May 2011

Prepared for:
City of Live Oak
Jim Goodwin
City Manager

Prepared by:
AECOM
2020 L Street, Suite 400
Sacramento, CA 95811

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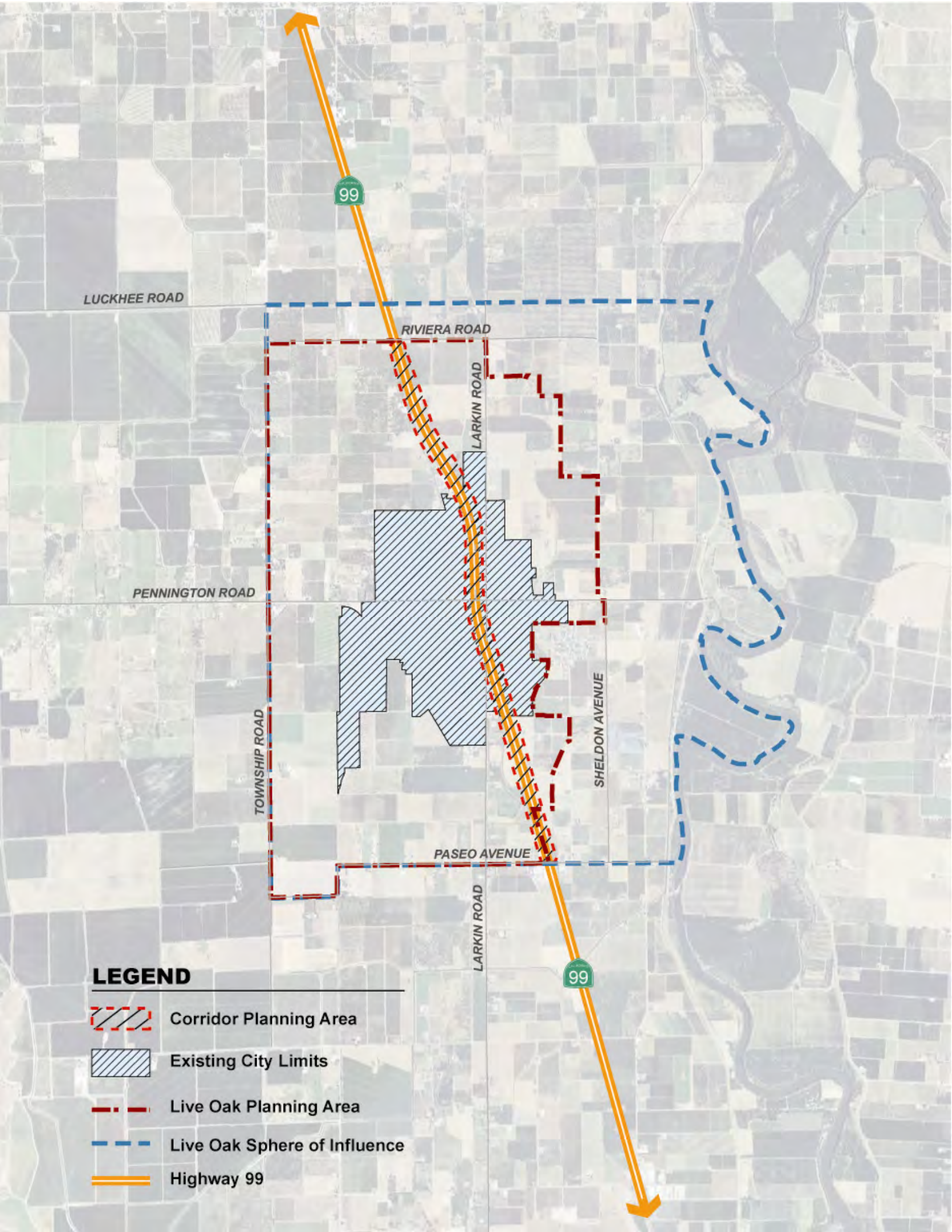
1 INTRODUCTION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LEGEND
Corridor Planning Area
Existing City Limits
Live Oak Planning Area
Live Oak Sphere of Influence
Highway 99

PURPOSE OF THE DOCUMENT:

- *Establish conceptual guidance for improvements along Highway 99 within the City limit of Live Oak as the community grows; and*
- *Include recommendations to enhance aesthetics, safety, multi-modal accessibility, and quality of life for residents and visitors.*

PROJECT OVERVIEW

Live Oak is a growing community that could accommodate a population of between 45,000 and 53,000 at full build-out under the recently adopted General Plan. As the City grows, the General Plan calls for retail, service, and employment development to help transition from a bedroom community to a more self-sufficient city. Highway 99 is an important asset for Live Oak, connecting the community with other cities and regional destinations. But it also creates a physical barrier, dividing the eastern and western sides of the community. The Union Pacific Railroad tracks, located just west of the highway, create additional barriers to connectivity whether on foot, on a bicycle, via transit, or by car. The General Plan recognizes the importance of accommodating each of these travel modes, including in the Highway 99 Corridor Planning Area (hereafter: Plan Area).

Existing Pennington Road intersection on SR99 corridor.

Guidance from both the City's General Plan and the Caltrans Highway Design Manual have been used to inform the design concepts in the Plan Area. Consistent with the General Plan and Caltrans guidelines, the highway needs to serve multiple functions:

- regional and statewide thoroughfare;
- main street serving Live Oak's existing and proposed commercial districts; and
- an inviting and aesthetically pleasing gateway to the City.

This Plan is meant to ensure coordination with Caltrans on design standards that are appropriate for this state route to ensure both functionality and a good aesthetic environment. To be consistent with the City's General Plan Guiding Principles (refer to next page), it will also be important to improve highway 99 for pedestrians and bicyclists as well as cars and trucks.

GENERAL PLAN GUIDING PRINCIPLES

Small-Town Character

- Public spaces where people can meet and interact with friends and neighbors are essential.
- Commercial corridors should be attractive, distinct, and pedestrian-friendly.
- Live Oak can grow without being overcome by traffic or other effects that would sacrifice the small-town character.

Unique and High-Quality Design, Sense of Place

- The entire community benefits from high-quality, unique neighborhoods with tree-lined, pedestrian-friendly streets and a strong sense of place.
- The Sutter Buttes are a globally unique natural feature, views of which should be provided and protected as the City grows.
- Maintaining and improving our urban tree canopy is important to our air quality, climate, aesthetic enjoyment, and overall quality of life.

Downtown

- Downtown should be remade as the social, civic, cultural, and economic heart of our community.
- Downtown should be safe and convenient for walking and biking, including east-west travel.
- The entire community will benefit from a vibrant, pedestrian-scaled downtown commercial center that reflects our community's unique identity and small-town character.

Employment Opportunity

- Local employment that is in balance with the local population is essential to a functioning and fiscally healthy community.
- Approved land development projects should contribute to the City's economic health and fiscal sustainability.

Infrastructure and Public Services

- New development will generate sufficient public revenue to pay for the public facilities and services required to meet minimum service standards set by the City.
- Livable neighborhoods and a healthy citizenry require adequately maintained parks and open space, cultural and recreational activities and programs, and active neighborhood involvement in such facilities and programs.
- We need a safe and reliable water supply and high-quality sewer service and stormwater drainage.

Pedestrian and Bicycle Safety and Convenience

- Though we enjoy the independence and convenience provided by our automobiles, our City should be designed to meet the needs of our people, and not our cars.
- Our downtown will be more successful and our neighborhoods more livable if the City is designed as to be safe and convenient for pedestrians and bicyclists, as well as drivers.
- It is important to provide alternatives to automobile travel for work, school, shopping, and recreation.

CALTRANS DESIGN STANDARDS AND CONTEXT SENSITIVE SOLUTIONS

Caltrans Highway Design Manual (HDM) provides guidance on the design and construction details of all highways in California. The HDM's design standards and guidelines are integral to the development of this plan. The City in collaboration with Caltrans reviewed all the proposed designs in view of the HDM standards. In an attempt to encourage unique places and design, Caltrans (District 3) has adopted a policy to incorporate Context Sensitive Solutions (CSS) along with the implementation of the HDM standards. CSS principles are based on the guidance provided by Federal Highway Administration's (FHWA) publication on Flexibility in Highway Design.

Recognizing the need to provide designers flexibility to respond to unique existing conditions and changing market demand, Caltrans provides a design exception process as an alternative to strict adherence to the HDM standards. This allows for implementing more CSS within a constrained planning area.

Live Oak is a changing community with a General Plan that envisions sustainable growth. The Plan should recognize small-town character, community identity, and views of the Buttes, as appropriate. The Plan will likely use a variety of design concepts appropriate at different locations, threaded together to provide multi-modal travel corridor. Caltrans' design approval process does allow for exceptions to the Highway Capacity Manual under certain conditions. It may be desirable to narrow lanes in the central city and construct improvements that encourage drivers to reduce traffic speed.

The existing Caltrans Right-of-Way (ROW) is 100 feet wide through the Plan Area. The highway has two 12-foot lanes, with turning lanes at major intersections. To accommodate Live Oak's projected growth, the highway will need to add another travel lane in each direction. .

Refer to Exhibit 1.1 for guidelines from the Highway Design Manual that need to be considered while designing in the Plan Area.

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Exhibit 1.1: Guidance from Highway Design Manual

REGARDING THE CROSS SECTION

Reference chapter 200, 300

1. TRAVELED WAY WIDTH - STANDARD LANE WIDTH FOR NEW CONSTRUCTION ON 2-LANE AND MULTILANE HIGHWAYS, RAMPS, COLLECTOR ROADS, AND OTHER APPURTENT ROADWAYS SHALL BE **12 FEET**.

2. CROSS SLOPE - STANDARD CROSS SLOPE TO DRAIN WATER SHALL BE **2 PERCENT** WITH A MAXIMUM OF 4 PERCENT (FOR WIDENING PROJECTS).

3. SHOULDER WIDTH - ON CONVENTIONAL 4-LANE HIGHWAY, STANDARD PAVED SHOULDER ON LEFT SHALL BE **5 FEET** AND ON THE RIGHT SHALL BE 8 FEET. FOR URBAN AREAS WITH SPEED < 45 MPH AND CURBED MEDIAN THE LEFT SHOULDER SHALL BE 2 FEET AND RIGHT SHOULDER SHALL BE 8 FEET (WHERE PARKING IS ALLOWED, 10 FEET TO 12 FEET SHOULDERS ARE PREFERRED).

4. CURB TYPE -

Location	≤ 40 mph	45 mph	≥ 50mph
Traffic signal	6 in.	6 in.	4 in.
Raised traffic & Median islands	6 in.	6 in.	4 in or 6 in.
Adjacent sidewalks and pedestrian refuge island	6 in or 8 in.	6 in.	6 in.
Bulb-outs/ curb extension	6 in or 8 in.	NA	NA

5. MEDIAN - ON CONVENTIONAL 4-LANE HIGHWAY, STANDARD MEDIAN WIDTH SHALL BE 12 FEET. UNPLANTED CURBED MEDIANS GENERALLY ARE TO BE SURFACED WITH MINIMUM 0.15 FOOT OF PORTLAND CEMENT CONCRETE.

6. CLEAR RECOVERY ZONE - CLEARANCES ARE MEASURED FROM THE EDGE OF THE TRAVELED WAY TO THE NEAREST POINT ON THE OBSTRUCTION (USUALLY THE BOTTOM). ON CONVENTIONAL HIGHWAYS WITH POSTED SPEEDS LESS THAN OR EQUAL TO 40 MPH AND CURBS, CLEAR RECOVERY ZONE WIDTHS DO NOT APPLY. ABOVE 40 MPH, THE CLEARANCE SHALL BE 20 FEET.

7. VERTICAL CLEARANCES - 15 FEET SHALL BE THE MINIMUM VERTICAL CLEARANCE OVER THE TRAVELED WAY AND 14 FEET 6 INCHES SHALL BE THE MINIMUM VERTICAL CLEARANCE OVER THE SHOULDERS.

8. SIGN STRUCTURES - SIGN STRUCTURES SHALL HAVE A VERTICAL CLEARANCE OF 18 FEET OVER THE ROADBED.

9.. SIGHT DISTANCES -

Design Speed (mph)	Stopping (ft)	Passing(ft)
40	300	1,500
45	360	1,650
50	430	1,800

REGARDING LANDSCAPING

Reference chapter 900, ENHANCED LANDSCAPING GUIDELINES

1. DESIGN CONSIDERATIONS
   - PLANTINGS SHOULD BE DESIGNED ACCORDING TO THE PERSPECTIVE OF THE MOTORISTS. COMPOSITIONS SHOULD BE SIMPLIFIED AND LARGE IN SCALE.
   - SELECTION AND LOCATIONS OF PLANTS SHALL BE CAREFULLY CONSIDERED TO MAINTAIN SIGHT DISTANCE AND CLEAR RECOVERY ZONES.
   - IRRIGATION COMPONENTS SHOULD BE CLUSTERED AND LOCATED ADJACENT TO ACCESS GATES, MAINTENANCE VEHICLE PULL-OUTS OR OTHER AREAS AWAY FROM TRAFFIC.
   - FEDERAL REQUIREMENT OF AT LEAST 1-QUARTER OF ONE PERCENT OF FUNDS EXPENDED FOR LANDSCAPING SHALL USE NATIVE WILDFLOWERS. NATIVE SPECIES FOR ALL PLANTING TYPES ARE ENCOURAGED.

2.. SIGHT DISTANCES
   - LOW GROWING PLANTS MAY BE PLACED IN FRONT OF SETBACKS AS LONG AS SIGHT DISTANCE REQUIREMENTS ARE MET.

3. PLANT SELECTION
   - PLANTS SELECTED SHOULD BE TOLERANT OF LOCAL ENVIRONMENTAL CONDITIONS AND WATER AVAILABILITY.
   - MONOCULTURE PLANTING IS DISCOURAGED.
   - PLANTS SHOULD NOT BE LOCATED WHERE PRUNING IS NECESSARY, FOR EXAMPLE UNDER UTILITIES OR STRUCTURES.
   - PLANTS SHOULD NOT OBSCURE EXISTING BILLBOARDS OR ON-PREMISE BUSINESS IDENTIFICATION SIGNS.

4. MEDIAN
   - TREES IN THE MEDIAN SHALL BE AT LEAST 100 FEET FROM LONGITUDINAL END ON THE MEDIAN.

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2 PLANNING PROCESS

COLLABORATIVE HIGHWAY 99 STREETSCAPE MASTER PLAN

JOINT COLLABORATION

Public Process

TAC review and comment

Identification of opportunities and constraints

Development of conceptual alternatives

TAC review and comment

Development of preferred design approach

City of Live Oak

California Department of Transportation (Caltrans)

Draft Plan

Technical Advisory Commitee (TAC)

Members (in alphabetical order):

Bob Woten, Live Oak Business Owner
Dan Root, Live Oak Fire Station
Denis Cook, City Planner
Diane Hodges, Live Oak Council Member
Gary Baland, Live Oak Council Member
James Casner, Live Oak Sheriff's Department
Jason Banks, Planning Commissioner
Jennifer Saylor, Senator LaMalfa Representative
Jim Goodwin, Live Oak City Manager
Judy Richards, Live Oak Resident
Linda Lange, Business Owner
Michelle Parkinson, CalTrans
Scott Rolls, City Engineer
Steve Hesson, Business Owner
Wada King, Business Owner

PROJECT TIMELINE

Project Kick-off — **Feb 2010**

Technical Advisory Committee Meetings — **Jul 1, 2010** — **Aug 31, 2010** — **Oct 5, 2010** — **Dec 14, 2010**

Jun 28, 2010
1st Public Workshop

Mar 2011
Proposed draft review

Apr 2011
2nd Public Workshop

TBD
Plan Submittal to Caltrans

CHAPTER INTENT:

- *Identifies the planning process for the streetscape design; highlights public, City, and Caltrans participation collaboration;*
- *Discusses how the focus areas were selected;*
- *Discusses the design themes selected for analyzing the focus areas;*
- *Identifies opportunities and constraints in the focus areas, based on the design themes.*

PUBLIC PARTICIPATION

Public participation has been integrated throughout the Live Oak General Plan and the Highway 99 Streetscape Master Plan process. The City acknowledges that successful implementation of these plans relies on public acceptance of the vision and design principles. Three public participation forums have been integrated in the design process for exchange of ideas related to the Plan Area.

i. **General Plan Outreach and Input:** The City used the General Plan Guiding Principles noted in the first chapter of this plan to guide the design for the highway Plan Area.

ii. **Public Workshops:** Two public workshops will be held during the design process. The first workshop was conducted during the initial stage of the project, to solicit design ideas based on opportunities and constraints in the Plan Area (held on 28 June, 2010). The second workshop will be held in the summer of 2011 to present the design alternative.

iii. **Technical Advisory Committee:** A Technical Advisory Committee (TAC) was formed to continue to solicit community participation from business owners and others with a special interest in corridor design in the Plan Area. During the design process up to the draft plan, 4 TAC meetings were held (July 1, 2010; August 31, 2010; October 5, 2010; and December 14, 2010).

PLAN EVOLUTION

The streetscape design for this Plan evolved through a process of drawing up a variety of alternatives, presenting the concepts to the TAC, and incorporating TAC and City staff comments into a preferred alternative. The project team presented corridor design concepts, with additional detail added at each stage. Design concepts evolved from a detailed understanding of existing conditions, identification of key issues in the Plan Area, consideration of Live Oak 2030 General Plan policies, and design standards forwarded by Caltrans.

The first step in the design process was to meet with the community at-large and facilitate a discussion of the major challenges and opportunities related to the highway corridor today, as well as ideas for making improvements to Highway 99 as the community grows. There was consensus in the public workshops and TAC meetings that the design approach for this corridor should be presented in two major parts: (1) the Downtown Core Area and (2) New Growth Areas (both north and south of the existing City). Breaking the highway corridor into these two main parts helps to customize the design each in area. It was clear from the discussions at the public workshop and the first TAC meeting that four key questions need to be addressed in the corridor design, such as:

1. How should pedestrian and bicycle facilities be incorporated through the core of the City?

2. What kind of landscaping will occur along the Highway to create an attractive environment?

3. How should buildings and parking be located and designed in the future along the Highway corridor?

4. What type of signage should be used to announce entry to the City and downtown Live Oak?

The second important step was to draw up various alternatives based on the guidance provided in the Caltrans Highway Design Manual, as informed by community preferences and existing conditions in the Plan Area. The preferred alternative was an outcome of testing different approaches with respect both to community preferences and Caltrans design standards, as interpreted under the Department's philosophy of providing context sensitive solutions. The TAC members reviewed three alternatives for each of the Downtown Core Area and New Growth Areas. A typical preferred alternative was then selected and applied along the length of the two focus areas.

One of the key issues that evolved along the course of the design process was how to manage traffic on the Highway effectively so that it allows for a pedestrian experience especially in the Downtown Core Area, while also attracting passing traffic to local businesses along the Highway. The project team looked at similar precedents studies in the nation to recommend design approaches that can help to visually slow the traffic and attract attention to adjacent businesses. Various design techniques, such as change in paving color, narrower lanes, tall landscaping treatments, and median barriers are included in the preferred alternative to create a more vibrant and attractive highway corridor.

TAC meeting notes are included in Appendix A of this Plan, including discussion of various design components and areas of consensus on the preferred approach. Various graphics and PowerPoint slides are also included in the Appendix as a record of the materials presented.

IDENTIFICATION OF FOCUS AREAS

During the first public workshop, two major geographic areas were identified along the Highway 99 corridor for design emphasis: the Downtown Core Area and the New Growth Areas. Each of these areas has a unique planning context and needs distinct consideration for streetscape design along the corridor. The City's General Plan land use designations were used as un underlying basis for the Focus Areas.

Historic buildings on Broadway are visible from the SR99 corridor.

DOWNTOWN CORE AREA

The General Plan envisions the highway corridor between Nevada Street and Ash Street to be the heart of Live Oak. The City envisions the Downtown Core Area as a vibrant, pedestrian-friendly, mixed-use environment. Walkability and pedestrian and bicycle safety will have a strong emphasis within the Downtown Core Area, and safe connections would be provided across the highway corridor, as well, for residents to reach destinations, such as schools, parks, shops, and services.In most parts of the Downtown Core Area pedestrian and bicycle amenities are lacking. Pedestrian, bicycle, transit, and streetscape improvements in the Plan Area will help many people crossing this part of the corridor today. Looking at the highway as more of a "complete street" (providing for all travel modes) will make use more safe and comfortable for existing, as well as future users.

Looking north, towards the existing downtown core along the highway.

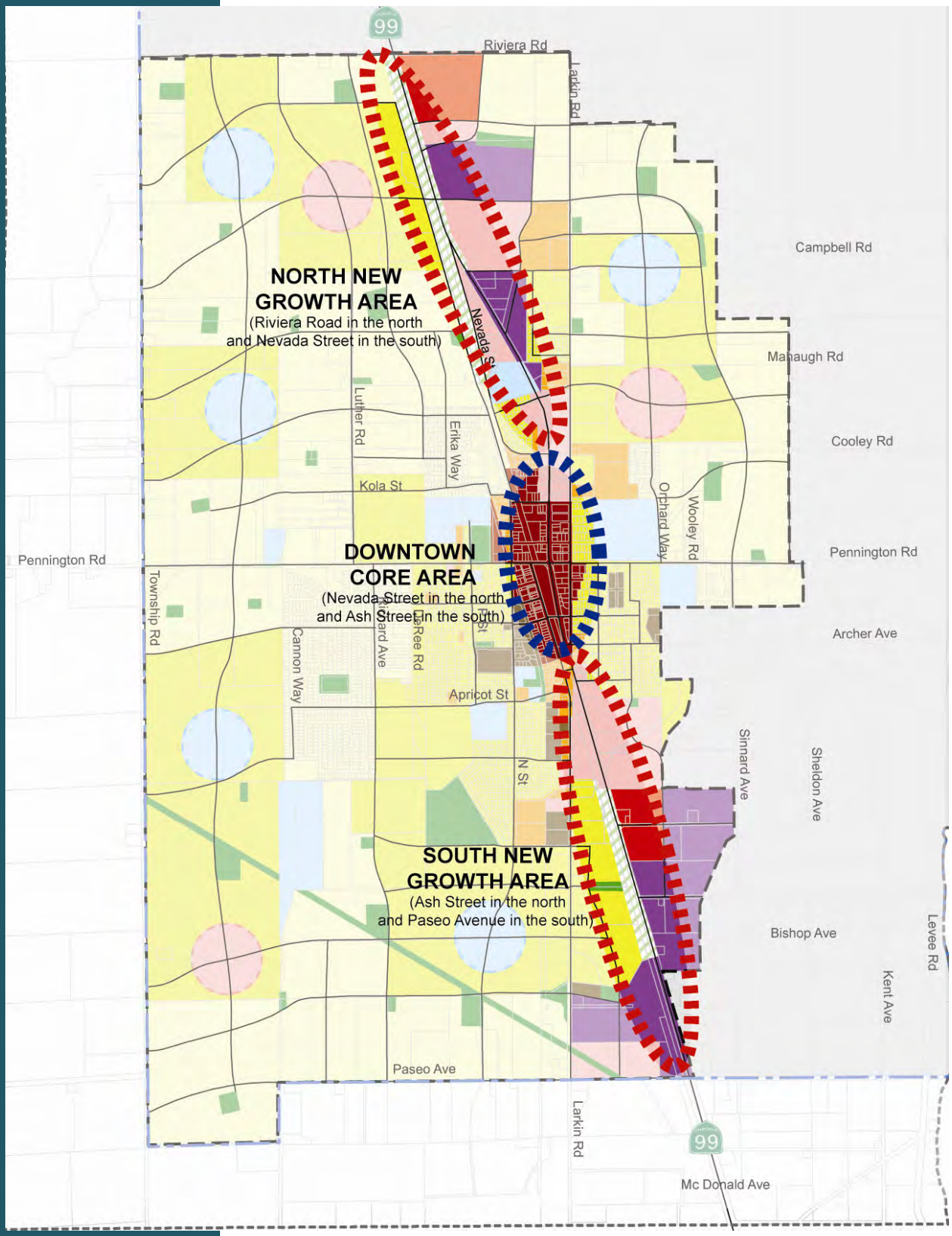
NEW GROWTH AREAS

Under the 2030 General Plan, new growth would occur both north and south of the City's exisiting jurisdictional limits, but within the City's existing Sphere of Influence. These New Growth Areas would accommodate a mix of land uses. There is little development in these areas today, and this Plan provides guidance for improvements to the highway corridor in this Focus Area that are consistent with the General Plan, align with Caltrans standards, and encourage multi-modal travel (walking, biking, public transit, and vehicular). Toward the northern and southern edges of the Plan Area, the design character has special signficiance since, in the long term, it is in these areas that many visitors will form their first visual impression of the community. Therefore, these rural fringe areas need to create a gateway experience for the City. The design in these gateway areas should recognize the rural heritage of Live Oak, enhance the small town character, and provide multi-modal access.[1]

Existing commercial development at the norther edge of the City's planning area.

[1] The design guidance provided in this Plan complements direction in the General Plan for private development adjacent to the highway corridor in these "Important Visual Gateways." See the City's Community Character Element for more details.

Exhibit 2.1: Identification of Focus Areas



IDENTIFICATION OF DESIGN THEMES

For the purpose of guiding the streetscape design along the Highway 99 corridor, four main design themes are being considered:

1. Bike and pedestrian safety and comfort
2. Landscaping and drainage
3. Building setbacks and parking
4. Wayfinding and signage

The intent for identifying these themes is to improve function, convenience, and safety for all types of users ranging by age, physical ability, and choice of transportation.

Based on the observations during site tours, mapping and analysis, review of the General Plan, public and advisory committee meetings, and review of the Highway Design Manual, the following constraints were identified in the Plan Area:

a. Highway 99 acts as a barrier between homes, schools, and other land uses on either side of the corridor due to limited east-west crossings. The elevated crown of the Highway from the adjacent parcels and intersecting roads decrease accessibility further and cause ADA issues near crosswalks. The new highway corridor design should address lowering of the crown for better accessibility.

b. The corridor is mainly designed for uninhibited vehicular movement. Posted speeds today vary from 55 miles per hour (mph) at the edge to about 35 mph in the Downtown Core Area (see diagram on the left).

c. Sidewalks and bike routes are discontinuous along the highway. In some areas, including adjacent to some newer developments, sidewalks are directly adjacent to the highway travel lane. With high-speed traffic, this creates an unsafe and uncomfortable condition for regular bike and pedestrian use.

d. Lack of adequate landscaping and street lighting along the corridor creates an uninviting visual impression that may discourage passersby from stopping and doing business in Live Oak. Little landscaping is present to soften the visual environment or buffer sidewalks and buildings from travel lanes. Existing above ground utilities add to the visual chaos in the Plan Area and should be under-grounded in future.

e. Frequent curb-cuts create conflicts among bicyclists, pedestrians, and passing highway traffic.

f. Unbroken impervious surfaces along the highway create high stormwater runoff rates and the lack of infiltration into the ground.

g. Most of the buildings in the Downtown Core Area are set back from the highway, with parking mostly in front of buildings, which creates impediments for pedestrian access and compromises the aesthetic environment.

h. There are some banners and signage in the Downtown Core Area, but no real striking entry signs to the community.

Exhibit 2.2: Existing Opportunities and Constraints by Focus Area

DOWNTOWN CORE AREA

EXISTING CONDITIONS

1. 2-lane highway with striped changing lane and crosswalks at the intersections.
2. Discontinuous sidewalks. Newer developments have sidewalks adjacent to the highway.
3. Buildings setback from the highway with direct access to parking lots in front of the buildings from the travel lanes.
4. Updated signage and banners at some locations.

OBSERVATIONS

- Beautification of this improtant gateway to the community is a great economic development opportunity for Live Oak.
- Currently Highway 99 is focussed on vehicle movement with few east-west crossing points for pedestrians and bicyclists.
- Minimizing drive-cuts and on-street parking along the highway may improve bike-pedestrian safety and vehicular movement.

NORTH NEW GROWTH AREA

EXISTING CONDITIONS

1. 2-lane highway with striped changing lane and crosswalks at the intersections.
2. Exisitng agricultural land east of the highway and large heritage trees west of highway.
3. Union Pacific Railroad right-of-way abuts the highway corridor creating a long narrow strip in between the 2 right-of-ways.
4. Limited east-west access as the railway tracks and highway divide the community.

OBSERVATIONS

- Currently Highway 99 is focussed on vehicle movement with few east-west crossing points for pedestrians and bicyclists.
- Potential locations for gateway signs into Live Oak community a few miles ahead of Riviera Road intersection to alert drivers of upcoming Live Oak community.
- Require sidewalks in new development areas to ensure connectivity to the Downtown Core Area.

SOUTH NEW GROWTH AREA

EXISTING CONDITIONS

1. 2-lane highway with striped changing lane but no crosswalks at the intersections and no sidewalks.
2. An irrigation canal and greenway along the highway.
3. Industrial land uses to the west and orchards to the west of the highway. No sidewalks in these areas.
4. Limited east-west access as the railway tracks and highway divide the community.

OBSERVATIONS

- Potential locations for gateway signs into Live Oak community a few miles ahead of Paseo Road intersection to alert drivers of upcoming Live Oak community.
- General Plan provides for parallel bicycle and pedestrian connectivity via Class I trails west of the highway.
- Potential to preserve exisiting orchards and large heritage trees at the entry to the community to highlight the small town character of Live Oak.

DOWNTOWN AREA – CONSTRAINTS

Bike and Pedestrian Safety and Comfort

- Existing Union Pacific mainline railroad track west of SR 99 corridor creates a one-sided downtown.
- Highway crossings can be dangerous for pedestrians, especially in areas without formalized crossings and signals. This is a particular concern for school kids crossing from adjacent residential areas.
- Crowning on the highway poses visual hazard and conflict among highway traffic. This is a concern where access is directly from the highway (rather than from local streets).
- Adequate streetlights are needed at crosswalks and near restaurants and businesses to promote pedestrian and bicyclists visibility during night.
- Discontinuous sidewalks near the northern and southern ends of the downtown area.
- In the newer retail areas, sidewalks are directly adjacent to highway travel lanes.

Landscaping and Drainage

- Minimal landscaping exists in the Downtown Core Area with no continuity in the choice of trees planted.
- There is no street or pedestrian furniture.
- Existing impervious, unbroken surfaces convey large amounts of urban runoff from the surrounding developments and could create drainage challenges for properties in the highway corridor.

Building Access and Parking

- The historic Downtown Core Area is on Broadway, which needs visibility from the highway to promote business.
- Buildings along the highway are set back from the travel lanes, which creates empty space and a vacuous feeling that is neither inviting nor pleasant for pedestrians and bicyclists.
- Most parking is in front of buildings with drive cuts from the properties to the highway, creating pedestrian and vehicular conflicts.

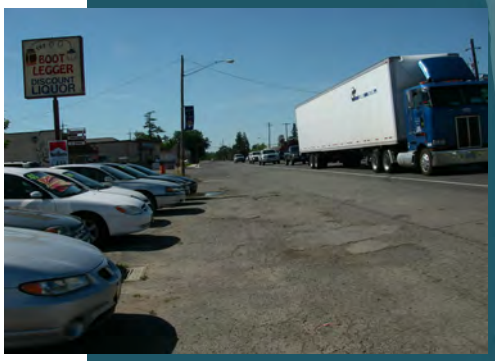
Wayfinding and Signage

- Some existing banner signs along the highway near Pennington Road.
- No continuity in style and size of business signs along the highway.
- No sign or marker to announce entry to the downtown.

Existing railroad crossing at Elm Street .

Existing crowning on the highway causes visual hazard.

In newer retail areas, sidewalks are directly adjacent to the highway travel lanes.



Existing impervious, unbroken paved surfaces along the highway causes drainage issues.

DOWNTOWN AREA – OPPORTUNITIES

BIKE AND PEDESTRIAN SAFETY AND COMFORT

- Three existing at-grade crossings at Kola Street, Pennington Road and Elm Street connecting the east and west sides of the community can be enhanced further with pedestrian and bicyclist improvements.
- Create a continuous sidewalk along the highway connecting the existing and new developments.
- Include bollards or other designed buffers on sidewalks directly adjacent to travel lanes to increase the perception of safety among pedestrians.
- Change in color or paving materials at crosswalks to increase pedestrian safety.
- Reduce travel speeds (below 35mph within the downtown area) to allow a safer pedestrian environment).
- Identify transit stops in areas that will be accessible to and comfortable for pedestrians and bicyclists.

LANDSCAPING AND DRAINAGE

- Plant adequate size trees to provide shade and a comfortable environment for pedestrians along the highway. However, carefully choose location of trees to avoid obscuring views of tenant signs for retail development along the highway.
- Continuity in species of trees chosen with 2 to 3 variety of trees planted and attention to avoiding significant problems with disease.
- Provide seating areas—for example, near renovated railway depot, park, and restaurants; with attention to the need for an appropriate noise environment.
- Design curb and gutter to allow for proper distribution of runoff. Regular curb-cuts could allow run-off to infiltrate in landscaped areas where possible.

BUILDING ACCESS AND PARKING

- Provide adequate parking for existing and future uses to the side or back of the building and additional parking on the street on local streets to create a more pedestrian-friendly and inviting environment.
- Access parking on side and back via local streets, where possible, to reduce conflicts.
- Provide easy building access and visibility to promote business along the corridor.
- If new buildings along the highway use similar architectural style and material palette as the historic buildings on Broadway, it will help to retain the small-town historic character of the city.

WAYFINDING AND SIGNAGE

- Design of an entry structure at Elm and/or Kola to announce entry into downtown area will visually help in reducing travel speeds.
- Continuity in theme, size and format of signs to create coherent look.

NEW GROWTH AREA – CONSTRAINTS

Bike and Pedestrian Safety and Comfort

- Existing travel speed is 45mph to 55 mph, which is not conducive to pedestrian activity.
- Existing and planned destinations (such as school, library, and restaurants) are on both sides of the highway and safe crossing points are needed.
- Inadequate street lighting discourages pedestrian use at night.

Landscaping and Drainage

- Near entry areas at Riviera Road and Paseo Avenue, land on either side of the highway is mostly undeveloped.
- Scattered landscaping exists along the highway.
- Most of the landscaping is in the interior of residential properties
- Some existing orchards align the highway corridor.
- Existing agricultural ditches cross under the highway in the north and south New Growth Areas.

Building Access and Parking

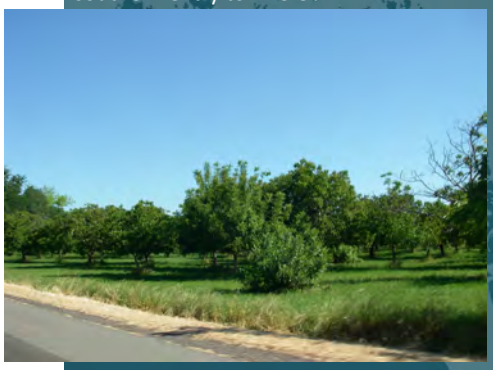
- Near entry areas, largely undeveloped with a few home sites and trailers, as well as a small number of nonresidential uses.
- Massing and footprints range from large industrial to smaller single-family residential buildings.
- No existing parking is provided along the highway corridor in the New Growth Areas today.

Wayfinding and Signage

- No signage or gateway structures announce entry to the community.
- There is no specific signage theme.
- Different style and sizes are used on existing businesses.

Existing canals cross under the highway in the north and south New Growth Areas.

Existing large heritage trees at the southern entry to Live Oak.



Existing orchards in the new growth areas.

Inadequate pedestrian crosswalks near exisitng destinations.

NEW GROWTH AREA – OPPORTUNITIES

BIKE AND PEDESTRIAN SAFETY AND COMFORT

- Link planned off-street bike trails parallel to the highway (but not within the highway right-of-way) to pedestrian facilities provided along the highway.
- Plan for reduced vehicular ingress and egress conflicts in the New Grown Areas (compared with developed Highway 99 areas).
- Reduce speed moving into the Downtown Core Area with visual cues of bicycle and pedestrian activity, such as signage, sidewalks, crosswalks, buildings closer to the travel lanes, denser landscaping, or other design features.
- Identify facilities to connect land uses and Class I trails planned on either side of the highway. Pedestrian/bike overpass, underpass along Live Oak Slough, or at-grade crossings of SR 99.
- Identify transit stops in areas that will be accessible to and comfortable for pedestrians and bicyclists.

LANDSCAPING AND DRAINAGE

- Preserve a row of orchard trees to maintain the small-town landscape at the entry of the community.
- Create open space corridor along the canals as way to preserve the small town character of the community.
- Retrofit existing areas with landscaping and shade trees near destinations to encourage pedestrian activity.
- Highlight major intersection of existing and future growth areas with the help of landscaping treatment and change in paving materials.
- Use low-impact development strategies to integrate surface stormwater management and connect to the existing canals.
- Wherever feasible, preserve large heritage trees in the northern and southern entry areas or replace them with the largest possible size tree that meets Highway Design Manual guidelines.

BUILDING ACCESS AND PARKING

- Design parallel road along highway to access properties and buildings along the highway and reduce vehicular conflicts.
- Create a landscaped buffer from the highway but maintain visibility of potential future retail and commercial service uses from the highway.

WAYFINDING AND SIGNAGE

- Design vertical elements at regular intervals along the highway to maintain a theme or identity for the community.
- Create a cohesive palette of materials, sizes, format for building signage.

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3 STREETSCAPE DESIGN

Conceptual View 1: Showing proposed improvements in the Downtown Core Area

Conceptual View 2: Showing proposed improvements in the New Growth Areas

CHAPTER INTENT:

- *Highlight design recommendations for the Downtown Core Area and New Growth Areas (north and south); and*
- *Propose a landscape palette for the Plan Area including different types of trees, shrubs, groundcovers, paving material and furniture.*

STREETSCAPE DESIGN

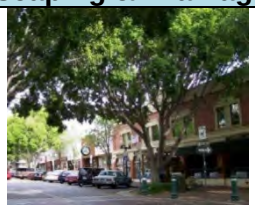
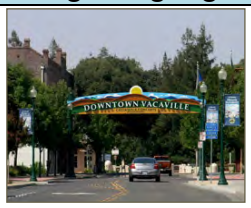
Streetscape is the visual image of a street, including the combination of buildings, landscape, hardscape and street furniture, parking, and signs. Successful streetscapes blend seamlessly across property lines and project types. An attractive streetscape involves consideration of the following design factors:

- Roadway design, including widths of travel way, paving surface and pattern, and curb and gutter design;
- Universal design that accommodates users of all ages and capabilities;
- Traffic-calming techniques to promote pedestrian and bicyclist safety and comfort, especially in areas with destination land uses and concentrations of housing;
- Public amenities, such as signage, street furniture, public art, and street lighting to enhance the pedestrian environment;
- Utility lines and their integration in the streetscape; and
- Management and maintenance of the streetscape.

All these factors were considered to enhance the identified four main design themes (as mentioned in Chapter 2 of this Plan) during the design development process for the Plan Area. This chapter describes graphically how the conceptual design for the highway corridor was developed and the proposed plant and paving palette for the Plan Area.

DOWNTOWN CORE AREA

The following table describes the potential design strategies that were considered before the preferred plan and section was developed for the Downtown Core Area (shown in Exhibit 3.1).

POTENTIAL DESIGN SOLUTIONS TO CONSIDER		
Bike & Pedestrian Safety & Comfort		
 Separated sidewalk but no bike lane.	 Distinguished paving on pedestrian and bike ways adjacent parking.	 Separated sidewalk with landscaped parkway, paved crosswalk, median and dedicated bike lane.
Landscaping & Drainage		
 Large shade trees at regular intervals in the sidewalk; concrete gutter and parking adjacent travel lanes.	 Separated sidewalk with narrow grass strip next to travel lane.	 Sidewalk adjacent to travel lane with landscaping on the interior side.
Building Setback & Parking		
 Parking next to travel lanes.	 Parking at the side of the building.	 Parking at the back of the building with access from the side of the building.
Wayfinding & Signage		
 Entry structure over the highway.	 Banners along the highway.	 Gateway signage at the corners of major intersections on the highway.

Based on input from the TAC members, typical preferred plan and section was developed for the Downtown Core Area. Exhibits 3.2 through 3.4 illustrate the preferred design concept along the Highway in the Downtown Core Area.

Exhibit 3.1: Downtown Core Area Typical Plan and Section

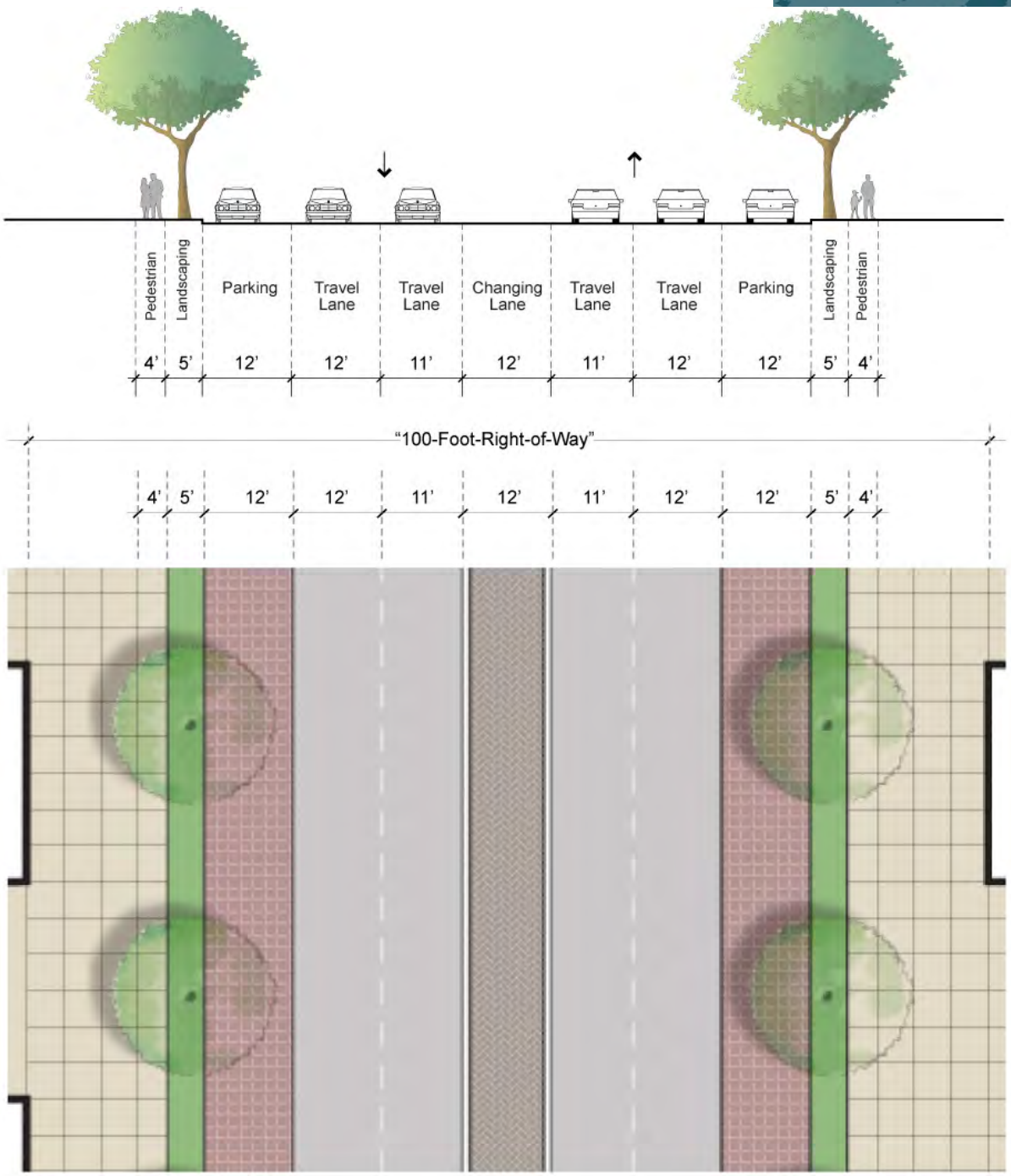


Exhibit 3.2: Downtown Key Map

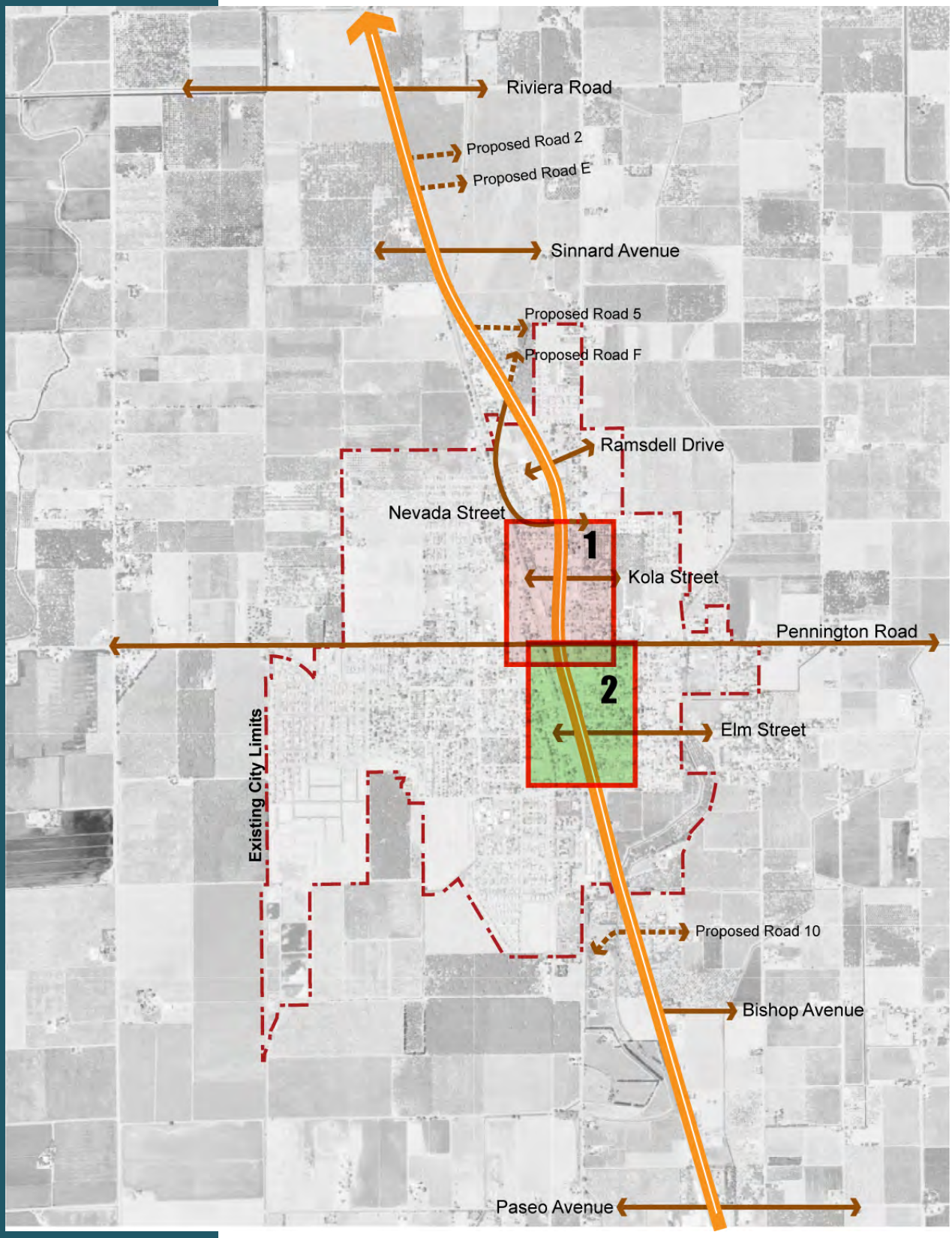


Exhibit 3.3: Conceptual Layout between Pennington Road and Nevada Street

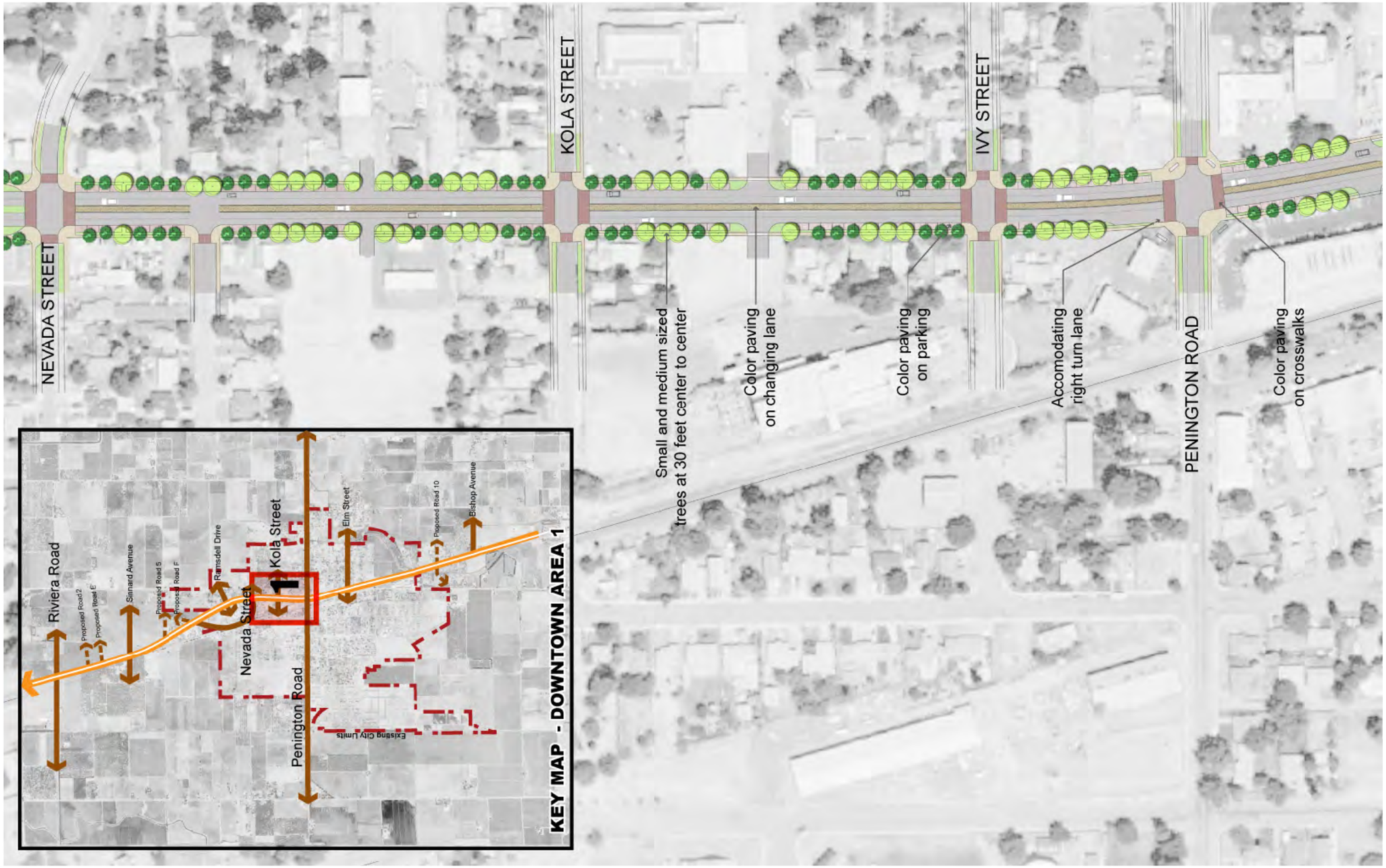
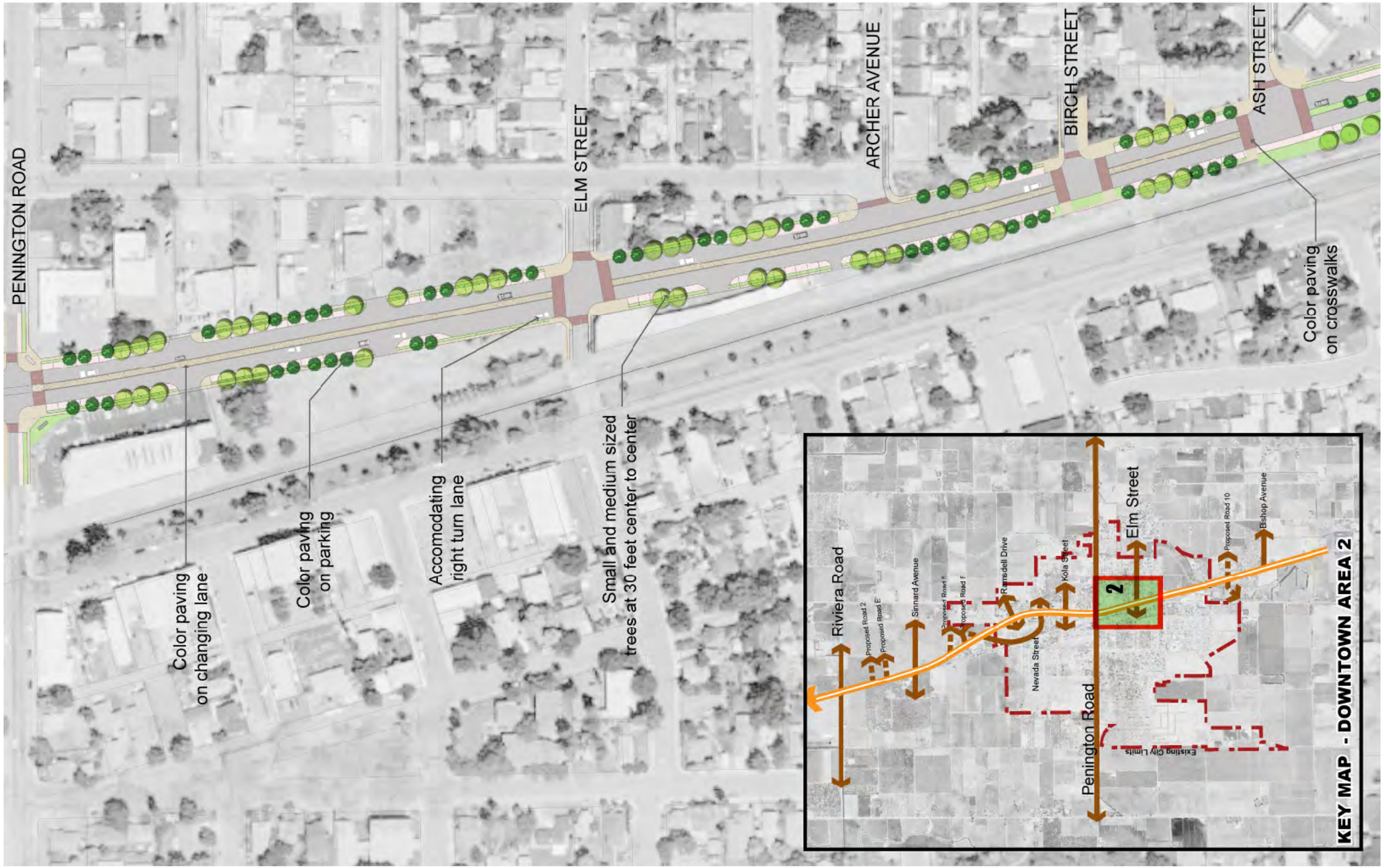
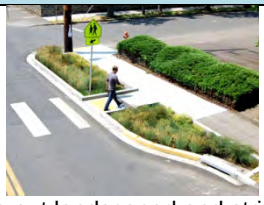
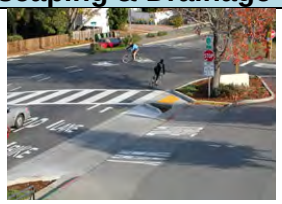
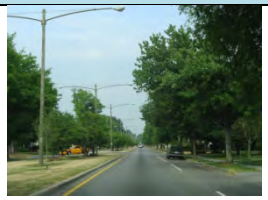
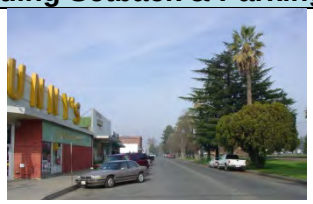
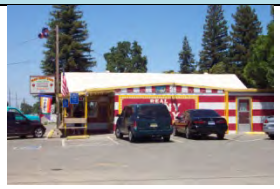
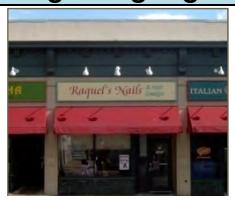


Exhibit 3.4: Conceptual Layout between Ash Street and Pennington Road



NEW GROWTH AREAS

The following table describes the potential design strategies that were considered before the preferred plan and section was developed for the New Growth Areas. Based on input from the TAC committee members the preferred plan and section were developed for the New Growth Areas.

POTENTIAL DESIGN SOLUTIONS TO CONSIDER		
Bike & Pedestrian Safety & Comfort		
 Striped pedestrian crosswalk with sidewalks adjacent travel lanes.	 Bulb-out landscaped and striped pedestrian crosswalk with combined pedestrian and bike way adjacent to travel lanes.	 Dedicated bike lane with separated sidewalks and landscaping adjacent travel lane.
Landscaping & Drainage		
 Landscaping interspersed along the Highway and at intersections with bollards or fence to separate sidewalks from travel lanes; concrete gutter for drainage.	 Grassy strip separating combined bike/pedestrian way with a grassy swale and drainage to the interior side.	 Dedicated landscaping along Highway with separated sidewalks; drainage within landscaped parkway.
Building Setback & Parking		
 Parking along a parallel street.	 Parking at the side of the building.	 Parking at the back of the building with access from the side of the building.
Wayfinding & Signage		
 Similar style front signage and arcades in non-residential buildings.	 Regularly spaced vertical signage along the highway to maintain Live Oak theme.	 Entry signage into mixed-use districts.

Exhibits 3.5 through 3.12 illustrate the preferred conceptual design in the New Growth Areas. In order to accommodate for the Highway Design Manual requirements, while maintaining the small-town tree-lined character of the City, the right-of-way is being proposed to extend by 6.5 feet on both sides of the highway when there is adjacent development. This allows for a healthy and attractive landscaped entryway into the community with mature trees that will buffer new development from the highway.

Exhibit 3.5: New Growth Area Typical Plan and Section

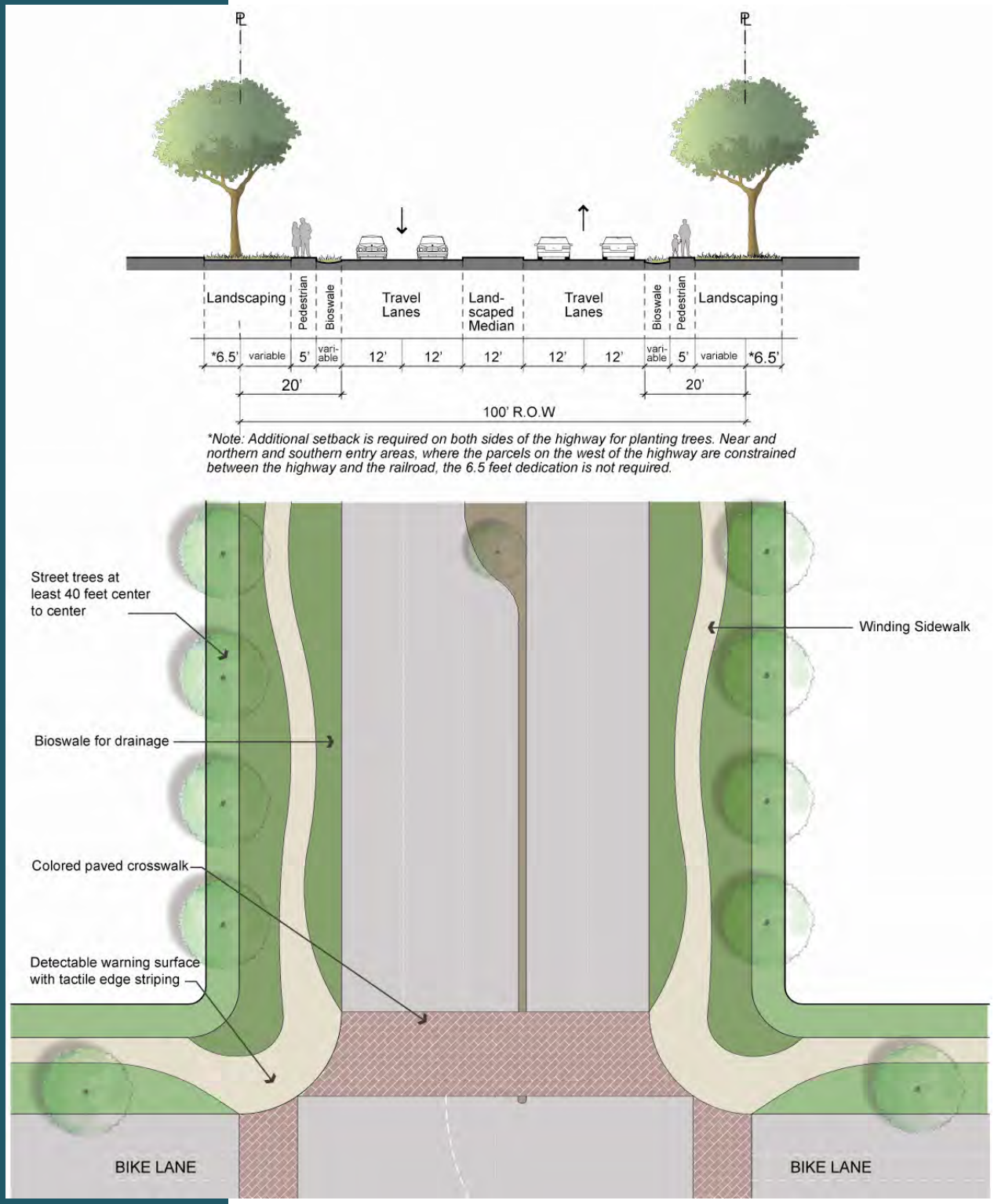


Exhibit 3.6: New Growth Areas Key Map

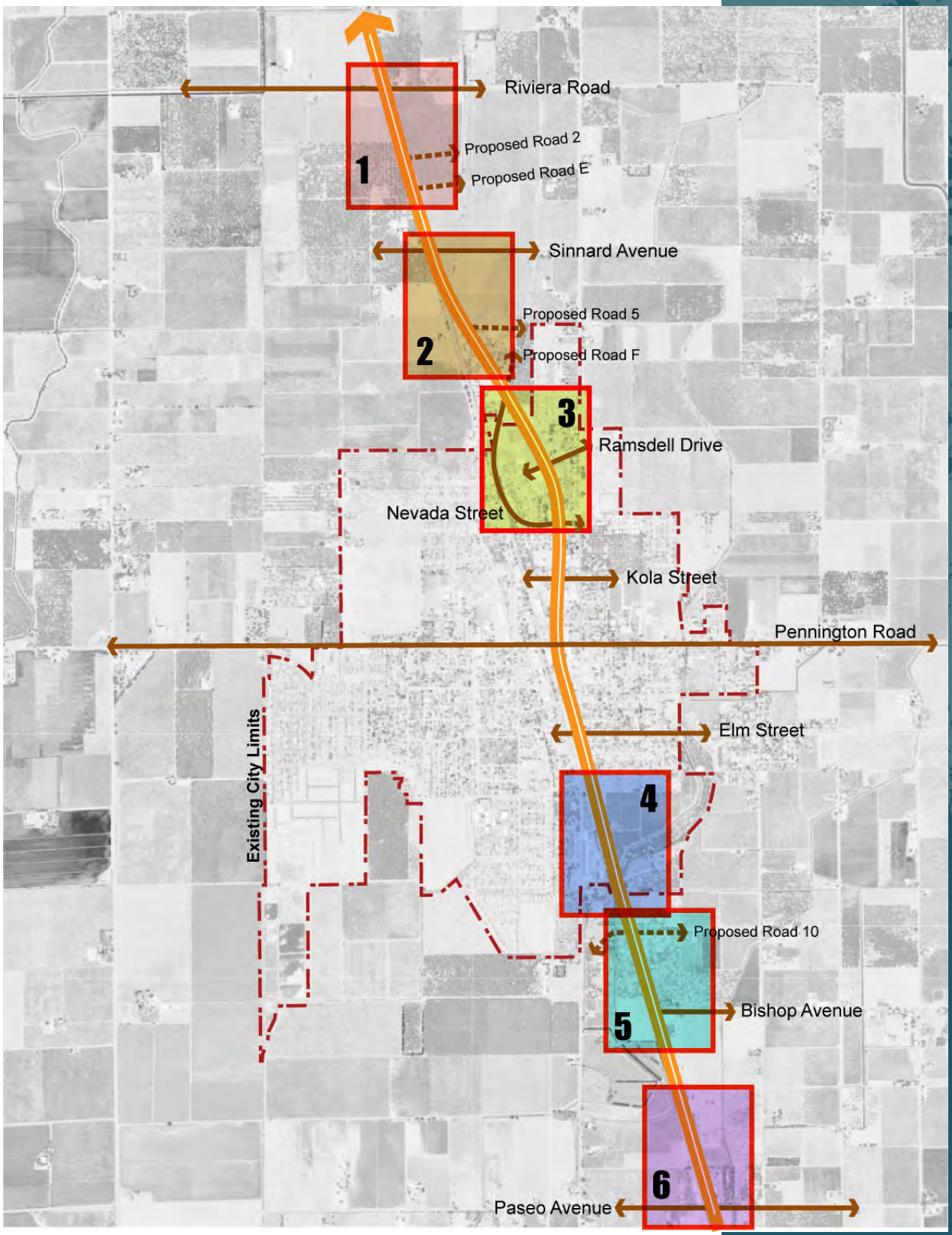


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Exhibit 3.7: North New Growth Areas – 1

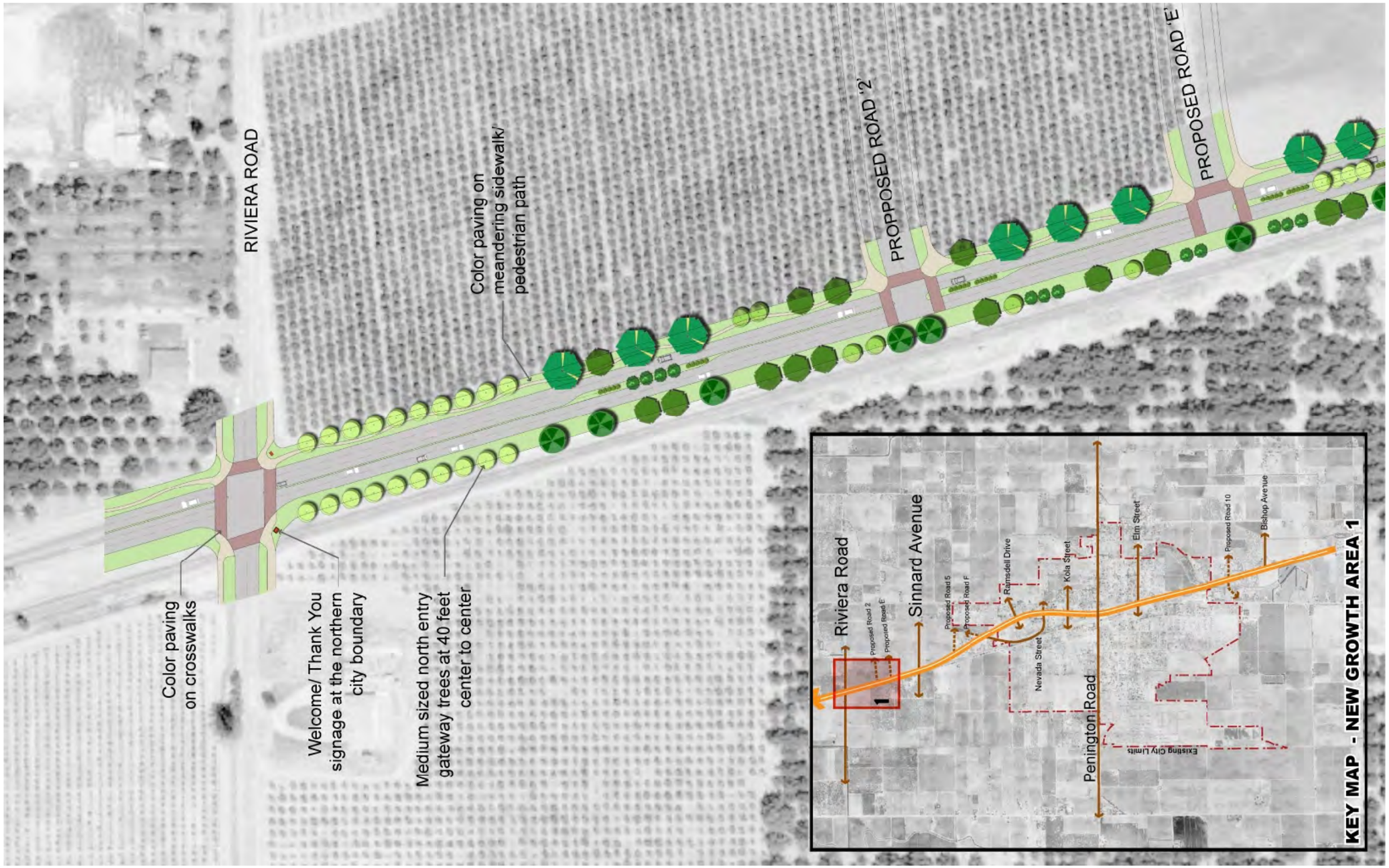


Exhibit 3.8: North New Growth Areas – 2

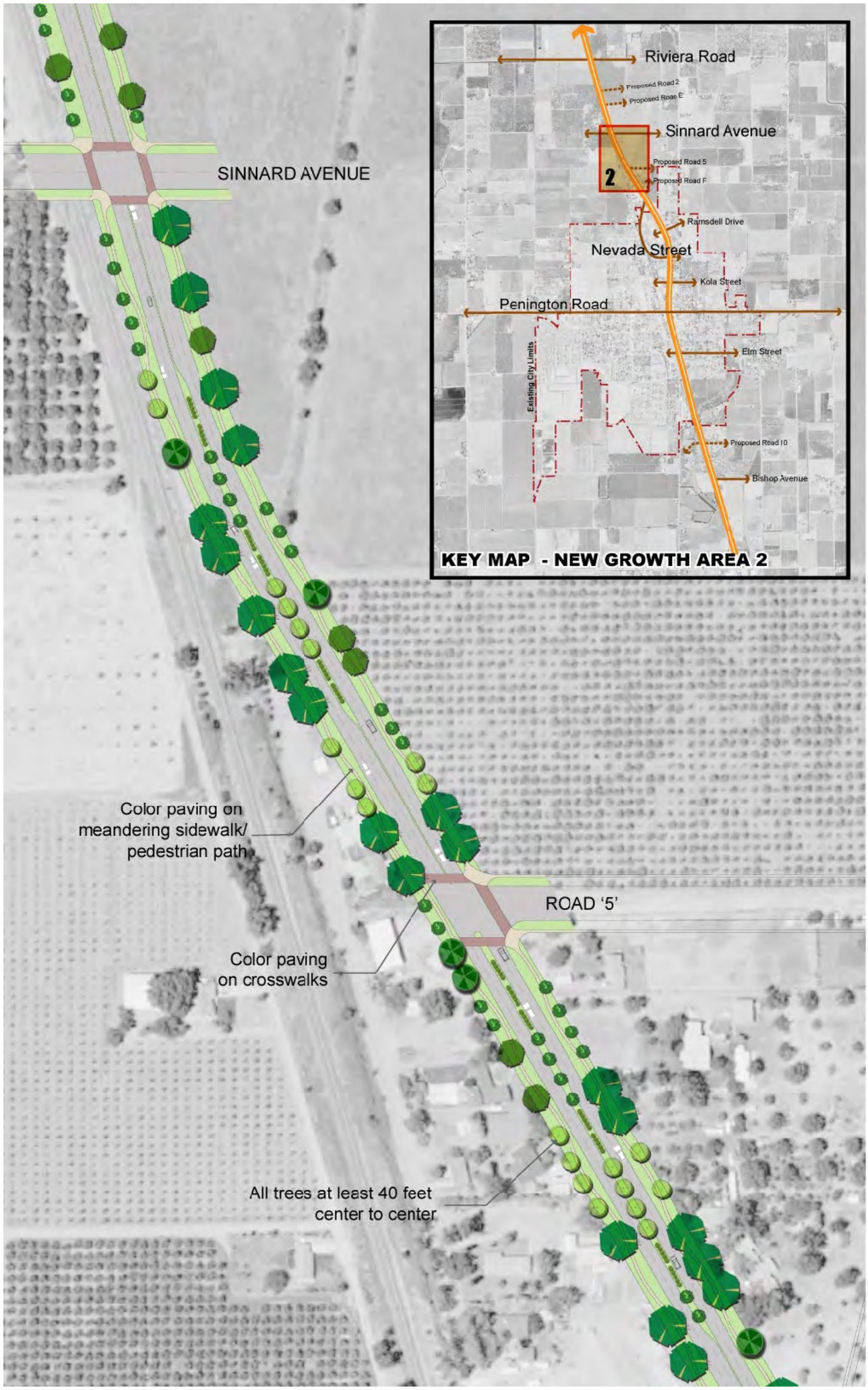


Exhibit 3.9: North New Growth Areas – 3

Exhibit 3.10: North New Growth Areas – 4

Exhibit 3.11: North New Growth Areas – 5

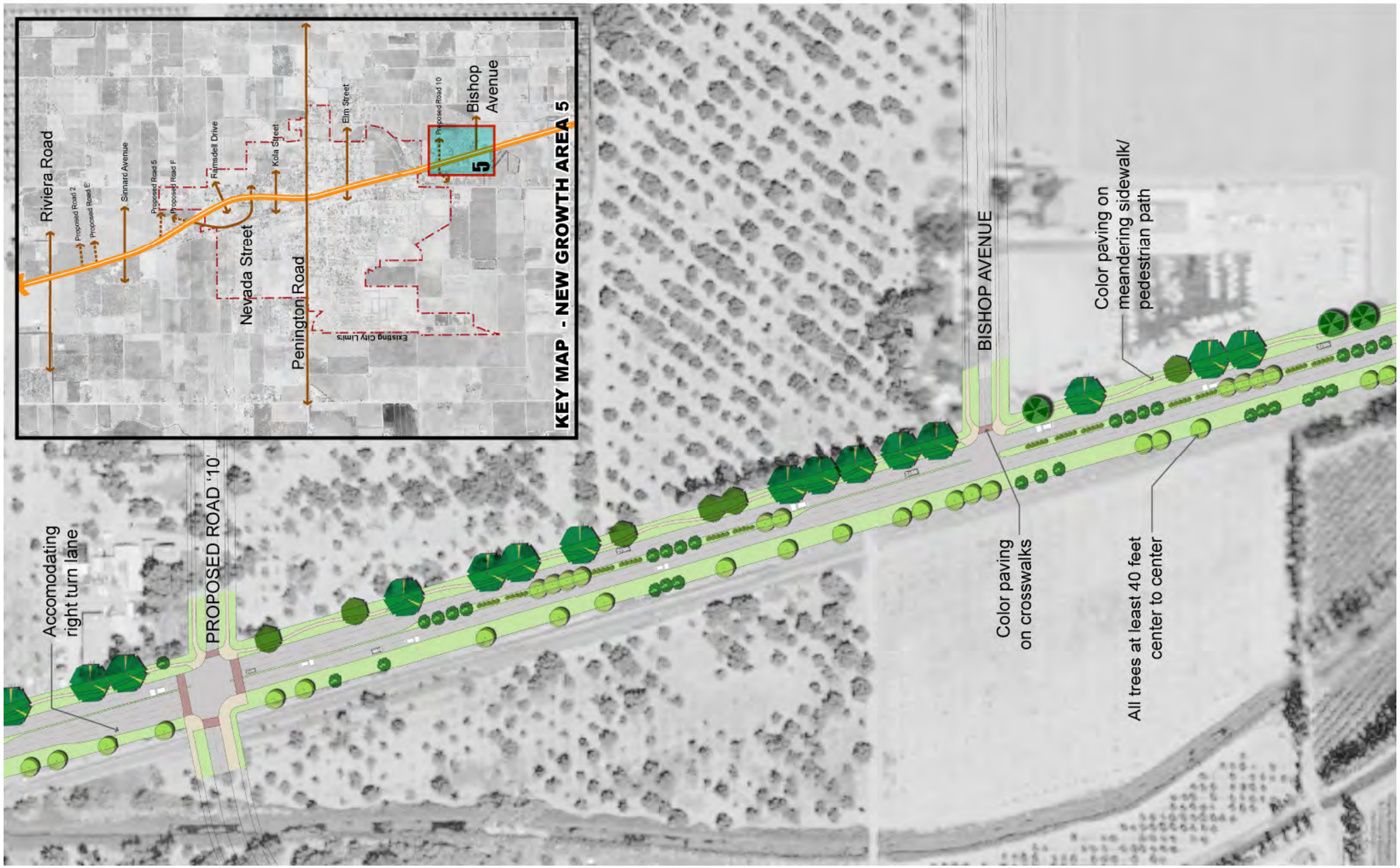
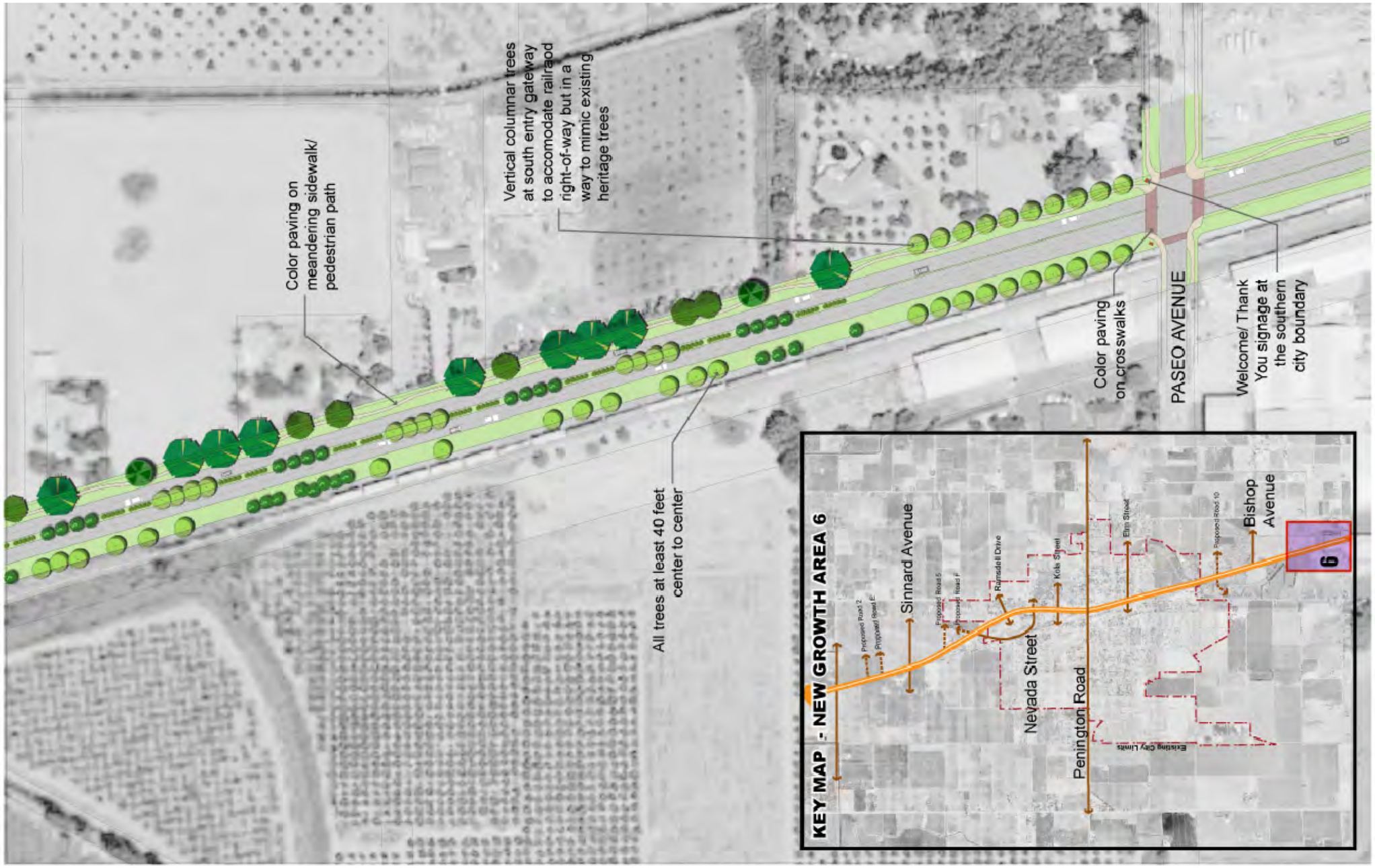


Exhibit 3.12: North New Growth Areas – 6



STREETSCAPE DESIGN GUIDELINES

The visual character of the highway corridor depends on more than what is being proposed within the highway right-of-way. A high-quality streetscape also requires buildings and landscapes adjacent to the highway to be compatible with the public right-of-way. Together the buildings, planting, paving, parking, lights, signs and other amenities create the visual character of a streetscape. Successful streetscape or highway corridor design would allow these various components to blend seamlessly across individual properties and land use to create a cohesive look for the City.

Recognizing the importance of these various streetscape elements, the Plan recommends some general guidelines to follow specifically for the listed items below:

- Site layout and building orientation
- Circulation and parking
- Signage

Later on in this chapter, the Plan also provides recommended palettes for some specific streetscape amenities, such as landscaping, paving, furniture and lighting.

SITE LAYOUT AND BUILDING ORIENTATION

Intent:

In the Downtown Core Area, site layout and building orientation should enhance the pedestrian environment. Within the New Growth Areas, emphasis should be given to separate the various modes of traffic to avoid conflicts and safety hazards.

Guidelines:

- In the Downtown Core Area, where the vehicle travel speed on the highway is slower, building should be oriented towards the highway to engage with the street and create an attractive environment.
- In the New Growth Area, where the vehicle travel speed is faster, the buildings should be setback with a landscape buffer to create a tree-lined highway experience for vehicles and a safer pedestrian area along the corridor.
- In both areas, care should be taken to create pedestrian friendly spaces that are functional, attractive and safe through clear separation of vehicular and non-vehicular circulation.
- In commercial areas, building should be easily visible from the highway to attract customers.
- Commercial buildings should not be turned away from the highway. Wherever not feasible, the following techniques are recommended –
    - Commercial building front facades should orient toward the highway. Where it is not feasible to orient the buildings to the highway

enhanced architectural features and articulation should be provided and loading areas should be screened from view.

- In residential areas, building should be buffered from highway noise by orienting living spaces (not bedrooms) and common areas (such as staircase wells in multi-family units) towards the highway.

CIRCULATION AND PARKING

Intent:

Circulation and parking along the highway should clearly distinguish between vehicular and non-vehicular needs to avoid safety issues and create a pedestrian- and bike-friendly environment.

Guidelines:

- Minimize driveway cuts directly from the highway.

- In new developments, both in the Downtown Core Area and New Growth Areas, preference should be given to parcel access from a side, rear or front street parallel to the highway.

- Careful attention should be given to parcel ingress/egress design to avoid conflict between vehicles, pedestrian and bicyclists.

- Connect land uses and Class I trails planned on either side of the highway. Promote use of pedestrian/bike overpass, underpass along Live Oak Slough, or at-grade crossings of Highway 99 to enhance pedestrian environment around the Plan Area.

- In the Downtown Core Area, parking on the side or rear of the building is highly encouraged. If parking in the front of the building is necessary, landscaping should be provided between proposed parking areas and the highway corridor.

- In the New Growth Area, commercial and residential parking along the highway should have sufficient landscape setback to create an overall tree-lined boulevard look. On-street parallel parking is only allowed in the Downtown Core Area.

SIGNAGE

Intent:

Signage should be clear, legible and attractive from the perspective of both pedestrians and occupants of vehicles. The City should have signage of varying scale and form to distinguish entry to the City and it neighborhoods. Special signage should be created to emphasize the historic Downtown Core Area as the heart of Live Oak.

Guidelines:

- Gateway signs to Live Oak should follow the recommended design approaches below:
  - Community entries or gateways should be designed to announce the transition from the County to the Live Oak City limits with the use of tall, vertical elements as visual landmarks.
  - Lettering on gateway signs should be easy to read from a fast-moving vehicle.
  - Design, material, and color palette of gateway signs should be compatible to the small town character of the City.
- Commercial tenant signs should follow the guidance in the City's Zoning Code.

STREETSCAPE AMENITIES

The following streetscape amenities were given special emphasis during the conceptual design of the Plan Area:

- Landscaping
- Paving materials
- Furniture
- Lighting

Conceptual palettes have been provided in this Plan to serve as reference for the preferred list of plant species, paving materials, furniture, and lighting styles. The final specifications for these design elements will be picked during construction detailing of the Plan Area. Therefore, these palettes should be used as a way to set the theme for the Highway streetscape.

Exhibit 3.13: Landscape Palette

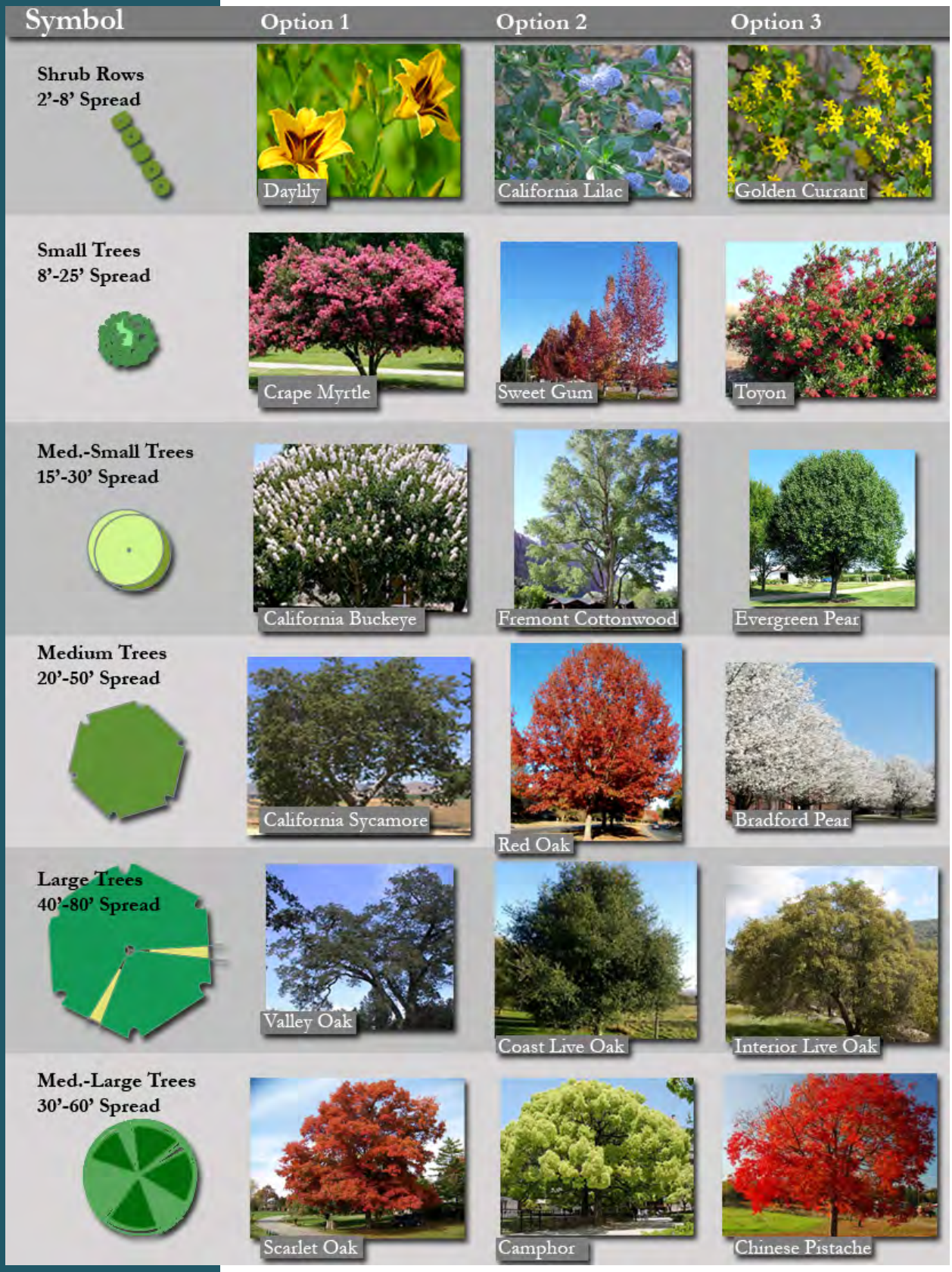
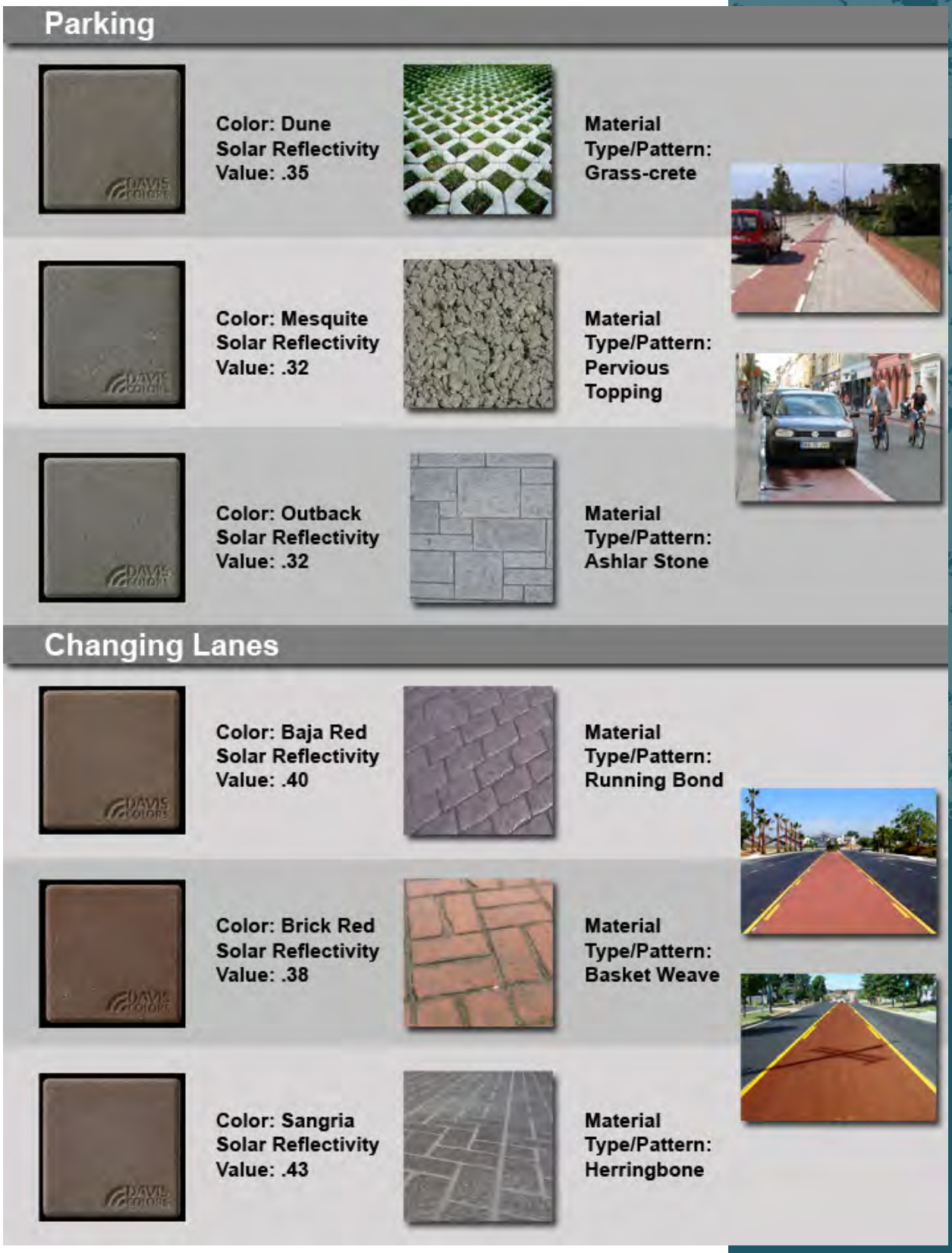


Exhibit 3.14: Paving Palette for Parking and Changing Lanes



Whenever feasible, use of permeable paving is recommended.

Exhibit 3.15: Paving Palette for Crosswalks and Sidewalks

Whenever feasible, use of permeable paving is recommended.

Exhibit 3.16: Furniture Palette

Exhibit 3.17: Street Lighting Palette

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4 IMPLEMENTATION

EXISTING INFRASTRUCTURE CONDITIONS ALONG THE HIGHWAY

1. *Above ground utilities*

2. *Crowning of the highway*

3. *Large heritage trees west of the highway*

4. *At-grade railroad crossing*

5. *Sidewalk next to travel lanes*

CHAPTER INTENT:

- *Identifies phasing for the improvements described in this Plan*
- *Provides conceptual cost estimates*
- *Identifies potential funding options.*

IMPLEMENTATION

The improvements described and illustrated in this Plan will be implemented over the course of many years and would involve a variety of participants. The guidance provided herein will ensure a cohesive whole in a Plan that would be implemented through a combination of public infrastructure projects and frontage improvements in new developments.

Although portions of improvements to the Highway may occur incrementally over time in conjunction with new developments, the City has identified conceptual phasing for the implementation of this Master Plan to help prioritize efforts. Cost estimates are provided to help guide future construction plans and funding efforts. Funding options for streetscape improvements are identified.

Finally, information is presented to provide decision makers with a rough set of expectations for implementation of this Plan in relation to vehicle speeds along the highway. Since State Route 99 runs through Downtown Live Oak and since schools and neighborhoods are on either side of the highway, this issue is of great interest to the community.

PHASING

PHASE 1: KOLA STREET ON THE NORTH TO ELM STREET ON THE SOUTH

This is the heart of Downtown Live Oak and, as such, is the first area of priority for the City. In addition to the Highway improvmeents, the City has identified the need for a new 10" water pipeline along the State Highway corridor to be constructed parallel to existing facilities that would eventually replace the existing facilities. Highway improvments may need to be coordinated with wastewater collection system improvements along Kola Street and the Kola Street Pump Station.

PHASE 2I: NEVADA STREET ON THE NORTH TO KOLA STREET ON THE SOUTH.

The City has identified two areas in Phase 2, but would anticipate that only one phase would construct at a time. These areas are identified as Phase 2i and Phase 2ii. The order of implemenation will depend on private development proposals in these areas, City infrastructure projects (such as drainage, water, or wastewater upgrades), and other factors. Phase 2i stretches from the southern intersection of Nevada Street southward to Kola Street. As with Phase 1, Highway improvments may need to be coordinated with wastewater collection system improvements along Kola Street and the Kola Street Pump Station. The City has identified the need for a new 10" water pipeline constructed along Highway 99 and parallel to existing facilities that would eventually replace the existing facilities.

PHASE 2II: ELM STREET ON THE NORTH TO ASH STREET ON THE SOUTH.

The City has identified the need for a new 10" water pipeline that would be aligned with Larkin Road in the vicinity of this phase, but that would cross the highway at approximately Ash Street. This improvement project needs to be coordinated with this phase of the Streetscape Master Plan improvements.

PHASE 3: EXISTING CITY LIMITS ON THE NORTH TO NEVADA STREET.

City limits will change during implemenation of this Plan, but maps provided here document the location of City limits as of the writing of this Plan.

LATER PHASES

The City has identified two areas north and south of the City where implementation of the Streetscape Master Plan would occur in coordination with new private development proposals. The northern extent of the future phase extends from Nevada Street to Riviera Road, whereas the southern future phase extends southward from Ash Street to Paseo Avenue. These areas are mostly outside of the City's jurisdictional limits today, but as described in the 2030 General Plan, these areas would annex to the City and would be developed under the City's policies and regulatory requirements.

North of the City, there is a new water line planned to extend across the highway corridor at Riviera Road and a proposed storm drain at the northern inersection of Nevada Street with Highway 99. South of the City, new water lines would extend across the highway at approximately Coleman and Bishop Avenues. In addition, to the south of the City limits, the City's Master Drainage Study identifies trunk drains along the Highway corridor south of Coleman Avenue and north of Paseo Avenue. A proposed storm drain would cross the highway corridor approimately 500 feet north of Paseo Avenue. Each of these infrastructure improvement projects will need to be coordinated with Streetscape Master Plan implementation.

Exhibit 5.1: Proposed Phasing

CONCEPTUAL COST ESTIMATE

The order-of-magnitude cost estimate provided in this Plan is based on the streetscape components described in the "Streetscape Design" chapter. More detailed plans and engineering work will be required in order to produce more specific cost estimates, such as those that may be used to receive bids to construct portions of the improved streetscape. The cost estimates provided here help the City and Caltrans to assess the probable level of effort required to construct different phases of this Plan. Factors including, but not limited to competitive bidding, negotiations with the City or Caltrans, and fluctuations in material costs will influence the actual cost to construct these improvements.

The following discrete elements were considered in providing conceptual cost estimates:

- Mobilization and demobilization (the set up and tear down costs);
- Clearing and grubbing;
- Grading and drainage;
- Asphaltic concrete and special street paving, along with an aggregate base;
- Striping, curb, and handicap access ramps;
- Sidewalk paving;
- 4 monument signs;
- Landscaping site preparation;
- Irrigation system;
- Street trees;
- Shrubs and groundcover; and
- Landscape maintenance for 3 months to establish the landscaping.

Phase 1: Between Kola Street and Elm Street					
No.	Description	Quantity	Unit	Unit Cost	Extended Cost
1.	Mobilization/Demobilization	1	Lump Sum	$107,300.00	$107,300
2.	Clearing and Grubbing	211,196	Square Foot	$0.10	$21,120
3.	Grading and Drainage	211,196	Square Foot	$2.00	$422,392
4.	Asphaltic Concrete (6" Depth) - Street Paving	118,519	Square Foot	$4.00	$474,076
5.	Concrete - Special Street Paving	51,439	Square Foot	$4.00	$205,756
6.	Aggregate Base (18" Depth) - Street Paving	7,588	Cubic Yard	$65.00	$493,220
7.	Striping, Signs and Markings	6,234	Linear Foot	$7.50	$46,755
8.	6" P.P.C. Curb and Gutter, Type A 2-6	8,245	Linear Foot	$20.00	$164,900
9.	Handicap Access Ramps	24	Each	$2,500.00	$60,000
10.	Sidewalk Paving (4" P.C.C)	28,701	Square Foot	$4.15	$119,109
11.	Monument Signage	4	Each	$12,500.00	$50,000
12.	Landscape Site Preparation	12,537	Square Foot	$0.25	$3,134
13.	Irrigation System	12,537	Square Foot	$3.00	$37,611
14.	Trees - 24" Box	44	Each	$250.00	$11,000
15.	Trees - 15 Gallon	44	Each	$150.00	$6,600
16.	Shrubs	0	Each	$25.00	$0
17.	Groundcover	12,537	Square Foot	$0.50	$6,269
18.	Landscape Maintenance Period (90 days)	3	Month	$7,500.00	$22,500
Subtotal (Rounded)					$2,252,000
25% Contingency					$563,000
30% Engineering Costs					$675,600
Total (Rounded)					**$3,491,000**
Additional Items - Unit Costs only					
Benches			Each	$1,500.00	
Trash Receptacles			Each	$1,000.00	
Street Lights & Conduit - 75' spacing (staggered)			Linear Foot	$50.00	

Notes:
1 This cost estimate, prepared by AECOM is based on the Conceptual Landscape Plans for the Project dated January 2011. This order-of-magnitude estimate is not a bid, but may be used as a planning tool to assess the probable level of effort required to construct the project. Competitive bidding, negotiations with the City, or fluctuations in market prices may affect actual construction costs.
2 This cost estimate does not include infrastructure related to street improvements, including but not limited to sewer, water, lighting, and electrical systems.
3 The item Mobilization/Demobilization includes the movement of personnel, equipment, supplies, and incidentals to and from the Project site; establishment of temporary facilities; preparatory work such as construction surveying, traffic handling, and erosion control BMP's; and operations and management to begin and conclude the work.

Phase 2i: Between Kola Street and Nevada Street (south)					
No.	Description	Quantity	Unit	Unit Cost	Extended Cost
1.	Mobilization/Demobilization	1	Lump Sum	$37,700.00	$37,700
2.	Clearing and Grubbing	77,137	Square Foot	$0.10	$7,714
3.	Grading and Drainage	77,137	Square Foot	$2.00	$154,274
4.	Asphaltic Concrete (6" Depth) - Street Paving	39,660	Square Foot	$4.00	$158,640
5.	Concrete - Special Street Paving	18,720	Square Foot	$4.00	$74,880
6.	Aggregate Base (18" Depth) - Street Paving	2,162	Cubic Yard	$65.00	$140,530
7.	Striping, Signs and Markings	2,676	Linear Foot	$7.50	$20,070
8.	6" P.P.C. Curb and Gutter, Type A 2-6	3,791	Linear Foot	$20.00	$75,820
9.	Handicap Access Ramps	10	Each	$2,500.00	$25,000
10.	Sidewalk Paving (4" P.C.C)	10,387	Square Foot	$4.15	$43,106
11.	Landscape Site Preparation	8,370	Square Foot	$0.25	$2,093
12.	Irrigation System	8,370	Square Foot	$3.00	$25,110
13.	Trees - 24" Box	28	Each	$250.00	$7,000
14.	Trees - 15 Gallon	22	Each	$150.00	$3,300
15.	Shrubs	0	Each	$25.00	$0
16.	Groundcover	8,370	Square Foot	$0.50	$4,185
17.	Landscape Maintenance Period (90 days)	3	Month	$4,000.00	$12,000
Subtotal (Rounded)					$792,000
25% Contingency					$198,000
30% Engineering Costs					$237,600
Total (Rounded)					**$1,228,000**
Additional Items - Unit Costs only					
Monument Signage			Each	$10,000.00	
Benches			Each	$1,500.00	
Trash Receptacles			Each	$1,000.00	
Street Lights & Conduit - 75' spacing (staggered)			Linear Foot	$50.00	

Notes:

[1] This cost estimate, prepared by AECOM is based on the Conceptual Landscape Plans for the Project dated January 2011. This order-of-magnitude estimate is not a bid, but may be used as a planning tool to assess the probable level of effort required to construct the project. Competitive bidding, negotiations with the City, or fluctuations in market prices may affect actual construction costs.

[2] This cost estimate does not include infrastructure related to street improvements, including but not limited to sewer, water, lighting, and electrical systems.

[3] The item Mobilization/Demobilization includes the movement of personnel, equipment, supplies, and incidentals to and from the Project site; establishment of temporary facilities; preparatory work such as construction surveying, traffic handling, and erosion control BMP's; and operations and management to begin and conclude the work.

Phase 2ii: Between Elm Street and Ash Street					
No.	Description	Quantity	Unit	Unit Cost	Extended Cost
1.	Mobilization/Demobilization	1	Lump Sum	$44,400.00	$44,400
2.	Clearing and Grubbing	101,318	Square Foot	$0.10	$10,132
3.	Grading and Drainage	101,318	Square Foot	$2.00	$202,636
4.	Asphaltic Concrete (6" Depth) - Street Paving	59,118	Square Foot	$4.00	$236,472
5.	Concrete - Special Street Paving	15,360	Square Foot	$4.00	$61,440
6.	Aggregate Base (18" Depth) - Street Paving	2,758	Cubic Yard	$28.00	$77,224
7.	Striping, Signs and Markings	3,699	Linear Foot	$7.50	$27,743
8.	6" P.P.C. Curb and Gutter, Type A 2-6	5,241	Linear Foot	$20.00	$104,820
9.	Handicap Access Ramps	14	Each	$2,500.00	$35,000
10.	Sidewalk Paving (4" P.C.C)	15,900	Square Foot	$4.15	$65,985
11.	Landscape Site Preparation	10,940	Square Foot	$0.25	$2,735
12.	Irrigation System	10,940	Square Foot	$3.00	$32,820
13.	Trees - 24" Box	25	Each	$250.00	$6,250
14.	Trees - 15 Gallon	28	Each	$150.00	$4,200
15.	Shrubs	0	Each	$25.00	$0
16.	Groundcover	10,940	Square Foot	$0.50	$5,470
17.	Landscape Maintenance Period (90 days)	3	Month	$4,500.00	$13,500
Subtotal (Rounded)					$931,000
25% Contingency					$232,750
30% Engineering Costs					$279,300
Total (Rounded)					**$1,444,000**
Additional Items - Unit Costs only					
Monument Signage			Each	$10,000.00	
Benches			Each	$1,500.00	
Trash Receptacles			Each	$1,000.00	
Street Lights & Conduit - 75' spacing (staggered)			Linear Foot	$50.00	

Notes:

[1] This cost estimate, prepared by AECOM is based on the Conceptual Landscape Plans for the Project dated January 2011. This order-of-magnitude estimate is not a bid, but may be used as a planning tool to assess the probable level of effort required to construct the project. Competitive bidding, negotiations with the City, or fluctuations in market prices may affect actual construction costs.

[2] This cost estimate does not include infrastructure related to street improvements, including but not limited to sewer, water, lighting, and electrical systems.

[3] The item Mobilization/Demobilization includes the movement of personnel, equipment, supplies, and incidentals to and from the Project site; establishment of temporary facilities; preparatory work such as construction surveying, traffic handling, and erosion control BMP's; and operations and management to begin and conclude the work.

Phase 3: Between Nevada Street (south) and Existing City Limits					
No.	Description	Quantity	Unit	Unit Cost	Extended Cost
1.	Mobilization/Demobilization	1	Lump Sum	$88,600.00	$88,600
2.	Clearing and Grubbing	210,952	Square Foot	$0.10	$21,095
3.	Grading and Drainage	210,952	Square Foot	$2.00	$421,904
4.	Asphaltic Concrete (6" Depth) - Street Paving	103,646	Square Foot	$4.00	$414,584
5.	Concrete - Special Street Paving	0	Square Foot	$4.00	$0
6.	Aggregate Base (18" Depth) - Street Paving	3,839	Cubic Yard	$65.00	$249,535
7.	Striping, Signs and Markings	5,361	Linear Foot	$7.50	$40,208
8.	6" P.P.C. Curb and Gutter, Type A 2-6	7,595	Linear Foot	$20.00	$151,900
9.	Handicap Access Ramps	12	Each	$2,500.00	$30,000
10.	Sidewalk Paving (4" P.C.C)	21,190	Square Foot	$4.15	$87,939
11.	Landscape Site Preparation	86,116	Square Foot	$0.25	$21,529
12.	Irrigation System	86,116	Square Foot	$3.00	$258,348
13.	Trees - 24" Box	16	Each	$250.00	$4,000
14.	Trees - 15 Gallon	40	Each	$150.00	$6,000
15.	Shrubs	24	Each	$25.00	$600
16.	Groundcover	86,116	Square Foot	$0.50	$43,058
17.	Landscape Maintenance Period (90 days)	3	Month	$6,500.00	$19,500
Subtotal (Rounded)					$1,859,000
25% Contingency					$464,750
30% Engineering Costs					$557,700
Total (Rounded)					**$2,882,000**
Additional Items - Unit Costs only					
Monument Signage			Each	$10,000.00	
Benches			Each	$1,500.00	
Trash Receptacles			Each	$1,000.00	
Street Lights & Conduit - 75' spacing (staggered)			Linear Foot	$50.00	

Notes:

[1] This cost estimate, prepared by AECOM is based on the Conceptual Landscape Plans for the Project dated January 2011. This order-of-magnitude estimate is not a bid, but may be used as a planning tool to assess the probable level of effort required to construct the project. Competitive bidding, negotiations with the City, or fluctuations in market prices may affect actual construction costs.

[2] This cost estimate does not include infrastructure related to street improvements, including but not limited to sewer, water, lighting, and electrical systems.

[3] The item Mobilization/Demobilization includes the movement of personnel, equipment, supplies, and incidentals to and from the Project site; establishment of temporary facilities; preparatory work such as construction surveying, traffic handling, and erosion control BMP's; and operations and management to begin and conclude the work.

Later Phase TBD: Riviera Road to Existing City Limits					
No.	Description	Quantity	Unit	Unit Cost	Extended Cost
1.	Mobilization/Demobilization	1	Lump Sum	$318,400.00	$318,400
2.	Clearing and Grubbing	770,760	Square Foot	$0.10	$77,076
3.	Grading and Drainage	770,760	Square Foot	$2.00	$1,541,520
4.	Asphaltic Concrete (6" Depth) - Street Paving	366,780	Square Foot	$4.00	$1,467,120
5.	Concrete - Special Street Paving	0	Square Foot	$4.00	$0
6.	Aggregate Base (18" Depth) - Street Paving	13,584	Cubic Yard	$65.00	$882,960
7.	Striping, Signs and Markings	18,339	Linear Foot	$7.50	$137,543
8.	6" P.P.C. Curb and Gutter, Type A2-6	27,509	Linear Foot	$20.00	$550,180
9.	Handicap Access Ramps	22	Each	$2,500.00	$55,000
10.	Sidewalk Paving (4" P.C.C)	45,760	Square Foot	$4.15	$189,904
11.	Monument Signage	2	Each	$12,500.00	$25,000
12.	Landscape Site Preparation	358,220	Square Foot	$0.25	$89,555
13.	Irrigation System	358,220	Square Foot	$3.00	$1,074,660
14.	Trees - 24" Box	34	Each	$250.00	$8,500
15.	Trees - 15 Gallon	132	Each	$150.00	$19,800
16.	Shrubs	112	Each	$25.00	$2,800
17.	Groundcover	358,220	Square Foot	$0.50	$179,110
18.	Landscape Maintenance Period (90 days)	3	Month	$22,000.00	$66,000
Subtotal (Rounded)					$6,686,000
25% Contingency					$1,671,500
30% Engineering Costs					$2,005,800
Total (Rounded)					**$10,364,000**
Additional Items - Unit Costs only					
Benches			Each	$1,500.00	
Trash Receptacles			Each	$1,000.00	
Street Lights & Conduit - 75' spacing (staggered)			Linear Foot	$50.00	

Notes:

1 This cost estimate, prepared by AECOM is based on the Conceptual Landscape Plans for the Project dated January 2011. This order-of-magnitude estimate is not a bid, but may be used as a planning tool to assess the probable level of effort required to construct the project. Competitive bidding, negotiations with the City, or fluctuations in market prices may affect actual construction costs.

2 This cost estimate does not include infrastructure related to street improvements, including but not limited to sewer, water, lighting, and electrical systems.

3 The item Mobilization/Demobilization includes the movement of personnel, equipment, supplies, and incidentals to and from the Project site; establishment of temporary facilities; preparatory work such as construction surveying, traffic handling, and erosion control BMP's; and operations and management to begin and conclude the work.

Later Phase TBD: Ash Street (south) to Paseo Avenue					
No.	Description	Quantity	Unit	Unit Cost	Extended Cost
1.	Mobilization/Demobilization	1	Lump Sum	$394,700.00	$394,700
2.	Clearing and Grubbing	971,520	Square Foot	$0.10	$97,152
3.	Grading and Drainage	971,520	Square Foot	$2.00	$1,943,040
4.	Asphaltic Concrete (6" Depth) - Street Paving	450,360	Square Foot	$4.00	$1,801,440
5.	Concrete - Special Street Paving	0	Square Foot	$4.00	$0
6.	Aggregate Base (18" Depth) - Street Paving	16,680	Cubic Yard	$65.00	$1,084,200
7.	Striping, Signs and Markings	22,518	Linear Foot	$7.50	$168,885
8.	6" P.P.C. Curb and Gutter, Type A2-6	33,777	Linear Foot	$20.00	$675,540
9.	Handicap Access Ramps	9	Each	$2,500.00	$22,500
10.	Sidewalk Paving (4" P.C.C)	37,790	Square Foot	$4.15	$156,829
11.	Landscape Site Preparation	483,370	Square Foot	$0.25	$120,843
12.	Monument Signage	2	Each	$12,500.00	$25,000
13.	Irrigation System	483,370	Square Foot	$3.00	$1,450,110
14.	Trees - 24" Box	134	Each	$250.00	$8,500
15.	Trees - 15 Gallon	183	Each	$150.00	$19,800
16.	Shrubs	212	Each	$25.00	$2,800
17.	Groundcover	483,370	Square Foot	$0.50	$241,685
18.	Landscape Maintenance Period (90 days)	3	Month	$25,000.00	$75,000
Subtotal (Rounded)					$8,289,000
25% Contingency					$2,072,250
30% Engineering Costs					$2,486,700
Total (Rounded)					**$12,848,000**
Additional Items - Unit Costs only					
Benches			Each	$1,500.00	
Trash Receptacles			Each	$1,000.00	
Street Lights & Conduit - 75' spacing (staggered)			Linear Foot	$50.00	

Notes:

[1] This cost estimate, prepared by AECOM is based on the Conceptual Landscape Plans for the Project dated January 2011. This order-of-magnitude estimate is not a bid, but may be used as a planning tool to assess the probable level of effort required to construct the project. Competitive bidding, negotiations with the City, or fluctuations in market prices may affect actual construction costs.

[2] This cost estimate does not include infrastructure related to street improvements, including but not limited to sewer, water, lighting, and electrical systems.

[3] The item Mobilization/Demobilization includes the movement of personnel, equipment, supplies, and incidentals to and from the Project site; establishment of temporary facilities; preparatory work such as construction surveying, traffic handling, and erosion control BMP's; and operations and management to begin and conclude the work.

FUNDING OPTIONS

As with any public improvement project, this Streetscape Master Plan requires sources of funding for both construction and operational phases. The City will not have the ability to fund the improvements described in this Plan for the State Highway corridor. However, there are a variety of reoccurring and periodic sources of funding that could be used to implement the improvements described herein.

STATE AND REGIONAL FUNDING

Caltrans produces Transportation Concept Reports for State highways to guide long-range planning for these facilities. For State Route 99, the most recent Transportation Concept Report is from July of 2010. Segment 13 extends from Lomo Crossing, which is approximately four miles south of Downtown Live Oak, to the Sutter/Butte County line. The Transportation Concept Report identifies programmed, planned, and conceptual improvements, generally defined as follows:[1]

- A **programmed** improvement is planned and funded, with funding amounts identified by year.
- A **planned** improvement is in a long-term plan, such as a regional transportation plan or capital improvement plan, but without specific funding attached.
- A **conceptual** improvement is needed to maintain mobility or serve multiple modes of travel, but is not included within a "financially constrained" list within a long-term plan and is not funded. Regional transportation planning agencies are required both to identify improvements necessary to provide for transportation needs, but also do so with financial constraints in mind.

The following programmed, planned, and conceptual improvements are relevant for the City:

- Programmed:
  - Modify signalized intersection at Pennington Road (2010) 2008 SHOPP
  - Signalize Elm Street/SR 99 (2010) Sacramento Area Council of Governments Metropolitan Transportation Improvement Plan (SACOG MTIP)
- Planned:
  - Flatten roadway cross-slope in Live Oak near Pennington Road (2009) 10-Year State Highway Operations and Protection Plan Program (SHOPP)
- Conceptual:
  - Widen from 2 lanes plus two-way, left-turn lanes (TWLTL) to 4 lanes plus TWLTL in Live Oak

[1] California Department of Transportation. State Route 99 Transportation Corridor Concept Report. July 26, 2010.

- Signalize Kola Street/SR 99 intersection in Live Oak

- Work with City of Live Oak to identify pedestrian/bicycle improvement projects

The above improvements relate to those identified in this Plan, and could be implemented through the SACOG Metropolitan Transportation Plan, the SACOG Metropolitan Transportation Improvement Plan, and/or the State Highway Operations and Protection Plan Program according to the guidance presented in this Plan. Bonding provided for Statewide improvements to Highway 99 may be available for use in certain segments since some projects undergoing the bidding process are less expensive compared to original estimates.

GRANT FUNDING

The City has recently been quite successful in competitive grant applications for planning, environmental, design, and construction projects. Some grant programs would be more applicable for constructing portions of the Streetscape Master Plan than others, considering the grant funding guidelines and criteria. Some grant programs have more funding – a consideration that must be balanced with the extent of the likely pool of applicants. Some grant programs require a local match, whereas some do not. City staff will continue, on an ongoing basis, to strategically assess reoccurring grant programs, as well as new programs that may become established in the future to help fund the improvements described in this Plan.

One of the more promising potential sources of grant funding is SACOG's Community Design Program.[2] In 2010, the SACOG Board of Directors awarded $17.5 million to 18 projects in the fourth round of the SACOG Community Design Program (2009-2011), including $491,000 for the Live Oak Community Trail. This program calls for applications approximately every two years for construction projects that are consistent with SACOG Blue Principles (transportation choices, housing diversity, compact development, use of existing assets, mixed land uses , quality design, and natural resource conservation).

NEW DEVELOPMENT

The City will review new development proposals for consistency with the Streetscape Master Plan. New developments within the New Growth Area (defined in Chapter 3) will be required to construct and dedicate frontage improvements consistent with this Plan. This would include curbs, sidewalks, street trees, naturalized drainage, and possibly street furniture. Developers would construct and dedicate improved sections of the State Highway and/or contribute on a fair-share basis to improvements to highway travel lanes. Whether the City requires construction and dedication or fair-share contribution to a fee program will depend on the timing of new developments relative to broader public improvement projects.

MAINTENANCE

Long-term maintenance will be required to maintain the appearance and functionality of improvements to the highway corridor. Solid waste pick-up, landscape maintenance, street sweeping, painting, and general cleaning will be

[2] For more information, please see: http://www.sacog.org/regionalfunding/communitydesign.cfm.

needed. The City took into account long-term maintenance costs in the design of this Plan. The City will be responsible for the non-structural maintenance activities and may use financing districts or other similar tools (landscaping and lighting districts, local improvement districts, etc.) to ensure funding for ongoing operations and maintenance.

VEHICLE SPEEDS

The purpose of this Streetscape Master Plan is to provide conceptual guidance for improvements along SR 99, including recommendations to enhance aesthetics, safety, multi-modal accessibility, and quality of life for residents and visitors. Vehicle speeds are a primary consideration for improvements to safety and quality of life for Live Oak residents.

High vehicle speeds (of more than 35 miles per hour) through the downtown area are a serious safety concern for the City. Slower motor vehicle speeds allow drivers to stop in a shorter distance and reduce the chance of injuring a pedestrian or bicyclist. A motor vehicle traveling on a level surface at a rate of 40 miles per hour will need nearly 300 feet to stop, whereas stopping distance is only 197 at 30 miles per hour.[3] If a pedestrian is struck by a motor vehicle traveling at 40 mph there is an 85% likelihood that the pedestrian will be killed. This percentage drops to 45 percent at 30 mph and 5 percent at 20 mph.[4]

According to the Institute of Transportation Engineers (ITE), whether a community is trying to create a retail-oriented main street or transform a suburban-style arterial into a more walkable mixed-use area, lower operating speeds (of 35 miles per hour or less) are top-priority design outcomes.[5] Vehicle speeds are influenced by:

- Signal timing;
- Narrower travel lanes;
- On-street parking;
- Paving materials with texture;
- Speed limit signage and other advisory signs;
- Street trees; and.
- Buildings constructed closer to the right-of-way to create more of a "main street" aesthetic environment.[6]

The vehicle speed chosen by a driver may be influenced by factors such as:[7]

- Presence and/or history of enforcement;
- Vehicle parking;

[3] Policy on Geometric Design of Highways and Streets, 2001 4th Edition. Chapter 3, Elements of Design. American Association of State Highway and Transportation Officials.
[4] U.K. Department of Transportation, 1987. Killing Speed and Saving Lives.
[5] Institute of Transportation Engineers. An ITE Proposed Recommended Practice: Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities. 2006.
[6] Institute of Transportation Engineers. http://www.ite.org/css/online/DWUT07.html.
[7] Florida Department of Transportation. http://www.dot.state.fl.us/trafficoperations/FAQs/SpeedLimitFAQ.shtm.

- Lane width[8];
- Adjacent land use and development;
- Shoulder width and condition; and
- Pavement type and condition.

The City intends to make of use of techniques outline in this Plan to accomplish the Plan's objectives, including improving safety by reducing vehicle speeds. Speed limits are not established by the City according to policy priorities, but rather are established by measurements of existing traffic speeds. Over time, as the Streetscape Master Plan is implemented, vehicle speeds are anticipated to decrease through Downtown Live Oak.

Caltrans recognizes that the City would like to reduce the speed limit on Highway 99, especially through the downtown area. However, changes to speed limits require an engineering and traffic survey, along with consultation with law enforcement officials. The City Council may conduct public hearings to discuss such changes and the results of the public hearing must be taken into account in considering speed limit changes. Caltrans documents note that speed reduction can be achieved through design changes and traffic control devices to reduce the speed of the motorist. If changes are made to a section of the highway that are intended to lead to a speed limit reduction, the District Division of Traffic Operations can recommend that the speed limit be reduced and can place speed limit reduction signage in these areas as an interim solution. Caltrans would complete an engineering and traffic survey within six months and signage must comply with the results of the engineering and traffic survey.

Caltrans has supported community efforts to improve the aesthetics and functionality of State highways, including through efforts such as this Plan, which is designed to address both local and regional needs for Highway 99. Caltrans has also published documents that assist local governments in collaborative efforts to establish more "Context Sensitive Solutions" for State highways that also serve important local purposes. From the 2005 document, "Main Streets: Flexibility in Design & Operations:"

> *Main streets through a community that also happen to be state highways provide access to businesses, residential roads and other nearby properties. Main streets serve pedestrians, bicyclists, businesses and public transit, with motorized traffic typically traveling at speeds of 20 to 40 miles per hour. Main streets give communities their identity and character, they promote multi-modal transportation, support economic growth, and may have scenic or historic value.*
>
> *The California Department of Transportation (Caltrans) recognizes the value of a main street to a community and understands that planners and designers need to address community values when developing highway improvements where state highways also serve as main streets. Caltrans is committed to early and continuous public*

[8] With every foot that a lane is reduced, the 85th percentile speeds can be expected to be reduced by approximately 3 miles per hour. Fitzpatrick, Kay et al, "Design Factors That Affect Driver Speed on Suburban Arterials," Research Report 1769-3, Texas Transportation Institute, June 2000. Available at: http://www.arlingtonva.us/Departments/CPHD/forums/columbia/pdf/lane_width.pdf.

participation to accommodate a community's values into the planning and design of projects.

The City intends to continue this collaborative effort with Caltrans to implement the Highway 99 Streetscape Master Plan and achieve both City and State objectives for this important travel route.

Appendix A

Appendix A

What should Highway 99 in Live Oak look like in the future? Please come tell us!

Live Oak Highway 99 Streetscape Design Workshop
Monday, June 28th, 6:30 p.m.
City Hall – 9955 Live Oak Blvd, Live Oak, CA

The City of Live Oak will hold a public workshop on Monday, June 28th at 6:30 p.m. at City Hall, which is located at 9955 Live Oak Boulevard. All Live Oak residents, property owners, and business owners are encouraged to participate and share their opinions on the future of Highway 99 in Live Oak.

The focus of discussion at this workshop will be potential design ideas for State Highway 99 through Live Oak. The City is preparing a conceptual streetscape plan for Highway 99. This plan will identify future improvements along the State Highway 99 needed to enhance its look, function, and safety; pedestrian, bicycle, transit, and vehicle access; and the local quality of life.

The City of Live Oak encourages those with disabilities to participate fully in the public hearing process. If you have any special needs to allow you to attend or participate in this public hearing process, please call 530-695-2112 prior to the public hearing, so that we may accommodate you.

Dear Business Owner:

State Route 99, our Live Oak Boulevard, operates as both Live Oak's Main Street and as an important north/south California state highway route. The road also functions as frontage for your business.

Making all of these roles work together well requires quality planning. That's why the Live Oak City Council approved moving forward with the SR 99 Streetscape Master Plan. The project is a collaborative effort between Caltrans, the City of Live Oak, public safety, Live Oak residents and business owners and other interested parties to plan the highway corridor through Live Oak.

The kick-off for this project is a Public Meeting on Monday, June 28th, 6:30 p.m. at Live Oak City Hall. At the meeting our project consultants will discuss the planning process, provide images of highway corridors in communities in other parts of California, and solicit ideas from those in attendance.

Please consider attending this important meeting and sharing your thoughts, ideas and vision. Community involvement is key for ensuring a successful project. RSVP to Kathleen Caldwell, 695-2112 or kcaldwell@liveoakcity.org.

Thank you in advance for your consideration.

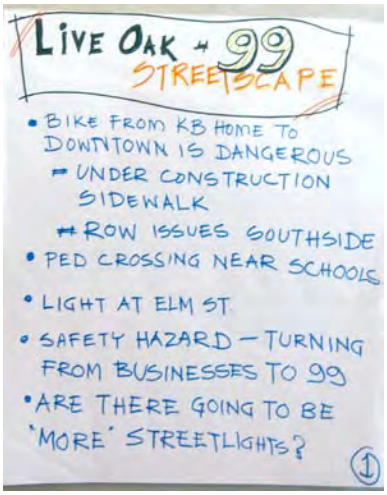
Sincerely,

Jim Goodwin
City Manager
City of Live Oak

LIVE OAK HIGHWAY 99 STREETSCAPE

MINUTES FROM PUBLIC MEETING 1

June 28, 2010



- **What are the main issues today?**
- **Is pedestrian and bicycle safety a problem?**
    - *Live in KB Homes, and there is a stretch where it is very dangerous to walk and bicycle (down Pennington Road) (Staff noted that sidewalk improvements are currently underway on the north side, but south side improvements are more difficult due to right-of-way dedications)*
    - *Highway 99 crossing for school kids is dangerous around Kola. Crosswalk markers that flash might help.*
    - *Question about whether a traffic signal is being put in near Wada King? (Staff confirmed plans are Elm Street intersection with 99)*
    - *Crown cross section of 99 at Wada Kings is so high that it creates a safety/visual hazard for customers pulling out its parking area. (Consultant noted that removal of the crown is on Caltrans long-term plans for improvements)*
    - *No street lights north of Pennington at Betty's and in front of Pizza factory to increase visibility of pedestrians at crosswalks at night*
    - *Need continuity of paving materials for visually impaired. To walk to downtown, varies from concrete to dirt to asphalt. Parts are very pretty, while other parts are not very pretty.*
- **Does the corridor lack an inviting environment that would be safe to shop and walk?**
- **Is pedestrian friendliness an issue?**
- **Are aesthetic issues the most critical?**
    - *Parts of Highway 99 are OK, but other areas look really bad*
    - *Like Gridley, but nothing to do or see in Live Oak. The new development at Pennington with the Bank is nice.*
    - *The brick inlay in the highway at the crosswalks (in Gridley) provides a sense that you are in the City.*
    - *Caltrans: check out Streetprint.com for ideas on alternative paving patterns.*
    - *Staff question: If you think about 99 as the main street, what would you expect to see?*
        - *Buildings on the street that are not in terrible shape. Do something with vacant buildings. Property*

owners have a responsibility – need to keep the property up or sell it.

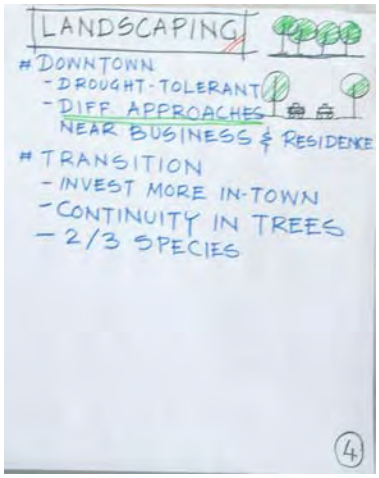
- Lack of landscaping – the single most attractive feature of a city is inviting landscaping (cited the example of new landscaping in Yuba City along 99 at Colusa).

- **Is the mix/amount of signage an aesthetic issue?**
- **What other issues are priorities for you?**
  - *The lighting from Elm Street to Kola is a problem. This section of 99 is a highly used segment. Real problem for drivers because of low visibility for pedestrians in crosswalks.*
- **How should crossings of SR 99 be treated?**
  - *Are we thinking of premium budgets—who is paying for the improvements? The City? Property owners? Caltrans (Consultant – need to be cost effectives, not "bite off more than we can chew." Funding will come from multiple sources)*
  - *Should look at new design approaches and technologies for safety crossings (bulb-outs, pedestrian refuges, special crosswalk treatment, etc.) Need to consider this.*
  - *Lack of lighting is one of the most unsafe aspects of trying to operate along the corridor as a pedestrian.*
  - *One of the safest places to cross a street may not be a corner due to the all the activities occurring at intersections. Need to consider a number of intelligent decisions on how to keep people safe in crossing the highway.*
  - *Should look at good examples of what other communities have done. Likes what City of Gridley has done. Registers that drivers are going through a populated area.*
  - *Landscaped median can provide an attractive feature, but need to ensure does not interfere with businesses.*
  - *Could have islands for crossing with a tree every 150' or so to provide safe areas to cross but not interfere with the business access.*
- **What is the preferred approach to sidewalks?**
  - *Would feel safer if sidewalks were not right next to the street. Would feel safer. Street trees would help too. (Consultant noted general nods of agreement)*
  - *Should not lose the small town feel and character. Should not become a linear commercial district. Don't lose the historic feel of downtown Live Oak; 50 years of history.*
  - *Question about paving options (Caltrans explained a number of options with materials, colors, elevation changes).*

- *A change in crosswalk materials and street trees announces that one is entering a town.*
- *Business concern about the putting sidewalks at the front door of businesses – would not leave room for customer parking. Need to consider the depth of properties.*
- *Wandering sidewalks can be more attractive.*
- *Change in color is excellent, but also need enough change in texture to alert driver and imprint a sense of need to slow down. (Caltrans representative noted a need to be careful about handicapped accessibility issues with changes in texture)*

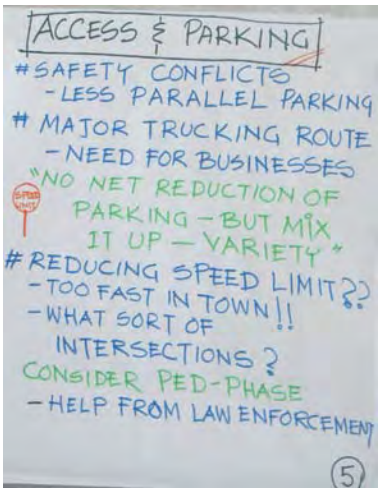
- **Should additional safe crossings be identified?**
  - *There will be need for additional crossing as the City grows.*
- **What other ideas do you have for pedestrian safety and comfort?**
  - *Consultant noted that the City is in the process of providing for improved north-south bicycle connections paralleling SR 99. One participant thought this was a good idea.*

- **What landscaping approach would work best**
  - *More emphasis on drought tolerant plants – would help the City decide what approach to go. (General agreement)*
  - *Should have some type of treatment that would soften the look of the highway but could be a transition to eventual commercial use some day. Right now, many properties along SR 99 are residential but could be commercial in the future. When this change happens, the streetscaping should also change.*
  - *Should have vegetation that provides consistency throughout the corridor, would provide more feeling of a city. A selection of plants used throughout the corridor.*



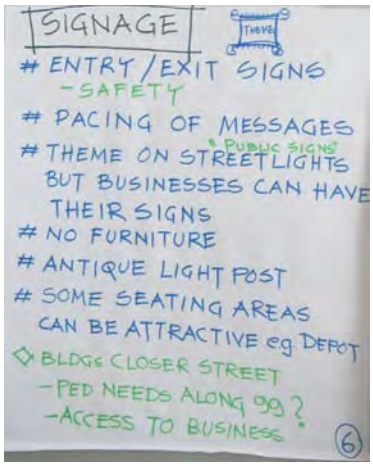
- **Should the approach vary from downtown, newer, mixed-use areas, rural transition zones?**
  - *In town is where most of the investment in streetscape investment should go. Farther out, an attractive tree-lined road may be all that is needed.*
  - *Would like to see continuity in types of trees—maybe two or three, but not a large variety (Caltrans cautioned against just one type of tree due to disease vulnerability)*
  - *Some businesses are too close to the road to accommodate a tree- don't want to put someone out of business to plant a tree.*
- **Should street trees be planted and preserved in the corridor?**
- **Should rural areas use swales for water quality and aesthetic benefit and to reduce costs?**

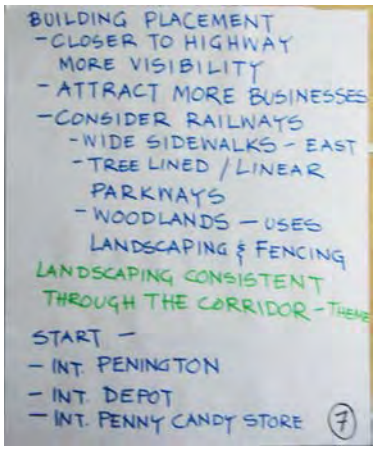
- **What approach to building placement do you favor?**
    - *Stay away from parallel on-street parking.*
    - *A lot of traffic in Live Oak – it is a major trucking route*
    - *Wada King uses on-street parking – important to its business*
    - *Question: Is there any anticipation of reducing the speed limit below 35 mph? Sometime it can be dangerous to stop for a pedestrian when other motorists are travelling at much higher speed.*
    - *Speed is too fast in town. Speed limit should be 25 mph – speed limit is too high.*
    - *In cities, sometimes the signals are set so that all motorists stop and pedestrians can go.*
    - *Do the flashing signs indicating speed make motorists more aware of speed?*
    - *Help from law enforcement would help – crosswalks by themselves may do it.*
    - *Gridley is attractive with the shopping center, no parking on the street, and buildings placed closer to the street.*
    - *When buildings are closer to the street, it makes for a better pedestrian environment that is more inviting.*
    - *Buildings closer the street helps make the street more pedestrian friendly and getting the cars away (from the front of the buildings?)*
    - *If the Pizza Factory were closer to the street, it would be more attractive, as an example. Seems to be more comfortable.*
    - *It's a lot easier to find a business while driving when not set so far back.*
    - *Live Oaks needs to attract business in town—too much business going to Yuba City. The money has to stay in Live Oak.*
    - *Problem with one-sided downtown due to the railroad tracks. Maybe wide sidewalk on one side and meandering pathway along the other side.*



- **Should the approach vary between downtown and outlying areas?**
- **Should access be consolidated to enhance safety?**
- **Should access to the highway properties be provided from side streets?**
- **Should parking be provided in front, side, or back?**
    - *Use a mix of parking – some along the side and back to provide variety and lend interest*
    - *Parking of big-rigs on front of stores when set back from the highway too much blocks view of the business.*

- **Should there be a theme to signage?**
    - *Consistent style of public signage and street lights but don't focus on consistency of business signage.*
    - *Doesn't see the need for benches on SR 99 – not the kind of place one wants to sit and watch cars go by.*
    - *Old Folsom antique light posts rather than the cold steel light posts.*
    - *No appealing place to sit – may at the historic Depot and the Oak Tree could be a nice place to sit.*
- **Should signage be used for the downtown district?**
- **To what degree should aesthetics be considered for signage?**
- **What design concepts would create a better visual impression?**
    - *Should have list of local churches (other key places of interest)?*
- **Should Live Oak have entryway signage?**
    - *At least having one at the outer limit to announce entry to the City and slow traffic*
    - *Could also have "pacing" of messaging to provide directions of places to go*





Where to start:

- *Pennington and SR 99*
- *Elm Street at the Depot*
- *Penny Candy store and Kings Market – has great potential for a commercial area.*

City of Live Oak

Collaborative Highway 99 Streetscape Master Plan

Public Workshop

June 28, 2010

Introductions

- City staff
- AECOM
- California Department of Transportation

Summary of Workshop

- Purpose of Workshop
- Purpose of Plan
- Existing conditions
- Present and discuss example streetscape ideas
- Receive input on preferred approach

Purpose of Workshop

- Identify key issues of concern
- Example approaches to streetscape design
- Pros and cons of different approaches
- Input on design ideas & preferences
- Answer questions

Purpose of the Plan

- Guidance for improvements along SR 99
- Certainty for property and business owners
- Enhance aesthetics
- Improve function, convenience and safety for all users
- Identify locally appropriate solutions for this highway and main street

EXISTING CONDITIONS:

Pedestrian/Bike Safety & Comfort

- Few east-west crossings
- Highway 99 is a barrier b/w homes, schools, other destinations
- Discontinuous sidewalks
- Some sidewalks are adjacent to highway travel lanes – particularly newer developments

EXISTING CONDITIONS:
Landscaping/Drainage

- Minimal landscaping
- Few street trees
- Unbroken impervious surfaces
- Stormwater runoff is not slowed or filtered

EXISTING CONDITIONS:
Access/Building Placement/Parking

- Buildings mostly set back from highway
- Parking mostly in front of buildings
- Underutilized on-street parking on side streets
- Many curb cuts & individual property access
- Many areas of “informal,” uncontrolled access

EXISTING CONDITIONS:

Wayfinding/Entryway Features

- Outdated and difficult to see entryway sign
- Banners along 99
- No themed signage for businesses or attractions

GROUP DISCUSSION:

Identifying Key Issues

- What are the main issues today?
- Is pedestrian & bicycle safety a problem?
- Does the corridor lack an inviting environment that would make visitors stop and stroll?
- Is pedestrian friendliness an issue?
- Is vehicular access and safety an issue?
- Are aesthetic issues the most critical?
- Is the mix/amount of signage an aesthetic issue?
- What other issues are a priority for you?

GROUP DISCUSSION:
Bicycle/Pedestrian Safety & Comfort

- How should crossings of SR 99 be treated?
- What is the preferred approach to sidewalks?
- Would you prefer separated sidewalk and street trees for safety and aesthetics?
- Should additional safe crossings be identified and improved?
- What other ideas do you have for pedestrian safety & comfort?

EXAMPLES:
Bike/Pedestrian Safety & Comfort

Downtown Area

Separated sidewalk but no bike lane.

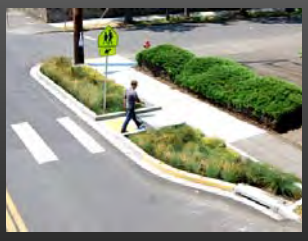
Distinguished paving on pedestrian and bike ways adjacent parking.

Separated sidewalk with landscaped parkway, paved crosswalk, median and dedicated bike lane.

EXAMPLES:
Bike/Pedestrian Safety & Comfort

New Mixed-use Area

Striped pedestrian crosswalk with sidewalks adjacent travel lanes.



Bulb-out landscaped and striped pedestrian crosswalk with combined pedestrian and bike way adjacent to travel lanes.

Dedicated bike lane with separated sidewalks and landscaping adjacent travel lane.

EXAMPLES:
Bike/Pedestrian Safety & Comfort

Rural Fringe Area

Dedicated bike lane and landscaped buffer , but no sidewalks.

Landscaped median, dedicated bike lane and separated sidewalk.

Striped bike and pedestrian way adjacent travel lane.

GROUP DISCUSSION:
Landscaping/Drainage

- What landscaping approach would work best?
- Should the approach vary from downtown, newer mixed-use areas, rural transition zones?
  - If so, how?
- Should street trees be planted and preserved along the corridor?
- Should rural areas use swales for water quality and aesthetic benefit and to reduce costs?

EXAMPLES:
Landscaping/Drainage

Downtown Area

Large shade trees at regular intervals in the sidewalk; concrete gutter and parking adjacent travel lanes.

Separated sidewalk with narrow grass strip next to travel lane.

Sidewalk adjacent to travel lane with landscaping on the interior side .

EXAMPLES:
Landscaping/Drainage

New Mixed-use Area

Landscaping interspersed along the Highway and at intersections with bollards or fence to separate sidewalks from travel lanes; concrete gutter for drainage.

Grassy strip separating combined bike/pedestrian way with a grassy swale and drainage to the interior side.

Dedicated landscaping along Highway with separated sidewalks; drainage within landscaped parkway.

EXAMPLES:
Landscaping/Drainage

Rural Fringe Area

Stormwater drainage ditch along Highway with separates bike and pedestrian way.

Engineered bioswale next to travel lanes separated with guard rails..

No dedicated landscaping or drainage system; landscaping and drainage features within property lines.

GROUP DISCUSSION:

Access/Building Placement/Parking

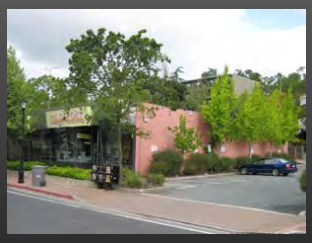
- What approach to building placement do you favor?
- Should the approach vary between downtown and more outlying areas?
- Should access be consolidated to enhance safety?
- Should access to highway properties be provided from side streets to enhance safety?
- Should parking be provided in front, on the side, in back?

EXAMPLES:

Access/Building Placement/Parking

Downtown Area/ New Mixed-use Area

Parking next to travel lanes.



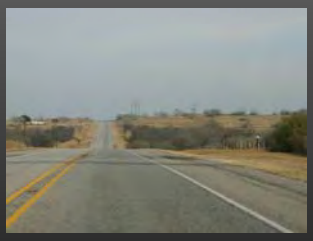
Parking at the side of the building.

Parking at the back of the building with access from the side of the building.

EXAMPLES:
Access/Building Placement/Parking

Rural Area

Depressed parking next to travel lanes.

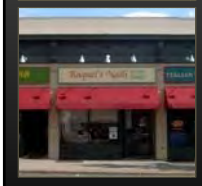


No on-street parking in rural areas.

GROUP DISCUSSION:
Wayfinding/Entryway Features

- Should there be a them to signage along 99?
- Should signage be used for the downtown district, for local attractions?
- To what degree should aesthetics be considered for signage along the corridor?
- What design concepts would create a better visual impression?
- Should Live Oak have entryway signage to the City, to downtown, or both?

EXAMPLES:
Wayfinding/Entryway Features


Other Comments, Questions?

Next Steps

- Technical advisory committee meetings
- Draft corridor plan
- Public workshop on draft corridor plan
- Final corridor plan
- Hearing to adopt corridor plan
- www.liveoakcity.org

AGENDA

CITY OF LIVE OAK COLLABORATIVE HIGHWAY 99 STREETSCAPE PLAN

Technical Advisory Committee Meeting, July 27, 2010

Goals and objectives:

- Role and vision of the TAC committee members
- To understand the project scope, existing constraints and opportunities in the planning area
- Identify conceptual guidance for improvements along SR 99 to enhance aesthetics, safety, multi-modal accessibility, and quality of life for residents and visitors.
- Identify conceptual recommendations for improvements that both maintain the function of this important regional route and also improve pedestrian friendliness.

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1. **Introductions**	**9:30 am**
2. **Purpose of Plan**	**9:35 – 9:45 am**
3. **Existing conditions – opportunities and constraints**	**9:45 – 10:15 am**
4. **Discussion of potential design approaches**	**10:15 – 11:00 am**
5. **Identification of gateway sites**	**11:00 – 11:15 am**
6. **Schedule and next steps**	**11:15 – 11:30 am**

MINUTES

CITY OF LIVE OAK COLLABORATIVE HIGHWAY 99 STREETSCAPE PLAN

Technical Advisory Committee Meeting, July 27, 2010

1. Introductions

Each participant introduced themselves and below is a record of their affiliation and phone number:

Name	Affiliation	Contact Information
Diane Hodges	Mayor, Live Oak	(530) 632-9160
Jim Goodwin	City Manager, Live Oak	(530) 695-2112
Scott Rolls	Public Infrastructure	(530) 895-1422
Denis Cook	Contract Planner, Live Oak	(530) 695-2112
Glen Mercer	Sutter County Sheriff	(530) 695-2122
Dan Root	Sutter County Fire	(530) 695-3522
Michelle Parkison (Ynez)	Caltrans	(530) 634-7630
Linda Lang	Wada King	(530) 695-2125
Gaylor McBride	Resident, Live Oak	(530) 673-7114
Melva McBride	Resident, Live Oak	(530) 673-7114
Judy K. Richards	Resident, Live Oak	(530) 695-1311
Windy Hernandez	Gold Country Bank	(530) 695-1813
Bob Woten	Pizza Factory	(530) 695-3232
Reggie Singh	Live Oak Pharmacy	(530) 695-5100
Matthew Gerken	AECOM	(916) 414-5892
Nivi Das	AECOM	(916) 266-4911

2. Purpose of plan

- To provide conceptual guidance for SR 99;
- To provide certainty to existing business owners;
- To ensure function as both a regional thoroughfare and main street;

- To improve bike and pedestrian safety and convenience;

3. Purpose of today's meeting

- Review draft opportunities and constraints analysis memo
- Identify anything we missed or anything we do not have presented correctly
- Discuss ideas to consider for corridor design

4. Existing conditions, constraints, opportunities, and design preferences

Matthew explained how the focus areas were identified. Focus areas are based loosely on the General Plan land use designations, with the idea that different design treatments should be provided for different portions of the corridor.

DOWNTOWN CORE – Matthew highlights constraints along the corridor, along with opportunities specific to Downtown Core Area section of the Highway 99 corridor through Live Oak. Notes from the group discussion follow.

- Bike and Pedestrian Safety
    - Denis: What is the current Caltrans right-of-way? What would the future 4-lane Highway 99 cross section look like through Live Oak? Is Caltrans going to buy 'no access' rights along the highway that may restrict where sidewalks would go? There is a need to layout highway corridor – draw the Caltrans plans and overlay on parcel configurations.
    - Matthew: This is an excellent idea that will be a part of the next stage of work, where we consider specific design ideas based on the consensus from this first TAC meeting and the first public workshop.
    - Michelle: The concept report has 4-lane highway through Live Oak.
    - Matthew: part of the purpose of the Plan is to find context sensitive solutions that work for Live Oak and also work for Caltrans, rather than strictly relying on what is in the Highway Design Manual.
    - Jim: AECOM will work with Live Oak community and Caltrans to find a solution for the highway corridor.
    - Reggie: 4-lane especially in Downtown is not feasible for business. Don't see 4 lanes happening any time soon; don't have space for 4 lanes; would take out too much land. How will the parking in front of building be addressed?
    - Linda: No option for parking in the back of the building so 3-lane may work. Businesses will like traffic to slow down and not flow through Live Oak.
    - Matthew: General Plan calls for 4-lane highway corridor based on local and regional growth.

- *Group Consensus: The real issue is not 4-lanes but to address the parking availability for businesses, as appropriate.*
    - Mayor Hodges: The Plan needs to create a visually inviting approach to Live Oak and address business concerns.
- *Group Consensus: Bicycle traffic should not be on Highway, but on parallel routes to 99, such as the Live Oak Community Trail, Larkin, Broadway, and other roads along 99.*
    - Mayor Hodges:
        - Provide visual cues at pedestrian-bike crossings – such as different color paving, different material.
        - Identify new locations for transit stops – for safety have them along Broadway instead of existing 2 stops on Highway; also spread out through community.
    - Reggie: don't want to have concrete everywhere, should have landscaping also.
    - Linda: would not want to walk along edge of 4 lane highway; is it possible to have pedestrian walkway over on Broadway rather than along highway?
- *Group Consensus:* Conceptually a sidewalk along highway with landscaping as a buffer to create an attractive pedestrian environment; there should be a continuous sidewalk along highway to connect businesses and provide an inviting environment for pedestrians and to encourage passersby to patronize local businesses.
    - Bob: Look at doing one-way access through parking areas or other creative arrangements to keep the same amount of parking but also add sidewalk and landscaped buffer; AECOM to create vignettes to help visualize how this would work.
    - Denis: Consider on-street parking to create a more main street feel, slow traffic, and add a buffer between travel lanes and the sidewalk?
    - Judy and Linda: Crowning on highway is a safety and visibility hazard – may need to be addressed first before considering enhancing pedestrian crossings.
    - Dan: with a cart or in a wheelchair, the highway crowning makes very difficult to maneuver.
    - Glenn: low-bed semi trucks get stuck across highway due to crowning.

- Building Placement and Parking
    - Reggie: building placement and parking codes affect local businesses – Parking behind buildings without good lighting and visual access would not be a good idea.
    - Jim: discussing example of big box stores and "sea of parking" along sections of highway in Yuba City. Is this more of the environment we want or something different?

- Windy: If parking is at the back or side, it is not safe during night; if we have alley access are we encouraging railway crossing by pedestrians to go to Broadway?
- Mayor Hodges: parking access and placement may depend on the use of the building – some larger users located in new growth areas might need more parking in the front, whereas other uses may not.
- Matthew: Consider a well-kept parking area with good casual visual access and lighting as a way to ensure safety when moving parking to the back/side. AECOM to create vignettes to help visualize.
- Windy: Businesses have a history here, and there may not be a one size fits all solution (for example: not all front-loaded parking) but we need to beautify the whole area – keep unique areas but not all symmetric.
- Windy: do not like string of parking lots along the highway.
- Reggie: Mix it up but in the core it makes more sense to bring buildings closer to the highway. Missing sidewalks and landscaping today.
- Linda: Enhance the feeling of a city by bringing buildings along Highway. There is not much feeling of a city as drive through Live Oak today; concept of bringing businesses toward the highway would enhance feeling that are in a city and create visibility; make people more aware of businesses.

- *Group Consensus:* mix of parking arrangements based on circumstances; provide some allowance for on-street parking; provide landscaping between highway and sidewalk; bring buildings closer to the street for the Downtown Core Area.

MIXED USE AREAS – Matthew highlights constraints along the corridor, along with opportunities specific to designated Mixed Use areas along the Highway 99 corridor through Live Oak. Notes from the group discussion follow.

- Bike and Pedestrian Safety
  - Denis: Include the railway as a constraint. All future crossings need to cross both highway and railway.
  - Jim: Railway also creates a constraint on the land use.
  - Windy: have community resource for children- Father's House; difficult area to reach today from certain locations; sidewalk ends there; people walking to churches today also; beyond that, not much is developed today.
  - The crossing near Pizza Factory (Kola) is also unsafe today.
  - There is a need to continue sidewalks from downtown to existing destinations in the shorter term. In longer term, extent continuous sidewalk into new growth areas, too.

- *Group Consensus: In developed areas (not open space buffer areas), sidewalk should be continued along the highway as a part of new development and redevelopment.*
    - Denis: Are there any Caltrans 'no access' strips?
    - Michelle: There is no existing 'no access' area between Riviera and Paseo and none anticipated in the future.
    - Matthew: there is a need to communicate design ideas with maps, using street names and photos.
    - Windy: Is there an option to have 4 lanes on the outskirts and then 2 lanes through Live Oak?
    - Scott: A 4 lane highway would be required based on future estimated traffic volumes. Caltrans Business Plan shows 4-lane highway from Lomo Crossing to County line and then someday to Gridley.
    - Judy: In the near-term, the focus on enhancing pedestrian crossings should be in areas that serve schools and residents (Pennington & Kola). But also, in the context of new development, need to identify safe ways to cross highway and railway.
    - Scott: Big issue is railway – they do not prefer at-grade crossings so any new crossing at railway has to be over the tracks.
    - Denis: for crossing points in new growth area (of Highway), we need to look at places where there will be signalized intersections in the future. Frequency of crossing points depends on Caltrans standards. Can't have uncontrolled ped/bike crossing points.
- *Group Consensus:* Landscaping enhancements only and no sidewalk west of the highway in new growth areas where General Plan designates open space buffer. For properties that develop as Employment, Community Commercial, and Commercial Mixed Use, continuous sidewalks with landscaped buffer is required; look for opportunities to cross the RR and Highway in new growth areas.
- Building Placement and Parking, Landscaping
    - Denis: 50% shade coverage in 15 years for parking lots.
    - Think about Metro PCS, haircutting, etc.; weird that the building is oriented to local streets; fewer vehicular conflict points.
    - Would depend on what goes in there – if big box comes in, will want parking; if have traveler with motor home; would pull into area to patronize the area.
    - Denis: should encourage as many pads along highway as can.

- Scott: with landscaped areas, buffer areas, need to consider whether would need to irrigate the area, consider long-term maintenance.
- Matthew: talking about in between approach with Rite Aid where some parking in front and some elsewhere.
- Denis: if have 50k sq.ft grocery with 300 spaces, want parking in front; have guidance to negotiate on getting pads up front and parking.

- *Group consensus:* Landscaping is critical in creating an inviting and pleasing environment for Live Oak; in new growth areas, design and landscaping is a bigger factor than building placement in creating pleasing environment; be more flexible on parking and building placement – provide guidance for high-quality design environment but be more flexible than in Downtown Core Area in order to attract wide array of business developments; buildings can be further from the highway in new growth areas; have heavy landscaping in parking lots; do not provide bike lanes along highway in new growth areas, either – look at parallel routes.

- Wayfinding and Signage
  - Nivi – could use overcrossings as welcome signage, too; this is a long term crossing; but need interim solution, too.
  - Mayor Hodges: Entry to Yuba City is a good example; Need nice, lighted, welcome to Live Oak sign.
  - Windy: don't like gateway type large overcrossing sign on south side because of business that would be left out; do not look at a big crossing sign, but some other type of smaller sign for entryway on south side.
  - Linda: thinks that Yuba City sign is too small; should be higher in the air; should do scale model to view before deciding type of signage. Design should be high quality.
  - Reggie: sign is set back and too small in Yuba City.
  - Denis: have to negotiate with private property owners on sign placement.
  - Jim: area between 99 and RR make difficult to locate the signage.
  - Mayor Hodges: need for different banners for different areas; some kind of change that grabs your eyes.

- *Group consensus:* Signage can be phased, should be similar theme; signage scale needs to be appropriate.
  - Downtown Core perhaps extended somewhat north and south; Mixed Use Areas are transition areas;
  - Extend Downtown Core Area to Nevada and Ash.

- Access from Highway or from side streets?
- Matthew: yes, this is charted out in the General Plan – spacing limitations along the highway mean that most access would be from planned local streets in new growth areas.
- No need to distinguish entry areas from new growth mixed use areas.
- Denis: Gateway will be more a location and not a strip.
- Denis: Distinguish design by land use type – for example heavily landscaped employment uses, some of which may be noxious, and commercial areas with good visibility next to highway.
- Jim: Live Oak needs to look different from Gridley or other communities.
- Windy: Oak tree is a historic feature for the community – the area needs to be beautified.
- Train depot area has the opportunity for outdoor seating areas towards the track side.

5. Identification of gateway sites

- AECOM to come up with gateway site locations.

6. Schedule and next steps

- Next TAC meeting on August 31st, 2010 @ 9:30 to 11:30am
- AECOM to present design ideas for the Downtown Core Area.

AGENDA

CITY OF LIVE OAK COLLABORATIVE HIGHWAY 99 STREETSCAPE PLAN

Technical Advisory Committee Meeting, August 31, 2010

Goals and objectives:

- Review conceptual recommendations for improvements that both maintain the function of this important regional route and also improve pedestrian friendliness within the Downtown Core Area.

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1. **Introductions** **1:30 pm**
2. **Review of the design concept** **1:35 – 3:00 pm**
    a. Design approach
    b. Conceptual sections
    c. Conceptual sketches
3. **Schedule and next steps** **3:00 – 3:30 pm**

CITY OF LIVE OAK COLLABORATIVE HIGHWAY 99 STREETSCAPE PLAN

Technical Advisory Committee Meeting, August 31, 2010

NOTES:

Discussion of ROW layout and existing buildings

- Don't have the new Tower Mart aerial info. Not sure how this fits in and the new depot --- need to superimpose aerial for these areas on our mapping
- Note: We have site plan for the depot; make sure incorporated
  ***** Get site plans for Tower Mart from Scott Rolls and any available plans for the parking lot project next to the Depot*

Discussion of increasing density of landscaping on the way into the downtown area, perhaps 2 rows of trees and meandering sidewalk – *no consensus here*

Discussion of "dressing up" the Elm Street intersection, while considering constraining condition of the building frontages

What type of treatment at key intersections – colors, materials, etc (similar to Gridley?)

Need visual cues to slow down at Ivy and Kola; mid-block crossing?

Parking – keep existing on-street parking; add in areas with small parcels

Ivy is closed as a RR crossing; Kola is open; ** need to revise the diagram*

Need 35 mph or less for trees to be within 5 feet of the highway

Caltrans Representative: Barrier – tree in median – can put barrier between tree and travel lane; if wanted median down the middle with trees; trees of a certain size;

Clear recovery zone – from edge of travel lane; (not ROW)

- Nivi to coordinate with Caltrans on types of trees, pavement treatments, street furniture

Discussion of having boxed landscaped areas with wider sidewalk area: (as in downtown area) rather than continuous sidewalk?

Jim – Which intersections are most constrained?

Discussing Country Bank – need to add separation with this new construction; a little creek there now.

Caltrans: assume 12' --- ***Nivi to check with Caltrans regarding the possibility of 11' lanes*** – design so that 12' and 11' works.

Jim – asking about Nevada to Ash – at any of the intersections along the way; could look like any of the cross sections

Consensus: look at short term plan that preserves parking and what is going on and have a longer term plan on what to do when buildings do change; Denis – demolition rather than remodel would trigger this

Need to address what happens when travel lanes are added in areas where people are backing out into the highway. Would lose backup parking someday. Would have to provide some type of on-street parking as well.

- Do not need to count potential parking on street and consider shared parking and overlap; and amount of growth and parking spaces needed overall in different "districts"

Jennifer - Business person – cut throughs on Kola Street – want to order some fencing to prevent driving over barriers.

With 4 lanes; cannot have parallel parking; need 2 tiered plan to deal with demolition and highway expansion.

How many parking spaces? Scott – want public parking somewhere?

- *It is outside the scope of the plan to identify strategically located areas for public surface parking lot.*
- *Get survey data from Scott – Live Oak Plaza at Pennington and 99; Elm Street; Tower Mart; survey data at Elm; Survey data at Archer; Kola Street; some do not have building footprints; some do*

Scott – centerline of the highway will change grade wise; some of the improvements may not fit – too high or too low – Pennington is a good example; highway is too high to west here; other locations – on east side near Pizza Factory – properties are lower than the highway.

*****Scott – don't worry about existing improvements.*

Jim – *just assume that existing businesses could stay and preserve parking strategy but provide solution for if the highway expansion starts first.*

Denis - need to look at this as a very long term project; makes existing problems less important. Need to decide what cross section looks like --- with areas of exceptions.

Scott: Subway area might need to stay; Ace Hardware; highway elevation may not change much there.

Mayor Hodges: vision for this committee is to enter and leave Live Oak; need to communicate that entering a city and slow down.

***** Identify research on canyon effect and parking on speeds.*

Mayor Hodges: need to realize that coming into a City

**** Note -show drawings of potential gateways – keep trees; gateway locations and designs.*

Gary Baland: gateway also should communicate, in addition to entering city, also visit our businesses. Like safe areas in the median for pedestrians, though. Or, could have bulb outs (allowed by Caltrans?)

Consensus: *look at median refuges and key locations for crossing; but not generally approving of continuous median. However, would be very tight trying to get medians at crossing locations.*

Gary: but, mid-block crossings may in some cases be safer. Scott – but motorists are not looking for you -- have example in Gridley at Black Bear – must be identified; want to channelize pedestrians there.

Mayor Hodges: Kola & Nevada would be major crossings – not necessarily at these intersections, but around them somewhere.

Caltrans: Walnut in Winters – painted refuge islands; pretty wide; painted; one on 50 over Myers; new post office there; wanted crossing – 45-55 mph. not for pedestrians per say; was painted for drivers.

Jim – pedestrian islands without compromising turn lanes LHT pockets. Elm to Nevada – 5 lanes; no restricted turnings. But, look at possible bulb outs in some cases where no RHT lane.

Jim – existing conditions – students don't want to use intersections today; should we designate mid-block crossings; crosswalks at uncontrolled intersections; but, with sidewalks would direct people more; could enforce jaywalking between 2 signalized intersections; that is a violation now.

Nivi – perhaps the idea of treated pavement along downtown median locations.

Denis – some combo; standard intersection configuration with treated pavement would be good; don't see bulb out working on State Highway.

Gary – look at bulb outs potentially. Medians where possible. Look for opportunities.

Scott – bulb outs do not necessarily have to eliminate the LT RT lanes depending on how done - could with RT lanes have a little pork chop area for refuge.

Scott – if bulbouts are only taking out parking; could have bulb out there; might not get as much of a neck down for pedestrian crossing.

Scott – no RT pockets today that are formalized.

Consensus – *protect continuous left turn lane; where opportunity add pedestrian/bike feature.*

Gary – down at Pizza near Nevada – may be opportunity to add median.

Parking – extend on street parking throughout downtown area? Parking south of Elm to Archer only; south of Archer mostly residential and no need for parking; no parking south of Wada King on west side.

Jim – monument concepts - archways? Would Caltrans allow archway across Highway. *** Jennifer will ask HQ; Nivi to follow up.

Entryways --- phased approach – have ultimate concept at entrance to town; entrance to City then entrance into Downtown; Downtown would be permanent.

Gary – gateway concept used for the Live Oak Community Trail was Live Oak specific – RR; Buttes; Oak Tree; lots of different types of signs; incorporate silhouette of the Buttes; physical restrictions on signage.

Denis – tree lined streets along Highway 99; cost of maintenance is a concern; say "tree lined" parkway, not landscaped parkway; tree maintenance is lower than landcover; parking between travel lane; park strip; never heard of problems with trees affecting trucks; where feasible should have tree lined streets.

Denis – decomposed granite; pavers; etc can be used instead for maintenance; water sensitive landscaping; make sure good drainage.

Mayor Hodges: space them as to not block the business; tree species;*** where curb cuts; can't have trees; will have to limit somewhat for turning movements.

*** in new growth higher speed areas; require on private property tree planting – this will have to be a separately described design component – not per say a part of the streetscape plan, but provide recommendation for City Municipal Code requirement.

Denis – most businesses today are going to ground signs for most businesses or max 10' signs

Jim – as new construction occurs; can put on property line and not landscape or if set back need to landscape.

Denis – every 30' on center is the standard for tree planting in the current code.

Consensus --- want left hand side of drawing #2; only look at bulb outs; sidewalk, landcape, parking travel lane on both sides; gets enhanced with ped/bike enhancements when possible.

Jim – potentially seek "Design Exception" in the downtown core for 11' foot lanes.****

ADA minimum 4' or 5' ---sidewalk . Nivi to confirm and incorporate into plan).

Consensus *– if have to give up either parking on one side or narrower sidewalk; have a narrower sidewalk.*

8.5 feet for curb, gutter, parking (according to Denis and Scott Rolls.)

*** Nivi – need to follow up on exact design manual suggestions and typical cross sections with distances marked out.*

What is LT lane – 12'?

Scott – Kola, Elm, Pennington are areas to maximize traffic flow

Denis – but in future development area could have median where can work for larger parcels.

Mayor Hodges: do not support median; farm trucks; coming through; the only artery through community; avoid median.

Mayor Hodges: supports colored sidewalks; do not like painted hatch pattern.

Jim – have eventual Caltrans investment in the highway; potential for new development to happen before that; how do we handle it?

Denis – in new zoning code with development standards; if get new development and street is unfinished; business is responsible to finishing the street; will require to finish the highway; have to get encroachment permit; if have plan that Caltrans agrees with, they implement our Plan; will be similar. Incremental pieces will have to blend in as possible.

New parking lot project – does not quite fit. ***** Need to get Reggie's parking lot project site plan*

Jim – when do sidewalk next to roadway; those improvements would come out eventually anyway.

Next Meeting

First week of October – October 5th ; 1:30-3:30pm

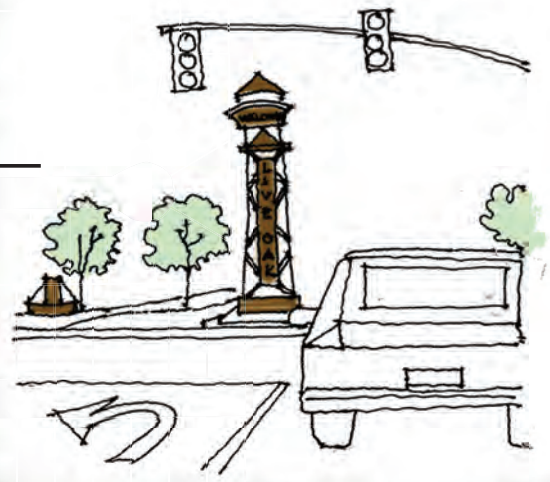
- Present detailed diagrams of Downtown and New Growth Areas for consideration. Then draft the plan.

NEVADA STREET

KOLA STREET

LARKIN ROAD

PENNINGTON ROAD



Conceptual sketch of central monument/ gateway element.

PENNINGTON ROAD

LARKIN ROAD

CALIFORNIA STREET

BROADWAY

N STREET

ELM STREET

K STREET

L STREET

ARCHER AVENUE

ASH STREET

APRICOT STREET

Conceptual sketch of entry monument/ gateway element.

Existing at-grade crossing.

Enhanced intersection with colored paving and accent plants at the corners.

PENNINGTON ROAD

Greening along the Highway to create a Green Boulevard aesthatic.

BROADWAY

CALIFORNIA STREET

N STREET

Vertical elements/banners along the Highway to highlight the intersection.

Signage/ art from in the median to demarcate Downtown Core Area.

Existing at-grade crossing.

ELM STREET

Enhanced intersection with colored paving.

Existing one-hour on-street parking location.

LARKIN ROAD

L STREET

ARCHER AVENUE

Greenway along the Highway to create visual buffer to railway tracks.

Enhanced crosswalk with colored striping.

Potentially close the at-grade crossing

Enhanced crosswalk with colored striping.

Locate corner gateway elements to distinguish entry to downtown core area.

ASH STREET

Sidewalk connect to future mixed-use development

Sidewalk connect to off-street trail along the slough

APRICOT STREET


LIVE OAK BOULEVARD/ HIGHWAY 99
LARKIN ROAD
BROADWAY
NEVADA STREET
MYRTLE STREET
KOLA STREET
IVY STREET
PENNINGTON ROAD
Enhanced intersection with colored paving.
Locate corner gateway element to announce entry/exit into Downtown Core Area.
Mid-block pedestrian crossing to Pizza Factory from residential uses across.
Greening along the Highway to create a Green Boulevard aesthatic.
Enhanced intersection with colored paving.
Existing one-hour on-street parking location.
Enhanced intersection with colored paving.
Existing at-grade crossing.
Enhanced intersection with colored paving and accent plants at the corners.
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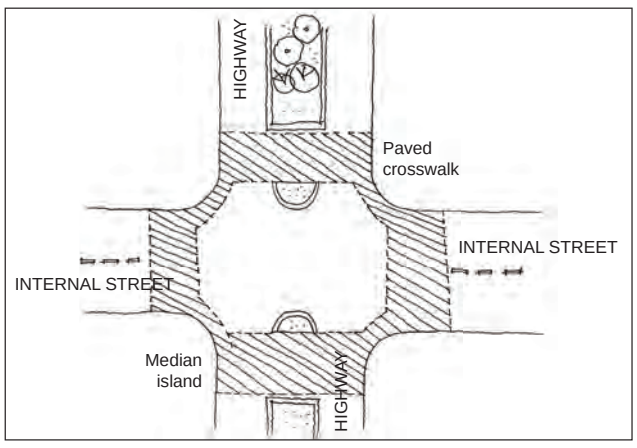
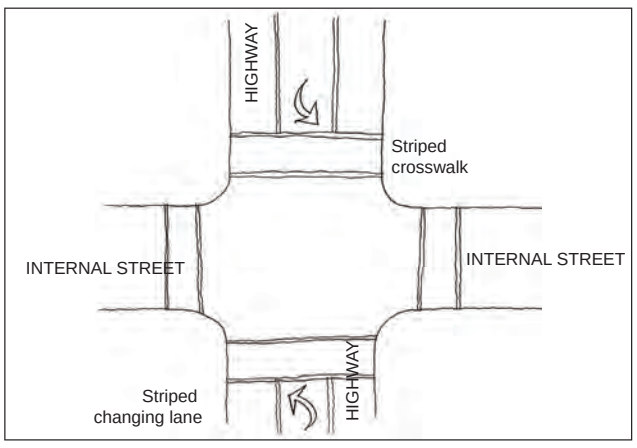
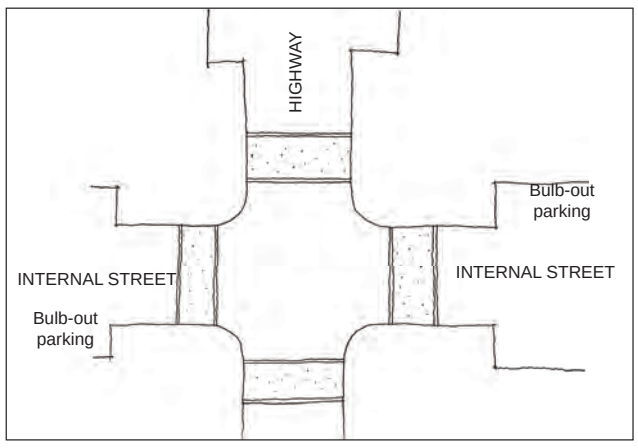
Bike Pedestrian Safety



Paved intersections with median and median island

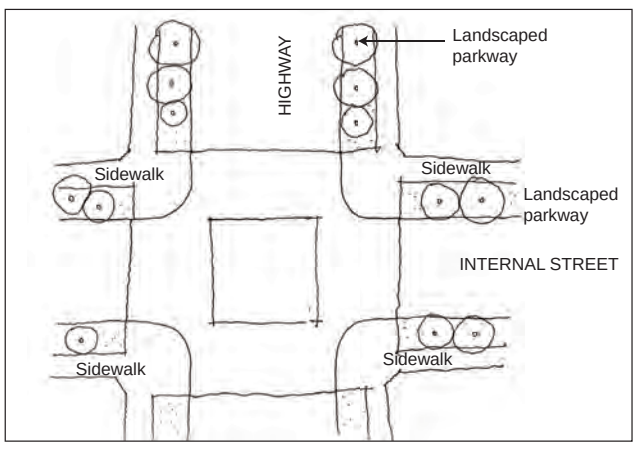


Striped crosswalks with striped changing lane.

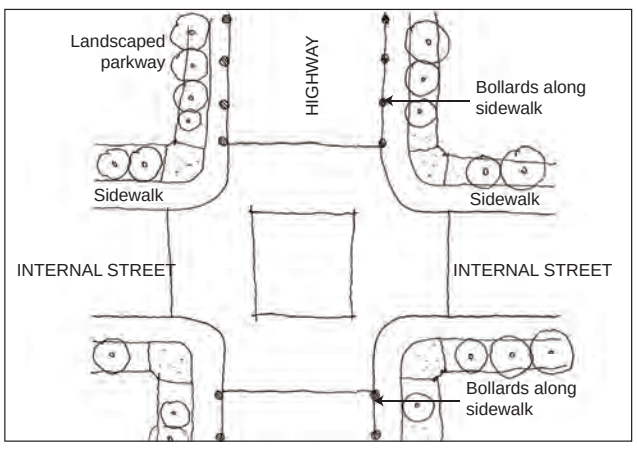


Bulbed-outs with on-street parking.

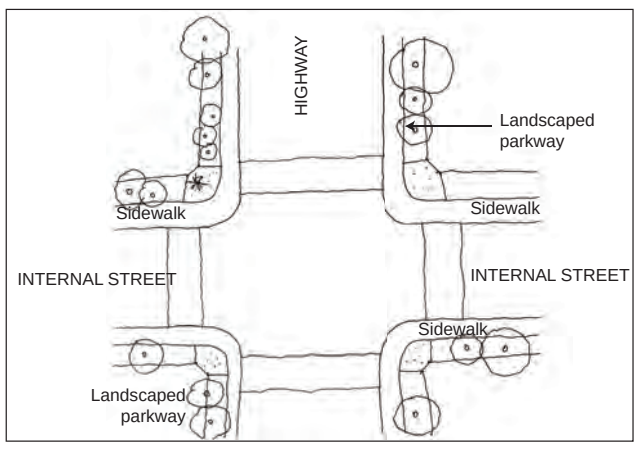
Landscaping and Street Furniture



Landscaped parkway along the highway with sidewalks in the interior side

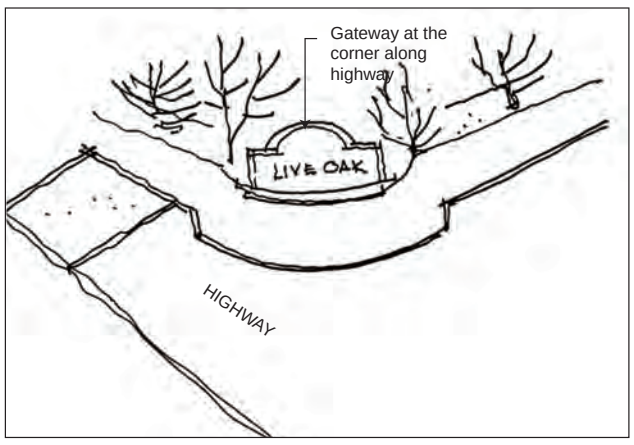


Regularly spaced bollards along sidewalk next to travel lane and landscaping in the interior side

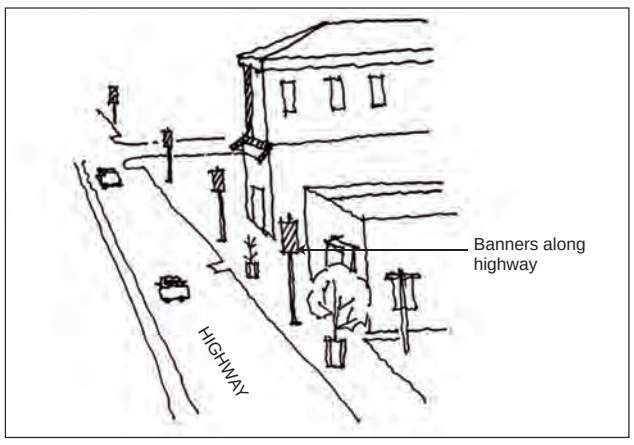


Regular landscaped boxes along Highway with wide sidewalk and seating areas

Wayfinding/ Entryway Features



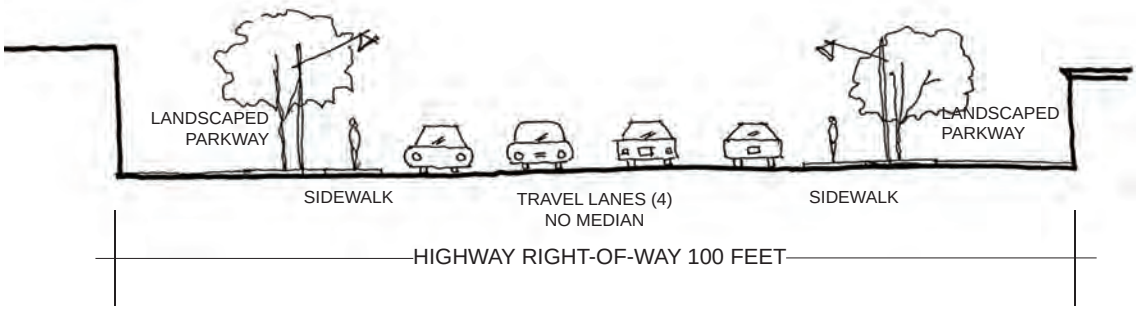
Decorative signage at the entrance of downtown

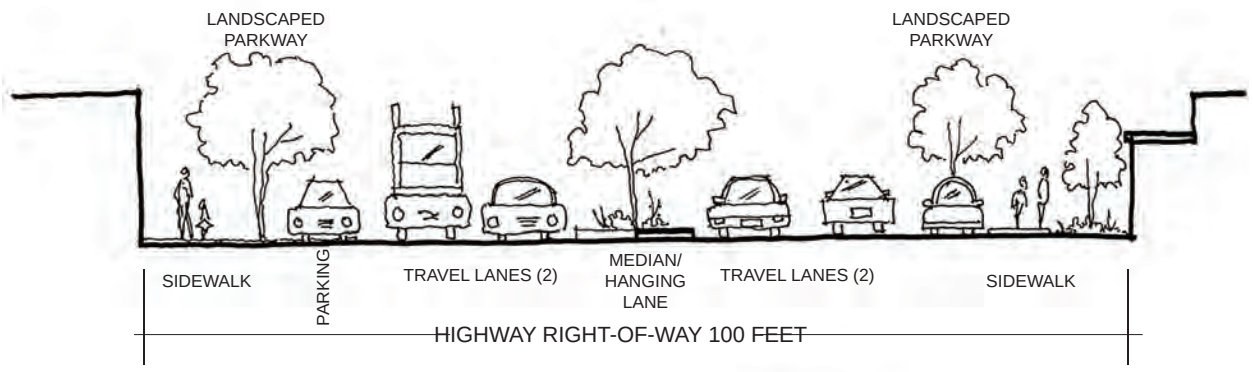


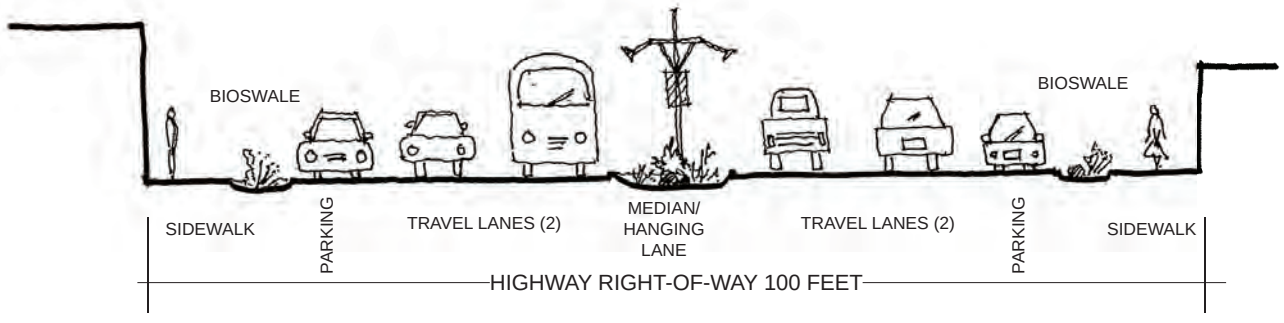
Decorative signage at the entrance of downtown

Decorative signage at the entrance of downtown

Conceptual Sections







AGENDA

CITY OF LIVE OAK COLLABORATIVE HIGHWAY 99 STREETSCAPE PLAN

Technical Advisory Committee Meeting, October 5, 2010

Goals and objectives:

- Review specific design alternatives for the Downtown Core Area and new-growth area based on input from previous TAC meetings.

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1. **Introductions** **1:30 pm**
2. **Review of the design concept** **1:35 – 3:15 pm**
    a. Design approach
    b. Conceptual plans
    c. Design palettes – landscape, paving, and furniture
3. **Schedule and next steps** **3:15 – 3:30 pm**

CITY OF LIVE OAK COLLABORATIVE HIGHWAY 99 STREETSCAPE PLAN

Technical Advisory Committee Meeting, October 5, 2010

NOTES:

Nivi's presentation – 40 MPH through downtown; 40MPH north of downtown; 45MPH south of downtown

Jim – Caltrans proposing speed limits based on posted speed limits

Michelle – no curb and gutter above 40MPH

Jim – need Caltrans operations at meeting?

Michelle – HDM is being updated now to consider lower speed areas; trying to update now; parts of it can be implemented and then speeds reduced

Jim – will have significant commercial along southern area; don't want higher speeds; design improvements intended to slow traffic; also, the speeds have not been posted yet

Jim – have a call into Ron Sykes now regarding speed limits; so, don't want to design master plan that assumes lower speeds

Scott – with Complete Streets concept, more flexibility?

*** Note to Matthew & Nivi --- bring in the work AECOM has done with NJ DOT and Penn DOT on context sensitive solutions and revised design manual work*

Jim – how many tickets challenged on the 85% for this corridor?

Michelle – don't know

Mayor Hodges – since lowered, more accidents but no fatalities

Jim – want to know that have agreement that will use this Plan to explore the "wiggle room" areas with design exceptions

Jim – Elm to Kola would be the only 40MPH place left if Caltrans acts as said that will act

***Michelle – have curb gutter sidewalk today in areas with higher speeds --- should point this out in pushing for design exceptions; point out where today there are inconsistencies with Highway Design Manual (HDM) are in place today as a way of getting exceptions*

Alternative 1 – Downtown Design – Nevada Street (Pizza Factory) to Archer Avenue

- Nivi – Alternative 1 on the left; based on HDM standards; parking and shoulder would take 13' of shoulder
- Reason for shoulder is the 5' of biking and parking ---- so, we would point out that not needing this shoulder width with the bicycle circulation that is included in the General Plan
- With Alternative 1, 2' left for landscaping would be groundcover, wildflower beds, drought tolerant landscaping
- Talking about 15' setback --- -? Should this be discussed or should we promote brining the buildings to the ROW and handling parking, etc, in back and on the sides?
- If driveways are constructed, they must be at least 200' from the intersection
- Bollards, signage, banners would be ok at 40MPH or less with Alternative 1

Alternative 2 – Downtown Design

- 11' foot lanes within 40MPH or less; only allowed for interior lanes
- Discussing boxed approaches for landscaping
- Paving surface to walk over to sidewalk
-

Alternative 3 – Downtown Design

- Mayor Hodges – should avoid placement of trees directly between views of commercial signage and façades
- Denis – should do 30' on center
- Discussion of long-term tree growth where trunk gets high enough to avoid obstructing views
- Scott – some powerlines today, but would be undergrounded both in new and old growth areas
- Scott – a lot of east area is fed through the back side; not true as much on the west side
- Nivi – avoid trees that need pruning often; have to consider interference with powerlines
- Gary – don't like trees that need pruned often
- Gary – on 11' lane, would that be acceptable?
- Michelle – it depends on where; probably not the whole stretch; may be places where cannot get the ROW; but hard to narrow lanes to 11'; have to be really convinced to get to 11' through the stretch of 99 since it is a major truck route
- Michelle – through the downtown area; may be plausible due to not getting ROW since existing buildings are close to the building; design exceptions get into details
  *** Note to Matthew and Nivi – get example documentation for design exceptions from Caltrans?*
- Gary – question about parking at Bob's restaurant; and Betty's
- Nivi – only remodeling would trigger the City requirement; perhaps in some locations would not have on-street parking; would allow continued off-street diagonal parking
- Jim – do want to accept that the overall corridor would change over time
- Denis – will become moot after going to 4 lanes; can't back out into the highway

- Nivi – on street parking would be a design exception 10' parking instead of 13' would be another design exception
- Michelle – can get reduced but perhaps not to 10'; between 10 and 12 is the range
- Mayor Hodges – this would be taken from landscaped strip area
- Nivi – minimum for healthy large trees would be 6' or 6.5' --- would have smaller trees if have to give back some room for 10 or 12' parking instead of 13'
- Gary – we are working on the corridor; but could design into commercial private property landscaping improvements; can have requirement for large trees for businesses?
- *Denis – in the new areas, not a problem, because when do a project; have to dedicate another XX feet (**** Note – require wider ROW)*
- Denis – in the code now, private side; have 10' landscaped; have flexibility now
- Denis – downtown area with existing development would become a problem
- Nivi – more restrictions in angled parking, would not be easy
- Denis – at some point, will need 4 lanes there; cannot have back out parking and four lanes of parking
- Gary – don't want to go through this process and have it not be do-able; have to treat existing City differently from new growth area
- Jim – have to ask the question about narrower lane and narrower parking area
- Scott – need to look at potentially, areas that will be commercial
- Michelle – design exceptions would be project by project; at design level
- Jim – if have collaborative project with Caltrans aren't we defining the approach to the corridor
- Michelle – Heidi needs more details on why need 11';
  *** Question to Caltrans -- -which details?*
- Denis – need to ask for what is best within reason; then when get project or money to do improvements would have to look at it.
- Scott – some may have to be done all at once due to grades; may need to go Archer to Nevada to make it work
  *** Note to Nivi and Matthew – work with Scott to define phases*
- Michelle – understands that it is downtown, don't have ROW, can't get more

Discussion

- Denis – go with Alternative 3 with exceptions for curb cuts
- Gary – don't like Alternative 1 – bareness
- Jim – don't like Alternative 1 – reduced lanes for reduced crossing distance; Alternative 1 would not do that
- Mayor Hodges – looks "hotter"
- Gary – agrees, looks "hotter"
- Mayor Hodges – on Alternative 2 and 3 have different paving types; good to distinguish as not the passing lane; turning lane; would be safer
- Mayor Hodges and Gary – like different colored crossing

- Nivi – have a lot of curb cuts now; but would that be the case in the future
- Denis & Jim – would combine lots, limit curb cuts; allow access from the back
- Jim – if pick preferred alternative that Caltrans does not allow; early on after ID preferred alternative; need to get some substantive feedback on whether would be approved
  ** Note – need to not get yes or no answer; but the rationale and what additional information is needed; then get additional information.*
- Jim – at some point in this process; after evaluated pref alt; created justification; still no way to get definitive response from Caltrans
- Michelle – signature for design exception does not come until the design phase; for now, verbal and through meeting notes for now.
- Jim – concern of having folks spend a lot of $ designing project only to figure out that won't work at project level; some type of letter approving approach
- Denis – call legislator, make noise

  *** Note to Nivi and Matthew --- set up process with Caltrans to get interim buyoff*

  *** Look at NJ and Penn DOT work (saved on P drive)*

  *** show data on why narrower lanes slow traffic – Florida DOT?*

- Michelle – why not bulb outs on this?
- Scott – right turn lanes; only want to do that is just to take the parking lane; only do on lower volume streets where would lose right turn pockets; could do it at Kola; even after signal.

  *** Matthew get info to Nivi on traffic signals*

New Growth Area – North Area First

*** Note to Nivi and Matthew --- look at existing trees along highway to north and south – can they stay?*

**** Note to Nivi and Matthew --- look at design concept overlain on preferred design concept to ID problem areas*

- Street trees in median – Chapter 900 does not eliminate median trees; 6" considered "barrier"; curb works as a barrier for 40MPH or less; may not work above this
- Michelle – can do "small trees" and vertical clearance that is needed; not considered a "fixed object"; cut off size – 4" diameter; at certain height within 10 years of growth
- Michelle – barrier curb; could use mountable in the median; in the HDM
- 100' feet from exterior longitudinal from intersection required for sight distance
- Jim – City's maintenance responsibility
- Denis – trees are better than shrubs aesthetically
- Denis – can't get green space at turning lane

**** Nivi – change the turn lane area to be narrower*

- Look into drought tolerant solutions
- Jim – like straight better than meandering sidewalk approach
- Refuge island argument for median doesn't work for most of new growth areas since there is nowhere to cross to

*** Note to Nivi – move trees to 20' away from the travel lane*

*** Note to Nivi – move sidewalk outside 100' ROW; change to 105' ROW; sidewalk just outside of 100' area*

- Jim – what if took concept from south Nevada to north Nevada; north of north Nevada already have existing tree lined area between RR and Hwy 99; may have to take out some of the trees
- Jim – huge heritage trees – black walnuts, etc? don't want to take this out
- Jim – have sidewalk on west from Nevada to Nevada
- Gary – 2 businesses north of church have walls, houses there, too; have to measure in there to see what can do; if put sidewalk there would be right next to outside lane; ditch along the east side and houses set back a bit
- Determine tree's location relative to the ROW
- Michelle – Caltrans would not want to take out the large trees
- Gary – like idea of pathway for recreation only; not to reach any specific locations since between highway and RR

*** Note to Nivi and Matthew - ** Look at where ROW is compared to RR property*

- Gary – people looking for areas to exercise – this is what makes communities vibrant – Davis, etc.
- Gary & Mayor Hodges Hodges – want to connect communities along the levee or elsewhere between Yuba City and Gridley
- Jim – can have bike connection from Larkin up Riviera and then down to the south end for recreation only
- Nivi – could have broader meandering; but would change setback slightly; would require more ROW
- Denis – likes straight sidewalk
- Denis – to some extent doing this in a void; always thought of study as having set of maps of highway 99 corridor; have not seen existing conditions report.

*** Note to Nivi – can put plans on aerial; see how it works; see how it fits.*

- Gary – want to widen strip and get larger trees
- Consensus – work with meandering pathway; increase setback; to accommodate larger trees in this area
- Perhaps also look at smaller trees nearer the road – no bushes
- Like the small tree concept in the median so long as can turn into new growth area businesses

- ** Note to Matthew and Nivi – look at how to preserve some existing orchard trees while planting new ones in the new growth area

New Growth Area (south)

- Lighting or banners need to be at 20' as well

*** Need to see what to do with the existing trees*

- Gateways
- Cannot have overhead gateway or mid block monument; instead corner monuments would be appropriate
- Jim – when overlay with aerial; have to find something on the west side northbound…. (Nivi will follow up)
- Michelle – would not want mid block crossing; would have to be a part of the overall plan
- Gary – only reason to have mid block crossing would be if having bike trail concept
- Jim – have 1 at grade crossing south of town
- Scott – would have intersections for future businesses and would put cross walk at these locations
- Gary – for mid block was thinking not of new growth area but rather the exsiting downtown area where crossing distance was too great.
- Michelle – but Caltrans would still have a problem with that because the intent would be to focus large number of pedestrians to cross; would not serve purpose here.
- Consensus ---- not look at mid block crossing.
- Look at the T intersections.
- Michelle – seeing that don't have shoulders – problem?
- Michelle – will follow up with whether need 2' shoulder or not.
- Tree still 20' from travel way not including shoulder.
- Median would not be continuous; for private driveways would not work; eventually would be all commercial; but will need interim that has less continuous median.

Plants, Street Furniture, Paving

- Nivi – instead of specifying which to use; provide "palette" to choose from
- Jim – pavement downtown core; not a choice; specify which to use for pavement
- Jim – avoid different colored pavements in different locations
- Consensus – pick one consistent theme
- Gary – look for things to tie the City together and one of those will be light stands, benches, etc; will have different storefronts and signage; thing that ties together would be furniture, etc;
- Mayor Hodges – keep the new and old similar; provide a unified theme throughout
- Gary – would be easier to maintain perhaps too with a similar theme throughout
- Mayor Hodges Hodges & Gary – Historical is best; don't like the modern as much;

Consensus *- Look for more along Historical theme*

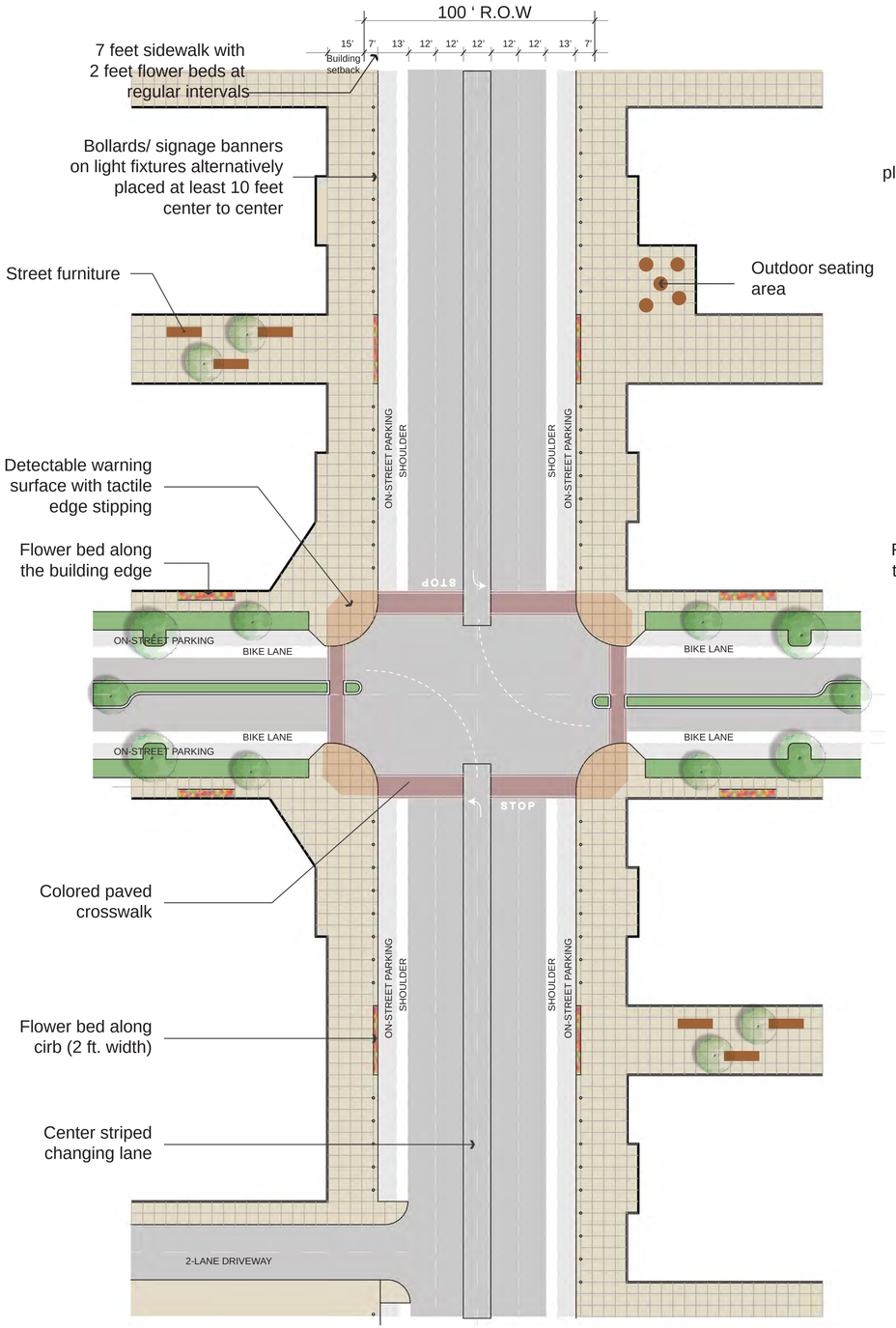
- Gary – would like to see something in the design that reflects Buttes, River, Live Oak Leaf; especially in light standards
- Jim – don't want to have to custom design; a leaf; perhaps an emblem on the base of the lighting
- Jim – want theme for lighting and use throughout can be diversity in furniture and trash receptacles, etc.
- Scott – LED lights should be used
- Denis – do more with bollard; a ring on it for hitching post look; for horses
- Jim – arborist; don't get too narrow on choices; disease
- Denis – have different trees
- Mayor Hodges Hodges – want different colors of Crape Myrtle?
- Jim – have a variety of choices?
- Jim – eliminate Western Redbud? Looks too much like bush
- Mayor Hodges Hodges – Buckeye would outdo the Crape Myrtle; need to place in certain locations as to not overshadow
- Denis – use oaks

*Jim – if use different variety of oaks, would achieve same protection as using different varieties of species? *** Note to Nivi and Matthew*

- Mayor Hodges Hodges – remove Manzanita
- Gary – carry through theme with trees; do have evergreen or not
- Denis – some oaks are evergreen and some are not
- Gary – not pine tree and then something completely different
- Jim – avoid trees that are very messy
- Denis – some oaks that are planted and domesticated grow fast
- Gary – make sure that crosswalks are illuminated; could have different bulbs at intersections and other areas; focused a different way; use same hardware; most important is to make sure crosswalks are illuminated

Next Steps

- Superimpose on aerial
- Take concepts to next level of detail using preferred alternative
- Work with Caltrans to get idea of what info will be needed to approve design exceptions
- First of December or so for next meeting



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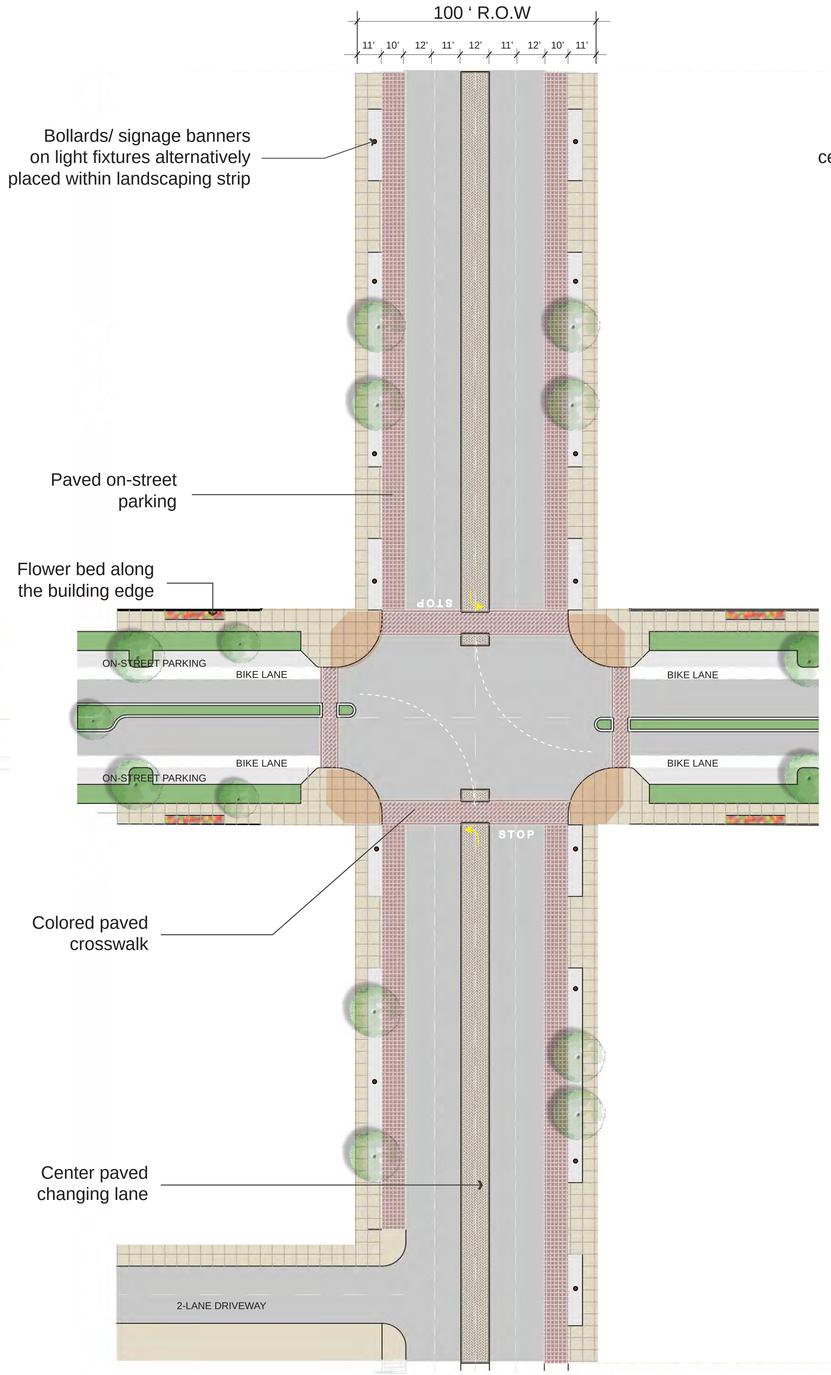

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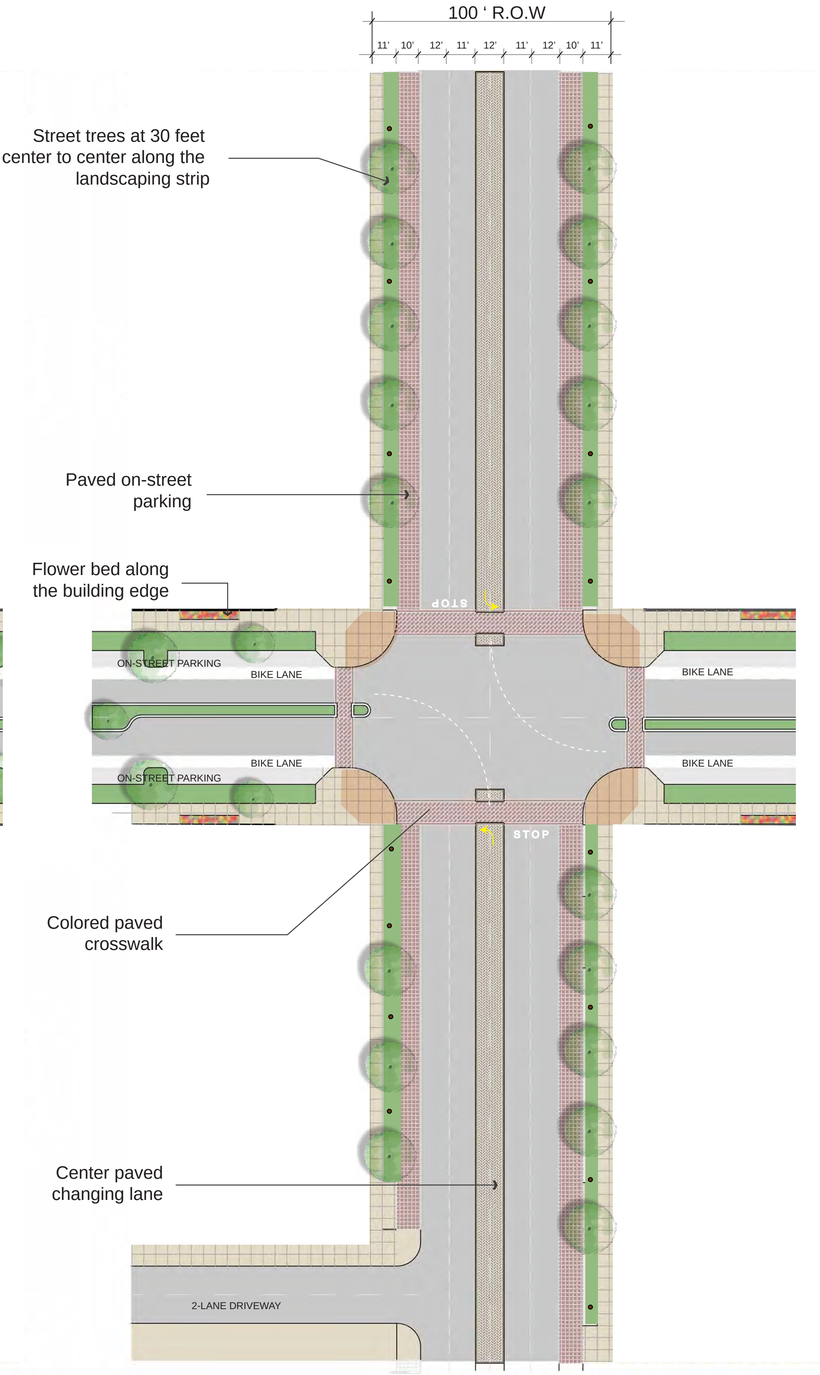


Alternative 3

HISTORICAL THEME

Ash Urn

Trash and Recycling Receptacles

Bollard

Tree Guard

Bike Rack

Bench

Lighting

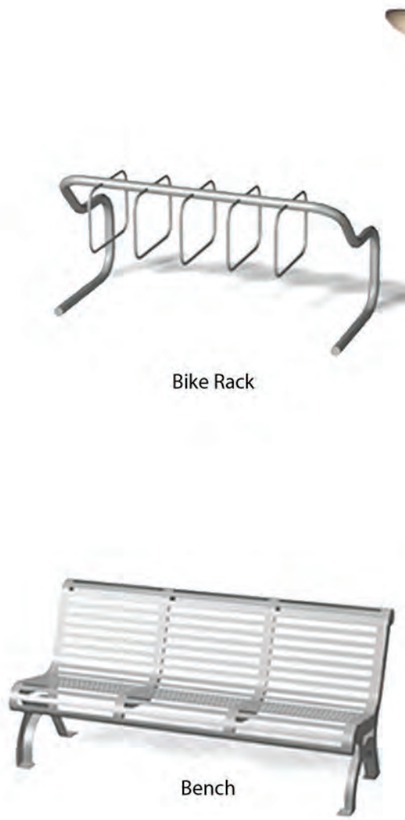
MODERN THEME

Ash Urn

Trash and Recycling Receptacles

Bollard

Bike Rack



Bench

Lighting

CONTEMPORARY THEME

Ash Urn

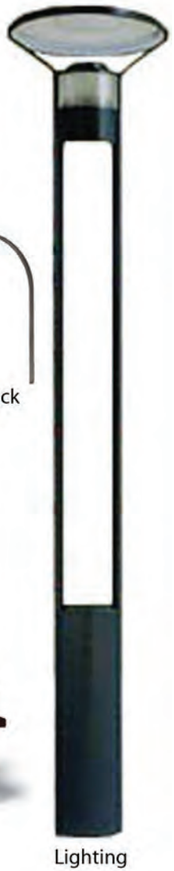
Trash and Recycling Receptacles

Bollard

Backless Bench

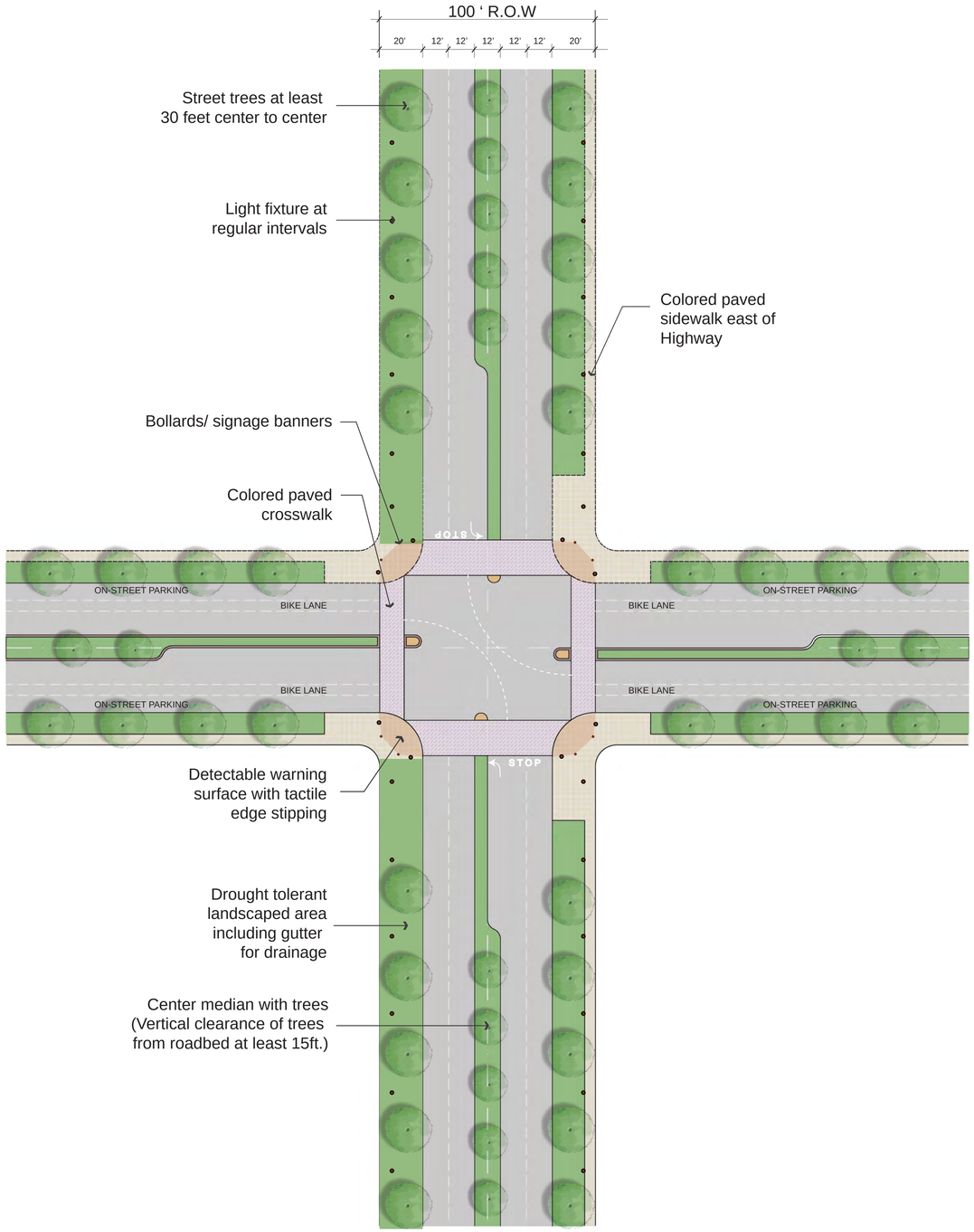
Bike Rack

Bench



Lighting

FURNITURE PALLETE



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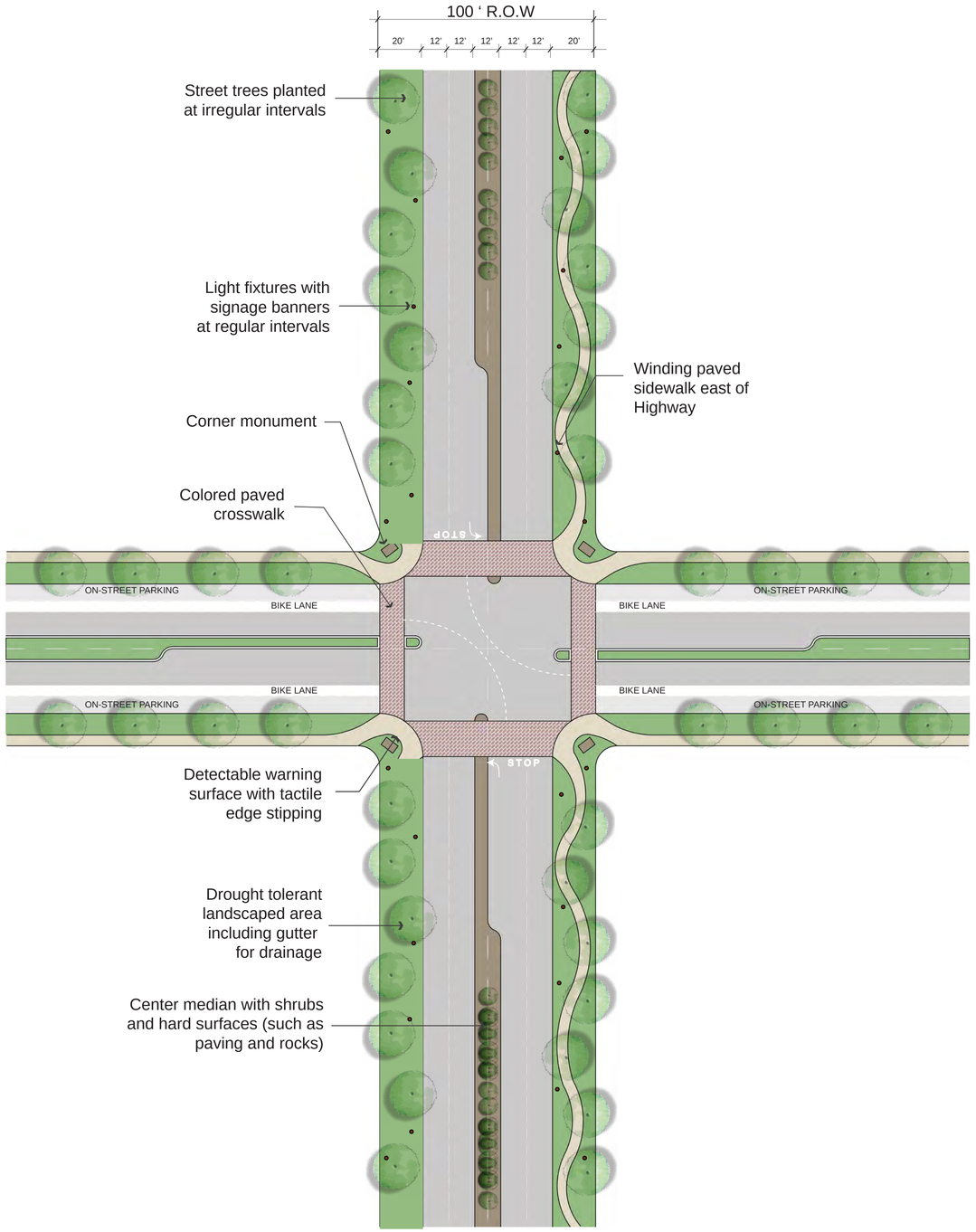

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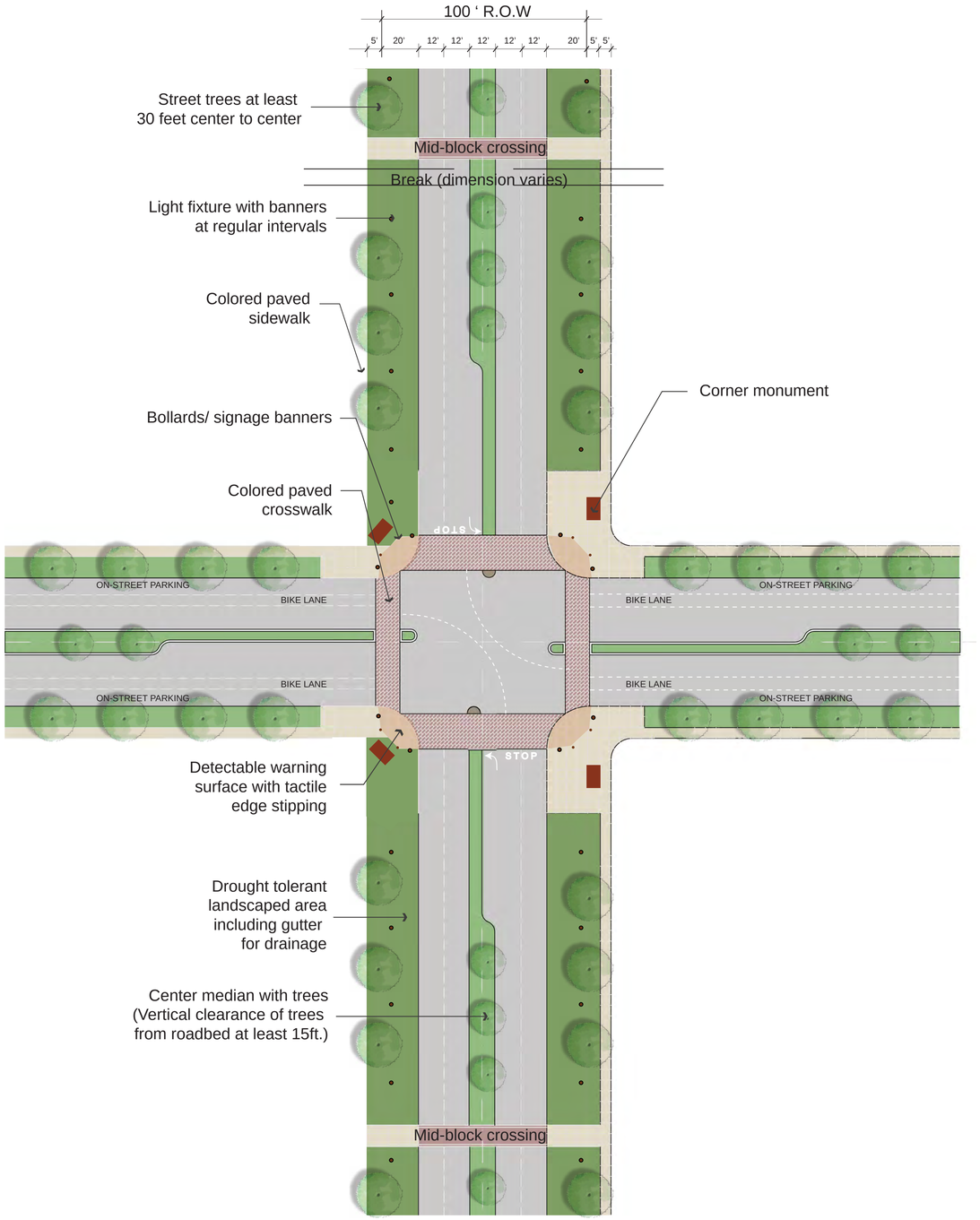

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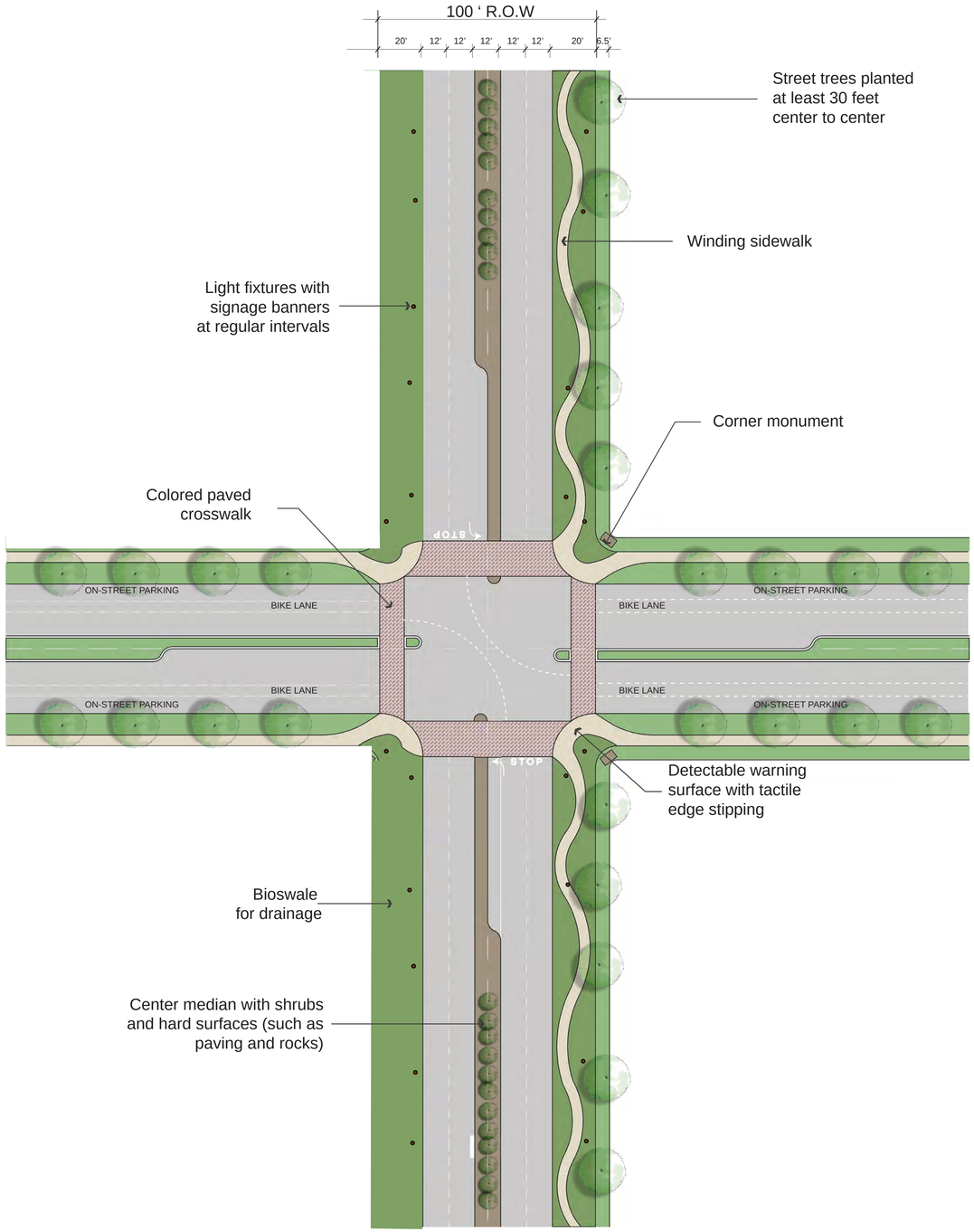

Alternative 2

PAVEMENT TYPES

CHANGING LANE

Color	Concrete Pattern	Solar Reflectivity Value	Pervious Paving
Baja Red	Running Bond	.40	No
Brick Red	Basketweave	.38	No
Sangria	Herringbone	.43	No

SIDEWALK

Color	Concrete Pattern	Solar Reflectivity Value	Pervious Paving
Canyon Front	Canyon Stone	.36	No
Flagstone Brown	Coquina	.32	No
Omaha Tan	Slate	.40	No

PARKING

Color	Concrete Pattern	Solar Reflectivity Value	Pervious Paving
Dune	Grass-crete	.35	Yes
Mesquite	Pervious Topping	.32	Yes
Outback	Soldier Course	.35	No






Palette based on California Native Plant Species

TREES (LARGE)

	Common Name	Botanical Name	Height	Spread	Native	Drought Tolerant	Minimal Distance From Trvd Way	Pvmt	Fence	Wall
	Chinese Pistache	Pistacia chinensis	30'-60'	30'-60'	No	Yes	12.5	-	6	6
	Coast Live Oak	Quercus agrifolia	30'-60'	30'-60'	Yes	Yes	9	-	6	4.5
	Evergreen Pear	Pyrus kawakamii	20'-25'	15'-25'	No	Yes	9	-	4.5	4.5
	* London Plane Tree	Plantanus x acerifolia	30'-60'	30'-60'	No	Yes	9	-	6	6
	* Valley Oak	Quercus lobata	60'-80'	60'-80'	Yes	Yes	9	-	6	6

SHRUBS

	Common Name	Botanical Name	Height	Spread	Native	Drought Tolerant	Minimal Distance From Trvd Way	Pvmt	Fence	Wall
	California Lilac	Ceanothus spp.	6'-12'	10'-15'	Yes	Yes	-	3	2.5	2.5
	Common Flannel Bush	Fremontodendron californicum	6'-12'	12'-25'	Yes	Yes	9	-	6	4.5
	* Daylily	Hemerocallis hybrids	2'	2'-3'	No	Yes	-	1	1	1
	Golden Currant	Ribes aureum	3'-6'	3'-6'	Yes	Yes	-	-	-	-
	Manzanita	Arctostaphylos spp.	1'-2'	3'-5'	Yes	Yes	-	3	3	3

* Note: Plants most appropriate for bio-swale planting.

TREES (SMALL)

	Common Name	Botanical Name	Height	Spread	Native	Drought Tolerant	Minimal Distance From Trvd Way	Pvmt	Fence	Wall
	* California Buckeye	Aesculus californica	10'-20'	10'	Yes	Yes	11	-	6	6
	Crape Myrtle	Lagersroemia indica	15'-25'	15'-25'	No	Yes	9	-	4.5	4.5
	Toyon	Heteromeles arbutifolia	8'-15'	8'-15'	Yes	Yes	-	4.5	4.5	3
	Western Redbud	Cercis occidentalis	6'-20'	10'-15'	Yes	Yes	-	4.5	4.5	4.5

NATIVE WILDFLOWERS/ GRASSES

	Common Name	Botanical Name	Height	Spread	Native	Drought Tolerant	Minimal Distance From Trvd Way	Pvmt	Fence	Wall
	Arroyo Lupine	Lupinus succulentus	1'-3'	1'-2'	Yes	Yes	-	-	-	-
	* Blue Wildrye	Elymus glaucus	1'-4'	2'-3'	Yes	Yes	-	-	-	-
	California Poppy	Eschscholzia californica	1'-2'	-	Yes	Yes	-	-	-	-
	* Deer Grass	Mulhenbergia rigens	2'-6'	3'-6'	Yes	Yes	-	-	-	-
	Golden Lupine	Lupinus densiflorus aureus	1'-3'	1'-2'	Yes	Yes	-	-	-	-
	Pink and White Yarrow	Achillea millefolium	2'-3'	2'-3'	Yes	Yes	-	-	-	-
	Small-Flowered Lupine	Lupinus bicolor	1'-3'	2'-4'	Yes	Yes	-	-	-	-

AGENDA

CITY OF LIVE OAK COLLABORATIVE HIGHWAY 99 STREETSCAPE PLAN

Technical Advisory Committee Meeting, December 14, 2010

Goals and objectives:

- Review design solutions for the Downtown Area and new-growth area based on input from previous TAC meetings.
- Review preferred alternative superimposed on spatially referenced aerial photography

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1. **Introductions** **1:30 pm**
2. **Review of the design concept** **1:35 – 3:00 pm**
    a. Preferred alternative
        i. Cross sections
        ii. Intersection plans
    b. Techniques to reduce travel speeds and effectiveness
    c. Revised design palettes – landscape, paving, furniture, and lighting
3. **Review of Streetscape Plan outline and format** **3:00 – 3:15 pm**
4. **Schedule and next steps** **3:15 – 3:30 pm**

CITY OF LIVE OAK COLLABORATIVE HIGHWAY 99 STREETSCAPE PLAN

Technical Advisory Committee Meeting, December 14, 2010

NOTES:

Jim – key reason to do this; better positioned for funding opportunities

Jim – somewhat premature; work that this TAC has already reviewed; already gave to Caltrans designers what may be a project study report on that section of highway

Jim – SR 99 bond savings being allocated; 7th or 8th on the list if there are additional savings from projects that come in under what was estimated with the SR 99 bond program

Gary – this project funded through a grant through Caltrans

Techniques to reduce travel speeds and effectiveness

- Discussing studies of slowing speeds
- Street trees and on-street parking – 7 to 8 miles per hour
- Narrowing – 2.5 miles per hour reduction
- Visual narrowing – buildings closer to the street – could not find empirical evidence
- Current speeds are 45mph today – so, if got 5-10 mph; could legitimately get speed limit down to 35 mph
- Jim – if intentionally release a plan where we indicate we are trying to slow traffic, will Caltrans have a problem
- Michelle – no; only focus on HDM
- Jim – what about signage – children crossing? Other types of signage?
    - Nivi – 6.5 mph for signage
- Jim – any limits to what can do with signage?
    - Michelle – yes, can do that; crosswalk signs; lime green signs here for crosswalks
    - Jim – can look at signage with this plan and where to do it
    - Ivy, Nevada, and Kola are the 3 to look at new ones
- Should we add this to plan?

Consensus *- Should discuss why want to reduce speeds; way to attract to patronize; way to increase safety; yes, do mention this; 3 schools near highway; yes, discussion of research and the city's intent*

Review of the design concept

Would have a 12’ changing lane; near changing lane 11’ design exception lane, then 12’ lane; then 12’ parking lane; sidewalk still 5’; 4’ for landscaping strip

New growth areas – medians; left turn lanes;

45mph – at least 20’ from end of travel lane; if had meandering sidewalk; trees on other side of sidewalk; then with 5’ from the property owner can get larger trees

Riviera; talking about dedicating area for entryway signage

Gary – left hand turn into commercial areas --- make sure to accommodate

Jim – remembering that at 50-55 could not be any center trees; cannot have large; small trees only in the median

*** would need any pedestrian crossing to the east in the northern area? only where we’d have an intersection crossing/pedestrian area; right?*** need to revise*

*** Need to coordinate with PUC on trees and the RR***

*** Need to show where the large trees are located and if they need to come down*

Jim – have heritage trees there; would recommend moving

Denis - ** attempt to save the trees; developers would expect a larger dedication for commercial developments

*** Nivi – look into what kind of dedication it would take to save the trees*

Jim – have a continuous walkway on the west side, too; show that, if room for a sidewalk, then put it there.

Gary – in the southern, ditch there, no opportunity for a walkway around the ditch; would have to go to Larkin to do that

Gary ** add a continuous sidewalk on the west side; decision to protect trees on the west side; could have continuous sidewalk there

North new growth area –

Ramsdell RT accommodated

** allow for sidewalk on the west side, too?**

Gary – shows Ramsdell going across

Diane – what about businesses; church; don't want to hide businesses; don't want to block them

Nivi – larger trees 40' apart; 30' feet apart in the downtown area

Jim – if looking at dense urban forest; then a problem; but not if not looking at spaced apart

Nivi – drive cuts would change tree spacing additional

Gary – need discussion with each of the businesses for median and street trees?

Jim – can have whatever process want

Group – just a concept for street trees

** Get some visual of what 40' looks like --- *** consensus with roughly 40' spacing*

** Nivi – scale study would help with 1 story buildings

Gary – like the idea; like the intersections; looks like clearer that entering into an urban area

Judy – median will be a good idea

Gary – north of Nevada Street – meandering sidewalk on east; straight on the west

*** Straight sidewalk on the west in the northern new growth area Nevada to Downtown*

Entryway feature --- where should it be? Could be busy commercial intersection and is that where want the entry way area to be?

Riviera and 99 – no need for crossing north of this intersection

Jim – something before hit the downtown core; Nevada and northbound south of Elm

Diane – needs to be away from a congested area – the signage

Denis –show this north of the Riviera somewhere

Jim – more critical to the downtown core

Denis – cannot do in the Caltrans ROW – willing property owner

Scott – difficult on the north side bc UPRR is the property owner

Consensus – *signage/entryway to the community and one to downtown; north of Riviera; north of Nevada street for downtown; just south of Elm street for downtown; south of Paseo for downtown traffic*

Jim – Annette – role for Chamber to ID locations for signage

Denis – get examples from other cities, pretty common

Gary – could blend into the existing landscape; church has landscaping and curb cut already; should just keep the signage as is; build in compatibility with existing features (referring to church)

Gary – instead of 2 big trees right in front of the church; locate at edges

North downtown area

Consolidating drive cuts in the future will be important

Drive cuts at 200' from the intersection is the rule

Row of trees on each side – will be smaller; lower in height

Diane – not showing existing drive cuts

Gary and Diane – don't want fronts of businesses to be blocked

Pizza factory – wires everywhere but, would be undergrounded in the future

Jim – if Caltrans were prepared to fund 4-lanes funding of highway; would lose parking

Pizza – would only have street side parking; not diagonal on-street

Jim – Tower Mart had to combine 5 parcels; then 2 drive cuts instead of 5; would be placed in designs

Jim - *** asking Denis to explain how to implement with design

Denis – talking about trees in ROW; also requiring landscaping required 50% at 15 years parking lot coverage; downtown use detailed survey to space the trees accordingly

Michelle – will be tree by tree

***** Need to distinguish and call Nevada (north) and Nevada (south)*

Nivi – different texture for parking; sidewalk; etc

Jim – maintenance for different asphalt?

Michelle – will ask; not sure about maintenance; depends on what color and what paving; in Gridley think is Caltrans maintaining ***

** Need to ask about different color paving

Denis – if improvements are triggered by new development then contract with property owner to maintain

South Downtown

Left driveway cut into bank; more than 200' from Pennington

Explaining bulb out and where that can be

Diane – if do the bulb out; how would bulb out affect the way that the truck traffic turns

**** Need to examine truck turn radius; make sure accommodate bus, delivery truck; 40' face to curb radius; 50' truck AASHTO truck accommodation.*

Jim – discussing long term urban use; need to have truck traffic to Paseo/Township/Riviera

Drive aisle at Wada King; another drive aisle proposed service to Wada King

South of Ash, changes to greenway; have sidewalks on this side; *** Need to study what it would look like*

If we can get more private property on the east side south of Ash

Scott – just south of Birch Street; on the RR track, there is a Larkin Road crossing; that one is going to stay open at this point**

Jim – have crossings as a special section **** provide for all crossings and RT options*

Scott – if Ramsdell crossing goes in handles enough traffic so that RT at Pennington goes away; started looking at Coleman area.

South New Growth Area

*** Need to show connection to off street pathway to the east around Slough*

*** Same issue to investigate for additional take*

***Ditch along the west side would preclude sidewalk area on the west side*

*** don't have sidewalk on west side between Ash and Coleman – better to direct toward Larkin and off street network*

But northern mixed use area; do look at sidewalk on the west if possible

South entryway

Building setbacks – ** in the downtown core, preference for buildings by streets; then outside core, further from roadway

Parking preferences -- ** include a bit of discussion

Landscaping palette

Need to have more than one to avoid disease wiping out**

Diane – Crape Myrtle – trim them up;

*Jim - ** is there a disease resistant mix of oak trees; run with native theme; coast live oak?*

How fast growing? Coast Live Oak is evergreen as well

Consensus – *look for evergreen variety; look for what tree would fit in what area; keep it broad as a palette for now*

Different symbol for accent trees?

Jim – be careful to have mix of trees to sustain against disease

Street lights

Consensus *- Leave as broad now and decide later on depending on situation*

** Jim – corridor should have one lighting theme throughout the corridor; reserve choice of which light post for later period

Gary – would like to see how some design techniques would slow traffic in certain area; have a good idea on how the corridor would look; want to see specifically how the techniques would work** correlate to what we are actually showing

Jim – say as policy objective of the plan that want to slow traffic; then demonstrate that speed reduction factors

Jim – don't know if have research on how they add up? Cannot sum them up exactly – see how this effect works.

Next Steps –

- First Tuesday in March for next TAC meeting
- Present Draft Streetscape Plan

City of Live Oak

Collaborative Highway 99 Streetscape Master Plan

Technical Advisory Committee

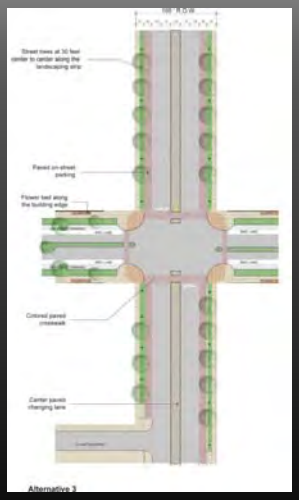
December 14, 2010

Agenda

- **Review of the design concept**
  - Preferred alternative on aerial
    - Cross sections
    - Intersection plans
  - Techniques to reduce travel speeds and effectiveness
  - Revised design palettes – landscape, paving, furniture, and lighting
- **Review of Streetscape Plan outline and format**
- **Schedule and next steps**

Summary of October TAC meeting

Downtown Area



New Growth Area

Preferred Alternative

Review of Design Concept

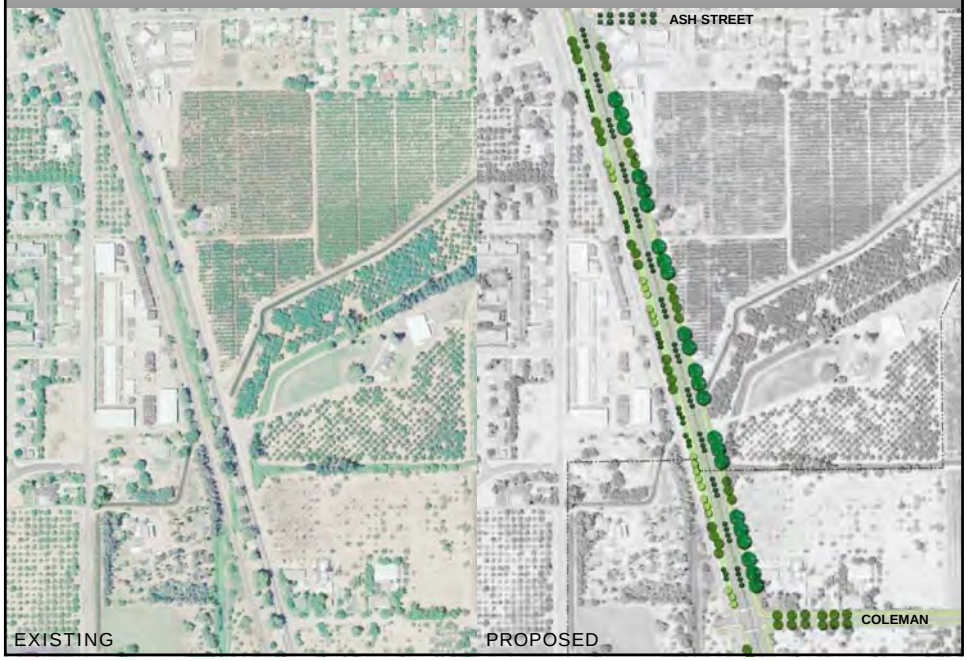
North Entry Area

North New Growth Mixed Use Area

North Downtown Area

South Downtown Area

South Mixed Use Area



South Entry Area

Design Techniques

Reduced Travel Speed and Effectiveness

Techniques and Examples

Design Technique	Speed Reduction
Shared space: remove lane striping, traffic control signs/lights, sidewalks/curbs,	8-12 mph
Street trees and on-street parking	7-8 mph
Urban legibility: design spaces for desired speeds, instead of using behavior modification to counter high-speed design	–
Narrow visual street width: building location (to back of sidewalk); street furniture; street lighting; street trees; raised curbs	–
Speed humps: 3-4" high, 10-14' long	7.5 mph
Speed table: flat-topped speed humps	6.5 mph
Traffic circle: raised islands placed in intersections	4 mph
Narrowing: bulbouts; medians; chokers	2.5 mph

Techniques and Examples

Traffic circles

Visually narrow street

Curb extensions

Shared space

Techniques and Examples

Speed table crosswalk

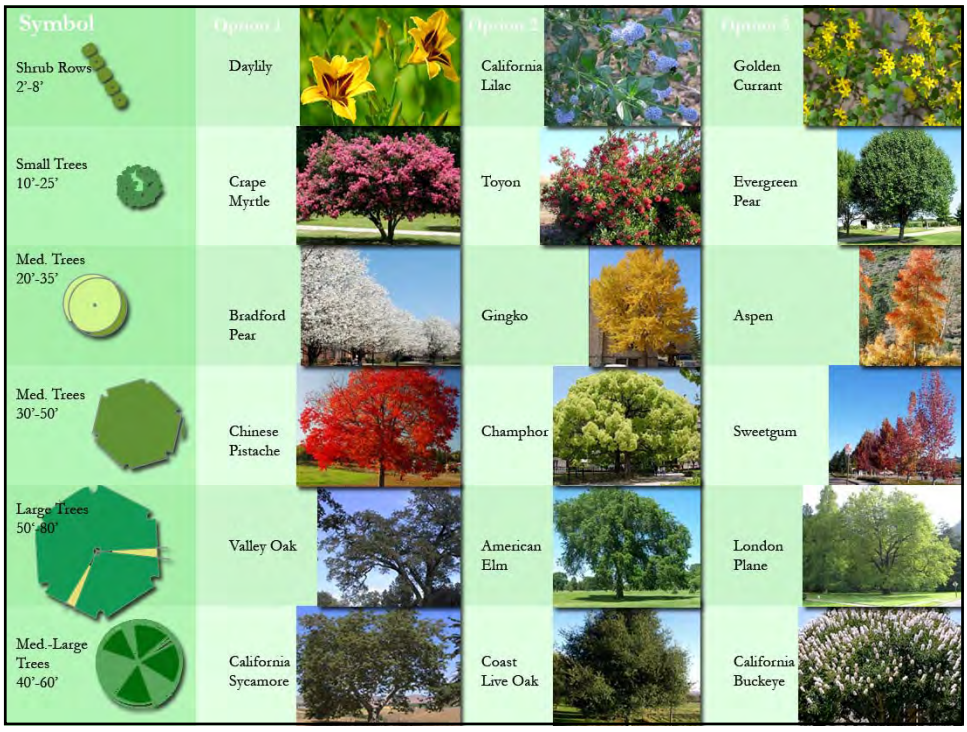
Bulbouts

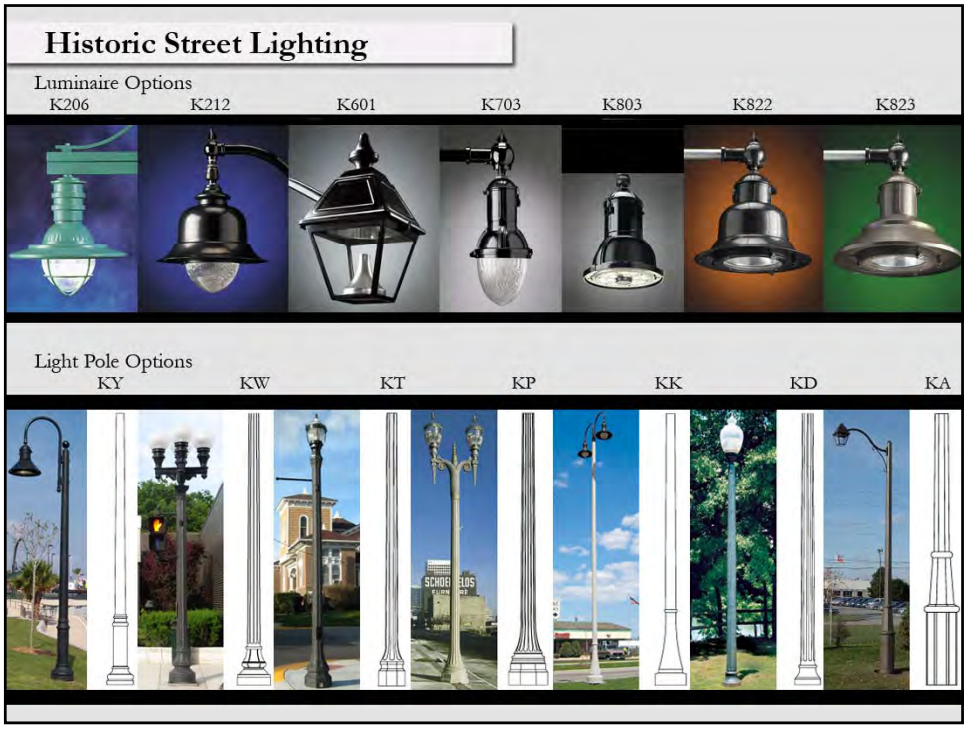
Median

Pavement coloring and streetscape elements

Landscape, Furniture, Lighting and Paving

Design Palettes





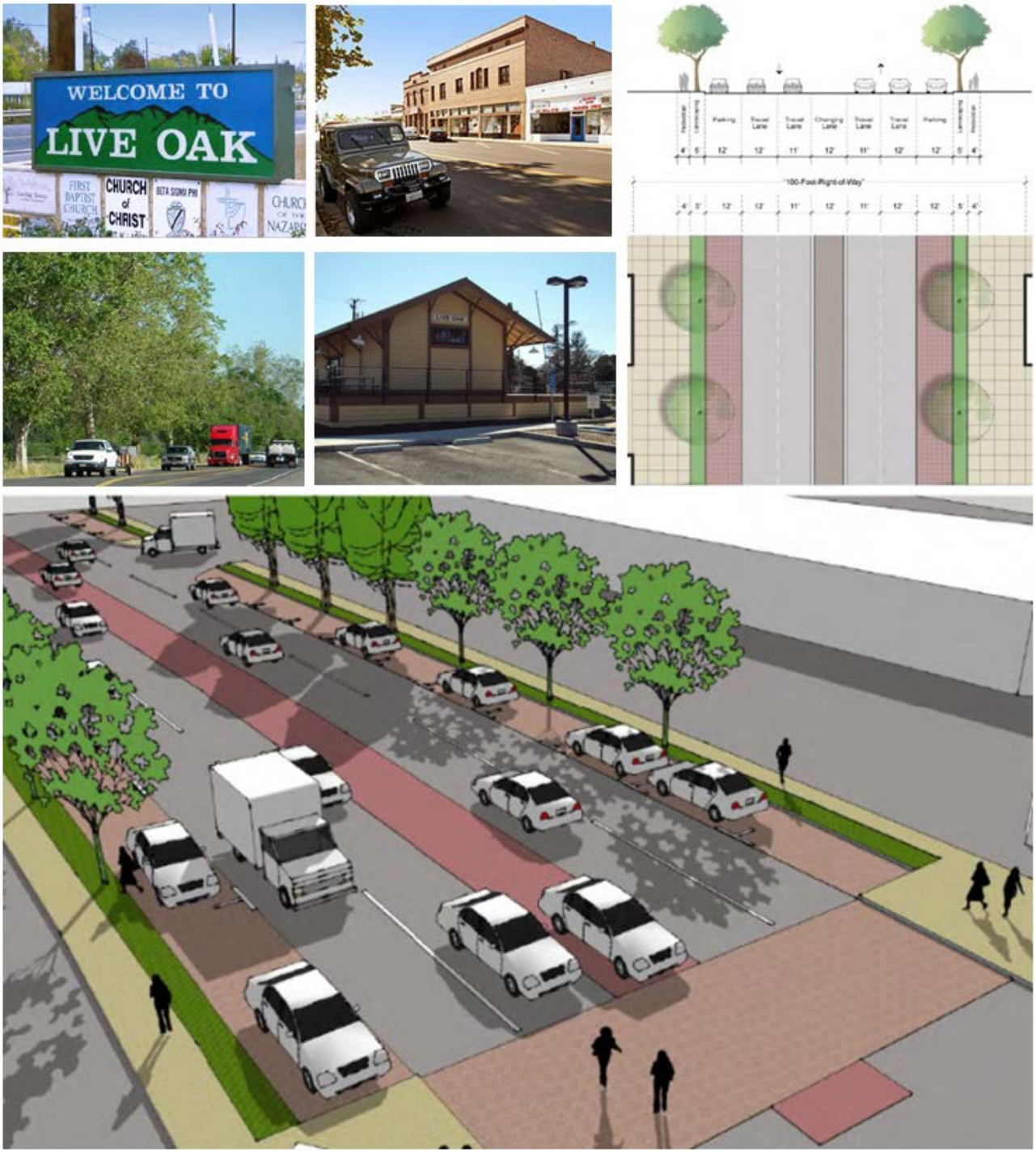
Other Comments, Questions?

Next Steps

- Draft corridor plan
- Public workshop on draft corridor plan
- Final corridor plan
- Hearing to adopt corridor plan
- www.liveoakcity.org

Live Oak Streetscape Project

TIGER Application by the City of Live Oak, California
April 2016



LIVE OAK CALIFORNIA
STREETSCAPE PROJECT

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Application Summary

Name of Project:	Live Oak Streetscape Project
Applicant:	City of Live Oak
Designation:	Rural
Primary Contact:	Jim Goodwin, City Manager City of Live Oak 9955 Live Oak Blvd. Live Oak, CA 95953 530-695-2112 citymgr@liveoakcity.org
Total Project Cost:	$22,090,938
Local Match:	$5,500,000
TIGER Request:	$15,720,938
DUNS:	609370622
Competition ID:	TIGER8-FY16
CFDA Number:	20.933
Opportunity Number:	DTOS59-16-RA-TIGER8

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SACOG Rural-Urban Connections Strategy: http://www.sacog.org/rural-urban-connections-strategy

SutterForward, the Yuba-Sutter Economic Development Corporations' 2015 Sutter Economic Development Prosperity Plan: http://www.ysedc.org/

U.S. Department of Commerce Economic Development Administration's 2015 Economic Comprehensive Economic Development Strategy for the Yuba-Sutter Economic Development District: http://www.ysedc.org/

Yuba-Sutter Transit: http://www.yubasuttertransit.com/

EXECUTIVE SUMMARY

The City of Live Oak is a rural and economically disadvantaged community that is requesting TIGER funds to implement the ***Live Oak Streetscape Project*** (Project) as envisioned in the City's Collaborative Highway 99 Streetscape Master Plan. This vital project will both positively change Live Oak's economic future and enhance a key state highway.

State Route (SR) 99 is one of the region's most important goods movement corridors with an average of 18,900 vehicles per day. As a Surface Transportation Assistance Act Route it carries a high volume of truck freight traffic as almost 10% of the vehicle trips through the City's Downtown Core are made by industrial and agricultural trucks.

SR 99 also serves as Live Oak Boulevard, the city's "main street." Live Oak developed as an agricultural community and has grown as a city alongside the highway. SR 99 now divides the City into east and west halves separating businesses, schools, and neighborhoods. SR 99 does not currently provide safe and accessible pedestrian and bicycle crossings due to its limited and discontinuous sidewalks which are located directly next to vehicle traffic, and the facilities are not Americans with Disabilities Act compliant. The roadway's existing drainage facilities are inadequate and undersized leading to ponding along the highway and connecting City streets. During peak travel times, downtown Live Oak also experiences significant queuing, idling, and traffic delays since there is only a single traffic lane in each direction.

Within the City's Downtown Core many of the properties along SR 99 are vacant or underutilized including the former Diamond Walnut processing factory, and are nonetheless primed for redevelopment and private investment. The ***Live Oak Streetscape Project*** will be a catalyst for private investment, economic revitalization, and job creation.

The City, its residents, and regional stakeholders have established a vision for revitalization of the Downtown Core and have been extremely committed and successful in promoting its implementation through the preparation of technical studies, establishing land use plans, and working with other regional partners to leverage funding to move forward with the ***Live Oak Streetscape Project*** and the City's downtown revitalization.

The City is hopeful that it will be able to partner with the U.S. Department of Transportation to build on the tremendous momentum that has been achieved since 2005. The City has recently completed its Downtown Reinvestment Plan, begun construction of the Live Oak Community Trail (a Class I bike facility paralleling SR 99). The City received $60,000 from the Sacramento Area Council of Governments for the Project Study Report-Project Development Support (PSR-PDS) completed in 2014, and $810,000 of Federal Statewide Transportation Improvement Program funding programmed by SACOG to work with the California Department of Transportation (Caltrans) to complete the Project Approval/Environmental Document (PA/ED) phase of the ***Live Oak Streetscape Project***.

The total project cost is $22,090,938. The cost of the TIGER-funded Project is $21,220,938 (does not include already funded PSR-PDS and PA/ED). The City and Caltrans have together identified $5.5 million to ensure a 26% non-federal funding match. As a result, $15,720,938 of TIGER funding is being requested for the ***Live Oak Streetscape Project***. Securing TIGER funding is the immediate and essential next step for not only transforming and revitalizing Live Oak's Downtown Core, but also simultaneously improving SR 99's future traffic flow, user safety, local accessibility, and regional goods movement.



Live Oak/SR 99 Today

PROJECT DESCRIPTION

Full improvement of SR 99 through Live Oak will be completed in three phases. TIGER funding is being requested for the ***Live Oak Streetscape Project*** (Project) which is focused on Live Oak's Downtown Core and is Phase 1 of the larger project. Phases 2 and 3 extend north and south of Phase 1 (see Figure 1). Phase 1 is has independent utility and the streetscape improvements benefits and effectiveness are not dependent on future completion of Phases 2 or 3.

The Project (Phase 1) encompasses a one mile long stretch of State Route 99 (SR 99) extending north from Ash Street to Ramsdell Drive (see Figure 2). This is the heart of downtown Live Oak and, as such, is the City's first area of priority. The Project includes the following streetscape elements:

- SR 99 rehabilitation and expansion to four lanes with a two-way-left-turn median lane
- Traffic calming measures to reduce traffic speeds to 35 – 40 mph
- Improved connections with SR 99 for local streets and businesses
- Signalizing the Kola Street/SR 99 intersection
- Reducing the crown of the highway
- Addition of highly visible and ADA compliant crosswalks and other pedestrian facility upgrades (Ash St., Birch St., Archer Ave., Elm St., Pennington Rd., Ivy St., Kola St., Nevada St.)
- Curb, gutter and sidewalks installation on both sides of SR 99
- Addition of parallel street parking to both sides of SR 99
- Drought tolerant landscaping between sidewalk and the roadway
- Addition of ornamental street lighting, furniture, bicycle parking, and other "place making" amenities
- Rehabilitation of existing drainage system

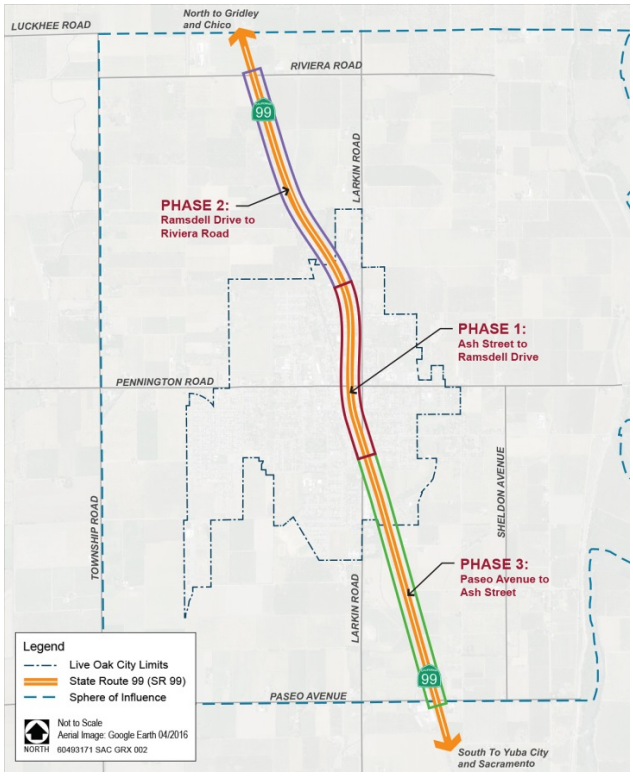

Figure 1 - Project Phasing

Live Oak Streetscape Conceptual Improvements

Conceptual Design

Figure 2 – Live Oak Streetscape Project Conceptual Design

Conceptual Cross Section

The ***Live Oak Streetscape Project*** will establish a new identity and greater "sense of place" for Live Oak. The streetscape improvements will send a clear visual signal to residents, commuters, and visitors that they are entering downtown Live Oak. It will create an environment that is enjoyable for walking and driving, and will encourage developers and business owners to invest in the community. Together the buildings, planting, paving, parking, lights, signs and other amenities create the visual character of the streetscape. The Project's streetscape and highway corridor design allows seamless integration of the various properties and land uses to create a more cohesive community identify (Figure 3).

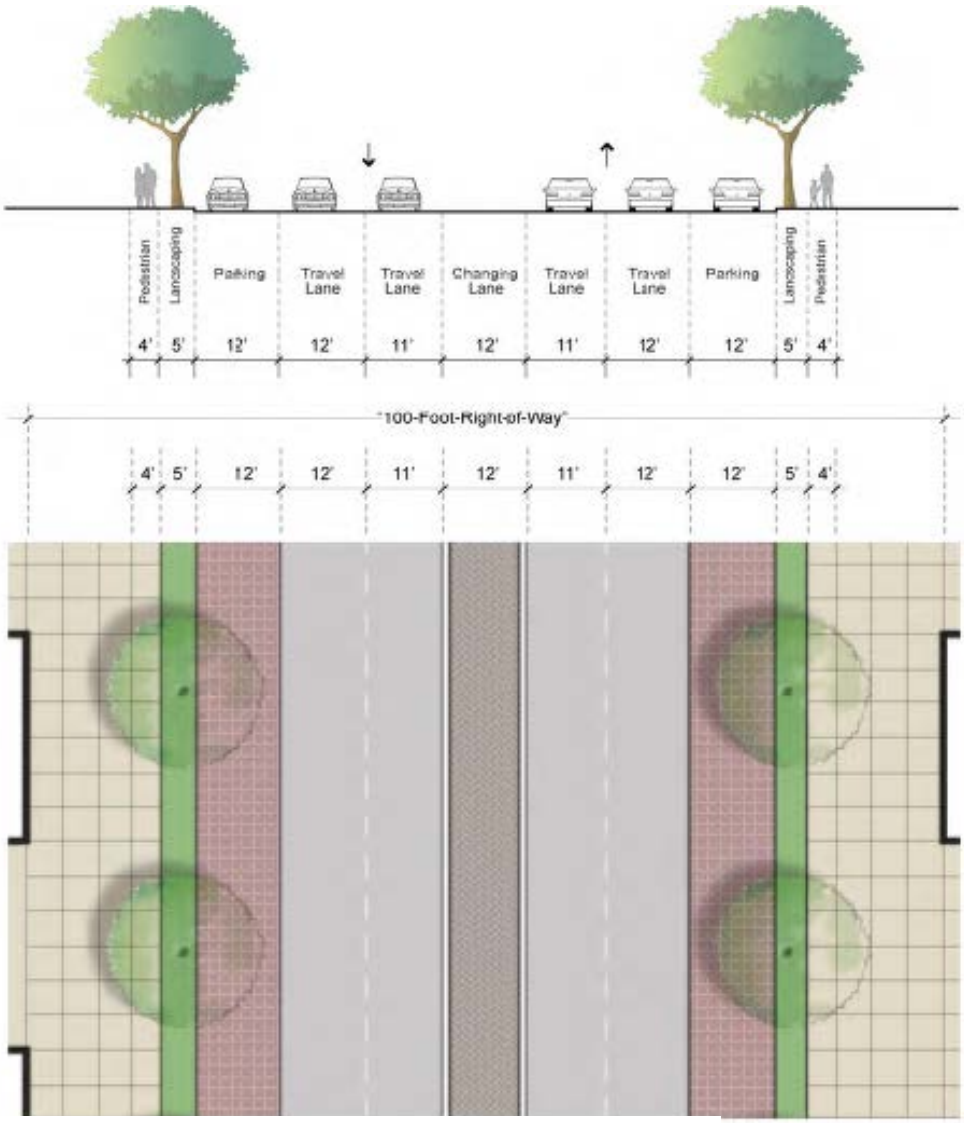

Figure 3 - Downtown Core Area Typical Plan and Section

Project Beneficiaries

The project will benefit SR 99 motorized and non-motorized users. The project beneficiaries will include not only the City's local residents, workers and students, but also the region's commuters, visitors and freight traffic. In addition to these transportation benefits, the Project will also transform the City's downtown area and improve the local economy. Key Project beneficiaries will include:

Local Shoppers, Visitors and Tourists

Place making improvements (i.e. sidewalks, street parking, lighting, place making banners and signage), beautification and better business accessibility will contribute to transforming Downtown Live Oak into a more vibrant and attractive destination for local shoppers, visitors and tourists. It will also attract new retail businesses and other commercial development.

Low Income Households and Seniors

Numerous senior affordable housing projects and multi-family affordable housing developments are located in close proximity to SR 99 and the Live Oak's downtown area. The Project will increase these disadvantaged residents access to retail businesses, potential job opportunities, local services and recreational facilities.

Local Schools

All four of Live Oak Unified District's schools are located within half a mile on either side of SR 99 (near Pennington Road). As a result, Live Oak's students will be a primary beneficiary of the Project improvements which will provide safe pedestrian and bicycle access to all of the schools. The School District is also the City's largest employer and therefore these improvements will also directly benefit a major portion of Live Oak's workforce.

Business owners and Employees

SR 99's streetscape improvements will greatly enhance its safety, improve traffic flows, increase pedestrian access, and make major aesthetic improvements to Live Oak's downtown area. These improvements will create a "sense of place" for Live Oak and develop downtown as a destination that will attract new customers to its retail and service businesses and also catalyze new commercial development. The Project will also improve the commercial district's visibility from SR 99 and provide new on-street parallel parking along SR 99. Other Project improvements benefitting local businesses and workers will include improved access to local shopping, restaurants, and services, and additional transportation options to and from work. e.

Central Valley Agricultural and Industrial Goods Movement

Almost 10% of the total daily vehicle traffic on SR 99 passing through the City's Downtown Core is comprised of industrial and agricultural trucks.

Transportation Challenges

Live Oak originally developed as an agricultural community alongside SR 99. However, the roadway has become a major barrier to east-west travel in downtown Live Oak that separates its schools, residents, businesses and parks. SR 99 is in need of major rehabilitation and does not have the infrastructure necessary to support greater multi-modal transportation. SR 99 also lacks the visual cues necessary to encourage vehicle speed reduction or support future community and commercial development.

SR 99 has heavy commute traffic within the City of Live Oak that results in lengthy traffic queues particularly at its intersection with Pennington Road. Downtown's other signalized and non-signalized intersections also contribute to congestion delays during the commute periods and also have other operational deficiencies.

SR 99 Deficiencies

Within the City of Live Oak, SR 99 major deficiencies include:

- Only two travel lanes leading to queuing, idling, and long waits during peak travel times
- A one-sided downtown resulting from SR 99 and Union Pacific Railroad
- Existing driveway access and vehicle parking at business frontages create conflict points for all modes of transportation
- Inadequate or non-existent business signage, gateway development, and a SR 99 business interface that does not benefit or showcase the City's downtown area and businesses
- Coordinated directional signage is lacking
- Pedestrian crossings are limited, impacted by SR 99's "high crown" and are not coordinated with the City's existing local infrastructure
- Insufficient street lighting at crosswalks, businesses, and infill development opportunity sites
- Sidewalks along SR 99 are discontinuous, located directly adjacent to vehicle traffic, and are not Americans with Disabilities Act (ADA) compliant
- Existing speed limits and vehicle speeds are not conducive to pedestrian activity and contribute to single occupancy vehicle modality
- Insufficient on-street parking
- Landscaping is minimal
- Existing SR 99 drainage facilities are undersized to adequately transport stormwater and do not apply low-impact stormwater strategies
- Off-site irrigation and reclamation ditches cross beneath the highway

Safety

Live Oak's downtown area will be more successful and its neighborhoods more livable if the City's "main street" is transformed into a "complete street" and is designed to be safe and convenient not only for vehicle drivers, but also for pedestrians, bicyclists and public transit. Most of the Downtown Core Area currently lacks adequate pedestrian and bicycle amenities. The City envisions the future Downtown Core Area as a vibrant, pedestrian-friendly, mixed-use environment. Both walkability and pedestrian/bicycle safety will have a strong emphasis within the Downtown Core Area. Safe connections across SR 99 also need to be provided for residents to reach local destinations, such as schools, parks, shops, and services.

Safe Routes to Work and School

Congestion on SR 99 primarily coincides with school start and stop times. The majority of Live Oak residents live west of SR 99. As shown in Figure 4, all four of Live Oak's schools are located within half a mile of SR 99 with all but one located east of the roadway. On May 9, 2012 the California DOT conducted a Traffic Turning Movement Count Survey at the intersection of SR 99 and Pennington Road. The survey recorded peak hour vehicle and pedestrian counts and also determined that almost all current pedestrian use was in the east-west direction crossing SR 99. School-aged children have been observed crossing SR 99 before school, during lunch, and after school at its unsignalized Kola Street intersection. Infrastructure improvements to eliminate current hazardous conditions in areas where most students live within walking distance of their schools are expected to substantially increase pedestrian/bicycle access to school and reduce their private vehicles or bus use.

Ladders of Opportunity

The Project will greatly increase east-west connectivity and improve access to employment, education, public transit, recreational opportunities, and affordable housing. The Project is also a key element supporting the City's ongoing revitalization efforts to attract developers, job creation, and encourage reinvestment in the community (see Figure 4). The project will:

- Increase connectivity between SR 99 and local streets and improve access to SR 99 frontage businesses
- Establish a sense of place, encourage community cohesion and attract commercial development revitalizing Live Oak's downtown area
- Improve access to jobs, shopping, and services for City residents and particularly for its low-to-moderate income populations and seniors
- Catalyze commercial and residential development, particularly of the existing vacant and underutilized sites located along SR 99 (see Figure 7)

Connectivity and Accessibility

Currently, sidewalks along SR 99 are discontinuous and located directly adjacent to vehicle traffic. The City's sidewalks are not Americans with Disabilities Act (ADA) compliant and pedestrian crossings are limited, inconvenient, and poorly marked.

Existing Pedestrian Crossing

The Project includes construction of new sidewalks, curbs and gutters. Drought tolerant and California native landscaping will also be planted between the sidewalk and the street to create a buffer between pedestrian and vehicle traffic. Project improvements will also include highly visible and ADA compliant pedestrian crossings at Nevada Street, Kola Street, Ivy Street, Pennington Road, Elm Street, Archer Avenue, Birch Street, and Ash Street. Improved connectivity will create greater cohesion between the east and west of SR 99 in the Downtown Core and also provide safer crossings for Live Oak's residents, employees, visitors, and schoolchildren. Improved connections between SR 99 and local streets will result in better access to SR 99 frontage businesses.

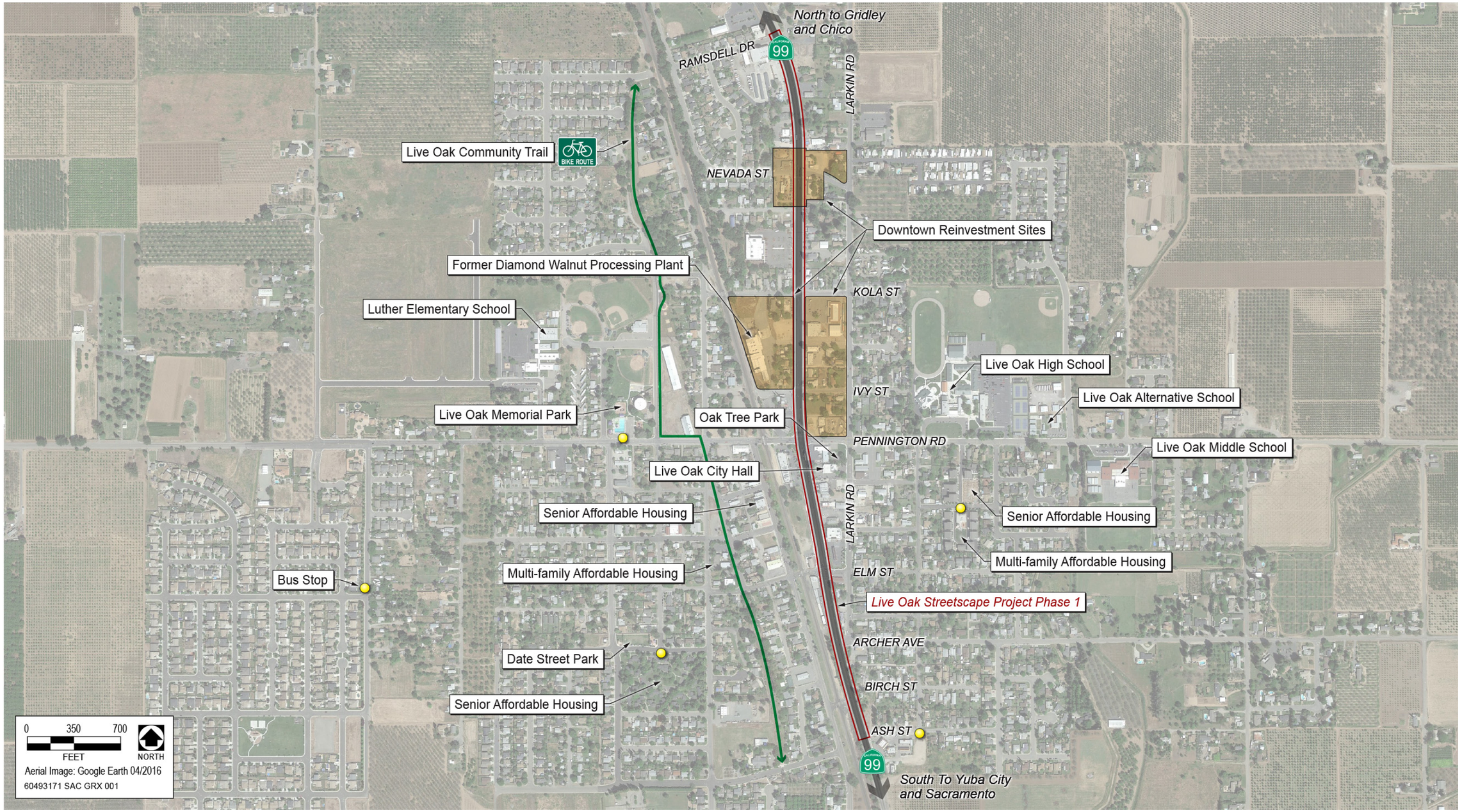

Figure 4 – Downtown Transformation and Ladders of Opportunity

Community Support, Downtown Revitalization and Land Reuse

Live Oak is an ethnically diverse and economical disadvantaged community. Almost half (48.8%) of the population is of Hispanic origin, while 35 percent of the population identify themselves as White, and 12 percent as Asian (primarily Asian Indian and Pakistani) (US Census, 2010). Between 2010 and 2030, the Hispanic population is projected to increase by 54 percent, the Asian population by 39 percent and the White population by 26 percent (DOF 2013). Live Oak's future population is projected to grow at an average rate of 1.4 percent per year and result in a 2035 population of approximately 11,233—a 35 percent increase (SACOG 2015). The median household income in Live Oak is $40,640 which is approximately 19 percent less than that of the County's $50,010 median household income.[1]

Redevelopment and revitalization of Live Oak's historic Downtown Core through streetscape elements, transportation facilities, and a public and private investment in infrastructure will help position the community to attract development of additional housing, retail services, restaurants, parks, entertainment, and civic uses needed by the City's growing population.

Housing & Employment

In 2011, Live Oak's total labor force was 3,381 and there were 982 jobs located within the City. This equates to just one job in the City for every three members of its labor force. Additionally, only 20 percent (200) of the jobs located in Live Oak are filled by City residents.

The City has the highest annual average unemployment rate in Sutter County. This is partly a reflection of the economic predominance of agriculture which largely provides only seasonal employment opportunities. Over the last decade, Live Oak's annual unemployment rate has ranged from 17 percent in 2006 to as high as 33 percent in 2010. In 2013, the Live Oak's annual unemployment rate was 27.3 percent and almost twice the County rate of 15.3 percent. Live Oak also has a 0.48 jobs/housing balance as many of its employed residents commute daily to jobs located as far away as Sacramento. In addition to its role in the region's traffic congestion and air quality problems, Live Oak's poor jobs/housing ratio also results in a lower tax base for the City than that if there was more local employment for residents.[2]

Local employment that is balanced with its local population is essential for a well-functioning, fiscally healthy and economically sustainable community. The Project will be a vital catalyst in attracting employment-generating uses of the opportunity sites along SR 99 by providing necessary infrastructure, drainage, and streetscape improvements that are essential requirements for new development to occur.

Low Income Households and Seniors

Live Oak is a disadvantaged community. The City is identified as a Low Income and High Minority (LIHM) Area in SACOG's 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy and the ***Live Oak Streetscape Project*** is specifically identified as a LIHM Area benefitting transportation project. Four senior and two multi-family affordable housing developments are located within walking distance of the Streetscape Project and the City of Live Oak recently completed construction of the new Maple Park affordable and senior housing project. The Project will increase the City's low income and elderly residents' access to local businesses, services, jobs and recreational activities.

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[1] *Live Oak Downtown Reinvestment Plan, 2015*
[2] *Ibid.*

Alternative Transportation Users (Walking, Biking, and Public Transportation)

Approximately 10.2 percent of Live Oak's households do not have a vehicle. This is considerably higher than the neighboring communities of Yuba City (7.7 percent), Gridley (3.3 percent) or for Sutter County (6.8 percent). There is considerable current local demand for greater bicycle and pedestrian accessibility since most of Live Oak's residents live within 2 miles of the Downtown Core and an estimated 242 City households do not have a car.[3]

The Project will greatly improve safety conditions along SR 99 for its non-motorized highway users through the implementation of traffic calming measures, improved intersections, and provisions of pedestrian and bicycle facilities. The Project is expected to increase pedestrian and bicycle use to shop, work, school or other destinations by local residents – particularly those living within a mile of SR 99.

The Project will also provide new linkages and use benefits for other ongoing and planned projects such as the Live Oak Community Trail (Trail). The Trail is a recently constructed mile long Class I bicycle path that runs parallel with SR 99. The City has secured funding to complete one of the two remaining trail segments. SR 99 way finding signage will direct bicycle traffic off the highway and onto the protected Trail.

In addition, the Project will also provide safety and travel time improvements for public transit users. Yuba-Sutter Transit provides bus service for the project area at four bus stops in downtown Live Oak that are within walking distance of SR 99. Dial-A-Ride service is also available for senior and persons with disabilities.

Regional Goods Movement Route Sutter County

SR 99 is a major north-south highway in California's Central Valley. The northern terminus is at SR 36 near Red Bluff in the Sacramento Valley. The southern endpoint is at Interstate 5 junction south of Bakersfield, near the southern end of the San Joaquin Valley (see Figures 5 & 6). SR 99 is known as the "Main Street" of the Central Valley since it connects or passes near most the region's major cities.

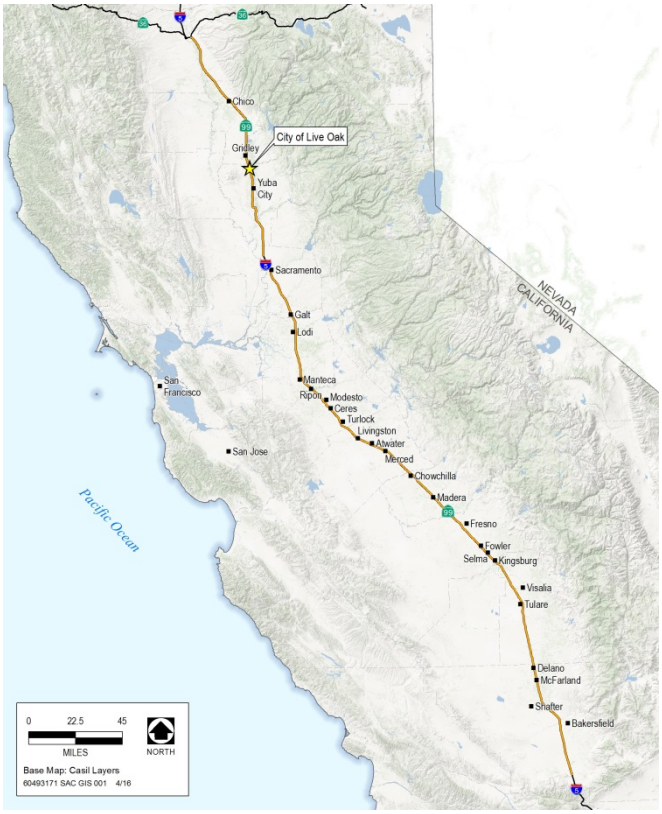


Figure 5 – SR 99

[3] *Live Oak Downtown Reinvestment Plan, 2015*

SR 99 is one of the region's most important goods movement corridors (see Figure 5). As a Surface Transportation Assistance Act (STAA) Route it has a high-level of freight traffic use that is a very important route for agricultural goods and supplies. Pennington Road is an identified "Stakeholder Route" in SACOG's Rural Urban Connections Strategy (RUCS) and its intersection with SR 99 is Live Oak's busiest roadway segment. It also has a relatively high percentage of truck traffic - in 2013 trucks accounted for 9.2 percent of the roadway's traffic. SACOG's Truck Intensities Map (2008) shows areas with "Med-High 0.15-0.19 trucks/acre" in the project area. The RUCS Board Packet from August 2011 indicates the Project is in a "large-scale agricultural" area. Project Location & Community Demographics

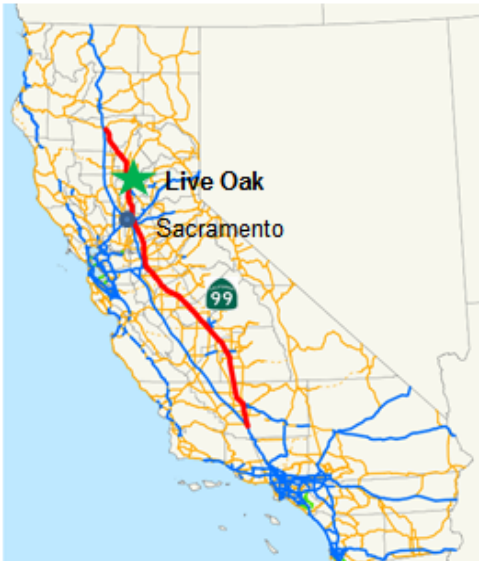


Figure 6- SR 99 & California Highways

The City of Live Oak has a population of 8,341 people (DOF 2013) and is located in the Sacramento Valley, 10 miles north of Yuba City and within Sutter County. Live Oak is 50 miles north of the City of Sacramento and 36 miles south of the City of Chico. The Project is located in a rural area (not within an Urbanized Area as defined by the Census Bureau). Live Oak is at risk of becoming a "bedroom community" for distant employment centers like Sacramento, Yuba City, and Chico. The City's General Plan 2030 calls for retail, service, and employment development to help its transition from a "bedroom community" to a self-sufficient city.

PROJECT PARTIES

City of Live Oak

The City of Live Oak will be the grant recipient and is the lead agency for the Project. www.liveoakcity.org

California Department of Transportation (Caltrans)

The Project will be managed and constructed by Caltrans District 3. http://www.dot.ca.gov/d3/index.html

Sacramento Area Council of Governments (SACOG)

SACOG provides transportation planning and funding for the region. SACOG is currently funding the preliminary design and environmental review of the Project. www.sacog.org

Live Oak Unified School District

The school district is the largest employer in Live Oak and managers four schools within walking distance of the project. The school district has been an active partner in the design of the improvements. www.edlinesites.net/pages/Live_Oak_Unified

Yuba-Sutter Economic Development Corporation (EDC)

Yuba-Sutter EDC is focused on business retention and expansion and the economic growth of the region. The EDC has been active partner with the City in its downtown reinvestment efforts. www.ysedc.org

Letters of support from project parties and other project stakeholders are included in Appendix A.

GRANT FUNDS

The total Project cost is $22,090,938. The cost of the TIGER-funded Streetscape Project is $21,220,938 (does not include already funded PSR-PDS and PA/ED). The non-Federal match is $5,500,000. The amount of TIGER funding requested is $15,720,938. The local match is 26% of the total project cost. All TIGER Grant funds will be expended in a rural area. No Federal funds have been previously requested for the TIGER-funded Project. The City received $60,000 from the Sacramento Area Council of Governments for the Project Study Report-Project Development Support (PSR-PDS) completed in 2014 (see Appendix F), and $810,000 of Federal Statewide Transportation Improvement Program funding programmed by SACOG to work with the California Department of Transportation (Caltrans) to complete the Project Approval/Environmental Document (PA/ED) phase of the ***Live Oak Streetscape Project***. TIGER funding is not being requested for the PSR-PDS or the PA/ED.

Local match funding sources include:

Caltrans State Highway Operation and Protection Program	$5,000,000
City of Live Oak (Local Transportation Funds & Impact Fees	$500,000
Total	**$5,500,000**

Importance of TIGER Funding to Complete the Project

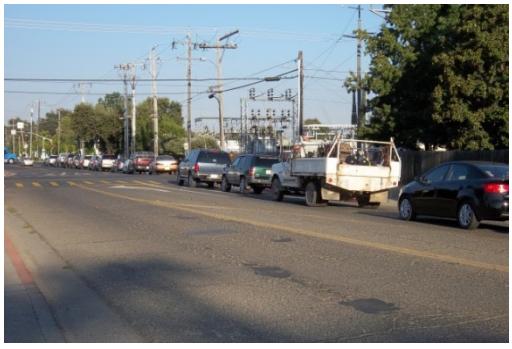
Without TIGER funding, the City of Live Oak will not be able to complete the ***Live Oak Streetscape Project*** in the foreseeable future. The City has actively pursued the available funding sources for the Project and was awarded $870,000 from the Sacramento Area Council of Governments to complete the Project's preliminary design and environmental work. The City has also received a commitment from Caltrans to provide $5 million towards the Project's construction cost. The City of Live Oak will also be contributing another $500,000. The TIGER funding will allow the City to move seamlessly from preliminary design, environmental review, and preliminary engineering directly into construction of this critical infrastructure project that will transform the City of Live Oak's downtown.

PRIMARY SELECTION CRITERIA

State of Good Repair

SR 99

The SR 99 existing conditions and deficiencies threaten its network efficiency. The project area experiences an Average Daily Traffic count of 18,900 and as a Surface Transportation Assistance Act (STAA) Route experiences a high-level of truck traffic. Since it was originally constructed in the late 1940s, SR 99 through Live Oak has been widened from the initial 22-foot wide paved travelled way to the current 36-foot wide three-lane configuration. The highway has also been overlayed several times which has raised the elevation of the crown. The combination of the overlays and roadway widening has resulted in cross-slopes that greatly exceed the 5% maximum ADA slope requirement for an accessible path of travel. In the roadway's most extreme case, cross-slopes exceed 15% at the northwest return at Pennington Road.



It is vital to make this improvement so SR 99 can continue functioning in its capacity as both a regional travel and goods movement corridor and also operate as a local roadway connection for downtown Live Oak. Caltrans has abandoned plans for a SR 99 bypass, and instead is focused on improving the existing SR 99 route so it can continue to serve as the thoroughfare for interregional traffic. The Project will improve the existing roadway so that it can adequately serve the region's current and forecasted future travel demand.

The City worked closely with Caltrans to establish a mutually beneficial conceptual approach to these improvements, which is embodied in the ***Live Oak Streetscape Project***. The City needs now to implement this consensus project so that future infill development projects work well with SR 99 operations.

Traffic and LOS Conditions

SR 99 currently operates at LOS E conditions throughout the SR 99 segment passing through the City of Live Oak[4], and the traffic conditions at the Kola Street, Elm Street and Paseo Avenue intersections are even worse (LOS F). If the Project is not built, regional and local growth will result in LOS F conditions on SR 99 throughout its downtown Live Oak segment.

Expansion of SR 99 to four lanes through the Live Oak section will increase capacity and ensure that acceptable levels of service will be attained through the corridor, and improvements at the Kola Street/SR 99 intersection can help movement of traffic through Live Oak and provide an additional controlled intersection for pedestrians.

[4] *Caltrans State Route 99 Transportation Corridor Concept Report, 2010*

Drainage Facilities

Most of SR 99 through Live Oak's Downtown Core is not presently served by storm drain systems. The existing SR 99 drainage facilities are undersized to adequately transport stormwater away from the roadway. During high-levels of precipitation this inadequate infrastructure results in flooding on SR 99 and causes significant disruptions to pedestrian accessibility, traffic flow and goods movement. The City developed a Master Drainage Study (MDS) in 2011 to address the existing drainage problems and identify flood control facility improvement needs. The Project will be consistent with the MDS and will construct curbs, gutters, and rehabilitate 15 culverts to extend their service life and ensure they perform as designed during storm events. The ***Live Oak Streetscape Project*** will also use low-impact development techniques to manage stormwater runoff, while addressing water quality and supporting native and drought tolerant landscaping.

Project Funding

The City and its project partners have demonstrated a commitment to the Project and have invested significantly through their past technical assistance and funding. Figure 10 illustrates the long-standing commitment to the ***Live Oak Streetscape Project***. Caltrans is committing a $5 million match to the TIGER Grant funding and has also committed to maintaining the streetscape improvements once constructed. There will be an agreement between Caltrans and the City for the electrical maintenance of the new signalized intersection at Kola Street, and the maintenance of the sidewalk and landscaping.

Economic Competitiveness

State Route and Community Revitalization

SR 99 has both positive benefits and negative impacts on the City of Live Oak. While SR 99 serves statewide commerce and connects Live Oak to regional destinations, the highway also acts as dividing barrier impacting commerce and community development within the City.

The ***Live Oak Streetscape Project*** addresses SR 99's multiple functions including serving as: (1) a regional and statewide thoroughfare; (2) a main street for Live Oak's existing and proposed commercial districts, and (3) an inviting and aesthetically pleasing gateway to the City; and (4) a catalyst for economic development that facilitates private investment and infill development.

The ***Live Oak Streetscape Project*** has been identified as a vital component for the region's economic growth by both the U.S. Department of Commerce Economic Development Administration's 2015 Economic Comprehensive Economic Development Strategy for the Yuba-Sutter Economic Development District, and SutterForward, the Yuba-Sutter Economic Development Corporations' 2015 Sutter Economic Development Prosperity Plan (SutterForward). SutterForward identifies Live Oak as a priority area for a job creation corridor.

Private Investment, Infill Development, and Employment Centers

Live Oak's Downtown Reinvestment Plan (Downtown Reinvestment Plan) determined that there is currently major unmet market demand for retail, office, and residential development. The current retail deficit is estimated to be 76,690 square feet which is expected to grow to approximately 150,000 square feet in 2035. The largest retail leakage in terms of sales dollars is in the categories of restaurants, general merchandise, grocers, and apparel.

Live Oak also currently has limited leasable office properties which are typically fully leased and a low vacant rate—an indicator that the market is undersupplied and likely could support additional office space. An additional 23,283 square feet of office space will be required to meet the projected growth in professional and medical office employment by 2035.

With 2,892 additional residents or 846 additional households anticipated by 2035, Live Oak could support approximately 685 single-family units and 119 multi-family units to accommodate the projected increase in households.

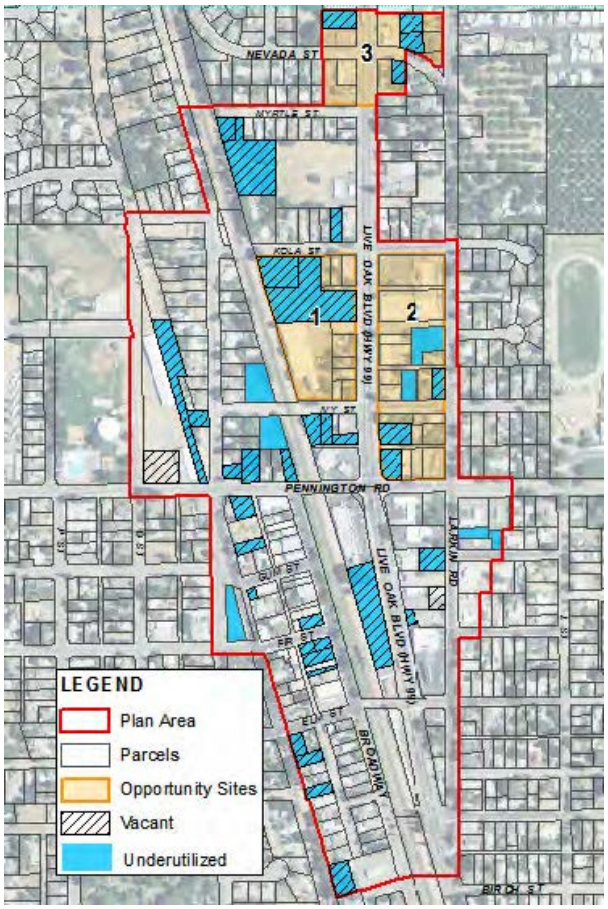


Figure 7 - Downtown Reinvestment Plan, Vacant and Underutilized Sites

The Project is considered a critical prerequisite for the City's Downtown Reinvestment Plan goal for greater infill development on vacant and underutilized lots. In its 2015 Downtown Reinvestment Plan, the City identified three key potential opportunity sites, all of which are located along SR 99 (see Figure 7). These sites were selected based on their high visibility, ability to transform vacant, underutilized, and deteriorated sites, improve downtown's physical appearance, increase surrounding property values, and encourage additional private investments.

One of these opportunity sites includes the vacant Diamond Walnut Processing Facility located on the southwest corner of SR 99 and Kola Street in downtown. The proposed site plan concept builds on the potential of rehabilitating and readapting the former walnut processing factory to house new employment-generating uses that could either be light-industrial, commercial, or office uses.

Diamond Walnut Processing Facility

Since the City's key opportunity sites are located along SR 99, the Project is an investment for any future improvement and growth to Live

Oak's economy. The proposed improvements will have a strong signaling effect demonstrating the city's commitment to the Downtown Reinvestment Plan and the city's revitalization, which will attract interest and encourage investment, property developers, and businesses. The project improvements specifically include improving frontage access to businesses along SR 99, particularly for pedestrians. Since most Live Oak residents live within walking distance of downtown, improved pedestrian and bicycle access will make the City more livable and also help attract and increase the City's retail and service businesses and customer base.

Housing and Transportation Costs

Pursuant to the Center of Neighborhood Technology Housing plus Transportation Index, Live Oak's combined cost of housing plus transportation for is 56 percent of household income, with housing accounting for roughly 27 percent and transportation accounting for 29 percent of the cost. The larger transportation cost is likely due to the number of residents who commute outside of the City for work. If future downtown revitalization results in new job opportunities and greater non-vehicular mobility, transportation cost savings could increase the disposable income for some local residents and households.

Quality of Life

Affordable Multi-Modal Transportation

The City's 2030 General Plan developed the new "Downtown Mixed Use" designation and laid the foundation for strategic infill development and targeted private and public investment in the City of Live Oak's downtown. The Downtown Reinvestment Plan completed in 2015, recommends development options for priority opportunity sites, and proposes strategies to remove barriers, encourage private investment and infill development. The ***Live Oak Streetscape Project*** will implement the goals of these plans and will incentivize new mixed-use development near retail, employment, affordable housing, and public transit. The Project will provide safe and comfortable public transit, bicycle and pedestrian movements that promote individual and community health, while connecting the commercial districts, residential neighborhoods, and schools.

Livability Principles

The Project further promotes the six Partnership for Sustainable Communities "Livability Principles" by encouraging use of alternative transportation through increased multi-modal access and spurring development of new local employment-generating land uses and housing. Both benefits can provide residents with increased access to local jobs, reducing transportation costs and reliance on fossil-fuels, while also promoting cleaner air quality and reducing greenhouse gas emissions.

The improvements will allow SR 99 to continue to function as a regional travel corridor, while improving access for pedestrians and bicyclists, enhancing aesthetics and improving community health by offering alternatives to driving. Additionally, streetscape improvements will make vacant and underutilized lots in the Downtown Core more attractive for mixed-use infill development that will reduce the need for some vehicle trips.

The Downtown Reinvestment Plan developed conceptual site plans for the key opportunity sites located in the Project area and directly adjacent to SR 99 (Figures 8 and 9). These conceptual site plans are supported by the market demand and provide a mix of retail, office, and market-rate and affordable housing.

Figure 8 – Downtown Reinvestment Plan, Conceptual Site Plan, Opportunity Sites 1 & 2

Figure 9 – Downtown Reinvestment Plan, Conceptual Site Plan, Opportunity Site 3

Land Use and Economic Planning and Technical Assistance

The project is consistent with current land use and economic plans, including:

- Live Oak 2030 General Plan
- Live Oak Downtown Reinvestment Plan
- U.S. Department of Commerce Economic Development Administration's 2015 Economic Comprehensive Economic Development Strategy for the Yuba-Sutter Economic Development District.

Figure 10 provides a comprehensive summary of the planning and technical studies that have been developed in support of the ***Live Oak Streetscape Project***.

Environmental Sustainability

Energy/Greenhouse Gas (GHG) Emissions

The increased highway capacity and reduced congestion delays will reduce fuel consumption, which will also reduce air emissions that would otherwise occur. Direct project related decreases in air emissions are limited to the reduction in traffic queuing, idling and long wait times during peak travel times. However, in addition more substantial air emission reductions can potentially be expected from multi-modal improvements and new business development downtown.

New and safer pedestrian facilities will improve pedestrian and bicycle access of local destinations such as work, school and retail businesses, will reduce up to 2 vehicle miles traveled (VMT) reduction per trip, resulting in improved air quality and reductions in GHG emissions. Further, greater retail business development in downtown Live Oak can reduce both sales leakage and employment outflows to Yuba City, which is 10 miles away (20 miles roundtrip). Replacement of the 20 mile roundtrip distance to a Yuba City shopping mall or worksite can be expected to result in a minimum net reduction of 18 VMT and 0.75 gallons of gasoline use per trip.

Stormwater

The stormwater improvements will improve water quality and support native and drought tolerant landscaping.

Avoiding Adverse Environmental Impacts

The Project will be limited to the existing Caltrans right-of-way and will not require any property acquisition, and therefore any adverse environmental impacts will be greatly minimized.

Brownfield Redevelopment

One of the opportunity infill development sites located along SR 99 is currently undergoing brownfield remediation to address environmental contamination resulting from the former gas station. ***The Live Oak Streetscape Project*** will contribute to the redevelopment of this site through construction of curb, gutter, sidewalk, and stormwater improvements.

Brownfield Currently Being Remediated

Safety

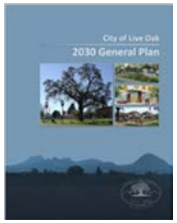
Historically, accident rates on this segment of the highway have greatly exceeded state averages. In the five years from July 1, 2008 through June 30, 2013, there were 153 accidents in the project area. The majority of these accidents were rear end and broadside traffic collisions, with one third of these collisions resulting in injuries. [5]

Most properties fronting the highway have direct access but in some locations there is very little spacing between access points. This results in vehicular conflict points throughout the corridor. The Project is expected to greatly improve safety conditions along the highway for its users through the implementation of traffic calming measures, signal coordination and intersection

[5] *Caltrans SHOPP Asset Management Pilot Program – SR 99 Live Oak Livable Downtown Corridor Project, 2015*

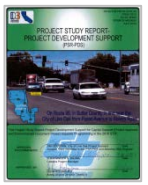
2030 General Plan
(Total Investment: $850,000)

In 2005, the City initiated a General Plan update and the community established the Vision and Guiding Principles which included the Live Oak Streetscape Project.



Live Oak Community Trail
(Total Investment: $1,900,000)

A mile-long Class I bicycle trail constructed on abandoned railroad right-of-way that runs parallel along SR-99. This innovative project removes bicycle traffic from the Live Oak Streetscape Project. The first of four segments was completed in 2010.



Caltrans Route 99 in and Near Live Oak, Project Study Report – Project Development Support (PSR-PDS)
(Total Investment: $60,000)

Caltrans initial step in the Streetscape Project development.

SACOG Regional & Local Program Funding Grant Award
(Total Investment: $810,000)

Funding preliminary design and environmental review.

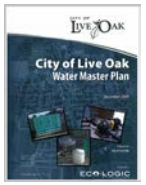
Live Oak Draft Bicycle, Pedestrian, and Trails Plan
(Total Investment: $115,000)

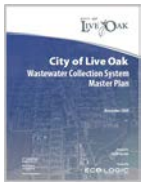
Supports the City's vision to create a safer, more comfortable walking and bicycling network.

2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016

Water and Wastewater Collection System Master Plans
(Total Investment: $316,000)

Critical in understanding the infrastructure improvements needed for the Streetscape Project and to accommodate infill development.





Live Oak Retail Market Analysis Report
(Total Investment: $35,000)

Prioritizes and encourages private investment along SR-99.

Master Drainage Study
(Total Investment: $129,500)

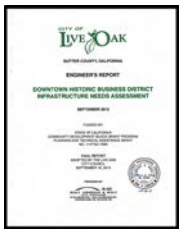
Recommend future drainage and flood control facility improvements.

Collaborative Highway 99 Streetscape Master Plan
(Total Investment: $117,000)

Sets the community vision and provides a guide for the Streetscape Project.

2013: Downtown Historic Business District Infrastructure Needs Assessment
(Total Investment: $32,250)

Evaluated the infrastructure of Live Oak's Historic Business District, and provided design recommendations, and cost estimates.



Community and Economic Development Action Plan
Sets the goals for the year. The Streetscape Project continues to be a top priority.

Downtown Reinvestment Plan
(Total Investment: $214,000)

Identifies opportunity sites for infill development, introduces development concepts, and provides concrete action steps to attract private investment along SR-99.

Figure 10-Live Oak Streetscape Project – A Decade of Community Visioning, Planning, and Investment

improvements. The signal coordination, adding lanes and continuous left turn lanes from Elm Street to Kola Street will also improve traffic circulation and reduce potential for collisions.

Currently the majority of the SR 99 corridor does not have curb, gutter, or sidewalks. The project will bring all curb cuts up to current Caltrans design and ADA standards, install compliant Accessible Pedestrian Signals, bring sidewalks up to current ADA standards and add sidewalk where they are missing. Roadside safety improvements will include installation of vegetation control at approximately 300 linear feet of guardrail at one guardrail location across from Ash Street to reduce recurrent on-foot maintenance activities.

Another major operations and safety concern is that the culverts are not connected to a storm drainage system. This results in ponding of water along and into the travel lanes of SR 99, of which the extreme cross slope exacerbates the flooding problem. At Pennington Road the high crown is at an 18 percent slope and when this area floods it creates a physical barrier for pedestrians and bicyclists wanting to use its signalized intersection.

Preliminary safety analysis indicates the roadway improvements and related improved traffic conditions could potentially reduce the area's future accident rates to state average levels.

The Project also removes bicycle traffic off of SR 99 onto parallel dedicated bicycle paths and routes, thereby reducing the potential for vehicle conflicts and collisions.

SECONDARY SELECTION CRITERIA

Innovation

This Project employs innovative transportation engineering and streetscape design that adds two travel lanes and maintains existing right-of-way, thereby not requiring any property acquisition. Caltrans allowed an exception of their design standards decreasing the width of the interior lanes to 11 feet. The Streetscape Project also does not include bike lanes. Instead, bicyclists are provided separate parallel routes along the Live Oak Community Trail—a Class I bike facility and other routes on streets with greatly reduced traffic volumes and speeds. An innovative financing strategy will also be used with approximately 25% of the total project cost coming from the California Department of Transportation State Highway Operation and Protection Program funds.

Partnership

Partnerships

The California Department of Transportation (Caltrans) shares Live Oak's vision to transform the Live Oak SR 99 Corridor and is vital partner in the design, funding, and delivery of the ***Live Oak Streetscape Project***. The Sacramento Area Council of Governments (SACOG) is also a key partner that is currently funding the preliminary design, engineering, and environmental analysis. Other important project partners include: City of Biggs, the City of Gridley, the City of Yuba City, the Live Oak Unified School District, the Live Oak District Chamber of Commerce, Sutter County, the Yuba-Sutter Economic Development Corporation, and the Butte County Association of Governments. Letters of support from these partners are included as attachments to this TIGER Grant funding request.

Public/Stakeholder Participation

Public participation and community engagement has been integral component of the ***Live Oak Streetscape Project***. The City has conducted public workshops, established technical advisory committees and has provided a variety of avenues for residents, property owners, business owners, and other stakeholders to provide meaningful input. Public involvement and transparency will continue to be integral to the success of the Project. The City of Live Oak will continue to ensure that residents and stakeholders impacted by the improvements will be informed and will continue to have opportunities to provide meaningful input. The planning documents used in the development of the Streetscape Project (Figure 10) provide a detailed list of all of public meetings and public outreach activities.

RESULTS OF BENEFIT-COST ANALYSIS

Over the 20-year timeframe, the benefit cost analysis (BCA) estimates a quantifiable net benefit of $2.6 million (discounted at 7 percent) and a Benefit-Cost ratio of 1.18. Using a lower 3 percent discount rate that is more applicable for public projects, the Live Oak street scape project is projected to result in approximately $14.4 million in quantifiable future benefits and would have a 1.80 Benefit-Cost ratio.

In both cases, the project is also expected to result in additional benefits for the region's residents and businesses that could not be quantified and consequently are not included and would be in addition to the net benefit and Benefit-Cost ratio estimates above. The complete benefit-cost analysis and findings are provided in Appendix B. The following section summarizes the key findings and quantified benefits.

Economic Competitiveness

Quantitative benefit from reduced congestion delays, improved travel conditions and increased roadway capacity is estimated at $24.3 million (undiscounted) over 20 years.
During peak periods, future SR-99 roadway users will benefit from reduced roadway congestion and shorter wait-times at both the signalized and unsignalized intersections. It is conservatively estimated that the project will reduce highway users travel times by on average of 1.3 minutes which on an annual basis will result in an average of approximately 31,600 hours in travel time benefits. In addition, the project is also expected to improve and increase the roadway capacity which enable growth in future highway use that would result in an average of 57,000 hours per year of new vehicle travel through the downtown area.

Quantitative benefit of reduced transportation costs for highway users of $0.8 million (undiscounted) over 20 years.
During peak periods, shorter delay times will reduce the fuel used annually by idling vehicles. The BCA estimates that automobiles would use 176,000 gallons less of gasoline resulting in an estimated $0.63 million in fuel costs savings over the 20-year period. In addition, an estimated 40,000 gallons of diesel fuel would also similarly be saved by trucks resulting in approximately a $0.172 million fuel cost savings.

Environmental Sustainability

Quantitative project-related air quality and stormwater management benefits of $1.07 million.
The projected avoided fuel use would be expected to result in reduced future emissions and consequently would include air quality benefits. The total economic value of the expected future air emissions reduction (including reduced greenhouse gas) is estimate to be $89,000 over the 20-year period. In addition, there will be significant direct environmental benefits to the City of Live Oak from the project's stormwater drainage improvements. The benefits to the City of Live Oak are conservatively estimated to be equivalent to at a minimum its $0.985 million improvement cost.

Safety

Quantitative benefits from reduced crashes on SR-99 of up to $25.8 million (undiscounted) over 20 years.

The project is expected to greatly improve future traffic and safety conditions on SR 99 within the City of Live Oak. Historically, accident rates on this segment of SR 99 have greatly exceeded state averages. Preliminary safety analysis indicates that an average of 6.8 injury and 26.3 non-injury accidents would be avoided if the project can improve future safety conditions to state average levels. Based on standard USDOT valuation of accident costs, the project is estimated to result in total future economic benefits of $25.8 million over the 20-year timeframe.

Qualitative benefit of increased safety for non-vehicle users throughout the project area.

There is insufficient information to predict and quantify the expected safety improvement for pedestrians and bicyclists. However, the current traffic conditions are generally considered unsafe and are a major deterrent for many individuals that might otherwise be interested in walking or bicycling through the project area. Combined with the City of Live Oak's ongoing bike trail improvements, the project's safety improvements are expected to encourage greater pedestrian and bicycle use within the downtown area.

Safe Routes to School (SR2S) and Active Transportation

Quantitative benefits from increased pedestrian and bicycle access to local destinations such as work and school of up to $1.0 million (undiscounted)

Current traffic conditions are considered unsafe and act as a barrier for students and commuters walking or bicycling to school and work, respectively. With a majority of Live Oak's population living within a mile of the project area, improvements in pedestrian access to local destinations such as work and school. There are four schools located within half a mile of the project area, and an increase in walking or bicycling to school will substantially lower vehicle trips and thus, lower vehicle operating savings and air quality benefits. Furthermore, it will also reduce expenditure on the provision of buses for student travel and travel time savings for parents that make special trips to bring their children to school. In addition to the SR2S benefits for students, the project is expected to increase the walk/bike mode for local residents travelling to work or non-work related destinations, which would also lower vehicle operating savings and air quality benefits. Over the entire lifespan of the project, $0.66 million in vehicle operating savings and $0.064 million in air quality benefits are estimated from increased walking and bicycling to local destinations.

Qualitative benefit from increased pedestrian and bicycle access to local destinations such as work and school

There are benefits of increased pedestrian and bicycle activity such as health and mobility benefits, which have not been quantified for this BCA.

Economic Development

Quantitative benefits from new retail development and sales tax growth of up to $2.2 million (undiscounted)

The project is expected to catalyze retail development along the highway, where majority of the city's high potential commercial development sites have been identified. This is expected to reduce the retail sales leakage to neighboring cities. Conservatively, 32,400 square feet of future

new retail development is estimated five years after completion of the project in 2024. This would lead to $7.56 million in increased local retail sales, and $0.09 million in sales tax growth. By 2038, the growth in Live Oak's retail development will increase to 50,000 square feet and would be expected to generate $12.13 million in annual sales. Over the 20 year analysis period, new retail development will add over $184 million in retail sales and a total of $2.2 million in sales tax for the City of Live Oak.

PROJECT READINESS & FEASIBILITY

Technical Feasibility

Pre-construction Activities

The Collaborative Highway 99 Streetscape Master Plan for this Project was completed and adopted May 2011. The City of Live Oak and Caltrans completed a Project Study Report-Project Development Support (PSR-PDS) for the Project in 2014. In order to identify environmental issues, a Mini-Preliminary Environmental Analysis Report (PEAR) was prepared for the Project as part of the PSR-PDS. The anticipated Environmental Document for the Project will be an Initial Study with a Mitigated Negative Declaration (California Environmental Quality Act (CEQA)) and an Environmental Assessment with a Finding of No Significant Impact (National Environmental Protection Act (NEPA)). The Project will only occur in areas that have been previously disturbed and no permanent right-of-way acquisition is required. However, the following permits/approvals will likely be required:

- California Department of Fish and Wildlife (CDFW) 1602 Streambed Alteration Agreement Permit
- Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification
- Army Corps of Engineers (ACOE) 404 Permit
- United States Fish and Wildlife Service (USFWS) Section 7 Formal Consultation for potential impacts associated with the Valley Elderberry Longhorn Beetle (VELB), the Giant Garter Snake *(Thamnophis gigas)* and the Hartweg's golden sunburst *(Pseudobahia)*
- CDFW coordination may be necessary for potential impacts to Swainson's hawk, recurved larkspur, bank swallow, Sanford's arrowhead, veiny monardella, and steelhead fish
- NPDES permits, Best Management Practices and a Storm Water Pollution Prevention Plan (SWPPP) will likely be required because the highway will be widened which will have a large Disturbed Soil Area (DSA) or greater than one acre of soil disturbance

The Planning Assessment/Environmental Determination (PA/ED) study for the Project is underway and expected to be complete in August, 2017. Plans Specifications and Estimates (PS&E) will be completed by June 30, 2019.

Project Schedule

The project schedule demonstrates the ability to obligate funds prior to September 30, 2019, and that all TIGER funds will be expended prior to September 30, 2024. The Project schedule includes adequate contingency.

March 2015 – August 2017	Planning Assessment/Environmental Determination (PA/ED)
August 2017 – June 2019	Plans Specifications and Estimates (PS&E)
July 2019 – September 2019	Reviews/Approval for Fund Obligation with Caltrans and FHWA
September 2019 – March 2020	Procurement, Award of Construction Contract, Execute Contract
March 2020 – June 2023	Construction of the ***Live Oak Streetscape Project***
July 2023 – September 2023	Landscaping Establishment and Maintenance
October 2023 – December 2023	Project Closeout

Project Risks

This table summarizes the potential projects risks and the mitigation strategies.

Risk	Mitigation Strategy
Environmental Issues	The Project will only occur in areas that have been previously disturbed and no permanent right-of-way acquisition is required.
Procurement/Contract Award	The Project will conform with the Caltrans standard procurement and bidding procedures.
Unexpected Financial Issues	The City and Caltrans have adequate funding from the identified sources to provide the non-Federal local match. Caltrans and the City have provided letters documenting these financial commitments.
Project is Over Budget	The cost estimate includes an 11.3% contingency and a $2.1 million escalation to delivery year allowance.
Project Schedule Delays	The Project schedule includes adequate contingency.
City Council or Community Shifts Priorities	The City Council, residents, and community stakeholders identified the Project as a top priority in the General Plan, in the 2015 Community and Economic Development Action Plan, and the community was involved extensively in the development of the Collaborative Highway 99 Streetscape Master Plan.

Financial Feasibility

Project Cost Estimate

The cost estimate was based on the results of the Project Study Report-Project Development Support (PSR-PDS) for the Project that was completed by Caltrans in July 2014. Please see below for a summary of the project cost estimate and refer to Appendix C for a detailed description of the streetscape elements and associated costs. There is a high-level of confidence that the project costs will not exceed the cost estimate, as the estimate includes adequate contingency and escalation.

Live Oak Streetscape Project Cost Estimate (Ash Street to Ramsdell Drive; post mile 39.84 to 40.81)		
Item	**Cost**	**Cost Percentage**
Earthwork	$1,730,842	7.8%
Structural Section	$4,362,890	19.7%
Drainage	$985,108	4.5%
Specialty Items	$115,000	0.5%
Environmental	$900,045	4.1%
Traffic Items	$621,000	2.8%
Detours	$300,000	1.4%
Minor Items	$901,488	4.1%
Mobilization	$991,637	4.5%
Supplemental Work	$545,401	2.5%
State Furnished Materials	$500,000	2.3%
Contingency	$2,390,682	10.8%
Right-of-Way (temporary easements)	$500,000	2.3%
Support Costs (with PSR-PDS & PA&ED)	$5,057,000	22.9%
Escalation to Delivery Year	$2,189,845	9.8%
Global Cost	**$22,090,938**	**100%**

The TIGER grant funding request for pre-construction activities include $1,452,000 for PS&E and $448,000 for pre-construction related right-of-way (temporary easements) support. The total pre-construction cost is $1,900,000, which represents 9% of the total funding request. The non-Federal match will provide $218,000 for pre-construction activities.

Live Oak Streetscape Project: Pre-Construction and Construction Costs				
Phase	**Cost**	**Funding**		
		TIGER Request	**Local Match**	**Total Funding**
Pre-Construction	$2,770,000	$1,682,000	$218,000	$1,900,000
Construction	$19,320,938	$14,038,938	$5,282,000	$19,320,938
Total	**$22,090,938**	**$15,720,938**	**$5,500,000**	**$21,220,938**

Project Management

The Project will be managed by the City of Live Oak and Caltrans District 3. The City has extensive experience managing Federally-funded infrastructure projects. The City of Live Oak is in good financial standing and has a proven track record of successfully managing federally-funded projects. See Appendix D for a list of federally funded infrastructure projects that have been successfully managed by the City of Live Oak. See Appendix E for the Federal Wage Rate Certification.