

CHAPTER 2

Calistoga Plan





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## PEDESTRIAN SETTING

Calistoga is a rural small-town community with approximately 5,155 residents which, according to city staff, can double or triple on any weekend when accounting for visitors in town for the many local and regional tourism options. The city is located in northern Napa County, approximately 30 miles north of the City of Napa along SR 29. Projected land use patterns for the city are shown in Exhibit C - 1 and a map of the downtown commercial district, including the locations of public buildings and tourist destinations, is shown in Exhibit C - 2.

### EXISTING PEDESTRIAN POLICIES AND PROGRAMS

To help guide the development of key programs and policies for this plan, Calistoga’s existing approaches to facilitating and enhancing walking were reviewed with a benchmarking matrix that compares the existing programs, policies, and practices with national best practices. The benchmarking analysis categorizes each jurisdiction’s programs, policies, and practices into three areas as follows:

- **Key Strengths** (areas where the jurisdiction is exceeding national best practices)
- **Enhancement Areas** (areas where the jurisdiction is meeting best practices)
- **Opportunity Areas** (areas where the jurisdiction should consider meeting best practices)

The City of Calistoga has made significant investments in creating a walkable community through the adoption of several pedestrian-oriented ordinances, collaboration with Safe Routes to School education programs as well as the recent collection of collision data and a pedestrian facility inventory. The city also adopted an Active Transportation Plan in 2014 which prioritizes facility improvements and includes pedestrian policies and programs. With this plan, the City of Calistoga will have a framework to strengthen areas of opportunity such as crosswalk design guidelines, pedestrian volumes and traffic calming programs. A summary of these benchmarking highlights is provided in **Table C-1**.

TABLE C-1: CALISTOGA BENCHMARKING HIGHLIGHTS		
Plans, Policies, & Programs	Current Practice	Recommendations
<b>Key Strengths</b>		
<p><b>Newspaper Rack Ordinance</b> Newspaper racks may obstruct walkways and reduce accessibility and pedestrian visibility when ordinances are not in place. A Newspaper Rack Ordinance improves the pedestrian realm by reducing clutter and organizing sidewalk zones and may detail size, location, and maintenance requirements.</p>	<p>Calistoga has a robust newspaper rack ordinance that addresses pedestrian safety and prohibits disruption of pedestrian flow. The policy also restricts the placement of newspaper racks anywhere that may obstruct a driver’s line of sight.</p>	





**TABLE C-1: CALISTOGA BENCHMARKING HIGHLIGHTS**

Plans, Policies, & Programs	Current Practice	Recommendations
<p><b>Street Tree Ordinance</b></p> <p>Street trees enhance the pedestrian environment by providing shade and a buffer from vehicles. Street trees may also enhance property values, especially in residential neighborhoods. However, street trees, when improperly selected, planted, or maintained, may cause damage to adjacent public utilities.</p>	<p>Calistoga’s tree ordinance includes requirements for maintaining vertical pedestrian clearances and installing root barriers to avoid sidewalk damage. Calistoga has adopted the City of Santa Rosa’s approved street tree list.</p> <p>In lieu of funding for sidewalk replacement and substantial repair, the city also grinds areas of the sidewalk to remove trip hazards as part of their trip and fall assessments, including locations that are lifted by tree roots.</p>	
<p><b>Safe Routes to Schools</b></p> <p>Safe Routes to School (SRTS) programs encourage children to safely walk or bicycle to school. The programs are important both for increasing physical activity (and reducing childhood obesity) and for reducing morning traffic associated with school drop-off, as much as 30% of morning peak hour traffic.</p> <p>Educational components of SRTS programs are especially important for school children where safe walking habits may be instilled as lifelong lessons. Funding for programs and/or projects is available at the state and federal levels.</p>	<p>The Napa County Office of Education (NCOE) currently has a three year grant to administer a Safe Routes to School (SRTS) Program across the County through 2016. Program leaders have a goal of reaching every interested school by the end of the grant term, and plan to work with Calistoga Elementary School and Calistoga Jr/Sr High School in 2015.</p> <p>The program includes events such as Walk and Roll to School Day, Bike Rodeos, and Safe Walking education presentations for students in grades K-3. Brochures are handed out during this program as well as at community events and PTA/parent meetings. Parent presentations include a review of pedestrian laws and ordinances.</p> <p>In Calistoga, Safe Routes to School routes have been mapped in the ATP to identify potential locations for infrastructure improvements, and the city is currently working on applications for SRTS infrastructure funding. The city also includes schools in the development review process.</p>	<ul style="list-style-type: none"> <li>• Reference the public involvement, analysis, and prioritization efforts of the countywide ATP and the Calistoga PSA when applying for grants to fund the top projects.</li> <li>• Determine feasibility of rolling out Walking School Bus program for Calistoga Elementary School.</li> <li>• Coordinate with NVTA to seek additional funding for SRTS.</li> </ul>
<p><b>Collision Reporting</b></p> <p>Identifying and responding to collision patterns on a regular basis is an important reactive approach to pedestrian safety (which may be combined with proactive measures).</p>	<p>Collision data from the beginning of 2002 through the end of 2011 was mapped as part of Calistoga’s Active Transportation Plan (ATP) and reviewed for trends related to pedestrian safety. The ATP also includes a policy to reduce pedestrian and bicycle collisions by 50 percent by the year 2020, based on 2011 collision data, as well as to review collision data annually to identify and prioritize applicable projects and programs.</p>	<ul style="list-style-type: none"> <li>• Comprehensive monitoring using Crossroads software would allow for more proactive pedestrian safety projects and best practices such as collision typing for countermeasure selection. GIS efforts may be funded through an Office of Traffic Safety grant.</li> <li>• Pedestrian volume data could be used to prioritize collision locations based on collision rates (collisions/daily pedestrian volume). This could lead to a proactive approach to identify treatments and program funding. Volunteers can collect pedestrian volumes and other data at collision locations.</li> </ul>





**TABLE C-1: CALISTOGA BENCHMARKING HIGHLIGHTS**

Plans, Policies, & Programs	Current Practice	Recommendations
<p><b>Inventory of Pedestrian Facilities</b> A GIS-based sidewalk inventory enables project identification and prioritization, as well as project coordination with new development, roadway resurfacing, etc.</p>	<p>Calistoga has a Citywide inventory of existing and proposed sidewalks, existing and proposed pathways, and ADA-compliant curb ramps collected as part of the 2014 Active Transportation Plan (ATP) that is geo-referenced in GIS.</p> <p>The city offers design guidance to developers building fronting sidewalks as well as a 50/50 cost sharing program for those repurposing an existing use. For new developments, pedestrian connectivity is required and if needed, the developer is responsible for the full cost of sidewalk construction. Property owners are generally responsible for the maintenance of fronting sidewalks; however the city uses 50/50 cost sharing for maintenance and repair efforts at their discretion, especially for sidewalks downtown along Lincoln Avenue.</p>	<ul style="list-style-type: none"> <li>• This plan has created a GIS-based inventory to expand the city's existing inventory. Data collected includes crosswalks, existing and missing curb ramps, as well as additional features like sidewalk material and curb ramp direction. This facility inventory could be expanded to include proposed or planned pedestrian crossing improvements in the City.</li> <li>• Consider mapping public comments to ensure all necessary sidewalk repairs and other pedestrian improvements are included in the city's Capital Improvement Program (CIP).</li> </ul>
<b>Key Opportunities</b>		
<p><b>Crosswalk Design Guidelines</b> A formal policy for crosswalk installation, removal, and enhancement provides transparency in decision-making and creates a consistent application of treatments citywide.</p>	<p>The City of Calistoga has a pedestrian crossing policy in their Active Transportation Plan (ATP) to provide safety features at uncontrolled pedestrian crossings, especially within pedestrian districts and at intersections of arterials with Class I trails<sup>2</sup>. The policy does not include criteria for appropriate enhancements.</p> <p>The City of Calistoga generally considers crosswalks at signals and high volume activity centers, especially near schools. The one existing signal is on Lincoln Avenue, a highway facility, and thus decisions regarding signalized crosswalk installation are made by Caltrans. Several uncontrolled crosswalks are installed on Lincoln Avenue at intersections with minor streets. The city does not install uncontrolled midblock crossings under current practice.</p>	<ul style="list-style-type: none"> <li>• Consider adopting crosswalk guidelines as part of this plan that reflect best practices and recent research to include criteria for appropriate locations to install crosswalk enhancements such as flashing beacons, advanced yield markings, or in-roadway pedestrian signs.</li> <li>• Coordinate with Caltrans to include criteria in the crosswalk guidelines for identifying, installing, and enhancing crossings where strong desire lines exist, especially across Lincoln Avenue.</li> <li>• Using the proposed crosswalk guidelines, conduct audits of the adequacy of current crosswalks.</li> </ul>

<sup>2</sup> City of Calistoga Active Transportation Plan, 2014





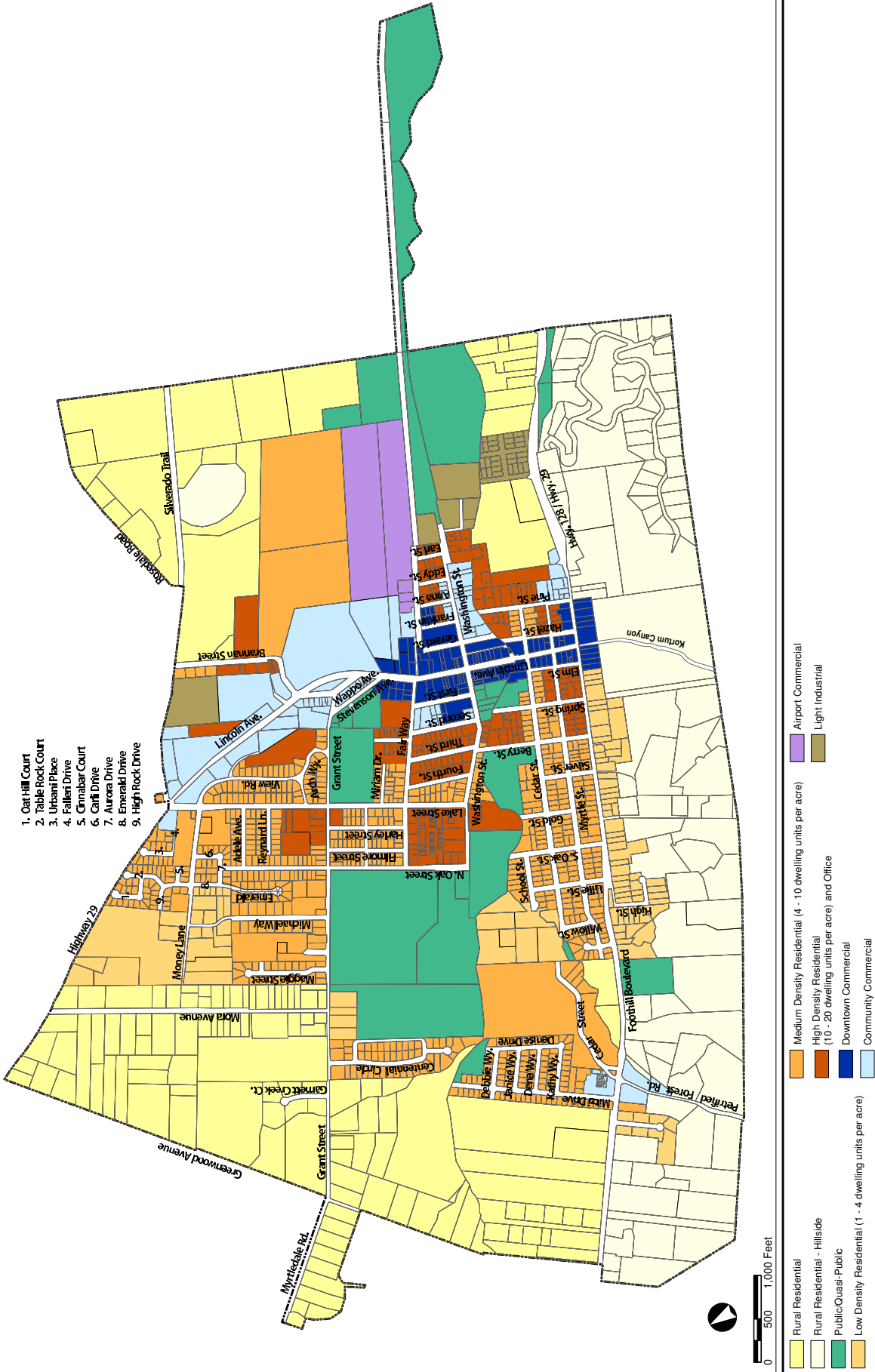


**TABLE C-1: CALISTOGA BENCHMARKING HIGHLIGHTS**

Plans, Policies, & Programs	Current Practice	Recommendations
<p><b>Pedestrian Volumes</b> Pedestrian volume data is important for prioritizing projects, developing collision rates, and determining appropriate pedestrian infrastructure.</p>	<p>The City of Calistoga does not collect pedestrian volumes routinely.</p>	<ul style="list-style-type: none"> <li>• Use collected volumes in this plan to monitor volume levels.</li> <li>• Consider installing automated counters such as Eco-counter at key locations.</li> <li>• Geo-code existing and future pedestrian volume data with GIS software along with other data such as pedestrian control devices and collisions to analyze data for trends or hotspots related to pedestrian safety.</li> </ul>
<p><b>Traffic Calming Programs</b> Traffic Calming Programs and policies set forth a systematic and consistent approach for addressing neighborhood requests and approvals, as well as standard treatments and criteria.</p>	<p>The City of Calistoga does not have a Traffic Calming Program; however, radar speed detection signs are in use near the high school and were funded through an insurance pool for safety improvements.</p> <p>The city municipal code prohibits the use of speed humps in Calistoga.</p>	<ul style="list-style-type: none"> <li>• Consider adopting a Traffic Calming program for pedestrian concerns that arise from residents in Calistoga and to address current concerns from the Police Department such as speeding and cut-through traffic near the elementary and high schools.</li> </ul>

The full benchmarking analysis for Calistoga, with associated recommendations, is presented in **Appendix C-A**.





Source: City of Calistoga, 2015 Land Use





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## EXISTING PEDESTRIAN INFRASTRUCTURE

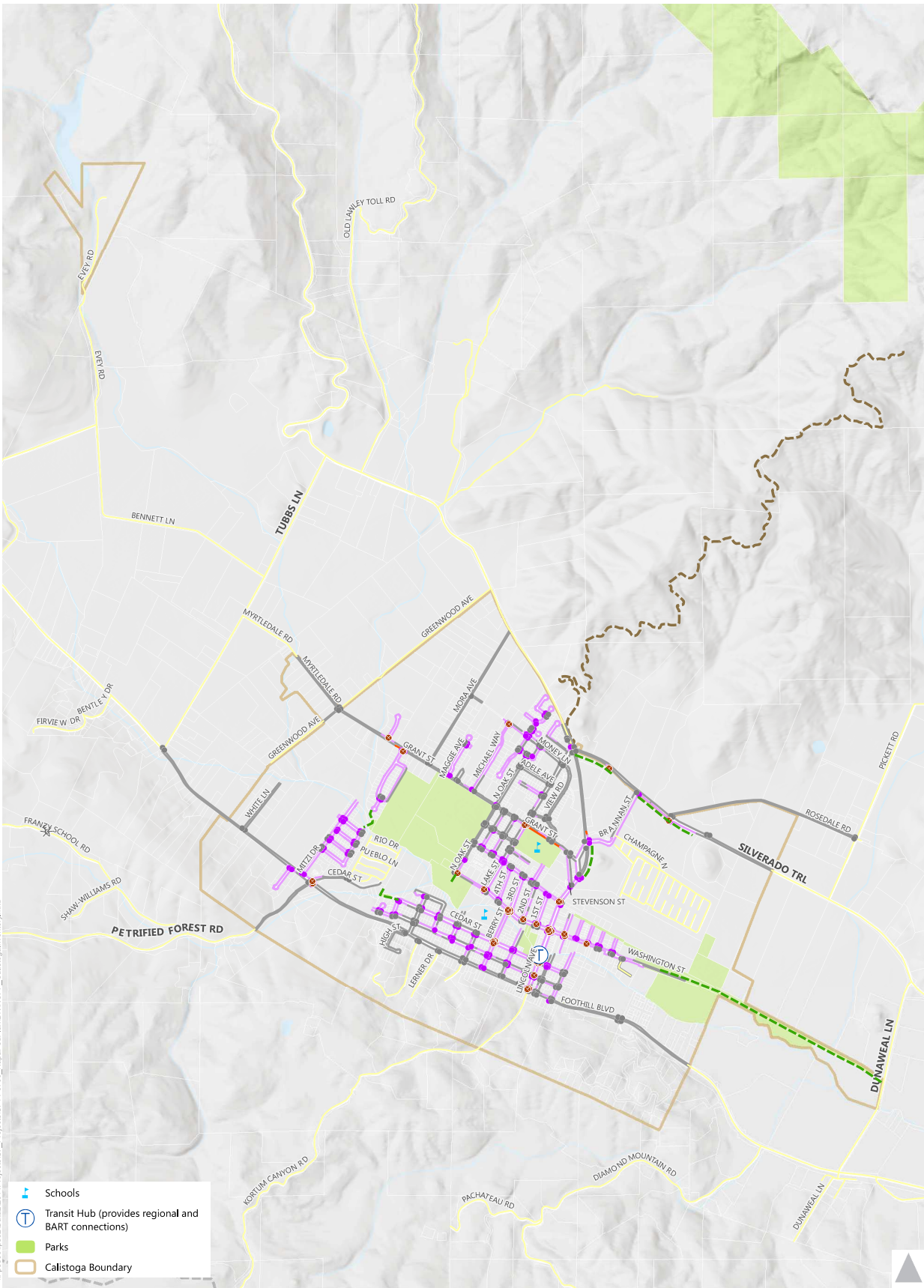
An inventory of existing sidewalks, marked crosswalks, curb ramps and trails was collected on key roadways throughout the city using a combination of aerial imagery and Google Street View imagery from the years 2011 – 2014 (imagery for a few small residential streets dated back to 2007).

A GIS database assembled for the inventory includes additional detail beyond what is illustrated in the inventory maps, including the style of crosswalk striping, the method of vehicle control at the crosswalk (i.e., traffic signal, flashing beacon, stop sign, or uncontrolled), whether the crosswalk was located in a school zone, and the curb ramp design (i.e., whether the ramp is directional or diagonal and if it has truncated domes). For more information and examples of these types of facilities, please see the Best Practices Examples, **Appendix D** of the Countywide Pedestrian Plan.

### Calistoga Inventory

Inventory was collected on the entire roadway network in Calistoga, and supplements existing data from the city's 2014 *Active Transportation Plan* (ATP). As shown in Exhibit C - 3, the city has several sidewalk gaps along Grant Street, which connects Calistoga Junior-Senior High School to the surrounding neighborhoods, as well as along Cedar Street, which was identified by staff as an east-west pedestrian corridor. Washington Street was also identified as a primary east-west pedestrian corridor and *Exhibit C-3* shows the potential for several additional curb ramps along the roadway. The primary north-south pedestrian corridor in Calistoga is Lincoln Avenue, which runs through the center of the downtown. The city's *General Plan Circulation Element* highlights the need to install marked crossings at pedestrian nodes on Lincoln Avenue and *Exhibit C-3* shows several intersections that were identified by city staff, including Lincoln at Brannan Street and at Stevenson Street, that are lacking marked crosswalks at important desire lines. The majority of missing sidewalks in Calistoga are presented as "proposed sidewalks" in the city's ATP and missing curb ramps are shown as "planned."





**Pedestrian Inventory**

- |                        |                                           |                       |                                  |
|------------------------|-------------------------------------------|-----------------------|----------------------------------|
| <b>Sidewalks</b>       | <b>Trails</b>                             | <b>Curb Ramps</b>     | <b>Crosswalks</b>                |
| Asphalt (orange line)  | Paved Multi-Use Trail (green dashed line) | Existing (purple dot) | Trail Crossings (green circle)   |
| Existing (purple line) | Unpaved Trail (brown dashed line)         | Missing (grey dot)    | Roads not Surveyed (yellow line) |
| Missing (grey line)    |                                           |                       |                                  |





## ACTIVITY LEVELS

Pedestrian counts were conducted at eight locations throughout Calistoga in October and November 2015. These locations were selected based on locations of proposed pedestrian projects in this plan, potential localized safety concerns, expected high levels of walking, and proximity to key pedestrian destinations, including schools and downtown commercial areas. **Table C-2** provides a summary of the two-hour counts completed within the city. Count results varied significantly based on nearby neighborhood population density, as well as by the adjacent land use.

TABLE C-2: CALISTOGA COUNT PROGRAM LOCATIONS						
ID	Jurisdiction	Location	Morning	Evening	School	Weekend
			7-9AM	4-6PM	2-4PM	12-2PM
CA1	Calistoga	SR 29 and Cedar Street	80	256		
CA2	Calistoga	Petrified Forest Road and Foothill Boulevard	2	5		20
CA3	Calistoga	Brannan and Lincoln	47	20		
CA4	Calistoga	Berry and Cedar	214		173	
CA5	Calistoga	Grant and Stevenson	22	22	10	
CA6	Calistoga	Grant Street and N. Oak Street	13	12		11
CA7	Calistoga	Lake County Hwy / Silverado Trail N / Lake Street		3		6
CA8	Calistoga	Lake Street and Grant Street	60		66	

Three of these counts were conducted in close proximity to local schools; CA5 and CA8 were collected at intersections adjacent to Calistoga Junior-Senior High School and CA4 was collected near Calistoga Elementary School. Pedestrian volumes near the elementary school were observed to be about two and half times as high in the morning as near the high school, and just over twice the amount during the school dismissal period (2-4PM). The highest number of pedestrians was observed during the evening weekday period at SR 29 and Cedar Street, a key southern connection to downtown. The lowest number of pedestrians was observed during the weekday morning period near the southwest edge of town at Petrified Forest Road and Foothill Boulevard.

## COLLISION ANALYSIS

Collision data was accessed from the California Highway Patrol Statewide Integrate Traffic Records System (SWITRS). This data represents all reported pedestrian-vehicle collisions occurring during the ten-year period from January 2003 to December 2012.

Exhibit C - 4 shows the locations of these pedestrian collisions in Calistoga.

Exhibit C - 4 presents raw collision counts only. While this is illustrative of “hot spot” areas, another important consideration for identifying safety focus areas can be collisions per pedestrian (or the collision rate). Collision





rates (not included in the current analysis because pedestrian volume data is not available citywide) can highlight locations where improvements can be added to ensure a focus on areas that may not have as many people walking (but have high collision rates) in addition to areas with high pedestrian volumes and a high number of collisions.

### Hot Spots

The majority of reported collisions in Calistoga occurred along Lincoln Avenue, the main commercial corridor that runs through the city’s downtown, as shown in Exhibit C - 4. Of particular interest is the Washington Street and Lincoln Avenue intersection, where three injury collisions were reported. No fatalities were reported in Calistoga over the last ten years.

### Countywide Demographic and Seasonal Trends

For this plan, a review of collisions countywide included organizing the data by age for children and seniors, and comparing the results across each jurisdiction. Daily and seasonal trends for collision occurrences and primary collision factors were also reviewed countywide. A summary of these results can be found in the *Countywide Walking Trends* chapter of the countywide plan.

### Pedestrian Actions

Perhaps one of the more telling sources of information in the SWITRS data is the Pedestrian Action variable, which describes what the pedestrian was doing immediately before the collision occurred. The pedestrian actions in **Table C-3** show that safety issues surrounding collisions in Calistoga are typically focused on pedestrian crossing locations.

TABLE C-3: CALISTOGA COLLISION SUMMARY PEDESTRIAN ACTIONS (2003-2012)			
Primary Collision Factor	Number of Collisions		
	Injury	Fatality	Total
Crossing in Crosswalk at Intersection	6	0	6
Crossing Not in Crosswalk	2	0	2

Source: SWITRS

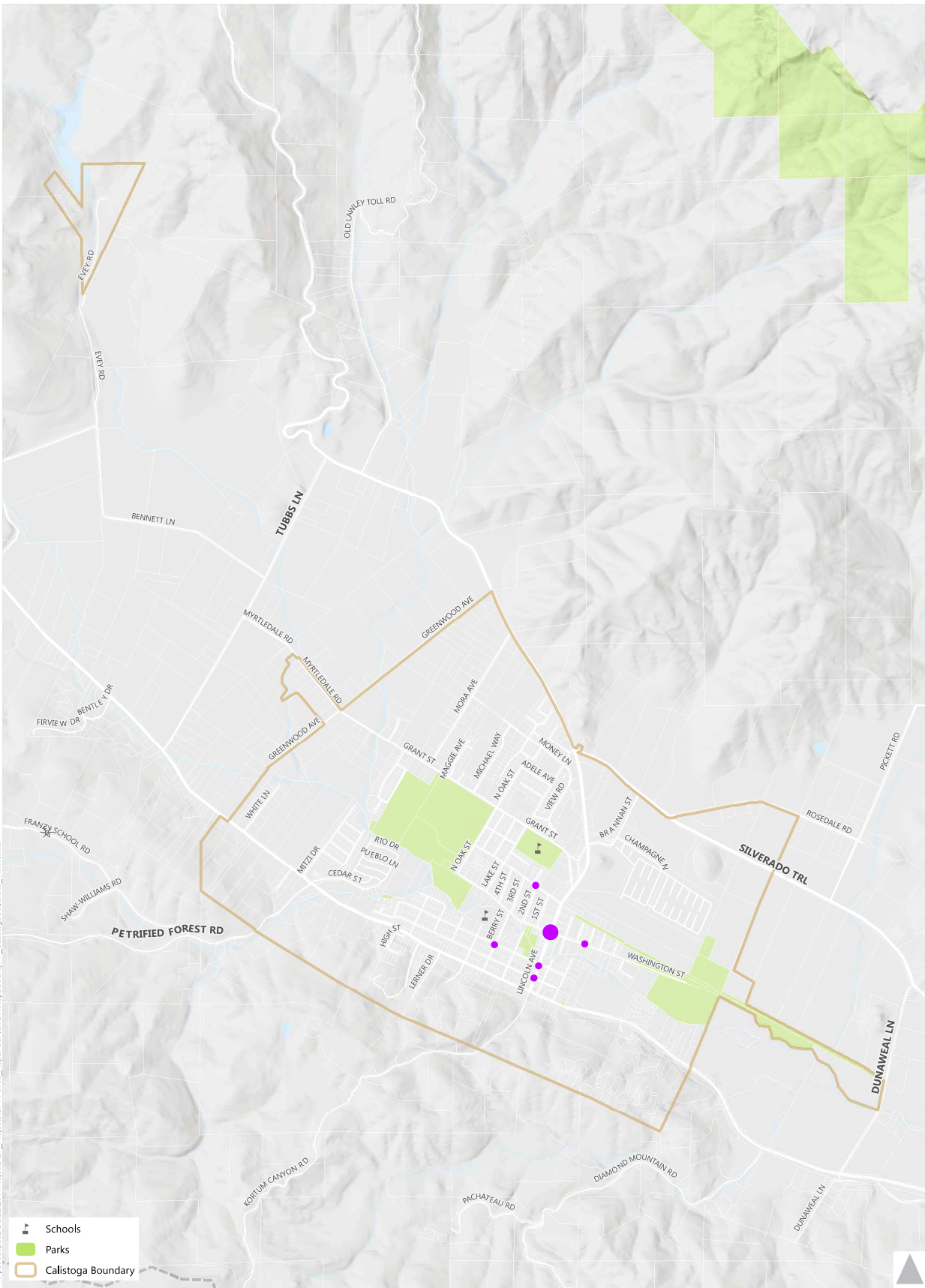




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- Schools
- Parks
- Calistoga Boundary

**Pedestrian-Involved Collisions 2003-2012**

- 1
  - 2 - 3
- } Injury Collisions

**Pedestrian Collision Locations**

Severity	Intersection	Total Collisions
	Cedar St. and Berry St.	1
	Lincoln Ave. and Myrtle St.	1
	Lincoln Ave. and Cedar St.	1
	Washington St. and Anna St.	1
	Washington St. and Lincoln Ave.	3
	2nd St and Fair Way	1

Exhibit C-4  
 Pedestrian-Involved Collisions  
 2003 - 2012  
 City of Calistoga





## PUBLIC AND STAKEHOLDER INPUT

### COUNTYWIDE OUTREACH

Input on plan goals and objectives, current pedestrian issues, and desired locations for improvement was solicited through meetings with jurisdiction staff and key stakeholders, countywide public workshops, and an interactive mapping tool made available online. The goal was to develop a community-supported vision for pedestrian improvements. A summary of all input received during this process countywide is displayed in **Table C-4**. Connectivity and safety were the key themes across the countywide comments.

**TABLE C-4: PUBLIC INPUT RECEIVED COUNTYWIDE**

Comment	Comment Type	Percent of Total Comments
Add a sidewalk here	Connectivity	16%
Make it safer to cross the street here	Safety	15%
Make it safer to walk here	Safety	14%
Add a pedestrian pathway	Connectivity	13%
High traffic volume or speed here	Safety / Walkability	8.5%
Pedestrian facilities need maintenance here	Walkability	4.5%
Barrier for persons with disabilities here	Accessibility	2%
Other (Add your own idea)		27%

Source: Fehr & Peers, 2015

#### Public Workshops

Ongoing public outreach and participation was an integral element in developing the Countywide Pedestrian Plan. Public workshops were advertised on NVTA's website, as well as via local media including the newspaper and radio. Invitations to the public workshops were also sent to local stakeholders, including senior centers, mobility impaired groups, advisory committees and local non-profit groups. The goal of the workshops was to identify public concerns and opportunity areas to inform focus areas, educate the stakeholders, and solicit feedback on the plan vision and goals.

Public workshops were held throughout the County in Winter 2015: in Napa on January 22 at NVTA; in Yountville on January 27; in St. Helena on January 28; and in American Canyon on February 4. Due to recent public workshops held in Calistoga through development of their Active Transportation Plan in 2014, a workshop was not held in this city. All workshops were open to all members of the public countywide. Photos of workshop posters are included in **Appendix A** of the countywide plan.





The format for each public workshop was the same and consisted of four stations:

- **Station One: Issues/Opportunities**

At Station One, participants voted on a list of common barriers to walking to indicate which issues were most relevant to the walking environment in their jurisdiction and countywide. Participants also wrote comments on large-scale aerial maps placed on tables or on the floor to highlight existing barriers to pedestrian travel and locations where improvements were needed. Suggested comments included “Make it safer to cross the street here” or “High traffic volume or speed here”. Comments were mapped in GIS after the workshops to visualize the areas of significant pedestrian needs and inform the decision for focus area locations.

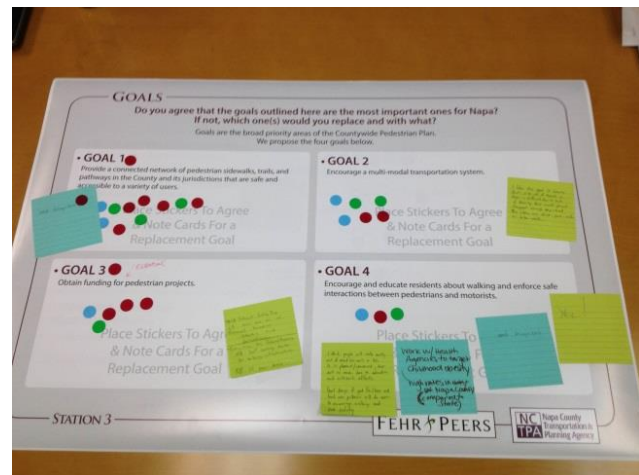


- **Station Two: Best Practices Toolbox**

Station Two was an informative station that displayed examples of best practices for pedestrian treatments frequently used in pedestrian planning efforts. Treatments included sidewalk buffers, intersection features, crosswalk enhancements, as well as signal and striping modifications.

- **Station Three: Goals Visioning**

At Station Three, participants had the opportunity to weigh in on draft goals for the plan and write their own vision statement. Conflicting desires related to transportation were also presented on either end of scale and participants were asked to place stickers where they thought the balance should be struck. Tradeoffs included ease of walking compared to ease of driving and creating a comprehensive pedestrian network compared to improved transit service. This information is valuable to determine where the public would like resources to be focused.



- **Station 4: Collision Maps**

Station Four was an informative station that displayed the collision maps shown in this plan.





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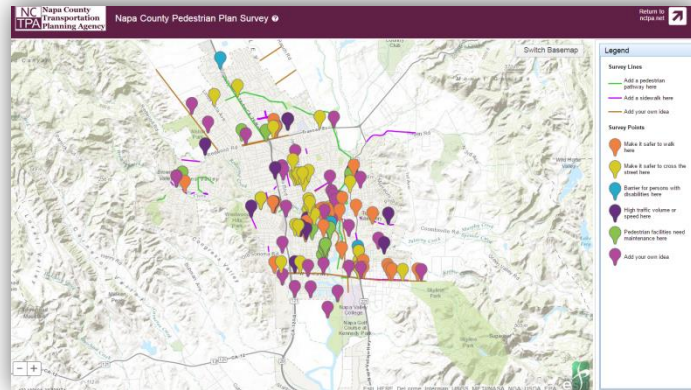




## Online Survey Mapping Tool

Napa County residents, employees, and visitors who wanted to provide input but were unable or did not wish to attend the public workshops had the option of submitting their comments online through an interactive mapping tool. Users placed pins on the maps to highlight desired improvements using pre-set comments or creating their own comment. Preset comments included:

- Make it safer to walk here
- Make it safer to cross the street here
- Barrier for persons with disabilities here
- High traffic volume or speed here
- Pedestrian facilities need maintenance here
- Add a sidewalk here
- Add a pedestrian pathway here



Results from the 70 comments submitted countywide are shown in *Exhibit 2* of the countywide plan. No comments were received in the City of Calistoga.





## CALISTOGA-SPECIFIC FOCUS GROUPS

At the outset of the plan development process, meetings were held with key staff from Calistoga to initiate the planning process on December 9, 2014.

This meeting included a discussion of existing programs, policies and practices. Recommendations for improvements are provided in the benchmarking summary table in **Appendix C-A**.

Jurisdiction staff also provided input during the initial benchmarking meeting and at the public workshops on key areas where pedestrian improvements are planned and in some cases, where connections and safety improvements are desired. This input was used to inform potential opportunities for walking audit routes, as well as discussed along with the facility inventory maps under the *Existing Pedestrian Infrastructure* section of this plan.

Key goals for the pedestrian planning process were also discussed with Calistoga staff, including traffic calming and preserving the rural character, and are incorporated into key programmatic and policy recommendations in this plan.

Additional focus group meetings were held for the Calistoga walking audit on April 14, 2015, and to review the list of suggested pedestrian projects on August 19, 2015.







## OPPORTUNITY AREAS

Calistoga's small-town feel, historic charm, numerous tourist destinations, and natural beauty create an enjoyable landscape for pedestrians. The city is also seeing growth and transition, and has recognized this moment as a key opportunity to enhance pedestrian safety and connectivity in concert with the development opportunities. The city has taken many recent steps in planning for a safer, more walkable community, focusing on the downtown core and safe routes to school in a Pedestrian Safety Assessment (PSA), completed in 2015 by UC Berkeley's Technology Transfer Program (Tech Transfer). This plan expands on those efforts by developing a list of proposed pedestrian facilities within key focus areas of the city and referencing those that have been developed by other plans. Initial focus areas for the plan were developed using a data-driven GIS process that evaluates several factors related to the built environment and demographics that affect the propensity to walk. This process, called the "Ped INDEX", was adapted by work done by the US Environmental Protection Agency (EPA) has been used in several plans in the Bay Area to map the qualitative likelihood of demand for pedestrian activity.

### PED INDEX

The main factors used in the Ped INDEX are population density, land use mix, presence of schools or parks, intersection density, location of downtown commercial areas, and age. The resulting "heat map" displays an estimate for relative pedestrian demand on the streets throughout the City of Calistoga. More detail on the Ped INDEX methodology and results as well potential applications can be found in **Appendix B** of the countywide plan.

To balance high pedestrian demand areas with key areas of need in Calistoga, additional data layers were used to display pedestrian deficiencies. These include gaps in sidewalk and reported pedestrian-involved collisions. In general, places with high pedestrian demand and a high infrastructure need are shown as target areas that could be prioritized for pedestrian improvements. The resulting heat map with overlaid demand and deficiencies is shown in Exhibit C - 5.

As illustrated on *Exhibit C-5*, Ped INDEX focus locations include the downtown core, Lake Street, Grant Street and North Oak Street. After discussion with city staff regarding candidate locations, the focus area that was chosen for study during walking audits for the Countywide Pedestrian Plan (approximately one mile) included:

- Cedar Street from Lincoln Avenue to Berry Street
- Berry Street from Cedar Street to Washington Street
- Washington Street from Berry Street to Lake Street
- Lake Street from Washington Street to Grant Street
- Grant Street from Lake Street to Stevenson Street
- Stevenson Street from Grant Street to Lincoln Avenue

Lincoln Avenue and Foothill Boulevard are also high pedestrian priority areas for the city, and these corridors were studied during walking audits for a separate Pedestrian Safety Assessment, completed in 2015 through the





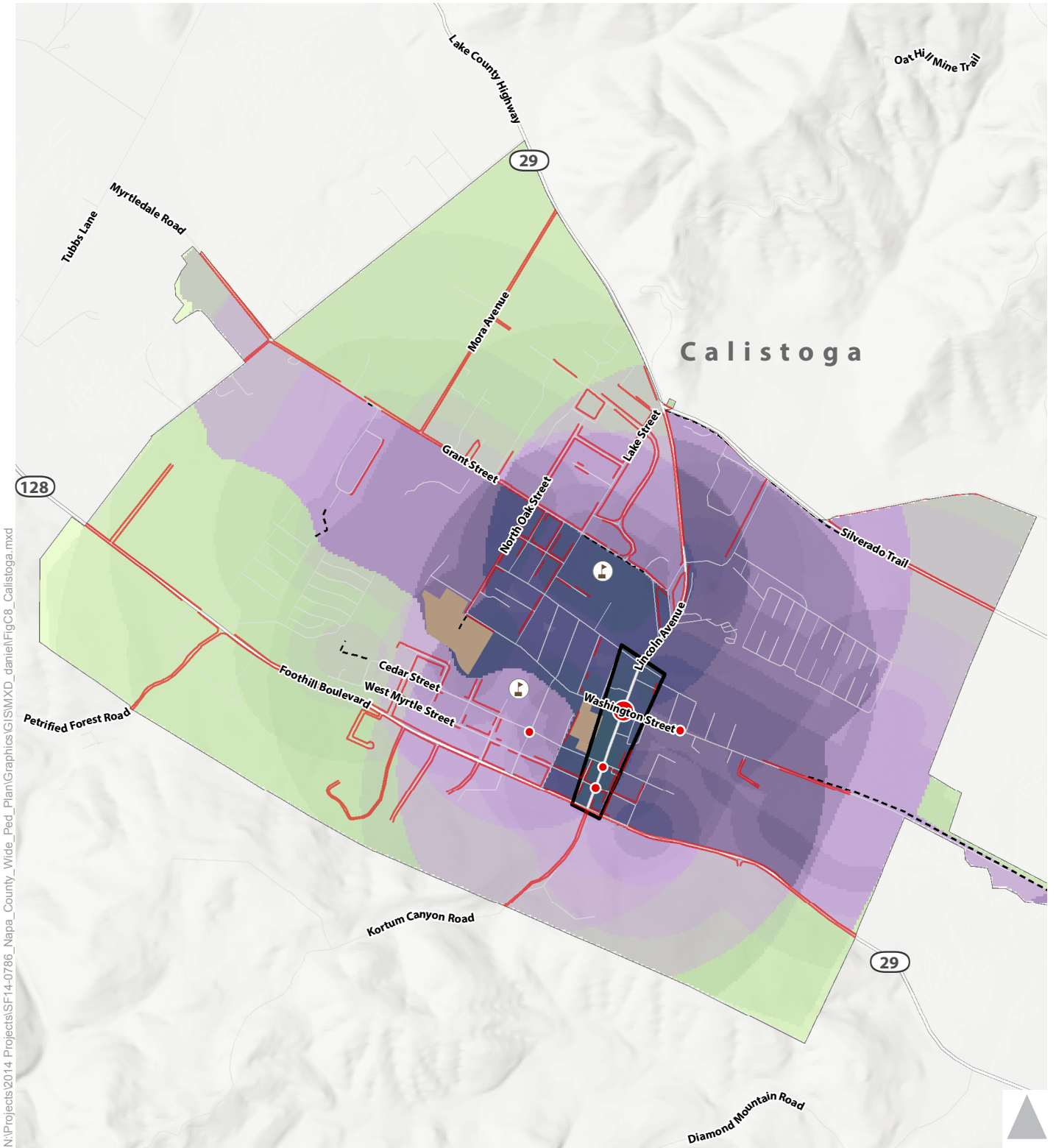
University of California at Berkeley's Technology Transfer Program. Projects suggested during these walking audits are referenced in this plan.





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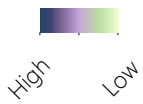




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**Demand:**

**Pedestrian Index Score**



**Deficiencies:**

**Pedestrian Collisions (Injuries)**



— Missing Sidewalks

**Legend:**

- Major Retail
- Parks
- Trail/Path
- School

Exhibit C-5

**Calistoga - Pedestrian Index Demand & Deficiencies**





## PRIORITY PROJECT AND IMPLEMENTATION PLAN

An important outcome of this plan is the designation of a priority project list and an implementation plan for these projects. The priority project list was assembled based on:

- Results of the Walking Audit conducted for the plan
- Projects recommended through related planning efforts, such as the Countywide Transportation Plan (CTP)
- Conversations with staff and stakeholders regarding other local priorities

### WALKING AUDITS

Walking audits for the Pedestrian Plan focus areas were conducted in April 2015 with key stakeholders to observe field conditions and brainstorm potential ideas for improvement. The following stakeholders attended walking audits in Calistoga:

- Erik Lundquist, Senior Planner City of Calistoga
- Mike Kirn, Public Works Director City of Calistoga
- Chris Canning, Mayor City of Calistoga
- Dieter Deiss, Member of Calistoga ATAC and NVTA ATAC
- Vicka Llamas, Principal Calistoga Elementary School
- Mitchell Celaya, Police Chief City of Calistoga
- Kaycee Wanless, Napa County Safe Routes to School

During the walking audits, visual surveys were conducted to observe physical characteristics and conditions of the pedestrian environment as well as the connectivity and continuity of the surrounding pedestrian network. A debrief was held afterwards with the group to discuss observations and determine suggestions for improvements.

### PROJECT LIST AND MAP

Suggested pedestrian projects developed during the Pedestrian Plan walking audits and similar, recent efforts are shown in





Exhibit C - 6. Descriptions of each project and additional program and policy recommendations are included below under *Priority Projects*.



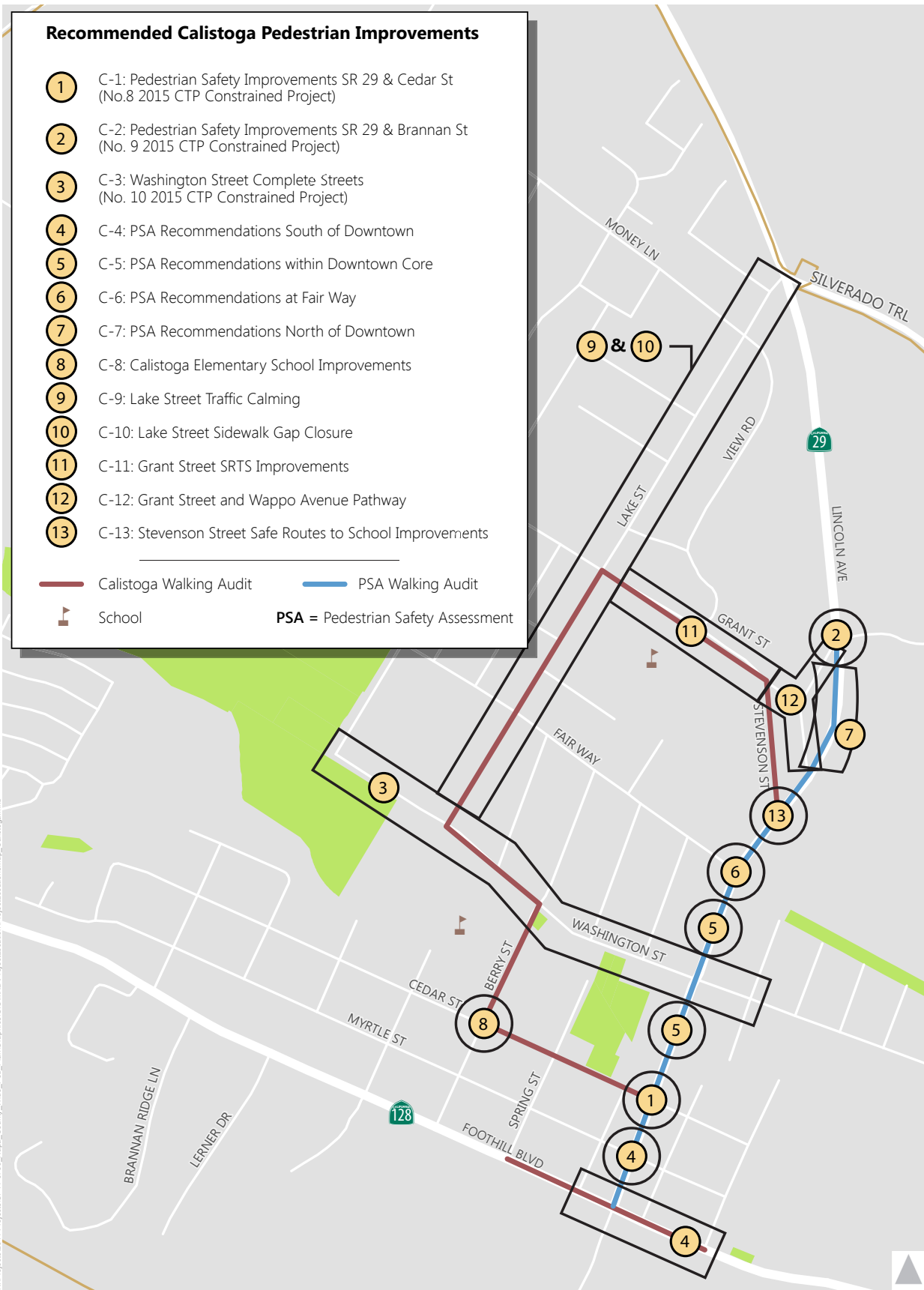


## Recommended Calistoga Pedestrian Improvements

- 1 C-1: Pedestrian Safety Improvements SR 29 & Cedar St (No.8 2015 CTP Constrained Project)
- 2 C-2: Pedestrian Safety Improvements SR 29 & Brannan St (No. 9 2015 CTP Constrained Project)
- 3 C-3: Washington Street Complete Streets (No. 10 2015 CTP Constrained Project)
- 4 C-4: PSA Recommendations South of Downtown
- 5 C-5: PSA Recommendations within Downtown Core
- 6 C-6: PSA Recommendations at Fair Way
- 7 C-7: PSA Recommendations North of Downtown
- 8 C-8: Calistoga Elementary School Improvements
- 9 C-9: Lake Street Traffic Calming
- 10 C-10: Lake Street Sidewalk Gap Closure
- 11 C-11: Grant Street SRTS Improvements
- 12 C-12: Grant Street and Wappo Avenue Pathway
- 13 C-13: Stevenson Street Safe Routes to School Improvements

— Calistoga Walking Audit      — PSA Walking Audit  
■ School      **PSA** = Pedestrian Safety Assessment

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## PRIORITY PROJECTS

Existing funding for pedestrian facilities is limited and cannot successfully cover more than a fraction of the recommendations in this plan. Available regional, state and federal funding sources and grant cycles are highly competitive among worthy projects and other jurisdictions. Using consistent prioritization criteria countywide, this plan includes a tiered list of projects for Calistoga reflecting:

- Local importance
- Safety enhancements
- Proximity to schools
- Proximity to transit
- Sidewalk gap and trail connections
- Cost

These criteria and the metrics used to define them are described in more detail in **Appendix C-C**. Each pedestrian improvement project is shown in one of two tiers based on the number of evaluation criteria it meets. Detailed results and project descriptions can be found in **Appendix C-C**. A summary of the improvements is shown in **Table C-5**.

### Funded or Constructed Projects

The City of Calistoga is planning a bridge replacement project on Berry Street at the intersection of Washington Street, near Calistoga Elementary School. The project is funded, and will include a realignment of the intersection to straighten crosswalks and shorten crossing distances, to the extent feasible. This funded project was assigned to “Tier Zero” in Table C-5 and was not evaluated for prioritization.





**TABLE C-5: CALISTOGA PEDESTRIAN IMPROVEMENTS**

Project ID	Location	Description	Pedestrian Component	Estimated Cost
<b>ON-GOING SYSTEM MAINTENANCE</b>				
Sidewalk Gap Closure and Maintenance (No. 10 2015 CTP Program)	Citywide	Sidewalk maintenance, rehabilitation and expansion	Sidewalks Maintenance	\$\$\$
<b>TIER ZERO (FUNDED OR CONSTRUCTED PROJECTS)</b>				
<b>T0-1</b> Berry Street Bridge Replacement	Berry Street at Washington Street	Intersection alignment and crosswalk enhancements	Crossing Treatments Traffic Calming	--
<b>TIER ONE IMPROVEMENTS</b>				
<b>C-1<sup>2</sup></b> Pedestrian Safety Improvements SR 29 & Cedar Street (No. 8 2015 CTP Project)	SR 29 (Lincoln Avenue) at Cedar Street	Crosswalk enhancements <sup>1</sup>	Crossing Treatments ADA Ramps PSA Recommendations	TBD
		Rapid Rectangular Flashing Beacons (RRFBs) if roundabout at Lincoln/Foothill is not installed	Crossing Treatments	
<b>C-2</b> Pedestrian Safety Improvements SR 29 & Brannan Street (No. 9 2015 CTP Project)	SR 29 (Lincoln Avenue) at Brannan Street	Feasibility study for roundabout or RRFBs	Crossing treatments Traffic calming PSA recommendations	TBD
		Curb ramp location modifications	ADA ramps? Crossing treatments PSA recommendations	
<b>C-3</b> Washington Street Complete Streets (No. 10 2015 CTP Project)	Washington Street: Lincoln Avenue to N. Oak Street	Complete Streets Enhancements <sup>3</sup>	Complete Streets <sup>3</sup>	\$\$\$
	Washington Street at Gerard Street	Crosswalk enhancements <sup>1</sup>	Crossing treatments ADA ramps	
	Washington Street at Lincoln Avenue	Signal modifications and crosswalk enhancements <sup>1</sup>	Crossing treatments ADA ramps PSA recommendations Signal timing/operations	
<b>C-4</b> PSA Recommendations South of Downtown	Foothill Boulevard: Pine Street to Elm Street	Sidewalks	Sidewalks	\$\$
	Lincoln Avenue at Foothill Boulevard	Roundabout feasibility study	Traffic Calming	





**TABLE C-5: CALISTOGA PEDESTRIAN IMPROVEMENTS**

Project ID	Location	Description	Pedestrian Component	Estimated Cost
	Lincoln Avenue at Myrtle Street	Crosswalk enhancements <sup>1</sup> and trail improvements	Crossing treatments ADA ramps Pathway	
<b>C-8</b> PSA Recommendations South of Downtown	Berry Street at Cedar Street	Crosswalk enhancements <sup>1</sup>	Crossing Treatments ADA Ramps	\$
<b>C-11</b> Grant Street Safe Routes To School Improvements	Grant Street: Lake Street to Stevenson Street	Traffic calming and safety enhancements	Traffic Calming Sidewalks	TBD
	Grant Street at Arch Way	Crosswalk enhancements <sup>1</sup>	Crossing Treatments	
	Grant Street at Stevenson Street	Intersection alignment and crosswalk enhancements <sup>1</sup>	Crossing Treatments	
<b>C-12</b> Grant Street and Wappo Avenue Pathway	Grant Street and Wappo Avenue; East of Stevenson Street	Pathway feasibility study	Pathway	TBD
<b>C-13<sup>2</sup></b> Stevenson Street Safe Routes to School Improvements	SR 29 (Lincoln Avenue) at Stevenson Street	Intersection alignment, crosswalk enhancements <sup>1</sup> and traffic calming improvements	Crossing Treatments ADA Ramps PSA Recommendations Traffic Calming	TBD
<b>TIER TWO IMPROVEMENTS</b>				
<b>C-5</b> PSA Recommendations within Downtown Core	Lincoln Avenue: Fair Way to Cedar Street	Mid-block crosswalk enhancements <sup>1</sup> and greenery or art for pedestrian paseo[	PSA Recommendations Crossing Treatments Paseos Place making	\$\$
<b>C-6</b> PSA Recommendations at Fair Way	Lincoln Avenue at Fair Way	Signal modifications, crosswalk enhancements <sup>1</sup> , and vehicle circulation modifications	Crossing Treatments Signal timing/operations PSA Recommendations Transit	\$\$
<b>C-7<sup>2</sup></b> PSA Recommendations	Lincoln Avenue at Wappo Avenue	Crosswalk enhancements <sup>1</sup>	Crossing Treatments ADA Ramps	\$\$





**TABLE C-5: CALISTOGA PEDESTRIAN IMPROVEMENTS**

Project ID	Location	Description	Pedestrian Component	Estimated Cost
North of Downtown	Lincoln Avenue, Wappo Avenue to Brannan Street	Sidewalks and lighting	Sidewalks Lighting	
<b>C-9</b> Lake Street Traffic Calming	Lake Street, Washington Street to Lake County Highway	Traffic calming study	Traffic Calming	\$\$
<b>C-10</b> Lake Street Sidewalk Gap Closure	Lake Street: Washington Street to Lake County Highway	Sidewalks	Sidewalks	\$\$\$

1. An enhanced crosswalk includes additional safety treatments such as curb extensions, reduced curb radii, or pedestrian refuge islands. These enhancements are recommended to address safety concerns such as higher speed or volume roadways, wider roadways, and roadways where motorists are less likely to yield to pedestrians. Specific recommendations are included in Appendix C-C. For additional information on the application of these enhancements, refer to the Crosswalk Policy of this plan.
2. The downtown stretch of Lincoln Avenue serves as a frequent parade route for events in Calistoga. To accommodate these parades, the design of any infrastructure projects on Lincoln Avenue from Stevenson Street to Cedar Street should not preclude large vehicles driving down the center of the street. Any median refuges being considered between these limits, such as those recommended in Improvement C-1, C-7, and C-13 as crosswalk enhancements, will require a feasibility assessment.
3. Complete Streets enhancements are designed to accommodate all users, including pedestrian, bicyclists, transit riders, and motorists. For more information, refer to the Best Practices Toolkit, Appendix D of the Countywide Pedestrian Plan.

\$\$\$ - high cost (>\$1million); \$\$ - medium cost (\$100k-\$1million); \$ - low cost (<\$100k)

Source: Fehr & Peers, 2016

Preserving the rural character is of value to the community of Calistoga and is an important consideration in the design of pedestrian infrastructure. When feasible, physical improvements such as curb extensions and median refuges are preferred as crosswalk enhancements in lieu of flashing beacons. Rectangular rapid flashing beacons (RRFBs) should only be considered as a second phase, if additional traffic calming is desired, for Projects C-7 and C-13 to maintain this rural character.

## SUPPORTING PROGRAMS AND POLICIES

Key program and policy recommendations that complement the engineering-related projects are shown below in **Table C-6**. Many of these recommendations draw from the benchmarking exercise completed at the onset of the plan development. The recommendations encompass education, encouragement, and enforcement activities.





TABLE C-6: CALISTOGA PROGRAM AND POLICY RECOMMENDATIONS

Program or Policy	Recommendations
<b>Education and Encouragement</b>	
Safe Routes to School (SRTS) Coordination	Coordinate with the Napa County Office of Education to continue SRTS programs in the city, and determine feasibility of implementing recommendations under the Safe Routes to School Support Program in the <i>Countywide Implementation</i> chapter of the countywide plan.
<b>Safety and Enforcement</b>	
Law Enforcement for Pedestrian Safety	Coordinate with NVTA to train officers in Calistoga on pedestrian safety enforcement principles and education outreach efforts to align with collision reduction goals in the Calistoga citywide ATP and in the <i>Countywide Implementation</i> Chapter of this plan. Consider designating traffic safety officers who conduct pedestrian related enforcement activities, such as monitoring school circulation activity during pick up and drop off periods. Determine feasibility of enforcement recommendations in <i>Countywide Implementation</i> chapter of the countywide plan.
NVTA Safety Campaign	Coordinate with NVTA on the media safety campaign that NVTA is pursuing, as an opportunity for education by distributing pedestrian safety pamphlets in-lieu of, or in addition to, citations.
Calistoga Elementary School Crossing Guard Training	Review crossing guard training and staffing to improve operations and reduce confusion.
Construction Coordination	Coordinate with stakeholders during traffic control plan development near key pedestrian nodes such as schools, parks and transit stops to ensure appropriate considerations for pedestrian circulation. Implement Policy 9.3 in the Calistoga ATP to require that construction projects minimize impacts to bicyclists and pedestrians through proper signage, equipment, and detours.





**TABLE C-6: CALISTOGA PROGRAM AND POLICY RECOMMENDATIONS**

Program or Policy	Recommendations
<b>Maintenance</b>	
Repair of Sidewalks, Crosswalks, and Curb Ramps	<ul style="list-style-type: none"> <li>• Continue to regularly improve and repair uneven sidewalk, broken asphalt in crosswalks, and install new curb ramps as part of the citywide Sidewalk Maintenance Program above. Determine feasibility of following the recommended timetable for maintenance activities in the Calistoga 2014 cCitywide ATP (Table 16, pg. 69-70). This could include efforts as part of the ADA Transition Plan and/or the trip and fall monitoring program.</li> <li>• Assign a point of contact in the Public Works Department to compile, track, and respond to routine bicycle and pedestrian maintenance issues in a timely manner (Policy 9.2, Calistoga ATP)</li> <li>• Determine feasibility of adding a page to the city’s website to allow residents and visitors to more easily report and track hazards in the public right-of-way and to ensure all necessary sidewalk repairs are included in the city’s Capital Improvement Program (CIP). This could include the reporting of maintenance needs for pedestrian-related pavement markings and traffic control devices.</li> </ul>
Overgrown Vegetation on Sidewalks and Planting Strips	Continue to ensure citywide that landscapes at maturity do not interfere with safe sight distances for bicycle, pedestrian, or vehicular traffic; do not conflict with overhead lights, traffic controls, traffic signage, utility lines or poles, or walkway lights; and, do not block bicycle or pedestrian ways. Require adjacent property owners to maintain landscaped areas with live and healthy plant materials, replacing plant materials when necessary to maintain full function and aesthetics; to water, weed, prune, fertilize and keep sidewalks and planting strips litter free. Determine feasibility of implementing these monitoring activities based on the recommended timetable in the Calistoga citywide 2014 ATP (Table 16, pg. 69-70).
Caltrans Coordination	Coordinate with Caltrans for sidewalk maintenance, crosswalk enhancements and curb ramp upgrades to directional along SR 29 (Lincoln Avenue)
<b>Engineering and Design Standards</b>	
Crosswalk Guidelines	Implement Crosswalk Guidelines, included in <b>Appendix D</b> of the Countywide Pedestrian Plan, to enable the city to respond to crosswalk requests in a manner that improves pedestrian accessibility and maintains public safety. Reference Guidelines when making decisions about where standard crosswalks (two, parallel white stripes) can be marked; where crosswalks with special treatments, such as high-visibility crosswalks, flashing beacons and other special features, should be employed; and where crosswalks will not be marked due to safety concerns resulting from volume, speed, or sight distance issues.







**TABLE C-6: CALISTOGA PROGRAM AND POLICY RECOMMENDATIONS**

Program or Policy	Recommendations
<b>Place Making and Complete Streets</b>	
Downtown Parking Plan	Develop parking plan to identify shared parking opportunities, consider parklets and mid-block crosswalks recommended in PSA report, and identify opportunities for bike parking to include bike corrals, which are an on-street bicycle parking facility that can accommodate up to 16 bicycles parked on racks in the same area as a single vehicle parking space.
Site Plan Review Checklist	Create checklist for development review to ensure site plans include considerations for pedestrian access, safety and sidewalk activation (including considerations for building frontage location, pocket parks, small plazas, or small retail/commercial kiosks and evaluation of pedestrian circulation in parking lots). Include items from MTC’s Routine Accommodation Checklist for projects in the public right-of-way to ensure routine application of the Complete Streets policy. MTC’s checklist can be found here: <a href="http://www.mtc.ca.gov/planning/bicyclespedestrians/Routine_Accommodation_checklist.pdf">http://www.mtc.ca.gov/planning/bicyclespedestrians/Routine_Accommodation_checklist.pdf</a>





## NEXT STEPS

### FUNDING SOURCES

Sidewalks are included in Calistoga's Capital Improvement Program, with an annual funding level of approximately \$50,000.

Federal, state, regional, county and local organizations provide funding for pedestrian and bicycle projects and programs. The most recent federal surface transportation funding program, Fixing America's Surface Transportation Act (FAST Act), was signed into law in December 2015. Details in this section are provided for funding programs that are used to fund scheduled projects through December 2020.

Fast Act funding is distributed to Federal and state surface transportation funds. Most of these resources are available to Calistoga through Caltrans, the Metropolitan Transportation Commission (MTC), and the Napa Valley Transportation Authority (NVTA).

Table C-7 summarizes the applicability of these various funding sources to projects, planning efforts, and programs proposed in this plan. Detailed descriptions of the grant funding sources are presented in **Appendix C** of the countywide plan. The most applicable funding sources for the improvements recommended by this plan are the Active Transportation Program, One Bay Area Grants, and Highway Safety Improvement Program.





**TABLE C-7: REGIONAL FUNDING SOURCE APPLICABILITY MATRIX**

Funding Source	Class I Multi-Use Path	Pedestrian Projects	Other Projects	Planning and Programs
Highway Safety Improvement Program (HSIP) Grants	◐	●	●	○
Caltrans Transportation Planning Grants	○	○	○	●
Local Transportation Fund (LTF)	●	●	●	○
California State Parks Recreational Trails Program (RTP)	●	○	○	○
Land and Water Conservation Fund (LWCP)	●	○	○	○
Active Transportation Program (ATP), including Safe Routes to School	●	●	●	●
Transportation Development Act (TDA)	●	●	●	●
One Bay Area Grant (OBAG)	●	●	●	●
Bay Area Air Quality Management District (BAAQMD) Transportation Fund for Clean Air	●	●	●	○

Note:

1. ● indicate that funds may be used for this category; ○ indicate that funds may not be used for this category, and ◐ indicate that funds may be used, though restrictions apply.

Source: Fehr & Peers, 2016.

### Cost of the Pedestrian Network

**Table C-8** presents unit costs for standard pedestrian treatments. The total cost represents the total construction for a typical treatment of that type, including engineering, design, construction management, mobilization, traffic control and contingency. These numbers do not include right-of-way and environmental costs.

**TABLE C-8: GENERALIZED UNIT COSTS FOR IMPROVEMENTS**

Facility Type	Cost <sup>1</sup>	Unit
Curb Extension/Bulbout	\$100,000	Each
Pedestrian Refuge Island	\$10,000	Each
Flashing Beacons (includes RRFBs)	\$20,000	Per Crosswalk
Pedestrian Hybrid Beacon (PHB)	\$80,000	Per Crosswalk
Customized Pedestrian Wayfinding Signs	\$2,000	Per Sign

1. Costs reflect capital costs plus contingency for engineering design, construction management, mobilization, traffic control, and contingency.

Source: Fehr & Peers, 2015.

The estimated total cost of all recommended pedestrian projects in Calistoga will be determined in the final draft of this plan. While cost estimates will be prepared for priority projects, this figure will include all suggested projects in this plan, calculated on an order of magnitude basis to understand planning-level costs. Projects that do





not include a prepared cost estimate will be assigned a ranking to indicate an estimated range of cost level. To determine a total project cost, these ranges will be averaged.

Project-level cost estimates will be prepared for the top 5 priority projects determined in the previous section of this plan, to include unit costs for individual improvements within the project and adjustments to account for traffic control, construction management, and mobilization. Additional factors will also be used for overall contingency, engineering design, contingency for engineering and environmental. These cost estimates will be included in **Appendix C-D**. A placeholder for the summary of the estimates is shown in **Table C-9** below.

TABLE C-9: PRIORITY PROJECT COSTS	
Project	Total Cost <sup>1</sup>
<b>C-11:</b> Grant Street SRTS Improvements	TBD
<b>C-1:</b> Pedestrian Safety Improvements SR 29 & Cedar Street (No. 8 CTP Project)	TBD
<b>C-12:</b> Grant Street and Wappo Avenue Pathway	TBD
<b>C-2:</b> Pedestrian Safety Improvements SR 29 & Brannan Street (No. 9 CTP Project)	TBD
<b>C-13:</b> Stevenson Street Safe Routes to School Improvements	TBD

1. Costs reflect capital costs plus contingency for engineering design, construction management, mobilization, traffic control, and contingency.  
Source: Fehr & Peers, 2015.

## COUNTYWIDE PERFORMANCE METRICS AND EVALUATION

NVTA intends to monitor progress on the implementation of this plan over time. The *Countywide Implementation* chapter of the Countywide Pedestrian Plan summarizes key performance goals and associated metrics for this plan’s implementation.





## CALISTOGA APPENDIX

C-A Benchmarking Table

C-B Existing Pedestrian Policies

C-C Detailed Project Lists and Prioritization

C-D Cost Estimates

C-E Plan Adoption Resolution





## APPENDIX C-A: BENCHMARKING TABLE

CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
Plans, Policies, & Programs	Benchmark	Calistoga Status	Recommended Action Items
<p><b>Coordination with Health Agencies</b> Involving non-traditional partners such as public health agencies, pediatricians, etc., in the planning or design of pedestrian facilities may create opportunities to be more proactive with pedestrian safety, identify pedestrian safety challenges and education venues, and secure funding. Additionally, under-reporting of pedestrian-vehicle collisions could be a problem that may be partially mitigated by involving the medical community in pedestrian safety planning.<sup>1</sup></p>	Key Strength	<p>Live Healthy Napa County, a coalition of local community stakeholders for improving health in Napa County, recently completed the Napa County Community Health Improvement Plan (CHIP) in February 2014. The document proposes a plan to address health issues through new policies and health promotion strategies, including transportation policies that encourage walking and biking.</p> <p>Live Healthy Napa County is also working to complete the first ever Napa County Community Obesity Prevention Plan, which addresses the need to increase active transportation options countywide.</p> <p>In Calistoga, health agencies are not involved in pedestrian planning on a regular basis at the local level.</p>	<ul style="list-style-type: none"> <li>Seek opportunities to meet goals in the CHIP related to active transportation, such as improving the built environment by ensuring all necessary sidewalk repairs are included in the city's Capital Improvement Program (CIP), and including additional pedestrian infrastructure projects in the program. Consider incorporating public comment from the recommended online comment form below under <i>Public Involvement</i>.</li> <li>Involve health agencies in the development review process, especially related to active transportation improvements.</li> <li>Ensure consistency with the CHIP by seeking partnership opportunities between health agencies and Safe Routes to School to expand the reach of education and promotion of walking.</li> </ul>
<p><b>Complete Streets Policy</b> Routine Accommodations or Complete Streets Policies accommodate all modes of travel and travelers of all ages and abilities.</p>	Key Strength	<p>The City of Calistoga has a Complete Streets Policy which follows the template provided by the Metropolitan Transportation Commission (MTC), and the policy is incorporated into the city's 2014 Circulation Element of the General Plan. According to the Circulation Element, Complete Streets practices must be integrated into public works projects and development projects as well as the retrofit or maintenance of existing streets.</p> <p>The policy requires development projects affecting the transportation system to be reviewed by the Active</p>	<ul style="list-style-type: none"> <li>Develop a checklist for ATC project review to ensure routine application of the Complete Streets policy and include relevant items from MTC's Complete Streets Checklist.</li> <li>Consider maintaining a GIS database of data collected as part of the policy evaluation, to include pedestrian volumes collected in this plan.</li> </ul>

<sup>1</sup> Sciortino, S., Vassar, M., Radetsky, M. and M. Knudson, "San Francisco Pedestrian Injury Surveillance: Mapping, Underreporting, and Injury Severity in Police and Hospital Records," *Accident Analysis and Prevention*, Volume 37, Issue 6, November 2005, Pages 1102-1113





**CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS**

		<p>Transportation Committee (ATC) for consistency with other city planning documents and recommendations for Complete Streets elements. The Active Transportation Advisory Committee (ATAC) of the Napa Valley Transportation Authority (NVTA) will follow MTC's checklist procedure when reviewing projects from the Regional Transportation Plan (RTP).</p> <p>The city collects development impact fees for traffic impact mitigations, used to pay for transportation capital improvements not covered by other funding sources. Pedestrian and bicycle improvements are included in the cost estimations and the allocation of monies.</p>	
<p><b>Newspaper Rack Ordinance</b> Newspaper racks may obstruct walkways and reduce accessibility and pedestrian visibility when ordinances are not in place. A Newspaper Rack Ordinance improves the pedestrian realm by reducing clutter and organizing sidewalk zones and may detail size, location, and maintenance requirements.</p>	Key Strength	<p>Calistoga has a robust newspaper rack ordinance that addresses pedestrian safety and prohibits disruption of pedestrian flow. The policy also restricts the placement of newspaper racks anywhere that may obstruct a driver's line of sight.</p>	
<p><b>Street Tree Ordinance</b> Street trees enhance the pedestrian environment by providing shade and a buffer from vehicles. Street trees may also enhance property values, especially in residential neighborhoods. However, street trees, when improperly selected, planted, or maintained, may cause damage to adjacent public utilities.</p>	Key Strength	<p>Calistoga's tree ordinance includes requirements for maintaining vertical pedestrian clearances and installing root barriers to avoid sidewalk damage. Maintenance is the responsibility of the owner of the lot fronting the street where the tree is located. Calistoga has adopted the City of Santa Rosa's approved street tree list.</p> <p>In lieu of funding for sidewalk replacement and substantial repair, the city also grinds areas of the sidewalk to remove trip hazards as part of their trip and fall assessments, including locations that are lifted by tree roots.</p>	
<p><b>Bicycle Parking Ordinance</b> Bicyclists become pedestrians after</p>	Key Strength	<p>The City of Calistoga has a bicycle parking ordinance that includes requirements for residential and nonresidential. Racks or lockers are required to be placed in a safe and</p>	







CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
parking their bicycles. Safe and convenient bicycle parking is essential for encouraging bicycle travel (especially in-lieu of vehicle travel).		convenient location, adequately separated from vehicles and pedestrians.	
<p><b>Collision Reporting</b> Identifying and responding to collision patterns on a regular basis is an important reactive approach to pedestrian safety (which may be combined with proactive measures).</p>	Key Strength	Collision data from the beginning of 2002 through the end of 2011 was mapped as part of Calistoga's Active Transportation Plan (ATP) and reviewed for trends related to pedestrian safety. The ATP also includes a policy to reduce pedestrian and bicycle collisions by 50 percent by the year 2020, based on 2011 collision data, as well as to review collision data annually to identify and prioritize applicable projects and programs.	<ul style="list-style-type: none"> <li>Comprehensive monitoring using Crossroads software would allow for more proactive pedestrian safety projects and best practices such as collision typing for countermeasure selection. GIS efforts may be funded through an Office of Traffic Safety grant.</li> <li>Pedestrian volume data could be used to prioritize collision locations based on collision rates (collisions/daily pedestrian volume). This could lead to a proactive approach to identify treatments and program funding. Volunteers can collect pedestrian volumes and other data at collision locations.</li> </ul>
<p><b>Safe Routes to Schools</b> Safe Routes to School (SRTS) programs encourage children to safely walk or bicycle to school. The programs are important both for increasing physical activity (and reducing childhood obesity) and for reducing morning traffic associated with school drop-off, as much as 30% of morning peak hour traffic.</p> <p>Educational components of SRTS programs are especially important for school children where safe walking habits may be instilled as lifelong lessons. Funding for programs and/or projects is available at the state and federal levels.</p>	Key Strength	<p>The Napa County Office of Education (NCOE) currently has a three year grant to administer a Safe Routes to School (SRTS) Program across the county through 2016. Program leaders have a goal of reaching every interested school by the end of the grant term, and plan to work with Calistoga Elementary School and Calistoga Jr/Sr High School in 2015.</p> <p>The program includes events such as Walk and Roll to School Day, Bike Rodeos, and Safe Walking education presentations for students in grades K-3. Brochures are handed out during this program as well as at community events and PTA/parent meetings. Parent presentations include a review of pedestrian laws and ordinances.</p> <p>Although materials for these programs are available each year for schools across the county, reaching schools on a weekly or yearly basis has not been possible due to understaffing and scarcity of volunteers.</p> <p>In Calistoga, Safe Routes to School routes have been</p>	<ul style="list-style-type: none"> <li>Reference the public involvement, analysis, and prioritization efforts of the countywide ATP and the Calistoga PSA when applying for grants to fund the top projects.</li> <li>Determine feasibility of rolling out Walking School Bus program for Calistoga Elementary School.</li> <li>Coordinate with NVTA to seek additional funding for SRTS.</li> </ul>





**CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS**

		<p>mapped in the ATP to identify potential locations for infrastructure improvements, and the city is currently working on applications for SRTS infrastructure funding. The city also includes schools in the development review process.</p>	
<p><b>Inventory of Pedestrian Facilities</b> A GIS-based sidewalk inventory enables project identification and prioritization, as well as project coordination with new development, roadway resurfacing, etc.</p>	<p><b>Key Strength</b></p>	<p>Calistoga has a citywide inventory of existing and proposed sidewalks, existing and proposed pathways, and ADA-compliant curb ramps collected as part of the 2014 Active Transportation Plan (ATP) that is geo-referenced in GIS.</p> <p>Sidewalks are included in the city’s Capital Improvement Program and the annual funding level for sidewalk repairs or gap closures is approximately \$50,000.</p> <p>The city offers design guidance to developers building fronting sidewalks as well as a 50/50 cost sharing program for those repurposing an existing use. For new developments, pedestrian connectivity is required and if needed, the developer is responsible for the full cost of sidewalk construction. Property owners are generally responsible for the maintenance of fronting sidewalks; however the city uses 50/50 cost sharing for maintenance and repair efforts at their discretion, especially for sidewalks downtown along Lincoln Avenue.</p>	<ul style="list-style-type: none"> <li>• This plan has created a GIS-based inventory to expand the city’s existing inventory. Data collected includes crosswalks, existing and missing curb ramps, as well as additional features like sidewalk material and curb ramp direction. This facility inventory could be expanded to include proposed or planned pedestrian crossing improvements in the city.</li> <li>• Consider mapping public comments received going forward to ensure all necessary sidewalk repairs and other pedestrian improvements are included in the city’s Capital Improvement Program (CIP).</li> </ul>
<p><b>ADA Improvements</b> Compliance with the Americans with Disability Act (ADA) guidelines is important not only to enhance community accessibility, but also to improve walking conditions for all pedestrians.</p>	<p><b>Key Strength</b></p>	<p>For guidance on ADA compliance for buildings, the city follows CALDAG standards, a user-friendly manual and checklist that combines the 2013 California Building Code regulations with federal 2010 ADA requirements. For public roadway facilities, Calistoga has adopted the City of Santa Rosa Street Design and Construction Standards, which include standards for sidewalk obstruction transitions, ADA-compliant curb ramps, and designs to maintain a level sidewalk across the back of driveways. Standards do not include a detail for directional curb ramps except for those at mid-block locations. Updated city standards for curb ramps require</p>	<ul style="list-style-type: none"> <li>• Maintain the existing GIS database of ADA-compliant curb ramps to ensure new updates are recorded. Consider adding sidewalk deficiencies listed in the ADA Transition Plan to track progress on completed improvements.</li> <li>• Consider adopting a City Standard for directional curb ramps and implement the design where practical, particularly around transit stop locations.</li> </ul>





**CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS**

		<p>non-yellow truncated domes.</p> <p>According to the Active Transportation Plan (ATP), the city collaborates with Caltrans to create ADA-compliant facilities on state facilities.</p> <p>The city has a 2008 ADA Transition Plan which it uses to replace and retrofit non-compliant facilities in the public right-of-way. All new street and sidewalk construction projects must upgrade ramps in the area, and the city performs spot checks of new curb ramps.</p>	
<p><b>Law Enforcement</b> Enforcement of pedestrian right-of-way laws and speed limits is an important complement to engineering treatments and education programs.</p>	<p><b>Key Strength</b></p>	<p>Calistoga shares data, expertise, and knowledge with the Sheriff’s Office at the City of St. Helena. Officers are involved in school drop-off activity along with school crossing guards.</p> <p>The police department’s educational outreach efforts are currently focused on bicycle safety, including distributing bicycle safety pocket cards and bike helmets. To date, law enforcement has not tracked pedestrian-involved collision trends to relate them to enforcement efforts. NVTA is interested in collaborating with CHP officers to implement pedestrian education outreach efforts to motorists countywide.</p> <p>In Calistoga, the Police Chief is involved in weekly project review.</p>	<ul style="list-style-type: none"> <li>• Coordinate with NVTA on efforts to train officers in Calistoga on pedestrian safety enforcement principles and education outreach efforts.</li> <li>• Implement sustained pedestrian safety enforcement efforts and involve the media. Coordinate with NVTA on the media safety campaign that NVTA is pursuing, as an opportunity for education.</li> <li>• Consider tracking pedestrian-involved collisions aligned with enforcement efforts to analyze trends.</li> </ul>
<p><b>General Plan</b> Planning principles contained in a city’s General Plan can provide an important policy context for developing pedestrian-oriented, walkable areas. Transit-oriented development, higher densities, and mixed uses are important planning tools for pedestrian-oriented areas. A city’s General Plan is also a key opportunity to establish the framework for pedestrian orientation. The Circulation Element of the Plan typically</p>	<p><b>Key Strength</b></p>	<p>Density in Calistoga is concentrated in the Central Business District on Lincoln Avenue and a few mixed-use zones are located in this area as well.</p> <p>The General Plan highlights the need to install crossings at pedestrian nodes on Lincoln Avenue and Foothill Boulevard, as well as a number of locations where crosswalk enhancements should be pursued at pedestrian nodes on Lincoln Avenue. In lieu of LOS standards, the General Plan includes a policy to balance the needs of all users during traffic evaluations, especially on Lincoln Avenue. The plan also recommends</p>	<ul style="list-style-type: none"> <li>• Explore opportunities for shared parking downtown and increased advertising of the Calistoga Shuttle service to tourists online and at hotels, especially the on-demand and extended hours, to further encourage “Car-Free” tourism.</li> <li>• Continue to work collaboratively with the Calistoga Chamber of Commerce and NVTA to provide the on-demand Calistoga Shuttle with extended hours of operations.</li> </ul>





CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
<p>assigns roadway typologies, which can include a layered network approach with prioritized corridors for transit, pedestrian, bicycle, and auto travel.</p>		<p>assessing the feasibility of adjusting street standards to improve pedestrian conditions, such as reducing corner radii and narrowing streets.</p> <p>Although the demand for parking is increasing in downtown Calistoga, the General Plan discourages the use of additional large parking lots to preserve the pedestrian-friendly environment. The city currently uses in-lieu parking fees, charged to commercial developments that are unable to meet on-site parking requirements, to provide municipal parking and foster a “park once” environment.</p>	
<p><b>Pedestrian Master Plan</b> This type of plan includes a large menu of policy, program, and practice suggestions, as well as site-specific (and prototypical) engineering treatment suggestions. A Pedestrian (or Active Transportation) Master Plan documents a jurisdiction’s vision for improving walkability and pedestrian safety; establish policies, programs, and practices; and outline the prioritization and budgeting process for project implementation.</p>	<p>Key Strength</p>	<p>Calistoga completed an Active Transportation Plan in 2014 which includes a citywide inventory of sidewalks, pathways, and curb ramps as well as a review of pedestrian collisions. The plan prioritizes pedestrian facility improvements, develops pedestrian policies, recommends pedestrian programs and provides funding sources for pedestrian improvements.</p> <p>Currently the city’s Senior Planner serves as the Bicycle/Pedestrian Coordinator and dedicates 20% of his time to pedestrian related work.</p>	<ul style="list-style-type: none"> <li>• Develop comprehensive, citywide crosswalk guidelines and toolbox as part of this plan</li> <li>• Develop pedestrian safety and “eyes on the street” design guidelines to incorporate security considerations into urban design.</li> </ul>
<p><b>Public Involvement</b> Responding to public concerns through public feedback mechanisms represents a more proactive and inclusive approach to pedestrian safety compared to a conventional approach of reacting to pedestrian collisions.</p> <p>Advisory committees serve as important sounding boards for new policies, programs, and practices. A citizens’ pedestrian advisory committee is also a</p>	<p>Enhancement</p>	<p>The City of Calistoga Public Works Department has online forms for the public to submit complaints, inquires, or requests and the city generally is able to respond or resolve an issue with 24 hours of a report.</p> <p>The city has a five-member Active Transportation Advisory Committee that focuses on improving active modes of transportation within Calistoga. A representative from the city’s ATAC also sits on the ATAC for NVTA to discuss countywide issues.</p>	<ul style="list-style-type: none"> <li>• Add a page to the city’s website dedicated to receiving public input regarding transportation issues to include the existing comment forms and a subsection for pedestrian topics. This category or subcategory may allow residents to file comments or complaints for traffic control devices or conditions of concern. This could be used to ensure all necessary pedestrian improvements are included in the CIP and identify areas of high priority.</li> </ul>





CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
key component of proactive public involvement for identifying pedestrian safety issues and opportunities.			
<p><b>Transportation Demand Management</b></p> <p>Transportation Demand Management (TDM) programs encourage multi-modal travel by incentivizing non-auto options. As new development occurs, TDM programs can be expanded, formalized, and strengthened.</p>	Enhancement	<p>Employers of 50 or more full-time workers in the Bay Area are required to provide commuter benefits to their employees through the Bay Area Commuter Benefits Program, to comply with California SB 1339. The Program includes benefit options like transit passes, employer-provided shuttles, and vanpool subsidies.</p> <p>Car-free tourism is currently being promoted on Visit Napa Valley’s website in collaboration with the Napa Clean Air Coalition. NVTA partners with the Solano/Napa Commuter Information (SNCI) service, who promotes multiple alternative transportation commuter programs online.</p>	<ul style="list-style-type: none"> <li>Implement education strategies that collaborate with local hotels to support the “Car Free” tourism program of the Napa Valley Destination Council and NVTA to provide wayfinding information to visitors so they can plan a trip without relying solely on a car.</li> </ul>





CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
<p><b>Design and Development Standards</b> Design policies and development standards can improve the pedestrian walking experience, encourage walking, enhance economic vitality, and offer funding opportunities for pedestrian improvements.</p>	<p>Enhancement</p>	<p>The city's adopted street standards require tree planting to include root barriers and comply with a list of approved trees. Although the city has no adopted standards for bulb outs, standard cross-sections do include sidewalks and narrow lanes in some cases. Lanes as narrow as nine feet are the standard for neighborhood streets with low speeds and volumes.</p> <p>The city's Residential Guidelines promote pedestrian-friendly neighborhoods by encouraging visual interest, scale and character as well as shade trees, pedestrian-scale lighting and pedestrian connections to adjoining facilities.</p> <p>The city's General Plan includes a recommendation to assess the feasibility of adjusting street standards to improve pedestrian conditions such as reducing corner radii and narrowing streets.</p>	<ul style="list-style-type: none"> <li>• Incorporate elements of the design guidelines presented in this plan as part of the development review process and to existing infrastructure where feasible and appropriate.</li> </ul>
<p><b>Pedestrian Safety Education Program</b> Education is a critical element for a complete and balanced approach to improving pedestrian safety. Education campaigns may target pedestrians of all ages.</p>	<p>Enhancement</p>	<p>The city of Calistoga has advertised such events as Bike to Work Day on the local news, and the Napa County Bike Coalition offers educational seminars for riding smart as well as bicycle safety laws and guidance on their website. Policy 7.2 in the Calistoga ATP recommends developing and maintaining a safety campaign for drivers, cyclists, and pedestrians.</p> <p>In accordance with policies in the Napa Bike Plan and the General Plan, NVTA is planning to pursue grant funding in November 2015 through the California Office of Traffic Safety (OTS) for a media safety campaign for motorists. The campaign will use Pittsburgh's Drive With Care campaign for inspiration, which characterizes bicyclists and pedestrians as our firefighters, doctors, and neighbors and uses the slogan "someone you care about rides a bike".</p>	<ul style="list-style-type: none"> <li>• Coordinate with NVTA on pursuing a media safety campaign, and consider the following methods to distribute the campaign in Calistoga: <ul style="list-style-type: none"> <li>• Include advertisements on buses and bus shelters, through SRTS and in-school curriculum, public service announcements, and/or brochures distributed by law enforcement, among many other strategies.</li> <li>• Pedestrian safety brochures could be distributed to the public at the library or made available at hotels independent of the media campaign to promote walking around town and to community events.</li> </ul> </li> </ul>
<p><b>Sidewalk or Street Furniture Ordinance</b> Street furniture encourages walking by</p>	<p>Enhancement</p>	<p>Calistoga has no specific street furniture ordinance, but does allow sidewalk dining within the public right-of-way</p>	<ul style="list-style-type: none"> <li>• Coordinate with Caltrans to establish policy/agreement for street furniture on</li> </ul>





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accommodating pedestrians with benches to rest along the route or wait for transit; trash receptacles to maintain a clean environment; street trees for shade, etc. Uniform street furniture requirements also enhance the design of the pedestrian realm and may improve economic vitality.		with a permit. The city's sidewalk dining ordinance requires that the location of the sidewalk dining not interfere with pedestrian safety, access, or flow.  The city does not have authority over street furniture within Caltrans' right-of-way on Lincoln Avenue.	Lincoln Avenue to eliminate the need for individual encroachment permits for street furniture requests.
<b>Walking Audit Program</b> Walking audits provide an interactive opportunity to receive feedback from key stakeholders about the study area as well as discuss potential solutions and their feasibility. They can be led by city staff, advocacy groups, neighborhood groups, or consultants.	Enhancement	Calistoga has not conducted comprehensive pedestrian walking audits before this plan and PSA, although walking audits are part of the city's trip and fall assessment to identify trip hazards and the need for sidewalk repairs citywide.	<ul style="list-style-type: none"> <li>Conduct regular comprehensive walking audits as part of a citywide safety program for pedestrians. This effort could complement the "trip and fall" program or health-oriented programs within the city, as well as distribution of the media campaign NVTA is pursuing.</li> </ul>
<b>Identifying Crossing Barriers</b> Crossing barriers such as railroads, freeways, and major arterials may discourage or even prevent pedestrian access. Additionally, crossing barriers are often associated with vehicle-pedestrian collisions. Identifying and removing barriers, as well as preventing new barriers, is essential for improving walkability and pedestrian safety.	Enhancement	Existing crossing barriers in Calistoga include Lincoln Avenue, Foothill Boulevard, and Napa River crossings. The city's ATP includes a proposed Southern Crossing of the Napa River with "medium" priority.  The city's General Plan highlights locations with high levels of pedestrian activity where designated crossings are needed across Lincoln Avenue and Foothill Boulevard.	<ul style="list-style-type: none"> <li>Identify and create a comprehensive inventory of pedestrian barriers, to include the recommendations in the General Plan and the city ATP, along with appropriate remedies or projects.</li> </ul>
<b>Institutional Coordination</b> Institutional issues for pedestrian planning/design may refer to adopted or informal impediments. This may be policies, practices, funding issues or even stakeholders that make it challenging to improve walking in Calistoga.  Institutional coordination associated with multiple agencies is necessary because of	Enhancement	Caltrans has jurisdiction over Lincoln Avenue and Foothill Boulevard in Calistoga. Lincoln Avenue is a major pedestrian attractor in Calistoga, with multiple hotels and restaurants lining the corridor, and has also been identified as a crossing barrier.  The city has had some challenges collaborating with Caltrans recently on the location of pedestrian curb ramps; however, they did reach agreement on the Vine Trail alignment in the city and have constructed ADA-	<ul style="list-style-type: none"> <li>Proactively seek opportunities to collaborate with Caltrans to improve pedestrian safety and accessibility along and across Lincoln Avenue.</li> </ul>







CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
non-local control of right-of-way and differing policies regarding pedestrian accommodation.		compliant curb ramps on state facilities.  The city has also had difficulty with constructing pathways due political and public safety concerns regarding new pathways through private property.	
<b>Historical Preservation</b> Historic walking routes, such as the famous Freedom Trail in Boston, encourage walking and enhance economic vitality.	Opportunity	Several historic sites exist in Calistoga, although not all are included in historic registries. Calistoga's Historic District was created to maintain the pedestrian oriented environment and historic character within the commercial core.  The local history museum, The Sharpsteen Museum, offers walking tours by appointment.	<ul style="list-style-type: none"> <li>In coordination with The Sharpsteen Museum and Chamber of Commerce consider developing a map to showcase natural or local sites of interest, including a walking route between the sites. Maps of the tour route and historic documentation materials could be made available online and wayfinding signs, maps, and plaques could also be provided throughout the city.</li> </ul>
<b>Speed Limits and Speed Surveys</b> Pedestrian fatality rates increase exponentially with vehicle speed. Thus, reducing vehicle speeds in pedestrian zones may be one of the most important strategies for enhancing pedestrian safety.	Opportunity	Minimal reviews of speed limits are completed by the city of Calistoga; however, speed surveys were completed in 2010 for all state facilities Speed limits are not posted in neighborhoods and are de facto 25 miles per hour.  The city currently has one reduced speed limit zone of 15 mph that was implemented in response to a bicycle fatality.  Enforcement is used when high speeds are present in pedestrian zones.	<ul style="list-style-type: none"> <li>Proactively consider pedestrian volumes when setting speed limits, especially in school zones. Work with Caltrans to review speed limits in pedestrian zones on Lincoln Avenue and Foothill Boulevard. Consider traffic calming in pedestrian zones where speed surveys suggest traffic speeds are too high.</li> <li>Ensure design standards in pedestrian areas do not contribute to a routine need for traffic calming.</li> </ul>
<b>Pedestrian Volumes</b> Pedestrian volume data is important for prioritizing projects, developing collision rates, and determining appropriate pedestrian infrastructure.	Opportunity	The City of Calistoga does not collect pedestrian volumes routinely.	<ul style="list-style-type: none"> <li>Use collected volumes in this plan to monitor volume levels.</li> <li>Routinely collect pedestrian and bicycle volumes by requiring them to be conducted in conjunction with all traffic studies and manual intersection turning movement counts.</li> <li>Consider installing automated counters such as Eco-counter at key locations.</li> <li>Geo-code existing and future pedestrian volume data with GIS software along with other data such as pedestrian control devices</li> </ul>





CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
			and collisions to analyze data for trends or hotspots related to pedestrian safety.
<p><b>Economic Vitality</b></p> <p>Improving pedestrian safety and walkability can enhance economic vitality. Similarly, enhancing economic vitality through innovative funding options such as Business Improvement Districts (BIDs), parking management, and facade improvement programs can lead to more active pedestrian areas and encourage walking.</p>	Opportunity	Calistoga does not have a BID or a façade improvement program.	<ul style="list-style-type: none"> <li>Consider establishing a Business Improvement District that can fund streetscape and pedestrian improvements.</li> <li>Consider implementing a way-finding program to reinforce a “park-once” environment along Lincoln Avenue.</li> <li>Prioritize development of a downtown parking plan to aid in implementing potential enhancements such as parklets and mid-block crosswalks</li> </ul>
<p><b>Pedestrian-Oriented Traffic Warrants / Traffic Control Devices</b></p> <p>Providing all-way stop or signal control at an intersection may improve pedestrian safety by reducing speeds and controlling pedestrian-vehicle conflicts. The MUTCD defines warrants for installing signals and stop signs.</p> <p>The 2014 California <i>Manual of Uniform Traffic Control Devices</i> (MUTCD) requires the installation of countdown pedestrian signals for all crosswalks at new or modified signals where the pedestrian interval is more than 7 seconds.</p> <p>Leading Pedestrian Intervals (LPIs) can reduce conflicts between turning vehicles and pedestrians by providing pedestrians with a “head start” signal timing before vehicles on the parallel street are allowed to proceed through an intersection.</p>	Opportunity	<p>The City of Calistoga uses MUTCD warrants for signals and stop signs.</p> <p>Calistoga currently has one traffic signal at Lincoln Avenue and Washington Street, operated by Caltrans, although no lead pedestrian intervals (LPIs) or pedestrian countdown timers are installed. Four new signals are proposed in the city’s General Plan. All four will be on Caltrans facilities.</p>	<ul style="list-style-type: none"> <li>Coordinate with Caltrans to install pedestrian countdown timers at signals along Lincoln Avenue and evaluate future need for LPIs in areas of high pedestrian activity.</li> <li>Consider using city-specific, pedestrian-friendly stop sign warrants for locations where pedestrian safety is a concern. Best practices for stop-sign warrant application include:                             <ul style="list-style-type: none"> <li>Requiring a collision history of three instead of five years based on routine underreporting</li> <li>Reducing traffic volume thresholds based on latent demand</li> <li>Providing consideration for school children, pedestrians and traffic speeds</li> </ul> </li> <li>Expand the GIS-based inventory to include pedestrian-related markings and traffic signals with pedestrian facilities.</li> </ul>
<b>Crosswalk Design Guidelines</b>	Opportunity	Calistoga has a pedestrian crossing policy in their ATP to	<ul style="list-style-type: none"> <li>Consider adopting crosswalk guidelines as part</li> </ul>





**CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS**

<p>A formal policy for crosswalk installation, removal, and enhancement provides transparency in decision-making and creates a consistent application of treatments citywide.</p>		<p>provide safety features at uncontrolled pedestrian crossings, especially within pedestrian districts and at Class I trail crossings of arterials<sup>2</sup>. The policy does not include criteria for appropriate enhancements.</p> <p>The City of Calistoga generally considers crosswalks at signals and high volume activity centers, especially near schools. The one existing signal is on Lincoln Avenue, a highway facility, and thus decisions regarding signalized crosswalk installation are made by Caltrans. Several uncontrolled crosswalks are installed on Lincoln Avenue at intersections with minor streets. The city does not install uncontrolled midblock crossings under current practice.</p>	<p>of this plan that reflect best practices and recent research to include criteria for appropriate locations to install crosswalk enhancements such as flashing beacons, advanced yield markings, or in-roadway pedestrian signs.</p> <ul style="list-style-type: none"> <li>• Coordinate with Caltrans to include criteria in the crosswalk guidelines for identifying, installing, and enhancing crossings where strong desire lines exist, especially across Lincoln Avenue.</li> <li>• Using the proposed crosswalk guidelines, conduct audits of the adequacy of current crosswalks.</li> </ul>
<p><b>Traffic Calming Programs</b> Traffic Calming Programs and policies set forth a systematic and consistent approach for addressing neighborhood requests and approvals, as well as standard treatments and criteria.</p>	<p>Opportunity</p>	<p>The City of Calistoga does not have a Traffic Calming Program; however, radar speed detection signs are in use near the high school and were funded through an insurance pool for safety improvements.</p> <p>The city municipal code prohibits the use of speed humps in Calistoga.</p>	<ul style="list-style-type: none"> <li>• Consider adopting a Traffic Calming program for pedestrian concerns that arise from residents in Calistoga and to address current concerns from the Police Department such as speeding and cut-through traffic near the elementary and high schools.</li> </ul>
<p><b>Coordination with Emergency Response and Transit Providers</b> Emergency response vehicles require special roadway design considerations that sometimes conflict with bicycle and pedestrian treatments. For example, while pedestrians benefit from reduced speeds of smaller curb radii, larger vehicles such as fire trucks and buses have more difficulty performing the turn within the smaller space. These conflicts require consensus building between the City and the respective departments.</p>	<p>Opportunity</p>	<p>The fire department represents emergency services and attends project review meetings to provide comments.</p> <p>Transit shelters were redesigned in 2009 and updated to meet ADA requirements. Transit providers are not currently involved in the pedestrian planning process, although the need for marked crosswalks at several bus stops has been identified.</p>	<ul style="list-style-type: none"> <li>• Seek opportunities for technical collaboration and funding with transit providers for pedestrian improvements.</li> <li>• Consider pilot testing programs for transit and emergency response and a more active involvement in project review for small projects and not just development projects.</li> <li>• In accordance with the General Plan and the ATP, explore ways to implement a Safe Routes to Transit Program that prioritizes bike and pedestrian access to transit connection points and transit centers.</li> </ul>

<sup>2</sup> City of Calistoga Active Transportation Plan, 2014





**CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS**

<p><b>Open Space Requirements</b> Residents typically rate open space as among a jurisdiction’s key assets and needs. Open space may encourage walking, especially for recreational trips.</p>	<p>Opportunity</p>	<p>The city of Calistoga is near open space and has several cherished trails through town that take advantage of the Napa River, a vital community asset.</p>	<ul style="list-style-type: none"> <li>• Prioritize connections to surrounding open space and consider adopting open space provisions for residential and non-residential land uses that accommodate pedestrian safety and accessibility.</li> </ul>
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## APPENDIX C-B: EXISTING PEDESTRIAN POLICIES

The City of Calistoga has adopted policies as part of its General Plan in support of walking. Most such policies appear in the Circulation Element of the General Plan. Additional supportive policies appear in the Land Use, Community Identity, and the Open Space and Conservation Elements of the General Plan as well as the 2015 Active Transportation Plan. These policies typically express support for making walking safer, more convenient and more pleasant.

### CALISTOGA ACTIVE TRANSPORTATION PLAN<sup>1</sup>

The Calistoga Active Transportation Plan is intended to “assess the needs of bicyclists and pedestrians in Calistoga and throughout Calistoga’s Planning Area<sup>2</sup> in order to identify a set of local improvements and implementation strategies that will encourage more people to walk and bicycle.” The Plan includes a citywide inventory of sidewalks, pathways, and curb ramps; prioritized proposed pedestrian facilities and cost estimates; proposed pedestrian programs; and a report of pedestrian collisions and trends. A number of pedestrian-related objectives and policies are established by the Plan, including:

- Objective 1. Comprehensive Bicycle and Pedestrian Network (16):
  - Policy 1.1 Provide a complete bicycle and pedestrian network among residential areas, downtown and major activity centers. (page 16)
  - Policy 1.2 Require new development to implement the planned bicycle and pedestrian network. (16)
  - Policy 1.3 Determine appropriate locations for bicycle and pedestrian access to and along the Napa River corridor. Access shall avoid properties developed with single-family residences and be respectful of single-family residence private property rights. All future improvements required of private land owners should have demonstrable public benefit and minimize impacts on privacy and security. Properties abutting the Napa River that are developed with a single-family residence shall not be required to participate in the costs of constructing pedestrian access facilities along the Napa River corridor. (16)
  - Policy 1.4 Build on Calistoga’s existing partnership with the Napa County Transportation and Planning Agency (NCTPA) to ensure that the City’s Active Transportation Plan is consistent with countywide transportation planning efforts. (16)
  - Policy 1.5 Increase the city’s walking and bicycling trips, in accordance with NCTPA 2035 goals. As a major part of this effort, the City will continue to develop and maintain a safe and integrated bicycle and pedestrian system throughout Calistoga for people of all ages and abilities. (16)
- Objective 2. Best Practices, Design Standards (17):

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<sup>1</sup> According to Calistoga City Council Resolution No. 2014-089, the policies in the city’s Active Transportation Plan (2014) supercede policies in the Calistoga Bike Plan (2012).

<sup>2</sup> The Planning Area is mapped as Figure 1 of the Calistoga Active Transportation Plan. It contains the City limits, a portion of the upper Napa Valley, and the hillsides that surround Calistoga on three sides.





- 2.1 Utilize the California Highway Design Manual, the California Manual of Uniform Traffic Control Devices, the American Association of State Highway Transportation Officials Guide for the Development of Bicycle Facilities and Guide for the Planning, Design, and Operation of Pedestrian Facilities for the development of bicycle and pedestrian facilities. (17)
- Policy 2.4 Provide safety features at uncontrolled pedestrian crossings, especially within pedestrian districts and at intersections of arterials with Class I trails. (17)
- Policy 2.5 Sidewalks shall have the appropriate width for their use. Commercial districts require wider sidewalks designed as part of the public space and foreground for the buildings. (17)
- Objective 3. Multimodal Integration (17):
  - Policy 3.3 Pedestrian access between development and transit facilities shall be developed, which will encourage use of public transportation. (17)
- Objective 4. Comprehensive Support Facilities (17):
  - Policy 4.3 Install high-visibility crossing treatments, pedestrian-scale lighting, street furniture, drinking fountains, and other pedestrian amenities in pedestrian districts and on Class I trails. (17)
- Objective 5. Enhanced Safety and Security (17-18):
  - Policy 5.1 Reduce automobile collisions with pedestrians and bicyclists by 50 percent by the year 2020, using 2011 collision data as the baseline for analysis. (17)
  - Policy 5.2 Review collision data annually to identify problem areas involving bicyclists and pedestrians and to prioritize projects and program activities. (18)
  - Policy 5.3 Focus on improving safety at intersections using pedestrian signal cycles, pedestrian buttons, high-visibility crosswalk markings and education and cycle-triggered signal changes. (18)
  - Policy 5.4 Give high priority to safety improvements in the vicinity of schools, public transit and other high use pedestrian destinations. (18)
  - Policy 5.5 Improve pedestrian safety and security with pedestrian-level lighting, where appropriate. (18)
  - Policy 5.6 Continue to implement Safe Routes to School program improvements. (18)
  - Policy 5.7 Take care in the construction and maintenance of drainage ditches, manhole covers, sewer and drainage grates, and asphalt/concrete interfaces to minimize hazards to bicyclists and pedestrians. (18)
- Objective 6. Integration (18):
  - Policy 6.2 The integrity of agricultural operations shall not be violated by bikes and pedestrian facilities. Where trails are required, they shall be sited to minimize the impacts to agricultural operations.
- Objective 7. Education and Promotion (18):
  - Policy 7.2 Develop and maintain a safety campaign for drivers, cyclists, and pedestrians. (18)
  - Policy 7.3 Increase the awareness of the benefits of walking and bicycling through an education campaign. (18)





- Policy 7.4 Distribute bicycle and pedestrian safety, educational, and promotional materials through law enforcement activities, at scholastic orientations, through drivers training and citation diversion programs, and to new political representatives. (18)
- Policy 7.5 Encourage events that introduce residents to walking and bicycling, such as walk/bike-to-work days, walk/bike-to-school days, senior walks, recreational walks and historic walks. (18)
- Objective 8. Planning (19):
  - Policy 8.1 The Active Transportation Advisory Committee (ATAC) shall be responsible for advising staff and decision makers on the ongoing planning and coordination of the bicycle and pedestrian transportation system.
  - Policy 8.2 Proactively seek new opportunities for acquisition of abandoned rights-of-way, natural waterways, utility rights-of-way...for the development of new multi-use pathways...(19)
- Objective 9. Maintenance (19):
  - Policy 9.2 Assign a point of contact in the Public Works Department to compile, track, and respond to routine bicycle and pedestrian maintenance issues in a timely manner. (19)
  - Policy 9.3 Require that road construction projects minimize their impacts on bicyclists and pedestrians to the greatest extent possible through the proper placement of construction signs and equipment, and by providing adequate detours. (19)
  - Policy 9.4 Require that routine maintenance of local roads consider bicycle and pedestrian safety and at a minimum includes the following activities:
    - Trim vegetation to provide a minimum horizontal clearance of 4 feet from the edge of pavement and a minimum vertical clearance of 8 feet.
    - Clear debris from road shoulder areas to provide space for walking (19).
  - Policy 9.5 Perform periodic sidewalk inspections to ensure adequate pedestrian clearance and to address maintenance issues that could present a tripping hazard. (19)
- Objective 10. Funding (19-20):
  - Policy 10.1 Work with federal, state, regional and local agencies and any other available public or private funding sources to secure funding for the bicycle and pedestrian system.
  - Policy 10.2 Support multi-jurisdictional funding applications to implement the regional bicycle and pedestrian system.
  - Policy 10.3 Promote the availability of adequate regional, state and federal funding sources for bicycle and pedestrian transportation projects.

## CALISTOGA GENERAL PLAN

### Land Use Element (2012)

- Goal LU 1 Protect the small-town qualities of Calistoga, which include walkability, vineyards, orchards, natural habitats and open space.





## Community Identify Element (2012)

- Policy P1.1-4 New developments should provide accessible public and semi-public areas and efficient and inviting pedestrian ... connections to existing Calistoga streets. (page C1-12)
- Policy P.1.1-7 New commercial development shall be designed to avoid characteristics common to typical auto-oriented shopping center or strip commercial development...(C1-12)
- Policy P.1.2-4 The amount of greenery, especially street trees, in the Downtown Commercial area shall be maintained and enhanced to help create a pleasant walking environment for pedestrians...(C1-13)
- Policy P.1.2-5 Pedestrian-scale lighting that encourages nighttime use of the Downtown Commercial area ... shall be used. (C1-13)
- Policy P.1.2-8 The development of pedestrian amenities within the downtown area shall be encouraged. (C1-13)
- Action A1.2-1 Prepare and adopt new design guidelines for commercial areas related to:
  - Building scale, bulk and façade treatment
  - Streetscapes
  - Design and location of parking
  - Lighting
  - Street furniture
  - Signage
  - Landscaping and trees
  - Other pedestrian amenities... (C1-14)
- Policy P.1.3-8 New neighborhoods shall promote human-scaled, comfortable and safe design, and incorporate pedestrian-oriented design features and connections to pedestrian/bikeways and site amenities. (C1-13)

## Circulation Element (2014)

- Policy P1.2-3: Since Lincoln Avenue is Calistoga's main street and serves pedestrian and commercial purposes as much as it does motorized vehicles, it is inappropriate to establish any LOS standard for Lincoln Avenue between Foothill Boulevard and Wappo Avenue. Instead, the City shall evaluate traffic on Lincoln Avenue on an on-going basis, seeking to balance vehicular, parking, bicycle and pedestrian needs. This exclusion is not applicable to intersections on Lincoln. (page CIR-14)
- Policy P1.3-2: New development shall provide sidewalks as needed to close gaps in the city's active transportation network. These gap closures may include off-site locations if the closure improves pedestrian connectivity from the new development to schools or other activity centers. (CIR-15)
- Policy P1.4-3: Maintenance, planning, and design of projects affecting the transportation system shall be consistent with local bicycle, pedestrian, transit and other relevant plans, except where such consistency cannot be achieved without negative consequences. (CIR-15)
- Action A1.4-2: In the design of new streets and the maintenance and improvements to existing streets, street shade trees, planting strips, crosswalks, pedestrian signals, street furniture, bicycle parking, traffic calming measures and other features that promote safe and comfortable travel for all users shall be incorporated to the maximum feasible extent. (CIR-16)
- Objective CIR-3.2: Provide a pedestrian network that encourages walking for short trips and recreation. (CIR-18)







- Policy P3.2-1. Walking shall be considered an essential and integral part of the city's circulation network.
- Policy P3.2-2. Sidewalks shall be designed to enhance the safety, comfort, aesthetic appeal, and interest of the pedestrian environment.
- Action A3.2-1. Implement the sidewalk improvement program contained in the Active Transportation Plan.
- Action A3.2-2. Incorporate the expansion of the sidewalk network into the City's capital improvement planning, with priority given to collector streets.
- Action A3.2-3. Seek funding from federal and state grant programs to implement sidewalk construction.
- Action A3.2-4. Study the feasibility of amending street standards by reducing corner radii, narrowing streets or taking other measures that would slow local traffic and thus improve conditions for pedestrians.
- Action A3.2-5. Implement a publicity program in cooperation with the Chamber of Commerce and the tourist industry to encourage visitors to park their cars once and spend their time in Calistoga on foot.
- Action A3.2-6. Conduct a feasibility study with Caltrans to determine the ability to improve pedestrian circulation along Foothill Boulevard.

#### **Open Space and Conservation Element (2003)**

- Policy P2.4-5 ... For the Napa River, a minimum setback of 30 feet from the top of the high bank shall be limited to ... and pedestrian/bicycle pathways (OSC-28)
- Policy P5.1-1 The City shall ensure that development safeguards scenic vistas and gateways and maintains the rural small-town character of the following roadways...Strategies to accomplish this include:
  - Retaining landscaped pedestrian/bicycle pathways... (OSC-32)
- Policy P7.1-3 The City shall promote decreased reliance on motor vehicle travel through ... to accommodate bicycle and pedestrian modes of travel. (OSC-35)





## APPENDIX C-C: DETAILED PROJECT LIST AND PRIORITIZATION

CALISTOGA PEDESTRIAN IMPROVEMENT LIST					
ID	Roadway	Limits or Intersection	Recommendations	Infrastructure Category	
<b>TIER ZERO (FUNDED OR CONSTRUCTED PROJECTS)</b>					
T0-1 Berry Street Bridge Replacement		Berry Street at Washington Street	<ul style="list-style-type: none"> <li>Realigned intersection to extent possible due to right-of-way constraints</li> </ul> Suggested additions: <ul style="list-style-type: none"> <li>Advanced stop bars on all legs</li> </ul>	Crossing treatments Traffic calming	
<b>TIER ONE</b>					
C-1 Pedestrian Safety Improvements SR 29 & Cedar Street (No. 8 2015 CTP Project)	SR 29 (Lincoln Avenue)	SR 29 (Lincoln Avenue) at Cedar Street	<b>Suggested Modifications to CTP Project</b>		
			<ul style="list-style-type: none"> <li>High visibility striping for north leg crosswalk</li> <li>Curb extensions on northeast and northwest corners with directional ramps</li> <li>Feasibility assessment for refuge island for north leg crosswalk</li> </ul>	Crossing treatments ADA ramps PSA recommendations	
			<ul style="list-style-type: none"> <li>Marked crosswalk on west leg with advanced stop bar and directional curb ramps</li> <li>Advanced stop bar on east leg</li> </ul>	Crossing treatments ADA ramps PSA recommendations	
			<ul style="list-style-type: none"> <li>Rectangular Rapid Flashing Beacons (RRFBs) with advanced yield lines if roundabout at Lincoln / Foothill is not installed</li> </ul>	Crossing treatments	
C-2 Pedestrian Safety Improvements SR 29 & Brannan Street (No. 9 2015 CTP Project)	SR 29 (Lincoln Avenue)	SR 29 (Lincoln Avenue) at Brannan Street	<b>Suggested Modifications to CTP Project</b>		
			<ul style="list-style-type: none"> <li>Feasibility study for roundabout as gateway installation</li> <li>Rectangular Rapid Flashing Beacon (RRFB) as potential alternative to roundabout</li> </ul>	Crossing treatments Traffic calming PSA recommendations	
C-3 Washington Street Complete Streets (No. 10 2015 CTP Project)	Washington Street	Lincoln Avenue to N. Oak Street	<ul style="list-style-type: none"> <li>Countywide Transportation Plan description: Complete Streets Enhancements<sup>1</sup></li> </ul>	Complete Streets <sup>1</sup>	
		<b>Suggested Considerations for CTP Project</b>			
		Washington Street at Gerard Street	<ul style="list-style-type: none"> <li>Curb extension on northeast corner with directional ramps</li> <li>High visibility marked crosswalk on east leg</li> </ul>	Crossing treatments ADA ramps	
		Washington Street at Lincoln Avenue	<ul style="list-style-type: none"> <li>Curb extensions on southwest, northwest, and northeast</li> </ul>	Crossing treatments	





### CALISTOGA PEDESTRIAN IMPROVEMENT LIST

ID	Roadway	Limits or Intersection	Recommendations	Infrastructure Category
			<ul style="list-style-type: none"> <li>corners with directional ramps</li> <li>Advanced limit lines on all legs</li> </ul>	ADA ramps PSA recommendations
			<ul style="list-style-type: none"> <li>Protected left turns or lead pedestrian intervals (LPIs), countdown pedestrian heads and automatic pedestrian recall phase</li> </ul>	Signal timing/operations PSA recommendations
C-4 PSA Recommendations South of Downtown	Foothill Boulevard	Pine Street to Elm Street	<ul style="list-style-type: none"> <li>Sidewalk gap closure</li> </ul>	Sidewalks
	Lincoln Avenue	Lincoln Avenue at Foothill Boulevard	<ul style="list-style-type: none"> <li>Caltrans intersection traffic control evaluation (ICE) study to consider roundabout</li> </ul>	Traffic calming
	Lincoln Avenue	Lincoln Avenue at Myrtle Street	<ul style="list-style-type: none"> <li>High visibility marked crosswalk on north and south legs with refuge islands and “yield to pedestrians” paddle signs</li> <li>Directional curb ramps on all corners</li> <li>Marked crosswalks with advanced stop bars on east and west legs</li> <li>Feasibility study for formal diagonal pathway through parcel at northwest corner of intersection</li> </ul>	Crossing treatments ADA ramps Pathway
C-8 Calistoga Elementary School Improvements	Berry Street	Berry Street at Cedar Street	<ul style="list-style-type: none"> <li>Curb extension on northwest corner with directional curb ramps</li> </ul>	Crossing treatments ADA ramps
C-11 Grant Street SRTS Improvements	Grant Street	Lake Street to Stevenson Street	<ul style="list-style-type: none"> <li>Restriped edge lines</li> <li>Traffic calming study to consider chicanes along corridor</li> <li>Reflective paint on existing berm corridor-wide</li> </ul> Long Term: <ul style="list-style-type: none"> <li>Sidewalk along north side of street</li> </ul>	Traffic calming Sidewalks
		Grant Street at Arch Way	<ul style="list-style-type: none"> <li>Curb extensions on northwest and northeast corners to realign intersection and close slip lane</li> </ul>	Crossing treatments
		Grant Street at Stevenson Street	<ul style="list-style-type: none"> <li>Curb extensions on southwest and southeast corners to “square up” intersection</li> <li>Marked crosswalks on all legs with advanced stop bars</li> </ul>	Crossing treatments
C-12 Grant Street and Wappo Avenue Pathway	Grant Street and Wappo Avenue	East of Stevenson Street	<ul style="list-style-type: none"> <li>Feasibility study for pathway</li> </ul>	Pathway
C-13 Stevenson Street Safe Routes to School	SR 29 (Lincoln Avenue)	SR 29 (Lincoln Avenue) at Stevenson Street	<ul style="list-style-type: none"> <li>Curb extension with directional curb ramps on southwest corner to “square up” intersection</li> </ul>	Crossing treatments ADA ramps PSA recommendations





### CALISTOGA PEDESTRIAN IMPROVEMENT LIST

ID	Roadway	Limits or Intersection	Recommendations	Infrastructure Category
Improvements			<ul style="list-style-type: none"> <li>High visibility crosswalk on south leg</li> <li>Feasibility assessment for a median refuge on south leg</li> <li>Marked crosswalk on west leg with advanced stop bar</li> </ul>	Crossing treatments PSA recommendations
			<ul style="list-style-type: none"> <li>Speed radar sign in advance of proposed uncontrolled crosswalk on southbound approach</li> <li>RRFBs with advanced yield lines if roundabout at Lincoln / Brannan is not approved and installed</li> </ul>	Crossing treatments Traffic calming
<b>TIER TWO</b>				
C-5 PSA Recommendations within Downtown Core	Lincoln Avenue	One block south of Washington Street	<ul style="list-style-type: none"> <li>High visibility mid-block crosswalks at entrances to existing pedestrian paseos with pedestrian crossing warning signs and curb extensions</li> <li>Feasibility assessment for refuge islands at proposed crosswalks</li> <li>Beautification for pedestrian paseo adjacent to Bella Bakery to include greenery or art</li> </ul>	PSA Recommendations Crossing treatments Paseos
		One block north of Washington Street	<ul style="list-style-type: none"> <li>High visibility mid-block crosswalk at Calistoga Roastery with pedestrian crossing warning signs</li> <li>Parklet at proposed crosswalk landing on east side of street</li> <li>Assess feasibility of refuge island at proposed crosswalk</li> </ul>	PSA Recommendations Crossing treatments Place making
C-6 PSA Recommendations at Fair Way	Lincoln Avenue	Lincoln Avenue at Fair Way	<ul style="list-style-type: none"> <li>PSA recommendations for crossing treatments and circulation recommendations at existing market and at intersection</li> </ul>	Crossing treatments Signal timing/operations PSA recommendations Transit
C-7 PSA Recommendations North of Downtown	Lincoln Avenue	Lincoln Avenue at Wappo Avenue	<ul style="list-style-type: none"> <li>Curb extension with directional curb ramp on southwest corner</li> <li>Marked crosswalk on west leg with advanced stop bar</li> </ul>	Crossing treatments ADA Ramps
		Wappo Avenue to Brannan Street	<ul style="list-style-type: none"> <li>Sidewalk on west side of street</li> <li>Pedestrian scaled lighting on both sides of street</li> </ul>	Sidewalk Lighting
C-9 Lake Street Traffic Calming	Lake Street	Washington Street to Lake County Highway	<ul style="list-style-type: none"> <li>Traffic calming study</li> <li>Class II bike lanes</li> </ul>	Traffic calming
C-10 Lake Street Sidewalk Gap Closure	Lake Street	Washington Street to Lake County Highway	<ul style="list-style-type: none"> <li>Sidewalk gap closure in coordination with culvert resolutions</li> </ul>	Sidewalks

Note: Tier One improvements are intended to be implemented within 5-7 years and Tier Two within 7-15 years.

1. Complete Streets enhancements are designed to accommodate all users, including pedestrians, bicyclists, transit riders, and motorists. For more information, refer to the Best Practices Toolkit, Appendix D of the Countywide Plan.





Based on feedback from NCTPA TAC, improvements were evaluated based on the criteria below using a binary approach for ranking. Each improvement was ranked first based on the number of criteria it met, and second according to whether or not it had local support. Results are shown in the final table below.

PRIORITIZATION CRITERIA	
Criterion	Data Set / Metric
Local support	<ul style="list-style-type: none"> <li>• CTP Project</li> <li>• Critical location identified by staff / public</li> </ul>
Safety	<ul style="list-style-type: none"> <li>• Collision “Hot Spot” Location</li> <li>• Highway Interchange Location</li> <li>• Traffic Calming</li> </ul>
Transit	<ul style="list-style-type: none"> <li>• Within ½ mile of a transit stop</li> <li>• Within a ¼ mile of a transit stop</li> </ul>
Connection	<ul style="list-style-type: none"> <li>• Sidewalk gap closure</li> <li>• Trail connection</li> </ul>
Schools	<ul style="list-style-type: none"> <li>• Within ½ mile of a school</li> <li>• Within ¼ mile of a school</li> </ul>
Cost	<ul style="list-style-type: none"> <li>• Low Cost Level (Signing and Striping)</li> </ul>





EVALUATION RESULTS									
Project	Local support	Safety	Transit		Connection	Schools		Low Cost	Number of Criteria Met
			Half Mile	Quarter Mile		Half Mile	Quarter Mile		
<b>TIER ONE</b>									
C-11	✓	✓	✓	✓	✓	✓	✓		7
C-1	✓	✓	✓	✓		✓	✓		6
C-2	✓	✓	✓	✓		✓	✓		6
C-3	✓	✓	✓	✓		✓	✓		6
C-8	✓	✓	✓	✓		✓	✓		6
C-12	✓		✓	✓	✓	✓	✓		6
C-13	✓	✓	✓	✓		✓	✓		6
C-4		✓	✓	✓	✓	✓	✓		6
<b>TIER TWO</b>									
C-5	✓		✓	✓		✓	✓		5
C-7			✓	✓	✓	✓	✓		5
C-9		✓	✓			✓	✓		4
C-10			✓		✓	✓	✓		4
C-6			✓			✓	✓		3





## APPENDIX C-D: COST ESTIMATES

CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
Project ID	Project Name	Project Elements	Cost <sup>1</sup>
C-1	Pedestrian Safety Improvements SR 29 & Cedar Street (No. 8 2015 CTP Project)	High visibility crosswalk	\$6,207
		2 curb extensions	\$111,682 <sup>2</sup>
		Feasibility assessment for refuge island	\$7,000
		Standard crosswalk with one directional ramp	\$1,184
		Advanced stop bar	\$476
		RRFB (if roundabout at Lincoln/Foothill isn't installed)	\$45,432
			<b>Total without RRFB: \$126,549</b>
			<b>Total with RRFB: \$171,981</b>
C-2	Pedestrian Safety Improvements SR 29 & Brannan Street (No. 9 2015 CTP Project)	Feasibility assessment for roundabout	\$30,000
		Relocate east leg marked crosswalk and curb ramps	\$21,704
		RRFB (if roundabout isn't installed at intersection)	\$45,432
			<b>Total without RRFB: \$51,704</b>
			<b>Total with RRFB: \$97,136</b>
C-11	Grant Street Safe Routes to School Improvements	<b>Near Term</b>	
		Restripe edge lines	\$6,600
		Corridor traffic calming study	\$40,000
		Reflective paint on existing berm	\$5,500
		2 curb extensions	\$111,682 <sup>2</sup>
		2 curb extensions	\$111,682 <sup>2</sup>
		3 standard crosswalks	\$3,552

<sup>1</sup> Cost includes contingencies for traffic control (5%), construction management (10%), mobilization (5%), contingency (20%), design (15%) and environmental (10%).

<sup>2</sup> Cost includes contingencies for drainage and utility contingency (40%)



CALISTOGA PROGRAMS, POLICIES, AND PRACTICES BENCHMARKING ANALYSIS			
		<b>Long Term</b>	
		Sidewalk	\$368,500 <sup>2</sup>
			<b>Total Near Term: \$279,016</b>
			<b>Total Long Term: \$647,516</b>
<b>C-12</b>	Grant Street and Wappo Avenue Pathway Study	Feasibility assessment for a pathway	\$150,000
			<b>Total: \$150,000</b>
<b>C-13</b>	Stevenson Street Safe Routes to School Improvements	Curb extension	\$55,841 <sup>2</sup>
		High visibility crosswalk	\$6,207
		Feasibility assessment for refuge island	\$7,000
		Standard crosswalk	\$1,184
		Speed radar sign	\$1,350
		RRFBs (if roundabout at Lincoln/Brannan isn't installed)	\$45,432
			<b>Total without RRFB: \$71,582</b>
			<b>Total with RRFB: \$117,014</b>

<sup>2</sup> Cost includes contingencies for drainage and utility contingency (40%)





## **APPENDIX C-E: PLAN ADOPTION RESOLUTION**

*This is a placeholder for Plan Adoption Resolution*