

STATE ROUTE 145 YOSEMITE AVENUE AS DOWNTOWN MAIN STREET PROJECT



Draft Report

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JANUARY 2020



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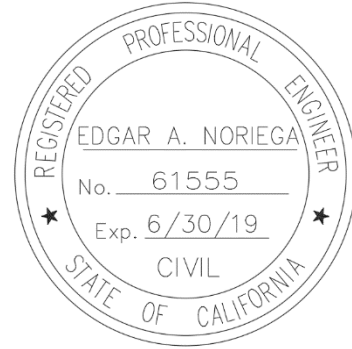
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This Final Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



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Date

Registered Professional Engineer

Mark Thomas

1. EXECUTIVE SUMMARY

Yosemite Avenue is a street with a rich history; a street full of pride and tradition. Known as Madera’s “Main Street”, located in the heart of Downtown Madera, Yosemite Avenue has been the center of local and regional culture, civic engagement, and commerce for over 100 years. Many multi-generational residents of Madera will recall stories of long passed relatives who once traversed and experienced much of their lives on Yosemite Avenue. Fast-forward to today, and you’ll find that much of what made Yosemite Avenue the “Main Street” of Madera is still intact.



Historic photo of the Madera County Courthouse & Jail Annex, along Yosemite Avenue.

Many of today’s locals have spent time on Yosemite Avenue; whether stopping in at shops or restaurants, watching annual parades and holiday lights, visiting the historic courthouse, or a trip to the civic district, just to name a few. This street is truly the heart of the city, as well as the region.

Downtown Madera’s borders fall between H Street to the west, High Street to the east, 4th Street to the north, and 6th Street to the south. In recent years, the community surrounding the downtown area has taken necessary steps to help fulfill the city’s ultimate desire to make downtown a destination where residents and visitors alike can visit, spend time, and enjoy entertainment, shopping, and dining. To accomplish this, the city realizes it needs to invest in public space to enhance aesthetics and to make the downtown core a safer and more comfortable place for the public to visit and spend time, create bicycle and pedestrian-friendly facilities to support a more livable downtown core, and establish traffic calming devices to complement enhanced aesthetic improvements. Past studies have looked to revitalize downtown by exploring and identifying these kinds of improvements. Since 2005, the City of Madera has actively engaged in the studies and program implementations to improve multi-modal transportation along Yosemite Avenue, also known as State Route (SR) 145, at its key city



Historic photo of Yosemite Avenue, sometime during the 1950s.

center. More recently, a group of local government and public organizations teamed up to commission a reimagining of the downtown core. A rich community conversation evolved out of this process, through community workshops with local stakeholders, investigations and observations by design professionals, and a feedback and revision process that was completed in 2018.

This document looks to these past studies and efforts, as well as their ultimate goals and guiding values, in order to propose realistic improvements that complement how the downtown core functions and to provide a list of funding opportunities for the defined improvements in order to deliver a fully-realized Downtown Madera as destination and Yosemite Avenue as a true “Main Street”.

1.1 Purpose & Background

The purpose behind this documentation is to establish a visionary master plan, a road map, for Yosemite Avenue and the rest of Downtown Madera, based on feedback generated through engagement with stakeholders and the community, and to provide initial guidance for the City of Madera, should they seek funding for the various projects outlined in the master plan.

The community knows that Downtown Madera is a unique place and the heart of the city. The central business district, civic district, and surrounding urban residential neighborhoods bring in vehicular, bicycle, and pedestrian traffic. Facilities for mass bus transit currently exist along Yosemite Avenue, however there are gaps in connectivity for pedestrians and bicyclists; missing and damaged sidewalks create accessibility gaps, while gaps in bicycle facilities make it difficult to navigate across



The Madera Water Tower, welcoming people into the city, near SR 99.

downtown. There is already planning in place to utilize state funds to help jump start improvements to pedestrian access by repairing and replacing sidewalks and ramps along Yosemite Avenue, as well as a plan to reactivate vacant land and develop a veterans’ facility, along with a low-income housing development. The community knows the importance of investing in their downtown core and the city has heard the call and continued the effort through this master planning document to realize a fully crafted and well thought out plan for improvements that will help better connect the community and have a lasting impact.

The foundation of this comes from past reports and studies of Yosemite Avenue and the rest of Downtown Madera. These include the following:

- UC Berkeley Transportation Injury Mapping System
- Madera 2025 Vision
- DOMA (Reimagining Downtown Madera)
- Madera County Traffic Monitoring Program 2018 Traffic Volumes Report

Summaries of these reports can be found in Chapter 2.2a. These reports and studies can be found in the Appendix.

1.2 Process & Outreach

The strategies and vision in this document evolved from a collaborative effort between design, planning, and engineering professionals, along with local government proponents, and a community based advisory steering committee. The project team’s strategy involved a multiphase process; data collection and identification of existing conditions, reporting and refining existing condition findings, a public participation and outreach plan, a draft master plan & report for presentation to the public, and a final master plan & report.

Professionals investigated and researched existing conditions, as well as analyzed and laid out opportunities for improvements and design constraints. Close communication with the City of Madera, the Madera County Transportation Commission (MCTC), and Caltrans helped inform and refine the initial data collection and existing conditions phases. The community-based side of the process, led by the project steering committee, trusted community leaders with a vested interest in Downtown Madera, provided important feedback and input to the draft master plan. These committee members included:

- City of Madera
- First 5 Madera County
- Madera Chamber of Commerce
- Landmark Real Estate
- Leadership Counsel of Justice and Accountability
- Madera County Public Health Department
- Camarena Health
- Madera County Arts Council

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- Madera Police Department
- Madera Downtown Association
- Madera County Economic Development Commission
- Madera County Transportation Commission
- Madera NAACP
- Leighton's Jewelers
- Madera County
- Caltrans

Concepts and goals in this report reflect an overarching vision to make the downtown core a more attractive destination to live, work and play while boosting economic development opportunities.



View of a row of businesses along Yosemite Avenue, between C Street & E Street.

1.3 Concept Overview

Ultimately, the stakeholders were presented with a master plan of Downtown Madera with the following features:

- Upgraded ADA compliant ramps and gap closures in sidewalks to provide unobstructed accessibility.
- Enhanced pedestrian experience with new street trees to provide a fuller urban canopy for enhanced aesthetics and more comfortable temperature regulation.
- Enhanced pedestrian amenities & furnishings for a more comfortable environment.
- Activated alleys with enhanced paving materials, amenities, furnishings, and decorative lighting to better utilize unused space in the downtown core.
- Gap closures in street lighting to enhance safety and the feeling of security.
- Protected crosswalks to enhance pedestrian safety and to provide complete access to downtown for pedestrians.
- Traffic calming devices with added aesthetic features.
- New and upgraded bicycle facilities.



Inspirational photo showing many of the proposed improvements to Downtown Madera



Inspirational photo showing many of the proposed improvements to Downtown Madera

- Select area for street closure to enhance neighborhood safety.

1.4 Estimated Cost

Estimated costs for the entirety of the downtown master plan are around \$33.3 million in 2019 dollars. Federal, state, and local grants will ensure project success; however, every effort has been made to capitalize on design earmarked to current grant funding opportunities.

- Landscaped ‘bulb-outs’ at most intersections to calm the flow of traffic, improve safety sightlines between vehicles and pedestrians for enhanced safety, and for landscape aesthetic treatment.
- Pedestrian crosswalk refuge space in protected median, at the widest streets, for enhanced pedestrian safety.
- Parklet locations throughout the downtown core, by utilizing unused space within diagonal parking scheme areas, in order to provide additional amenity and vendor space along sidewalks and to add enhanced landscape aesthetics.
- Bicycle facilities throughout all the downtown core streets in order to provide gap closures with existing bike lanes.
- Signalization at high volume intersections lacking protections for vehicles, bicyclists, and pedestrians.



Inspirational photo showing many of the proposed improvements to Downtown Madera

1.5 Next Steps

Late 2020

- Obtain grant funding to progress to next phase of design

2021-2022

- Procurement for first phase Project Approval & Environmental Documents (PA&ED)
- Environmental Clearance
- Plans, Specifications and Estimates (PS&E) for first phase.
- Applications for construction & management of grant funds.

2. INTRODUCTION

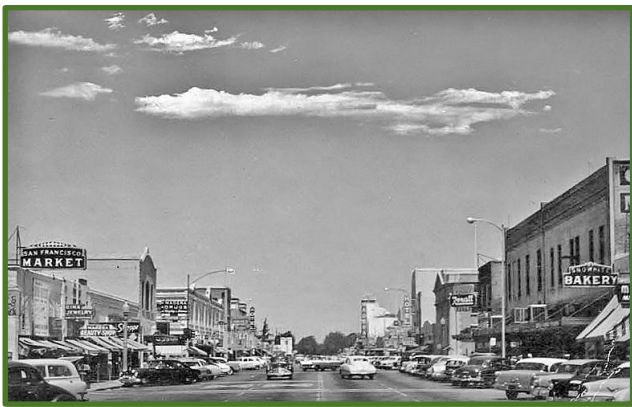
For over 100 years, generations of Madera residents have embraced Yosemite Avenue as the heart of the city. Over the decades, the city has looked for ways to incrementally improve Yosemite Avenue and the surrounding streets; concrete sidewalks have been installed on a number of streets that lacked sidewalk, paving has been upgraded and enhanced along portions of the corridor, street lighting has been added and upgraded in some of the more dense areas of downtown, and landscape planting areas and street trees have been added in select areas. For the next evolution of Yosemite Avenue, the entire downtown core must be taken into consideration in order to solve bigger problems, create a more cohesive and connected district, and to shape the foundation to make Downtown Madera into a destination where residents and visitor are drawn to visit and spend time.

2.1 History

Yosemite Avenue is a street as old as the city itself; where horses and wagons once cleared a path through the valley dirt, which made way for a growing city that would be incorporated as the City of Madera (1907). Madera, which translates to ‘lumber’ in Spanish, was named after the industry that propelled its initial growth. The crossroads of the city’s early industrial water flume, which carried precious lumber to the city, the railroad, and Yosemite Avenue laid the foundations for the city grid and vibrant community that would later grow and expand. A central business district was established, as well as local and regional civic operations



Historic photo of Yosemite Avenue as a dirt road at the corner of D Street, circa 1910



Historic photo of Yosemite Avenue, sometime during the 1950s.

after the construction of the county courthouse (1900). From that grew Madera’s first urban residential neighborhoods. With all this growth and change, Yosemite Avenue remained at the center of the community; a human scale, walkable neighborhood.

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The Historic Madera County Courthouse Park along Yosemite Avenue

Fast-forward to today, and you'll find Madera, a city with a population spilling over 65,000 residents, at a familiar yet evolved crossroads. With the growth of the city and era of the automobile, the city has seen sprawling development and its boundaries have more than doubled in land area. Although historic Yosemite Avenue and the downtown core are still at the heart of the city and region, they've become underutilized as the era of the car has pulled people out of the traditional downtown core. The current state of Yosemite Avenue is partly to blame; the corridor's multimodal transportation uses have evolved and changed so dramatically over the past hundred years, all while major improvements to the corridor have been neglected. Today's corridor lives in the past, in terms of design and layout. Instead of slow-moving horses, wagons, and people traversing a dusty untamed road we find cars, motorcycles, and semi-trucks zipping up and down an asphalt paved road, with the pedestrian at the sidelines; the evolution of the corridor has prioritized vehicular travel above all else, and over the years the downtown core has paid the price for this. Vehicular traffic has risen over the past decades. While some of that has been driven by the central location of the corridor, much of it has been driven by the growing population, as well as the increase in development and services in the area.

Over the years, the civic district along Yosemite Avenue has grown substantially; you'll find a historic courthouse and park, along with a modern county courthouse to meet the needs of the 21st century, a historic library building, new library, county government center, city hall, and other city services clustered around the historic courthouse near SR 99. At the Eastern end of Yosemite Avenue, near Flume & Lake Streets, you'll find an assortment of government



New Madera County Courthouse, South of the Historic Courthouse.

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Historic photo of a parade along Yosemite Avenue in Downtown Madera. Date unknown.

social services, park, and community center. The variety of services and amenities in the downtown core make the area a place many people go on a regular basis.

Although the central business district has grown and evolved with the needs of the community, it was designed with human scale in mind, and the slower moving pace of the pedestrian, not the semi-truck and the car. To add to the unforeseen problems associated with the age of the car, a change was made decades ago to Yosemite Avenue; the state laid claim on Yosemite

Avenue as State Route (SR) 145. Over the years, the additional traffic that comes along with an SR designation exacerbated pedestrian accessibility gaps and has created safety obstacles that make it difficult and dangerous to traverse the central business district. With the rise in traffic collisions caused by vehicular traffic, it's become obvious that changes need to be made to make the corridor safer; this is the perfect opportunity to think beyond just the car and design a safer corridor for all users in order to make Yosemite Avenue a safer and more vibrant place.

Downtown Madera has the location and bones to make for new transformation; a transformation guided by thoughtful planning, design, and engineering in order to transform it into a vital urban core district that better serves the needs of 21st century Madera residents, all while keeping with its historic aesthetics and value to the community. The City of Madera recognized that a master plan would be the most appropriate next step in



The annual 'Old Timer's Parade' along Yosemite Avenue in Downtown Madera in 2018. The parade has been an annual tradition for 88 years.

establishing a way to successfully accomplish the community supported improvements needed in Downtown Madera.

2.2 Project Background

The planning area (downtown Madera) is generally along SR 145 (Yosemite Avenue) and within the boundaries of Fourth and Sixth Streets (north and south) and H and High Streets (west and east). In its function as State Route (SR) 145, the corridor has faced challenges with high vehicular speeds, long pedestrian crossing distances, and insufficient



The Historic Madera Courthouse Park along Yosemite Avenue

lighting that have created a north/south separation within the city. In 2018, to create an opportunity for a re-imagined and energized downtown core, the city began seeking a qualified consultant team to support a proposed multi-modal transportation plan along SR 145 (Yosemite Avenue) as Downtown Main Street. The city's primary desire was to address transportation deterioration and inefficiencies along SR 145 through downtown Madera in efforts to improve multi-modal transportation at its key city center. The goal was to reduce congestion, vehicles miles traveled by city residents, greenhouse gas emissions, and ultimately make Downtown Madera a more attractive destination to live, work and play while boosting economic development opportunities.

Prior to the 2018 effort, the community surrounding the downtown area had already begun taking steps to begin revitalizing this undervalued area, by identifying future areas for improvements, through multiple studies and efforts.

2.2a Previous Studies

Since 2005, the City of Madera has actively engaged in studies and program implementations to improve multi-modal transportation along Yosemite Avenue, also known as State Route (SR) 145, at its key city center. That was one of the goals of Vision Madera 2025. The bigger goal of program was to ultimately make the downtown core a more attractive destination to live, work and play while boosting economic development opportunities.

More recently, the City of Madera, County of Madera, Madera Unified School District, and Madera County Arts Council commissioned the creation of the “Reimagining Downtown Madera” document, also known as “DOMA”. Completed in 2018, DOMA represented a vision for a revitalized Downtown Madera and a Cultural Performing Arts Center. Significant financial support from the local arts council brought the community



The DOMA document cover, reimagining Downtown Madera.

together through a series of community workshops with local stakeholders and designers. The end result gave the community inspiring ideas on how to make Downtown Madera, along Yosemite Avenue, a vibrant destination and community asset for the people.

Following DOMA, “The State Route 145 (Yosemite Avenue) as Downtown Main Street Feasibility Study”, initiated by the City of Madera, sought to identify improvements that would address the safety and use of a proposed multi-modal transportation plan while also reducing congestion, vehicle miles traveled by City residents, and greenhouse gas emissions. This study’s goal was to make Downtown Madera an attractive destination for its residents by integrating prior studies,



Some of the conceptual ideas that were presented in the DOMA document.

plans, and projects with bicycle and pedestrian safety improvement projects.

2.2b Identification of Need

The City of Madera serves as the urban center of the County of Madera and its population is steadily growing. Within a 30-year period, from 1980 to 2010, the City of Madera's population had nearly tripled from 21,732 to 61,416. Within the next 30-year period, the population is

expected to double again, rising to 120,000. This population increase will understandably require safe and reliable transportation networks into and around the city's urban center, Downtown Madera. With a revitalized downtown core, the City of Madera can provide a safe and desirable destination for its growing residents to use as their social and economic hub.

2.3 Purpose

Past studies and design efforts have shown the community's drive and desire for positive change in their community. Along with this drive comes more good news; a changing attitude at Caltrans regarding complete streets. According to the Caltrans Complete Streets Program and Smart Mobility



An example of a complete street with multimodal transportation options.

Framework, a complete street is a “transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists, appropriate to the function and context of the facility. Every complete street looks different, according to its context, community preferences, the types of road users, and their needs.”

The benefits of complete streets, which are recognized by Caltrans, are what the City of Madera desires as part of the remaking of the downtown core as a destination for entertainment, shopping, and dining in order to in residents and visitors. These benefits include:

- Increased Transportation Choices
- Economic Revitalization
- Improved Return on Infrastructure Investments
- Livable Communities
- Improved Safety for All Users
- More Walking and Bicycling to Improve Public Health
- Greenhouse Gas Reduction and Improved Air Quality

The goal of the State Route 145 Yosemite Avenue as Downtown Main Street Project is to identify multi-modal improvements along the downtown area between H and High Streets to implement



An example of a downtown themed wayfinding signage to help visitors navigate the downtown core.

complete streets improvements and prioritize potential projects that would be competitive for grant funding opportunities. The desires and goals of the community call for Yosemite Avenue to move into the 21st century as a complete street. The project requires that the master plan be informed by feasibility studies, Crime Prevention Through Environmental Design (CPTED), placemaking and public space activation techniques, and conceptual design exploration in order to create a successful master plan for Downtown Madera.

2.4 Guiding Principles

We look back to the community led efforts and recent studies as a guide to community values. Efforts such as master planning for complete streets improvements have the benefit of bringing design professionals together, such as engineers and landscape architects, for a more holistic approach; a way to consider all issues and aspects faced within a project area and to come up with a comprehensive plan to address them. For Downtown Madera, this approach has benefits such as reduced congestion, vehicles miles traveled by city residents, and reduced greenhouse gas emissions. To be sure, all those things make the downtown core a more attractive destination overall, however, it's guiding values and principles that guide our understanding and design process. Those principles are...

	Authenticity Informed by surroundings, represents Madera community values, takes material cues from historical buildings and elements
	Connectivity Placemaking, pedestrian and bicycle-friendly streets, branded destination district
	Economy Performing arts center activating economic revival in downtown core, ribbon retail, expanding influence

The guiding principles, as established by the DOMA document.

- **Authenticity:** Informed by surroundings, represents Madera community values, takes material cues from historical buildings and elements.

- *Connectivity:* Placemaking, pedestrian and bicycle-friendly streets, branded destination district.
- *Economy:* Performing arts center activating economic revival in downtown core, ribbon retail, expanding influence.

3. MASTER PLANNING GOALS & OBJECTIVES

At the onset of the planning process, the design team reviewed previous studies and reports. A full list of supporting documentation may be found in the Appendix. Key findings from these documents included the following:

- The need for safety improvements to roadway facilities.
- The desire for aesthetic improvements along Yosemite Avenue.
- The desire for multimodal transportation options in Madera.

The beginnings of the master planning process took on a technical approach, which involved the following:

- *Clearly Define the Problem:* The need for improvement within the project area, specifically along SR 145, was a top concern for the City of Madera, at the onset of the project.
- *Identified the Key Issues:* Once a clearer picture begins to come into view and we have identified the problems we can begin to tie these problems to specific improvements and funding sources.
- *Inventory and Analysis of Existing Conditions:* Conduct a detailed on-site review of existing conditions in order to field evaluate site features, parking usage during peak and off hours, utilities, circulation patterns, land uses, and urban canopy.
- *Identify Opportunities for Improvement:* Worked with community members, stakeholders, and steering committee members to establish a vision and propose solutions that could be supported by the community.
- *Make a Plan:* Created a plan that captured community input, directly related to issues identified in previous studies, and took into account what is possible in a Caltrans right of way. The master plan created offers flexibility and shows a full vision of what is possible and what an end result can look like.
- *Capture Funding:* Based on the vision established generate a list of capital improvements, with supporting costs that identify potential funding sources.

4. DATA GATHERING & RESEARCH

The design team utilized existing studies and supplemented them with additional data gathering and research to help build a case for design decisions that would be implemented in the master plan. This process began with a stakeholder site walk, design team observational site visits, a study and analysis of existing conditions, and an evaluation of opportunity and constraints.

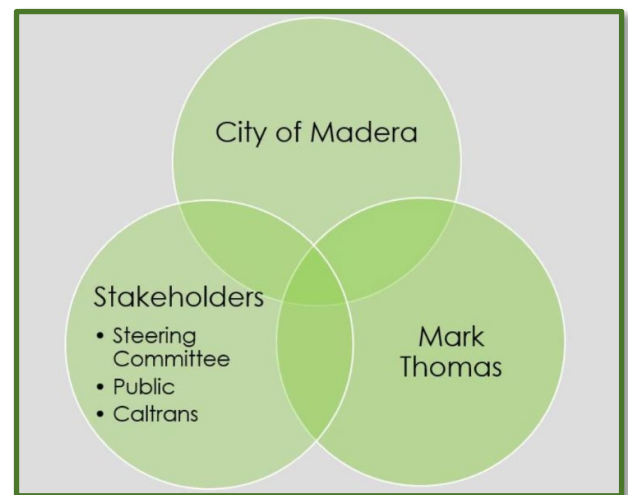
4.1 Stakeholder Site Walk

On June 27, 2019, the project was officially kicked off with a site walk among key members of the design team and stakeholder group. The purpose of this site walk was to collect valuable information from the key stakeholders regarding items of importance to the community. Much of what was discussed during the site walk was brought about through observations made by those present.

Most comments made during the site walk centered around the following topics:

- General Neighborhood Safety/Security/Feel.
- Vehicular Traffic Patterns & Multimodal Transportation Safety
- Programming and Management

Comments concerning general neighborhood safety, security, and feel centered on the pedestrian, and how pedestrians interact throughout the downtown core. Some specific concerns were regarding the lack of separation between vehicular traffic and pedestrian spaces, such as sidewalks. Stakeholders commented that the lack of landscape buffer in those areas created an uncomfortable feeling for pedestrians. The nature of heavy, fast-moving traffic, in general made the downtown core an unfriendly feeling place for pedestrians. Stakeholders also commented that better crosswalk design and the addition of more historic “acorn” style street lighting would add to a safer and more secure feel for pedestrians. Additional comments were made about incorporating



The groups guiding much of the project efforts; The City of Madera, Mark Thomas (lead consultant), and the stakeholders' group.

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“bulb outs” to shorten pedestrian crossings with additional landscape and stormwater management capabilities that would add shade and a better aesthetic to all the intersections.

There was much discussion regarding vehicular traffic patterns and overall multimodal transportation safety. Many stakeholders commented that heavy traffic exists along the Yosemite corridor, for extended periods of time, throughout the day. Many observed bicyclists on sidewalks, likely due to concerns for their own safety if they were to ride in the street alongside fast-moving



Photo from the day of the site walk with the steering committee and design team.

vehicular traffic. This, in turn, created unsafe conditions for pedestrians using the sidewalks. Many noted that long stretches of the corridor lacked crosswalks, and many crosswalks felt unsafe. This may have emboldened some pedestrians to simply jaywalk instead of finding a safe crossing, as jaywalking was observed on several occasions during the site walk. Another concern of stakeholders was of the observed effects that slowing traffic had on vehicular drivers. Concerns

about the danger of speeding cars leaving Yosemite Avenue to take “shortcuts” through narrow side-streets and even alleys were common refrains from stakeholders.

Lastly, the cultural and use components came into play with stakeholder discussion about general programming around the downtown core. Stakeholders noted the importance of several parades that the town holds, right in the heart of the downtown core, along Yosemite Avenue. There were concerns over any changes that might distort the parade route. There was also expressed importance of the downtown farmer's market. Since there is a large presence of businesses and civic resources in the area with a regular flow of patrons, stakeholders had a concern over availability of parking on city streets. They preferred angled parking as it allowed for safer entrance/exit from the vehicle. The stakeholders also expressed interest in creating plaza areas at select locations, such as Cesar Chavez Plaza and between the historic courthouse and the city/county buildings across the street along Yosemite. Opportunities such as enhanced paving, shade trees, and resources that would support plug and play activities, vendors, and neighborhood events. Vehicular noise was also a concern, especially near SR 99, and along Yosemite Avenue from fast-moving vehicular traffic.



Photo from the day of the site walk with the steering committee and design team. Notice the heavy North/South traffic moving along D Street at Yosemite Avenue.

4.2 Observations

The design team also made their own visits to Downtown Madera to drive and walk the area, with primary focus on Yosemite Avenue.

General Neighborhood Safety/Security/Feel:

- Many parts of the downtown core, especially to the east and throughout much of the residential districts, are lacking adequate street lighting. See the Site Lighting Map Exhibit in the Appendix.
- There is a lack of urban canopy, otherwise known as street tree shade/protection cover, which creates a lack of shade on most streets throughout the downtown core. This lack of shade contributes to a 'heat island effect'; a phenomenon in which urban areas experience warmer temperatures. Considering that the average summer temperatures range between the low to high 90-degree marks, this creates a recipe for an uncomfortable environment for pedestrians walking through downtown. If there were

street trees it would help mitigate some of the high heat and protect from direct sun exposure. Street trees would also help to add a layer of security when walking along side taller buildings by creating a more enclosed feel that is more comfortable for pedestrians. See the Urban Canopy Map Exhibit in the Appendix.

- Some parking lots and most vacant lots create the feeling of a lack of management and care, while a few are being used by street vendors, as there was no space on the sidewalk; there is a need to better utilize space and to activate additional public space for public use. See the Parking Analysis Map Exhibit in the Appendix.
- The civic/park spaces to the east, such as John W. Wells Youth Center and the Centennial Pool Complex, were the easiest for the residential neighborhoods to access. However, the civic/park space to the west around the courthouse was difficult to access because of busy intersection crossings with heavy and fast-moving traffic, lack of ADA accessibility at railroad tracks, driveway aprons and parking areas that block sightlines,



Photo from the day of the site walk with the steering committee and design team. One observation made throughout the downtown core was the lack of urban canopy.



Photo from the day of the site walk with the steering committee and design team at the 4th & Lake Street intersection.

and parallel parking on Yosemite Avenue that felt dangerous to use due to the heavy and fast-moving traffic along the corridor. See the Green Space Accessibility Map Exhibit in the Appendix.

- Much of the civic areas feel deserted during off hours. It doesn't help that there are large parking lots and parking structures that are left empty during those times. The team did notice security patrols in the civic areas, which did help with the feeling of security, even though the area was empty in the evening and on weekends.

Vehicular Traffic Patterns & Multimodal Transportation Safety:

- High speed and heavy traffic were observed along Yosemite Avenue, well beyond typical rush hour windows. When traffic is clear, many drivers speed through the area because there is nothing stopping them. See the Collision Data Map 2014-2018 Exhibit and the Map of Network Deficiencies Exhibit in the Appendix.
- Bus service runs along Yosemite and through other parts of the downtown core, but stop locations are minimal in terms of comfort and amenities; simply a bench and partial shade cover. These stops are well located in the civic districts, but crossings near the bus stops are dangerous. See Opportunities & Constraints Analysis Map Exhibit in the Appendix.
- Bicyclists are present but generally use the sidewalk because of dangerous street conditions. See the Map of Network Deficiencies Exhibit in the Appendix.
- Many areas within downtown are missing ADA access ramps, and some areas are missing sidewalks entirely. See the Sidewalk Analysis Map Exhibit and the Map of Network Deficiencies Exhibit in the Appendix.



Photo from the day of the site walk with the steering committee and design team. Courthouse Park, as well as many other civic locations at the east end of downtown are difficult to access due to the lack of safe crosswalks and the lack nearby parking.

Programming and Management:

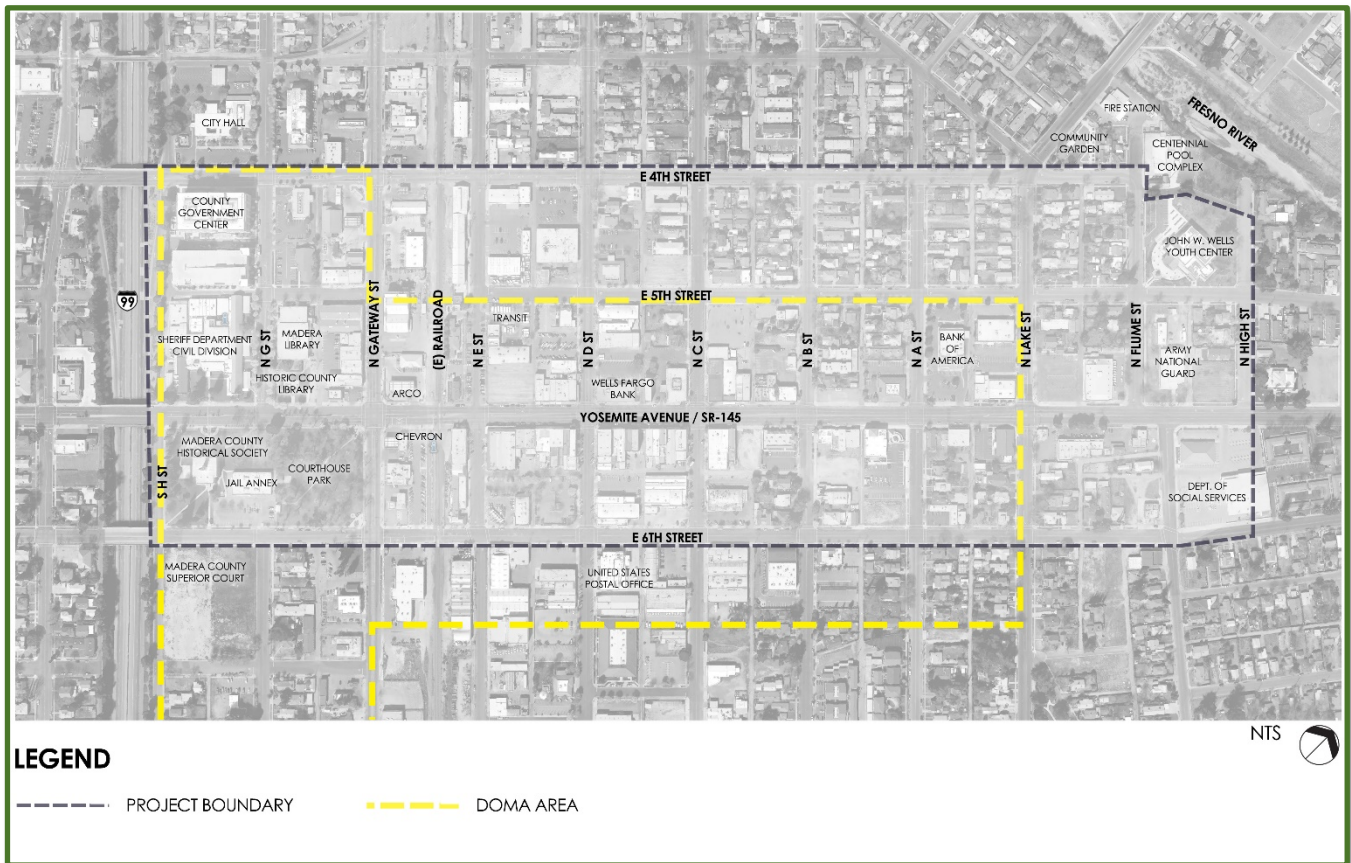
- The team observed a lack of dedicated public space and lack of access to the existing public space, such as the two parks on each end of the downtown core. Much of the lack of access had to do with missing sidewalks that caused accessibility gaps, as well as dangerous crossings at busy intersections.
- Even with several vacant lots around downtown, much of the open land was being underutilized; the spaces that did exist were not suited for gathering as they lacked adequate space and connectivity. They also did not provide a feeling of comfort or protection, due to the lack of site user amenities such as seating, and they also lacked security lighting, tree canopy and green space.

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- There doesn't appear to be maintenance in and around the commercial district. As improvements have been made, they haven't been maintained consistently.

4.3 Existing Conditions



Map showing the project area which existing conditions were analyzed.

The points below summarize the existing conditions within the study area. For the purposes of this study, we have focused on those features which have a connection to available funding at the state and federal level. These issues have been identified in prior studies.

- *Collision History:* Collision data gathered from TIMS and SWITRS between 2013-2017 show a high density of incidents along SR 145 (Yosemite Avenue), Fourth, Fifth, and Sixth Streets (72 collision - 15 bicycle, 8 pedestrian). Within Madera County, the top two most dangerous intersections for pedestrians/bicyclist are in the city at the intersections of Yosemite/D and Sixth/Lake. Most of the collisions resulted in personal injury, with seven resulting in a severe injury or fatality.

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- *Vehicular Speeds:* The posted speed limit varies from 30 mph to 40 mph along the corridor. Speed issues occur due to various factors but are mainly attributed to high speeds entering and exiting the City, and the continuous 4-lane facility with no side friction.
- *Unprotected Crosswalks:* There are 7 unprotected marked crossings within the study limits. These locations have a higher chance for pedestrian collisions and should be considered for enhancement.
- *Accommodation for Bikes:* There are no existing bike lanes along SR 145 (Yosemite Avenue). However, the community has defined a Class IV Separated Bikeway within the Madera ATP. The feasibility of incorporating planned facilities as well as identify opportunities to connect with regional network was reviewed as well.
- *ADA Accessibility:* Many of the existing sidewalk and ramps within the project areas appear to be noncompliant with current ADA standards. Mobility barriers were identified throughout the corridor and potential solutions considered.
- *Access to Transit:* Route 1 of MAX operates through this corridor. Concepts were developed that would improve functionality of transit stops. Transit improvements potentially include turnouts, ADA loading areas, new shelters / street furniture, and signage.
- *Lack of Placemaking Identity:* City residents have wanted to create a sense of place, transforming SR 145 (Yosemite Avenue) as a “Main Street”. We looked to activate locations that would encourage residents to think of downtown Madera as a destination and instill a sense of pride and ownership in the downtown core.
- *Public Parking:* Downtown users have expressed the importance of parking and a focus on ease for patrons to access a specific destination. We analyzed existing parking and looked to identify parcels for potential public parking that can serve the downtown area.
- *Create & Foster A Community Cohesiveness:* Over the decades, downtown has evolved into a collection of civic, commercial, and residential uses, buildings, and empty lots without continuity or unifying aesthetic. We worked with the project stakeholders and residents to



Photo from the day of the site walk with the steering committee and design team at the 4th & Lake Street intersection. Most of the downtown core needs new ADA compliant ramps.

develop a unifying aesthetic of street elements and treatments unique to Downtown Madera.

4.3a Summary – full report in appendix

Yosemite Avenue is currently a four-lane conventional highway that serves farming communities connecting SR 41 to I-5. It also serves as the primary corridor and center of the downtown core of the City of Madera. The road is approximately 73 feet wide and has four 12-foot-wide travel lanes, one center 11 foot median/left turn lane, and 7-foot-wide parallel parking along each side of the road. The right of way is approximately 100 feet, which lends to wide sidewalks, however, no landscape buffer planting to separate the street from the sidewalk. At its center, the corridor has



Photo from the day of the site walk with the steering committee and design team at the D Street & Yosemite Avenue. Yosemite Avenue is a wide 4 lane highway.

businesses directly on the right of way frontage, with parking in the rear or along the street only. Most four-way intersections are signalized with pedestrian crosswalks, but three-way intersections lack signalization and crosswalks. The more historic civic district, nearest to SR 99, has park space, historic buildings, and modern civic structures along the right of way frontage; parking is at the back of the properties, away

from the corridor. The civic district to the east contains buildings set back further from the corridor, with street level parking lots along the right of way. Each of the two civic districts have their own bus stops; both near unprotected crosswalks, but close to civil services. Bike lanes are not present along the corridor. For the most part, alleys connect across each block, in both directions.

Other downtown core streets range in size from 50 to 54 feet wide, with right of ways ranging from 78 to 80 feet wide. Within a block of Yosemite, E, D, and C Streets have parallel parking, while the remaining stretches have parallel parking. 5th street between E and C Streets has parallel parking. With Exception of 4th Street and select portions of Yosemite Ave & 6th Street around the

railroad tracks, all the other streets have parallel parking. Nearly all the downtown core has time restricted parking regulations.

The further away from the SR 99 and the central portion of the business district, the less dense it gets, and the fewer users you'll find. Pedestrians aren't as common in this area, as walking distances between properties gets further apart and tree canopy and lighting is lacking. Large parking lots and empty lots are more common in this area. Into the center of the business district you'll find more users and a more walkable neighborhood with historic buildings built against the right of way frontage. Closer to SR 99 and the civic district you'll find more users, as more tree canopy, more street lighting, and open public spaces become more common.

The full existing conditions report can be found in the Appendix, along with the following Exhibits:

- Project Area Map
- Land Use Relationship Map
- Collision Data Map 2014-2018
- Crosswalk Analysis Map
- Urban Canopy Map
- Parking Analysis Map
- Site Lighting Map
- Preliminary Utility Map
- Green Space Accessibility Map
- Sidewalk Analysis Map
- Map of Network Deficiencies

4.3b Key Issues That Impact Design Alternatives

There are several existing conditions that have impact on what can be done throughout the project.

Below are some key issues that have an impact:

- *Roadway Size & Road Diet:* A road diet was discussed as an option, but the existing roadway size creates constraints. Existing building setbacks prevent roadway widening in most locations. The central location of Yosemite Avenue, as well as its designation as SR 145, burdens it with heavy and constant vehicular traffic. Capacity of the corridor is of concern to city residents, not only by those along the corridor and who use it who are concerned with congestion on the corridor, but also by those in surrounding neighborhoods that do

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not want increased local traffic in their neighborhoods due to a road diet along Yosemite Avenue.

- *Parking:* The community wants to retain and, if possible, add more parking in the downtown core. On top of the challenge of designing a safe road with on street parking, a street in which space is already restricted due to currently setbacks, it's exacerbated further by the community preference of only having diagonal parking. A diagonal parking layout would take up more of the street width space. On some smaller streets, these space limitations prevent diagonal parking entirely. On Yosemite Avenue, diagonal parking would only be possible with a road diet. Adding more parking on vacant lots would create fewer opportunities to add new businesses, amenities, and activated spaces to the downtown core.

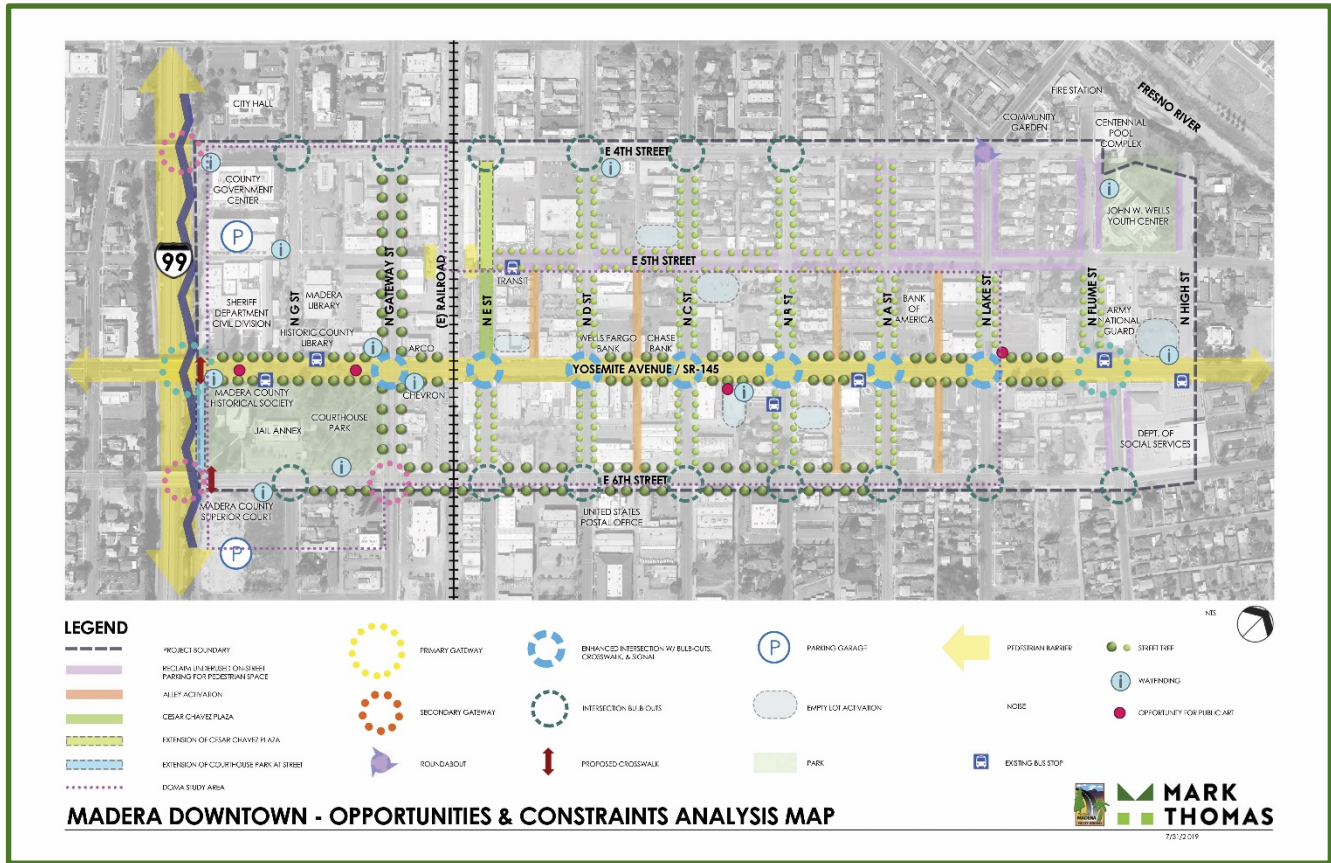
AGENCY	KEY CONCERNS
MCTC	Designing and funding improvements to serve the community.
City of Madera	Safety for all users and maintenance of improvements.
Caltrans	Safety, circulation and maintenance.
Madera Area Express	Bus transit operations and rider amenities.
Madera County Arts Council	Transforming downtown area into a cultural arts mecca (DOMA).
Madera Chamber of Commerce	Accommodating maximum number of users, security, access and parking.
Local Resident and Groups	Preserving the character of the community, access and parking.

The key concerns of each stakeholder group.

- *Accommodation for Bikes:* The existing built environment put limitations on what can be done on each street; street widths are constrained to their current widths and can't be widened, due to existing building setbacks. That means something has to give; class bike lanes are possible on each street, but class level choices are limited because of the need for adequately sized travel lanes and the importance of retaining and adding parking spaces.
- *Long Pedestrian Crossings:* The corridor, as well as several other downtown core streets are very wide, which creates long crossings for pedestrians. Currently there is no safety refuge areas for pedestrians, once they leave the sidewalk and start crossing the street. Bulb-outs or a road diet would be the only ways to solve this problem.
- *ADA Accessibility:* Many existing sidewalks are in disrepair and are not smooth and safe surfaces to traverse. Select areas of the downtown core are missing sidewalks entirely, and street geometry would need to be changed to

- *Urban Canopy & Greenspace Access:* Street trees have been identified to add to the urban canopy, which will add numerous benefits for the community and downtown core users. There's current lack of space for trees in some areas; building awnings into the right of way, along Yosemite Avenue, creates constraints. The need for hardscape removal or planters in order to plant trees will require coordination between the city and business owners. The downtown core, especially along Yosemite Avenue, lacks watering infrastructure that trees will require. Also, some streets have overhead utility lines that will limit tree species selection and canopy size. Parklets are a good way to expand green space throughout parts of the downtown core, but some restraints involve potential loss of parking spaces along the street, and the need to remove hardscape and adjust roadway geometry. Add to that the lack of watering infrastructure.

4.4 Opportunities & Constraints



Map showing opportunities & constraints analysis.

The downtown core is ripe for improvements that will have a lasting impact on the community and how they interact within Downtown Madera. The project team looked at the project area to consider limitations and places for improvement. Some of the opportunities and constraints the project team analyzed and mapped included:

- Reclaiming underused on-street parking for pedestrian space that will help support activities in the downtown core.
- Activating alleys for additional off-hours use and as an easier means of travel through the downtown core for pedestrians and cyclists.
- Expanding and creating additional plaza spaces that fill the need for community gathering spaces for events and vendors.

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- Yosemite Avenue has a high volume of fast-moving vehicular traffic that acts as a barrier for pedestrian and bicycle travel across Downtown Madera.
- Utilizing high vehicular traffic streets, that lead into Downtown Madera, and establishing 'gateway' entries through branding, wayfinding, and signage into the downtown core that benefits both vehicular travelers, as well as pedestrians and bicyclists; establishes a sense of place and arrival.



Alleys can be activated in many ways. This example shows an alley with art on the wall surfaces, decorative paving, and café seating to help support Downtown Madera as a destination for visitors that encourages them to stay.

- Creating more green space and a safer intersection for vehicles, pedestrians, and bicyclists by reconfiguration and establishing signalization at Lake & 4th Streets.



This example of a gateway shows monument signage with art incorporated into it. Gateways like this would help establish a sense of place and identity for Downtown Madera.

- Overhauling signalized intersections by adding bulb-outs to protect pedestrians, create shorter crossing distances, and establish better sightlines for both pedestrians and vehicular travelers along the corridor.

- Adding signalization and other protective measures for pedestrians and bicyclists at the most dangerous intersections to increase safety.

- Adding crosswalks at select locations for ease of accessibility for pedestrians.

- Activating vacant and infrequently used lots for added public gathering spaces and green spaces throughout Downtown Madera to make the area a more attractive place to visit and spend time in.



This example shows a pedestrian crosswalk with decorative paving, to help differentiate it from the road, as well as a planted median that acts as a pedestrian refuge to shorten crossing distances.

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- Adding better connectivity to existing parks and greenspace to help visitors and residents have easier access to them.
- Adding more amenities and site furniture at bus stops to help support Downtown Madera as a destination and encourage public transportation use to help reduce traffic and greenhouse gases along the corridor.



Siting pieces of sculptural art around the downtown core, like this example, can help reinforce a sense of place.



This example shows a bulb-out with landscape planting and a crosswalk; bulb-outs help slow down traffic and create shorter pedestrian crossing distances.

- Looking beyond the project limits of 'DOMA' and realizing a fully master planned Downtown Madera that better connects and serves residents, business owners, visitors alike.
- Locating potential new street tree locations to enhance and add to the urban canopy
- Proposed wayfinding opportunities and locations.
- Work with the local arts council to identify key locations for art in public places, around the downtown core, to help support the area as a destination and add aesthetic value; pride in art created by and for the community.

See the Opportunities & Constraints Analysis Map in the Appendix.

4.5 Goals & Objectives

In addition to the opportunities & constraints, the team identified 'big picture' goals and objectives for the entirety of the master plan. The design team collaborated with project proponents and the steering committee to refine these goals and objectives and devise initial design alternatives. These strategies are outlined below:



This example shows decorative paving that provides a visual connection across a road and can act as plaza space in the civic district with

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Traffic Calming: One of the key goals in any safety project is to discourage excessive vehicle speeds. Here are some strategies that were explored during the project along the downtown streets including SR 145:

- Road Diet – A road diet would have multiple benefits. Reducing the number of travel lanes from four to two would have a dramatic effect on vehicular speeds. Caltrans has expressed operational concerns with a road diet in the past. If a road diet moves forward a more focused study could show that a road diet is viable for a portion of the corridor.
- Bulb-outs & Wider Sidewalks – Narrow the roadway to slow down motorists as they enter areas with higher levels of pedestrian activity.
- Roundabout Intersections – The intersection geometry associated with a roundabout forces motorists to reduce speed. Strategically placed roundabouts along the Fourth, Fifth, and Sixth Street corridors could have a large impact.
- Enhanced Streetscape & Landscape Features – Creating a more attractive corridor filled with trees and enhanced paving encourages motorists to slow down and observe their surroundings.
- Placing a Higher Priority on Transit Facilities – Interaction with bus transit along the corridor



Articular paving, street trees, and various other landscape design elements help to enhanced streetscape.

results in more people at the stops and more buses along the route. While buses do pose a minor operational hindrance, the reduction in vehicular speed along the corridor provides an excellent safety benefit.

Improve Pedestrian Safety: Collision data gathered from TIMS and SWITRS shows a high density of pedestrian incidents along SR 145 (Yosemite Avenue). However, pedestrian safety throughout the corridor could be enhanced with the following improvements:

- Enhanced Street Lighting – Make the entire downtown core feel safer at night, and to provide enhanced safety at pedestrian crossings and throughout the corridor.
- High Visibility Crosswalks with Enhanced Controls – High visibility pavement markings for added visibility to motorists, and enhanced paving textures to add aesthetic value. Enhanced

safety controls at crosswalks, such as a “HAWK” signal (high-intensity activated crosswalk beacon) and/or “RRFB” (rectangular rapid flashing beacons).

- Improved Intersections – Improved pedestrian signal hardware, including countdown signals, and auditory/vibratory push buttons.
- Curb Bulb-outs – Bringing the pedestrian closer to the travel way prior to crossing will make the motorists more aware of the roadside environment and cause speeds to reduce.
- An increase in the amount of downtown wayfinding signage, especially to downtown attractions and parking, will improve pedestrian circulation downtown and provide an opportunity to reinforce theming and aesthetic continuity.



A protected crosswalk with a “RRFB” (Rectangular Rapid Flashing Beacon)

Incorporate Bicycle Facilities: Currently, Yosemite Avenue and most of the downtown core streets are absent of any bicycle facilities, with the exception of class II bike lanes on 6th Street. However, if a road diet were implemented along Yosemite Avenue, it would create space for bike lanes. As an alternative, and as planned within the Madera ATP, the feasibility of implementing a Class IV, Separated Bikeway, was considered. Class II and III bicycle facilities along other corridors in the project were analyzed. Additionally, provisions for bicycle infrastructure such as bike parking and racks were considered as part of the streetscape improvements to avoid potential pedestrian/bicycle conflicts and encourage use of alternate modes of transportation.

Activation of Public Spaces: Many times, a successful complete street requires an approach that looks beyond the obvious confines of the project, whether they be physical and/or programmatic, to not just look at what is “good enough” but what would “make it better”. Along the Yosemite Avenue corridor, the design team discussed opportunities to create new spaces to encourage people to get out and walk by



This ‘parklet’, with café seating and landscape planting is an example of enhanced streetscape with landscape.

fostering a sense of pride and ownership and reinforcing comfort and safety. Such spaces can be created with the following improvements:

- **Site Furnishings** – Adding site furnishings will help support visitors to Downtown Madera by providing a welcoming environment for them to spend time and encourage visitation. Some furnishings would include benches/seating, trash receptacles, bicycle racks, and drinking fountains.
- **Urban Parklets** – Unused spaces in parking lots and at intersection corners can be activated as park space to add additional public space, added aesthetics, and transform the corner into a gateway opportunity. These small parklets also can become memorial plazas, restaurant or café seating, spaces for bicycle parking, etc.
- **Alley & Empty Lot Activation** – Empty alley-ways and abandoned parcels and parking area can be enhanced with the use of special concrete treatments, ornamental iron work, materials to match the architecture of the corridor, and the application of plenty of lighting that is both functional and creative.
- **Public Art** – Local artwork, such as murals and sculptures can be placed in newly activated alleys, urban parklets, and along other areas of the streetscape throughout the downtown core to not only add aesthetic value and create a sense of place, but to also highlight the what is great about the local community.
- **Wayfinding** – Adding signage and other features to help motorists, bicyclists, and pedestrians navigate the downtown core to create a place that is a joy to visit.
- **Central Music Amplification** – This system can help create a background noise themed for the district to further enhance activation along the streetscape areas of the district.

Placemaking & Identity Branding: Celebrating and recognizing the community's personality was a primary aesthetic goal for the design team. They explored solutions grounded in the built environment, neighborhood context, history, and community input. It all began with centering around the community's identity.



Placemaking features, such as this mural, are pulled from the history of the community, such as the early 20th century founding of the city and the history of Downtown Madera.

Madera has a deep history of hard-working people, drawn in by local industry and demand, who rolled up their sleeves to build themselves a vibrant community; from Madera's humble beginnings as a lumber town, to the growth of its farm and agricultural identity and into the present. Local industry drew in workers from many parts of the county, as well as from different parts of the world over the past century; over that time immigrants have become an important part of the fabric of

Madera. Madera's past, present and future has supported the American Dream of opportunity, not only in industry, but also in the affordability of living in Madera, even as the state of California has seen a spike in living costs over the past decades. This is made clear by Madera's growing population, that continues to grow year after year, into the foreseeable future.

When the project team walked the streets of Downtown Madera, the history could be seen in the character of the buildings, the longtime and new businesses present throughout the downtown core, the civic and cultural amenities present, and the deep-rooted connection to the city that many of the steering committee members share; long-time and multi-generational Madera residents.

5. PUBLIC OUTREACH SUMMARY

The Public Participation and Outreach Plan (PPOP) utilized an established public participation process model, with the goal of open information and flow of ideas between the public and the project design team. The goal was the connect with the community at large and key stakeholders, including but not limited to pedestrians, bicyclists, businesses and residents particularly in the vicinity Downtown Madera. Objectives included the following:

- Identifying opportunities for increasing awareness and educating the public about the proposed "State Route 145 (Yosemite Avenue) as Downtown Main Street Plan".
- Organizing/attending public and community events to stimulate dialogue about proposed project.
- Building a rapport with businesses and property owners in targeting project areas.

- Developing and maintaining a communications stream to facilitate the exchange of information.

A full PPOP can be found in the Appendix.

5.1 Meetings

- *Kick-off Meeting (4/11/19)*
 - 19 in attendance – Steering Committee, Caltrans, City of Madera, Mark Thomas, and Rios.
 - Purpose of the meeting was to introduce the Project team to the Steering Committee and discuss the focus of the project to insight the Steering Committee to provide feedback on their goals of the project. By receiving constructive goals from the Steering Committee, the project team could better construct their plan to meet the community's needs.
 - Outcomes were Steering Committee provided feedback on types of improvements they would like to see and emphasized the use of the DOMA study to guide project improvements.
- *Walking Tour (6/18/19)*
 - 16 in attendance – Steering Committee, Caltrans, City of Madera, Mark Thomas, and Rios.
 - Purpose of the meeting was to introduce the typical project sites to the steering committee to insight feedback on possible improvements.
 - Outcomes were steering committee provided feedback on types of improvements and additional information that was site specific.
- *City Council Presentation (10/2/19)*
 - Number unknown – Madera City Council, Meeting attendees, City of Madera, Mark Thomas, and Rios.
 - Purpose of the meeting was to present progress of the project in respects to public outreach to the City Council and inform them of upcoming events.
 - Outcomes were informed City Council, received feedback from the mayor, improved connection of the City Council to the project outreach efforts.
- *Public Meeting #1 (11/13/19)*

- 12 members of Project team including: City of Madera, Mark Thomas, and Rios plus 81 Public Attendees.
 - Purpose of the meeting was to present a draft plan of the project area to the Public and open these improvements for comments from the public.
 - Outcomes were an informed public, positive feedback on the direction of the project, and constructive feedback on improvement types.
- Public Meeting #2 (1/23/20)
 - Not yet held.
 - Purpose of the meeting is to present a final plan of the project area to the public for one last round of feedback from the public.
 - Outcomes TBD.

Meeting minutes and report summaries that include more detail on what was discussed, and participant feedback can be found in the Appendix.

6. CONCEPTUAL STREET DESIGNS

With a full grasp of the challenges, as well as input from the project proponents and the steering committee, the design team was able to create conceptual street designs that worked towards solving problems, addressing constraints, capitalizing on opportunities, and closing gaps found throughout Downtown Madera in order to help create a more vibrant downtown core. A primary objective was that all components, combined, would result in Yosemite Avenue and the entire downtown core coming together to serve as a well-planned multi-modal complete street concept. Behind that was an overall design intent actively considering how each element contributed to a revitalized downtown atmosphere that would beckon visitation by the community and would support the making of Downtown Madera as a destination for the community and the region. The recommendations for the conceptual master plan included the following:

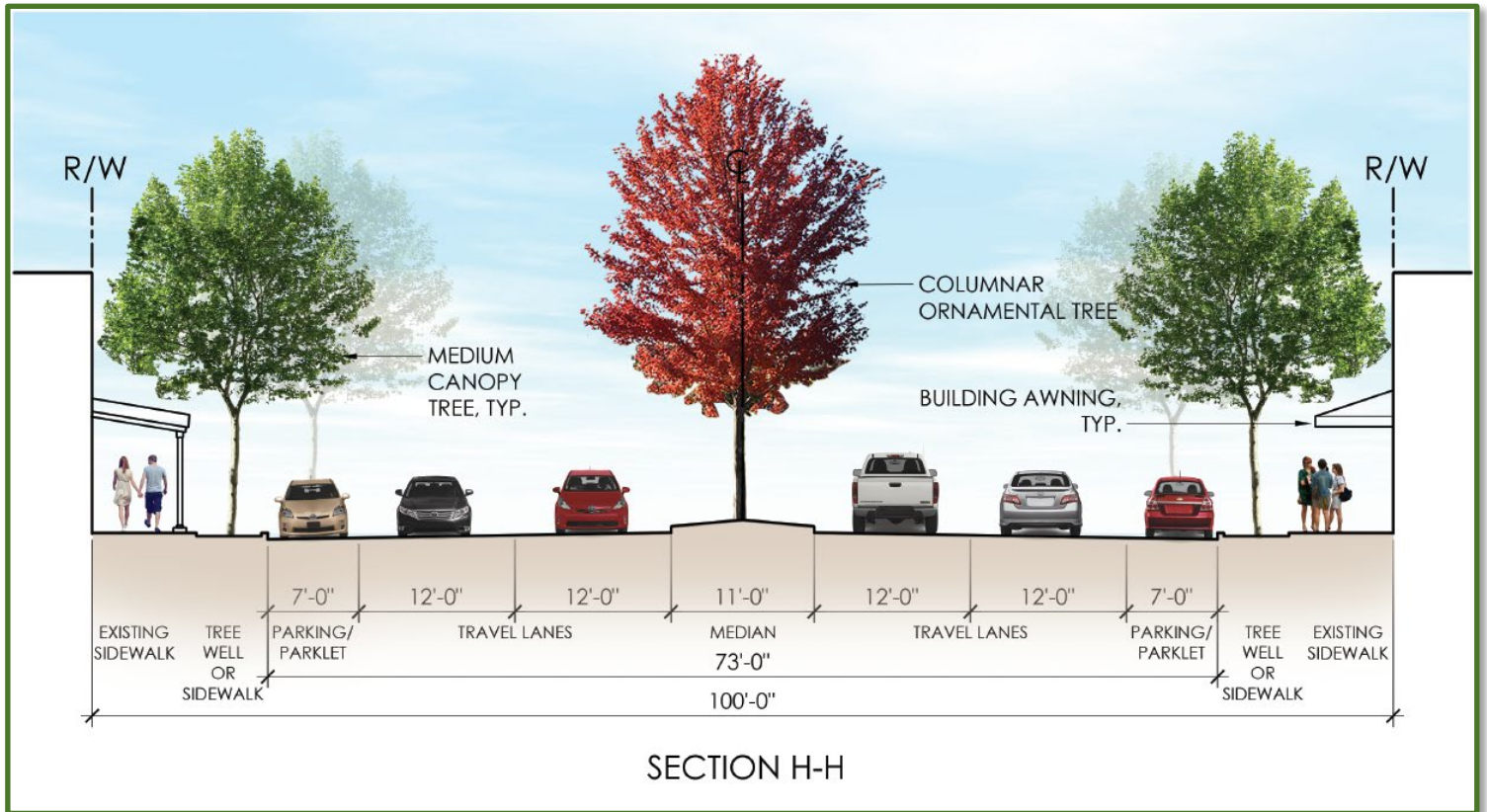
- Two design options for Yosemite Avenue. The first option has a four-lane configuration with on-street parking and a shared lane for bicyclists and vehicular travel. The second option is a ‘road-diet’ option with a two-lane configuration, on-street parking, and a class IV bike lane.
- A proposal for additional bicycle lanes (class II & III) throughout the remaining downtown streets; with exception of 6th Street, which already has class II bike lanes, to encourage and create safer options for multimodal transportation.

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- Recommendations for additional and modified traffic signals, bulb outs, refuge islands and crosswalks along Yosemite Avenue, 6th Street, and 4th street for improved pedestrian safety at the most dangerous intersections and crossings.
- Locations showing pedestrian-scale street lighting along Yosemite Avenue, and improved street lighting throughout the downtown core, especially in areas currently lacking street lighting.
- Locating areas of “Green street” concepts, such as storm water biofiltration planters at street corner bulb outs and shading trees along all the downtown streets to provide refuge, comfort, and aesthetic value.
- Locations of site furnishings and other design features throughout the downtown streetscape, especially at alley-ways and bulb-outs in and around Yosemite Avenue to create and support gathering spaces to help support Downtown Madera as a destination.
- Creation of additional accessible parking by either diagonal parking, additional opportunities for public parking or clearly marked parking spots, especially on C, D, & E Streets.
- Locations mapped for necessary maintenance of sidewalks, curbs and streets, including re-surfacing as needed to address both physical deterioration and ADA deficiencies such as gaps.
- Locating traffic calming design concepts such as parklets along sidewalks, bulb-outs, and medians in locations identified as the most hazardous for pedestrian safety

6.1 Design Intent by Area/Street



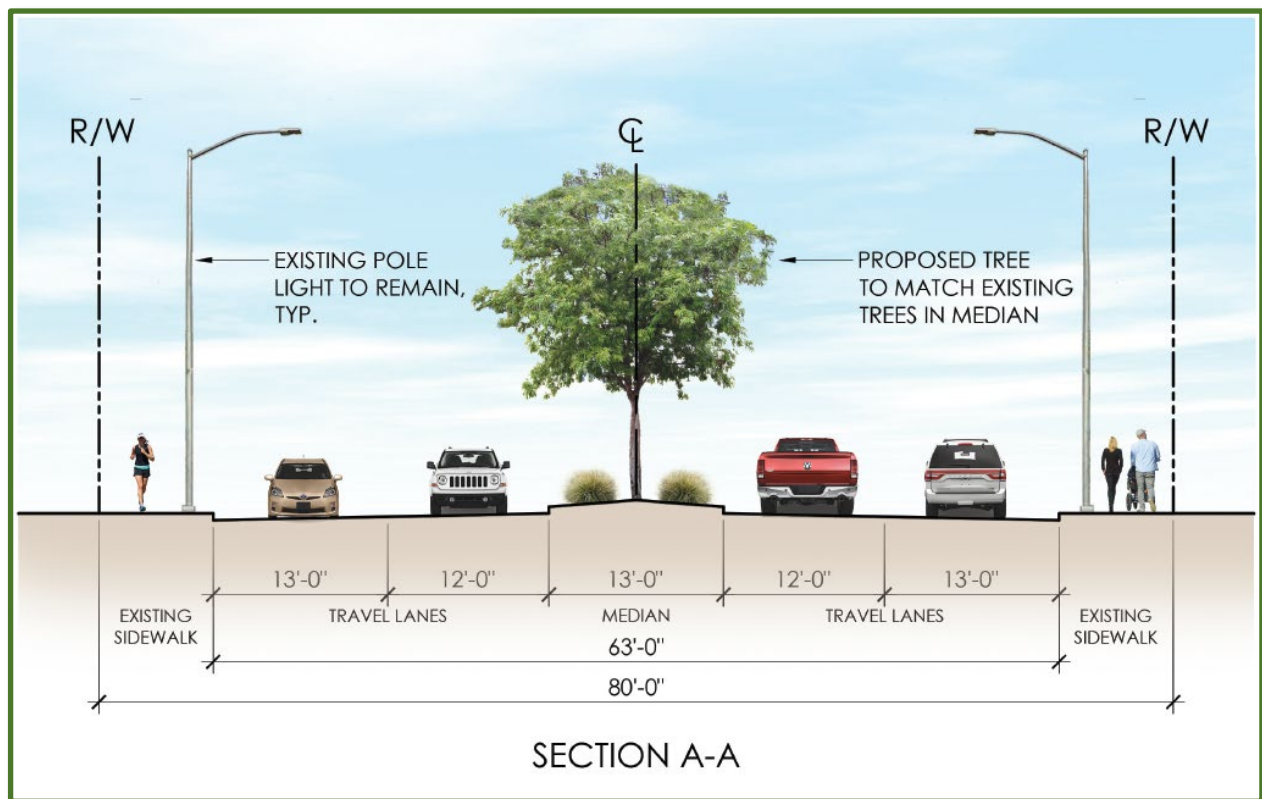
Yosemite Avenue between H Street & High Street (see section H-H, above): As the main arterial street in the center of the downtown core, Yosemite Avenue has the opportunity to set the tone and create a first impression as the gateway into Downtown Madera. This historic corridor has the widest right of way in the project area, which adds more opportunity for placemaking. There are several opportunities to enhance this roadway:

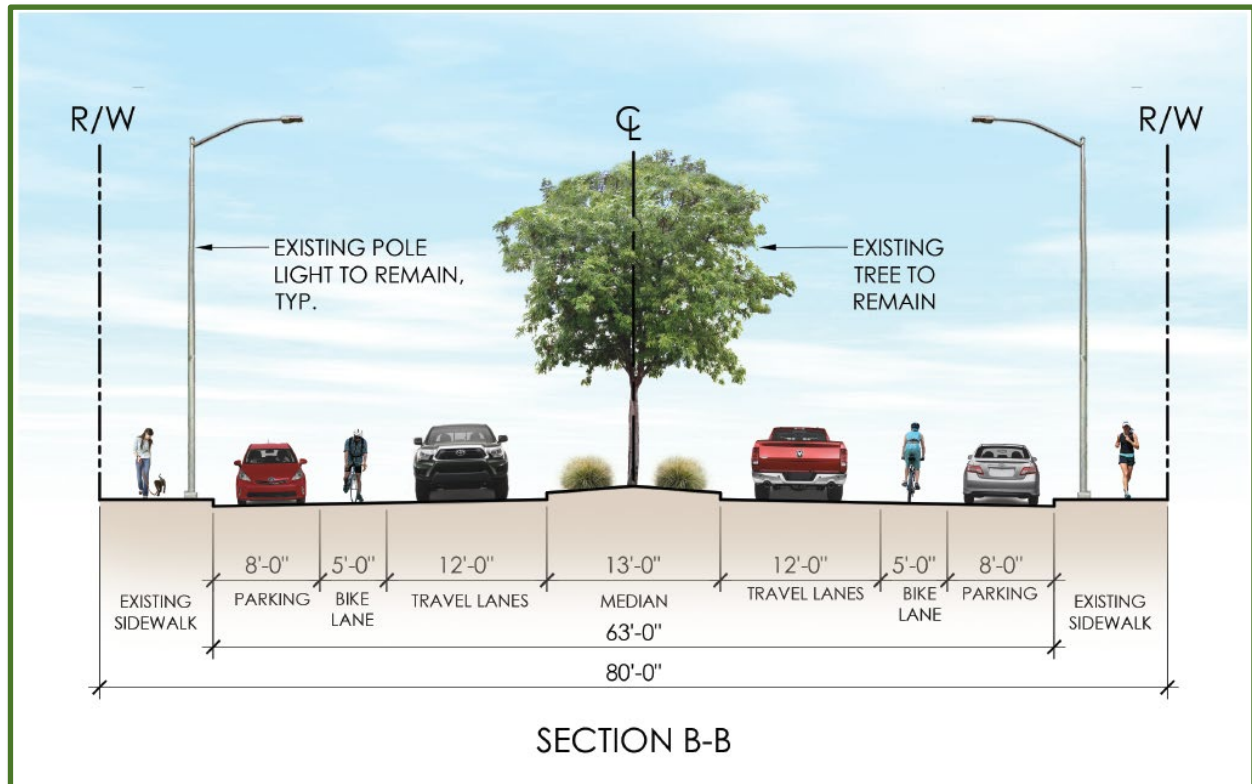
- Enhanced landscape architectural features:
 - Adding a planted median with ornamental tree, shrub, and groundcover plantings which acts as a pedestrian safe refuge at crosswalks, between C Street & Lake Street.
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Improved pedestrian experience through additional planting to add a buffer between pedestrians and the roadway at street corners, and the addition of street trees to

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- provide shade and added enclosure along the entire corridor between the sidewalk and the roadway
- Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera in all areas currently without street lighting.
- Upgraded roadway facilities:
 - Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
 - HAWK protected crosswalk at Yosemite Ave. and G St.
 - RRFB protected crosswalk at G St., B St. and A St. crossings along Yosemite Ave.
 - Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
- Space Activation:
 - Activating alleys, between E St. and Lake St., to add public spaces and provide more pedestrian connections to surrounding streets.





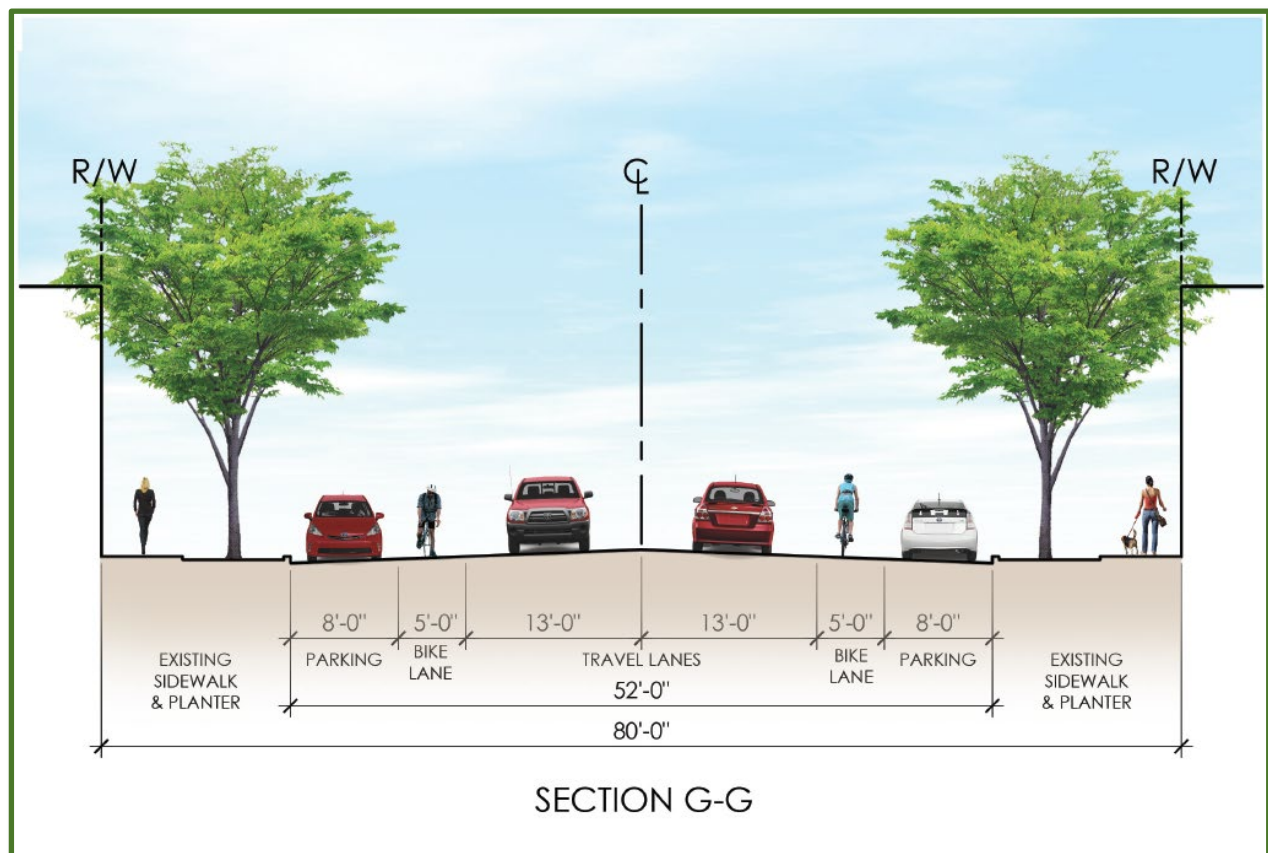
4TH Street between H Street & Flume Street (see sections A-A & B-B, above): As another arterial street, along the North project boundary, this street primarily serves the residential district and business and civic engagement near SR 99. Some recent improvements have already been made to this street, such as upgraded street lighting, new sidewalks, and median space for landscape planting. In addition, our design intent looks to build upon the improvements already made:

- Enhanced landscape architectural features:
 - Adding Downtown Madera themed planting to medians, along the entire corridor, to match other downtown streets with the goal of creating continuity within the downtown core.
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Closing off 4th St., east of Lake St., to provide community green space and enhanced neighborhood aesthetics.
- Upgraded roadway facilities:

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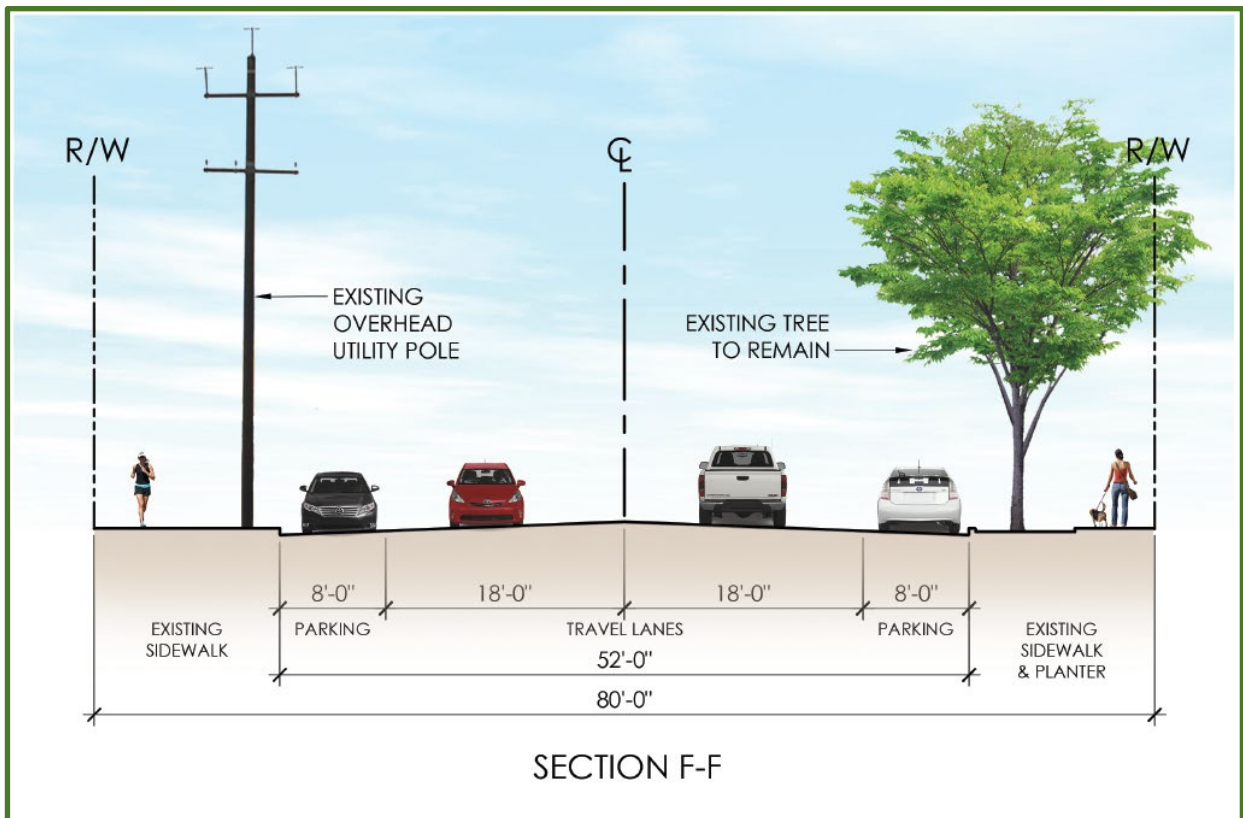
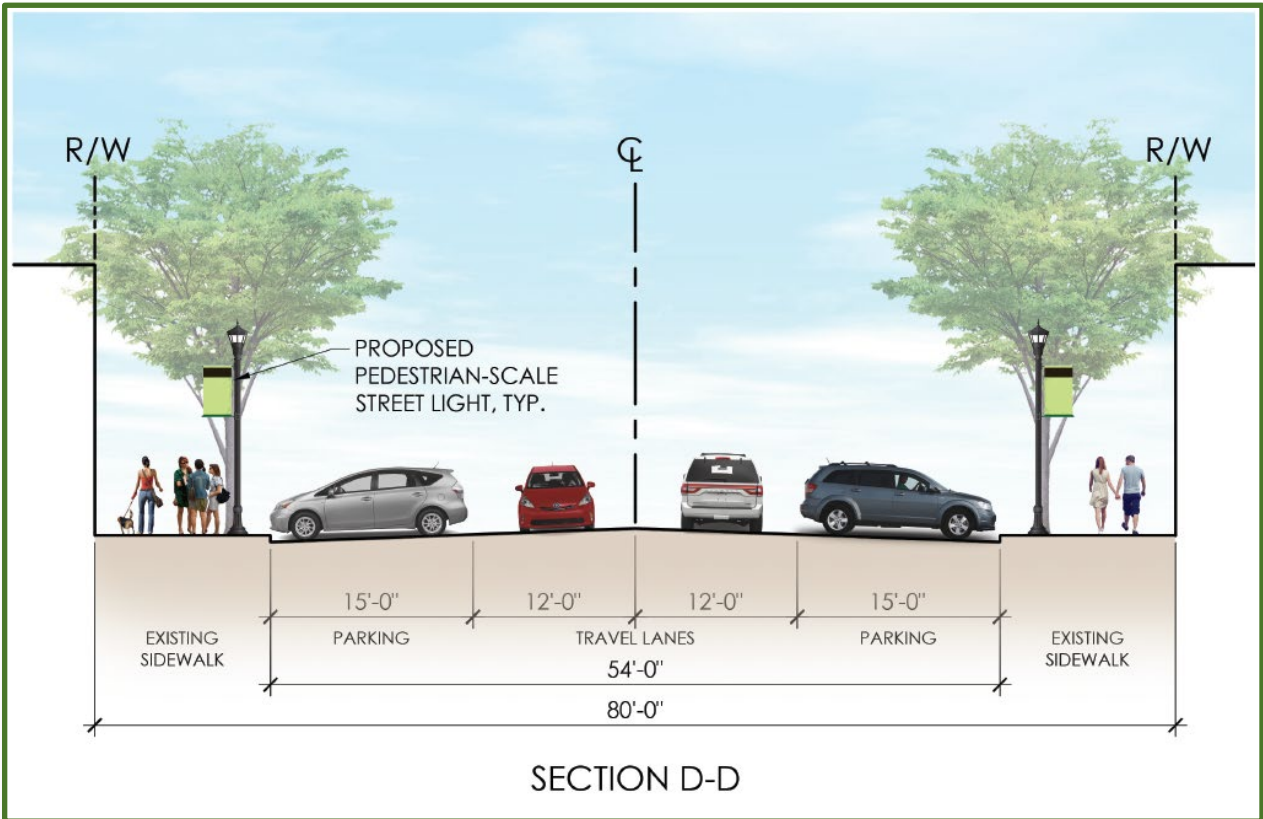
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- Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
- Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
- Signalizing and reconfiguring the 4th St. and Lake St. intersection to enhance pedestrian and vehicular safety.
- Providing class II bicycle facilities along the entire corridor.
- RRFB protected crosswalks at E St. along 4th St.



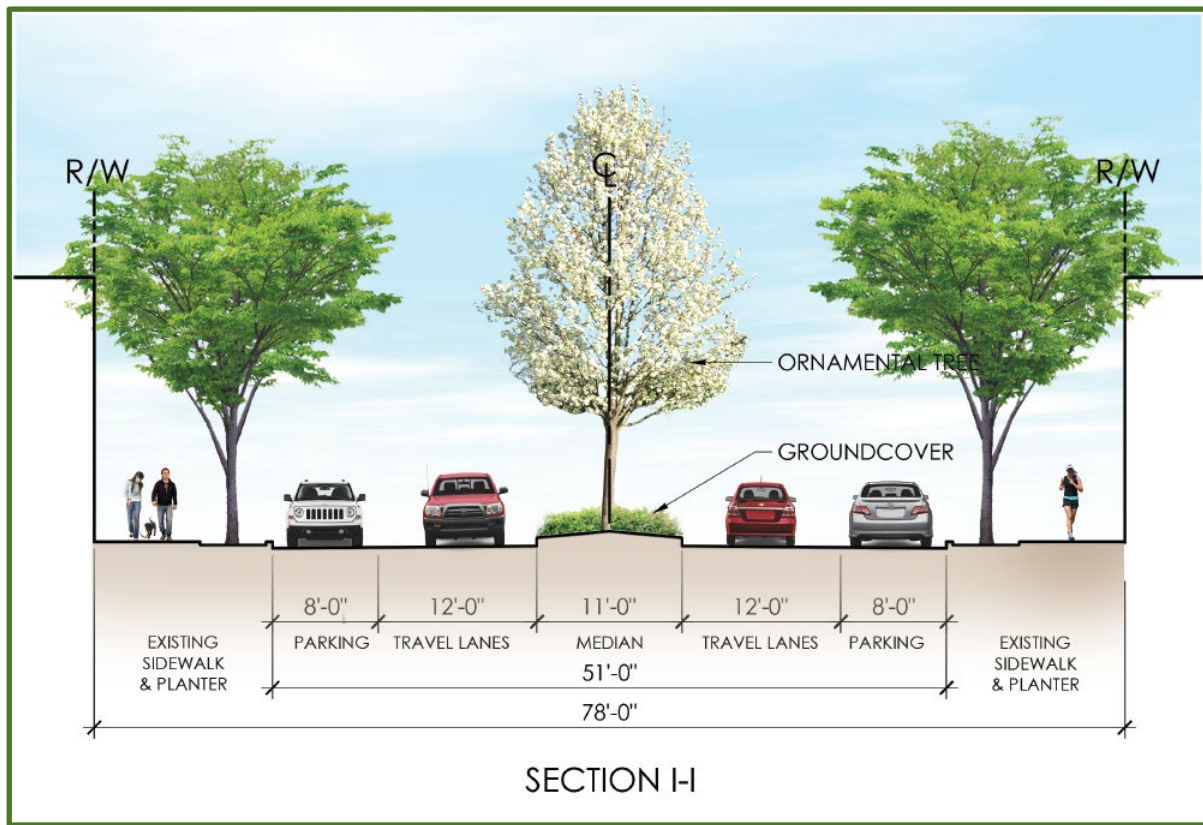
6th Street between H Street and High Street (see section G-G, above): Along the South project boundary, 6th Street separates much of the commercial district from the residential district to the south. Compared with Yosemite Avenue, just to the north, 6th Street sees lower volumes of traffic and slower moving traffic. This street is vital in providing connections to Downtown Madera from the residential district to the South:

- Enhanced landscape architectural features:
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Improved pedestrian experience through additional planting to add a buffer between pedestrians and the roadway at street corners, and the addition of street trees to provide shade and added enclosure along the entire corridor between the sidewalk and the roadway
 - Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera in all areas currently without street lighting.
- Upgraded roadway facilities:
 - Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
 - Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
 - RRFB protected crosswalks at G St., E St. and A St. crossings along 6th St.



5th Street between SR 99 & High Street (see sections D-D & F-F, above): This street currently separates much of the North residential district with the business district. This street and the properties on it are currently underutilized and undervalued as the possibility of being an important connection between the residential and business districts of Downtown Madera. 5th Street provides an opportunity to make a neighborhood impact and better connection:

- Enhanced landscape architectural features:
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera.
- Upgraded roadway facilities:
 - Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
 - RRFB protected crosswalk at 5th St. and D St.
 - Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
- Space Activation:
 - Activating ‘parklets’ at unused space adjacent to diagonal on-street parking between G St. and B St.
 - Utilizing bulb-outs at intersection of 5th St. & C St. for additional public space at intersections.
 - Activating alleys, between E St. and Lake St., to add public spaces and provide more pedestrian connections to surrounding streets



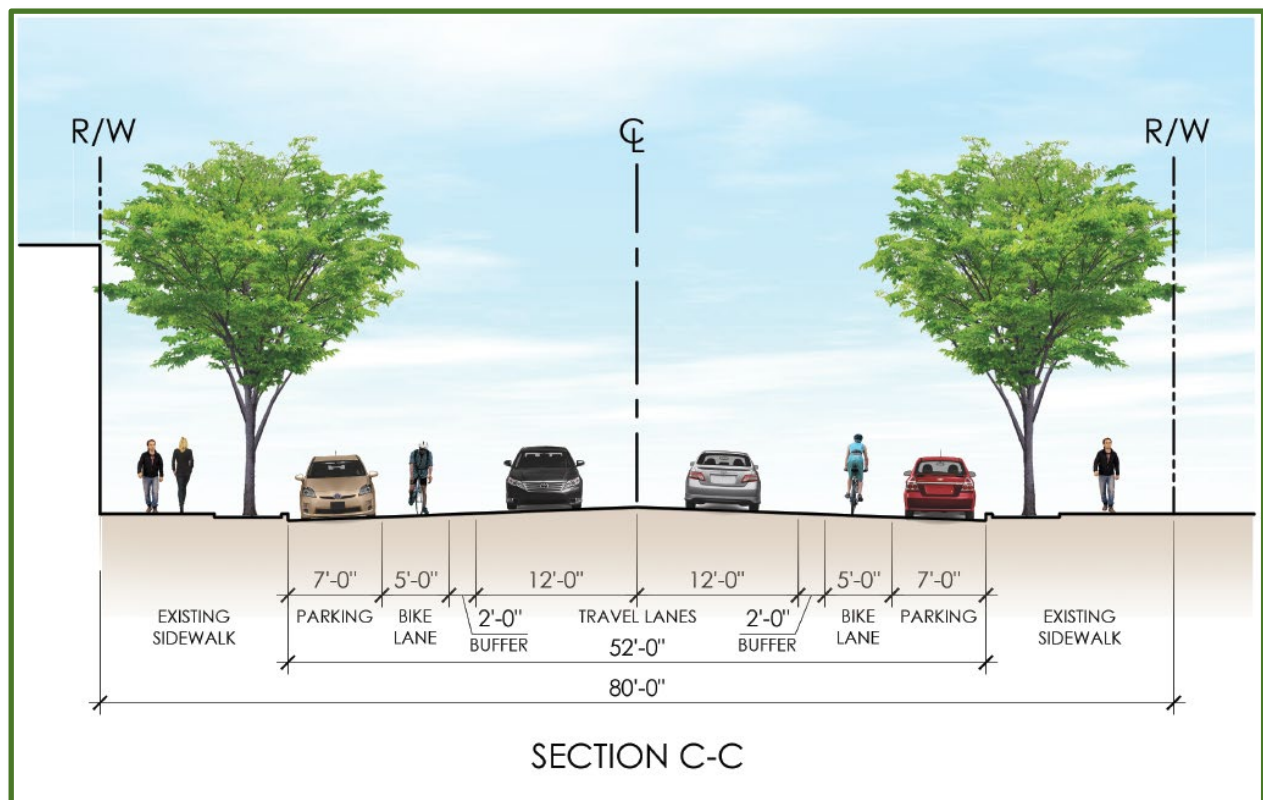
G Street between 4th Street & Yosemite Avenue (see section I-I, above): This street serves as the center of the civic district; city hall, the city library, county government center, and much more are located along this street. G Street also provides an axis opportunity between the civic core and Courthouse Park, right across Yosemite Avenue. G Street is a gateway to civic resources and has the opportunity for a better connection to neighborhood amenities:

- Enhanced landscape architectural features:
 - Adding a planted median with ornamental tree, shrub, and groundcover plantings which acts as a pedestrian safe refuge at crosswalks, between 4th St. & Yosemite Ave.
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera in all areas currently without street lighting.
- Upgraded roadway facilities:

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- Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
- HAWK protected crosswalk at G St. and Yosemite Ave.
- Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
- Creating Connections & Activating Spaces:
 - Activating ‘parklets’ at unused space adjacent to diagonal on-street parking between 4th St. and Yosemite Ave.
 - Utilizing bulb-outs at intersection of G St. & 5th St. for additional public space at intersections.



Gateway Street, between 4th Street & 6th Street (see section C-C, above): Gateway is a true ‘gateway’ to the downtown core, when entering from the North or South parts of Madera, as well as most motorists entering from SR 99. It’s a heavily travelled street, yet narrower road than Yosemite

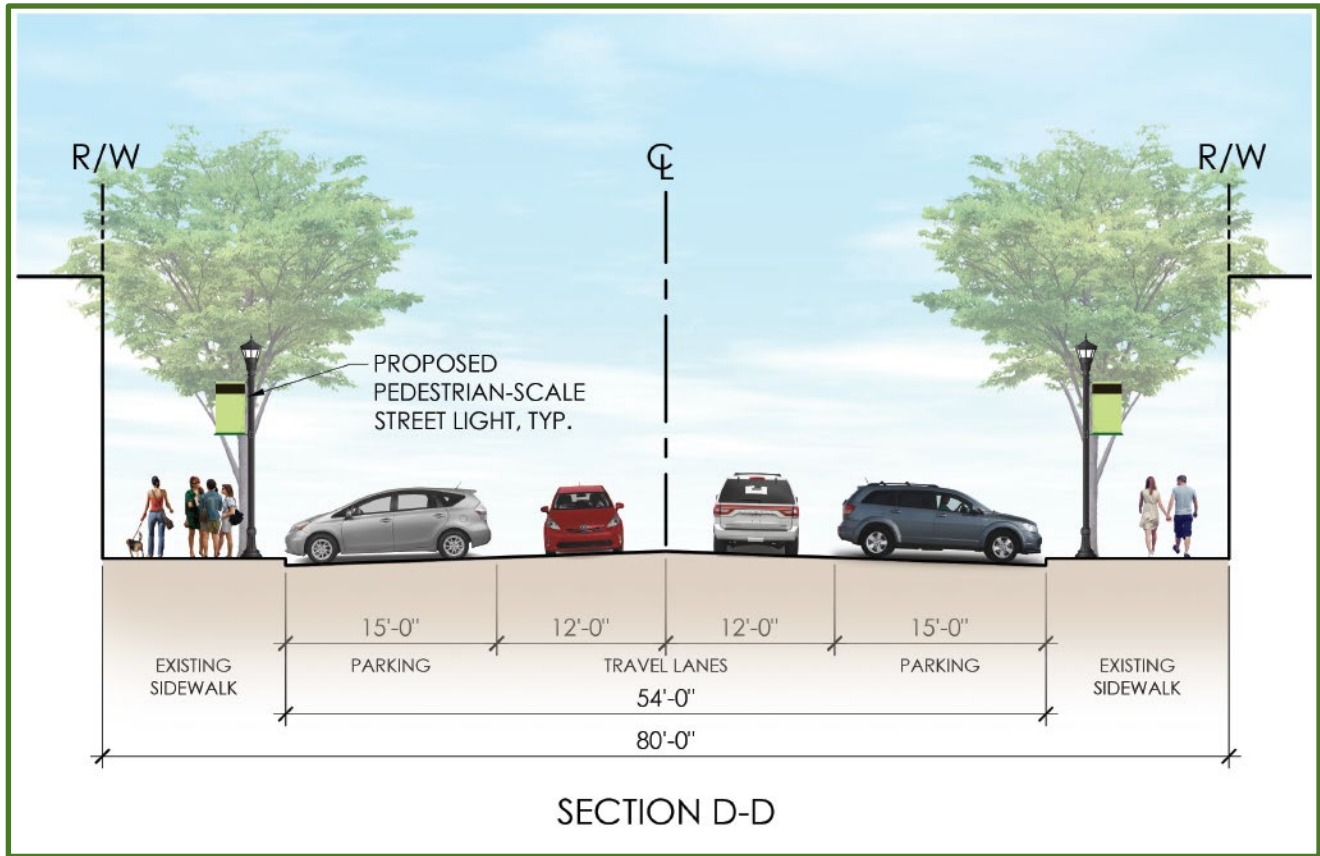
Avenue. Gateway has a prime opportunity for upgraded multimodal transportation options and helps serve as a true ‘gateway’ to the downtown core:

- Enhanced landscape architectural features:
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Improved pedestrian experience through additional planting to add a buffer between pedestrians and the roadway, and the addition of street trees to provide shade and added enclosure.
 - Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera.
- Upgraded roadway facilities:
 - Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
 - Providing class IV bicycle facilities along the entire corridor.

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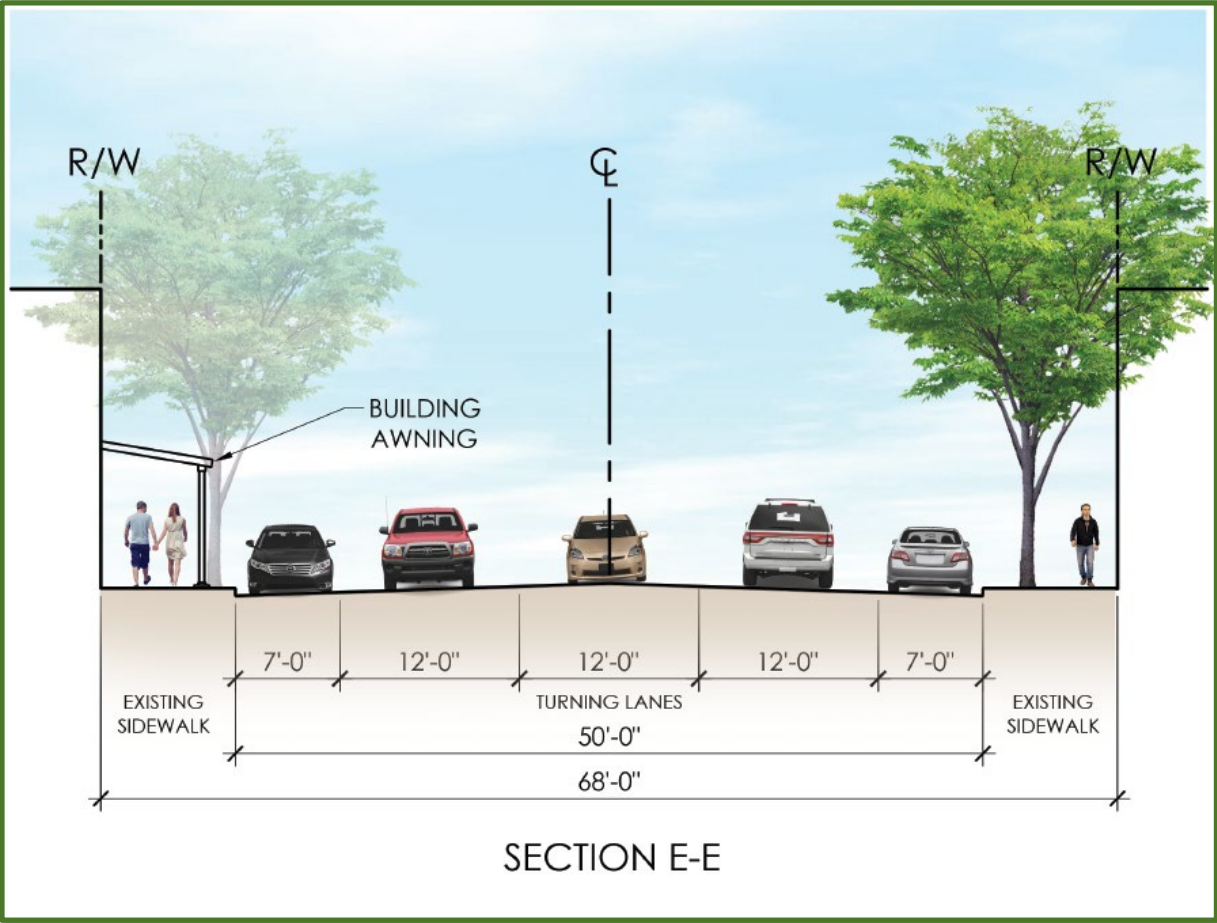
- o Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.

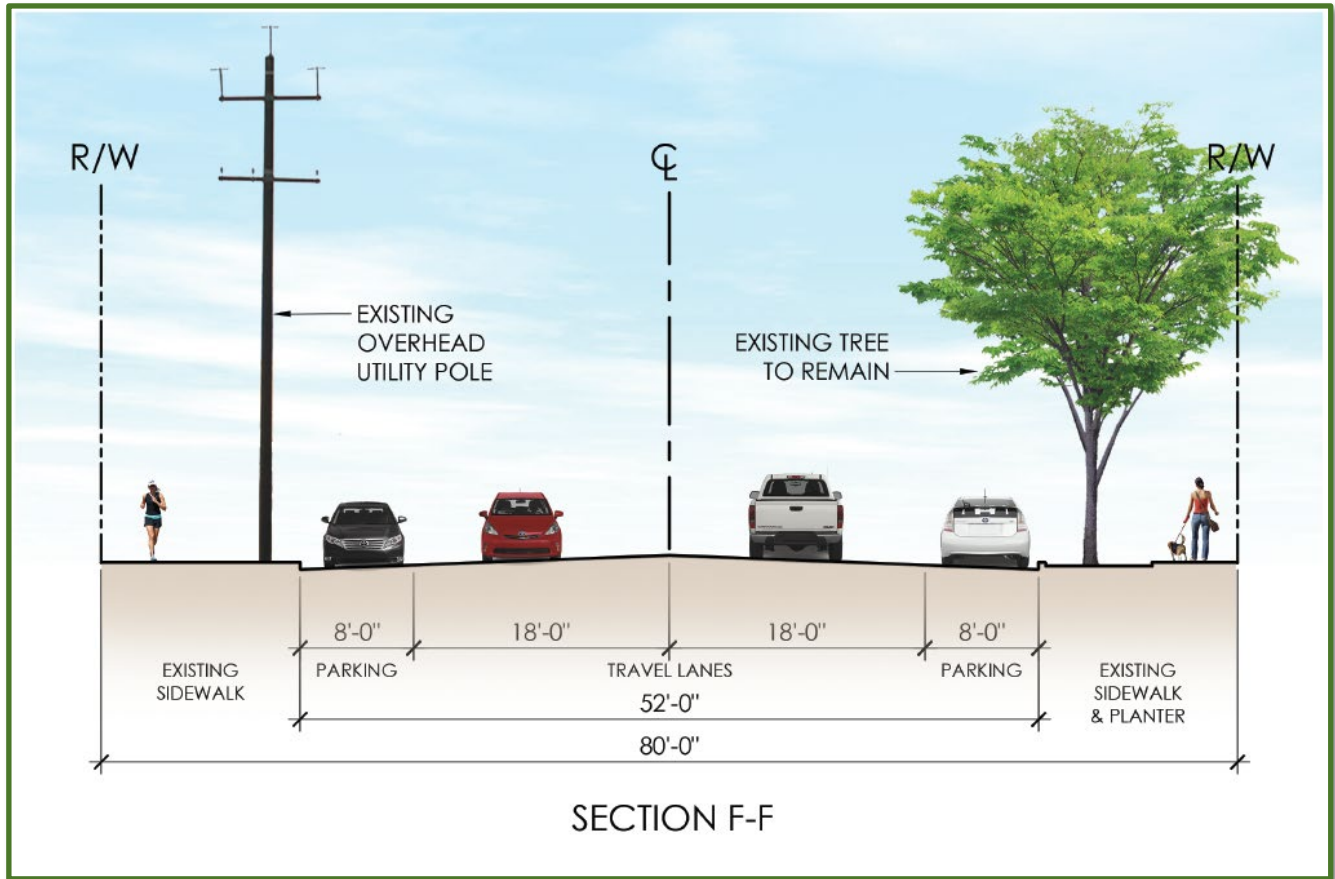


E Street between 4th Street & 6th Street (see section D-D, above): Serving as the home of Cesar Chavez Plaza, E Street is the only existing area with an enhanced plaza gathering space. Existing enhanced paving, vast tree canopy, and a human scale design give the plaza a feeling of comfort and enclosure. Much of this can be enhanced and expanded along E Street to add this valuable space:

- Enhanced landscape architectural features:
 - o Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.

- Improved pedestrian experience through additional planting to add a buffer between pedestrians and the roadway, and the addition of street trees to provide shade and added enclosure.
 - Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera.
- Upgraded roadway facilities:
 - Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
 - RRFB protected crosswalk at E St. and 4th St.
 - Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
- Space Activation:
 - Activating ‘parklets’ at unused space adjacent to diagonal on-street parking between Yosemite Ave. and 6th St.
 - Utilizing bulb-outs at intersection of E St. & 5th St. for additional public space at intersections.
 - Activating alleys, between Yosemite Ave. and 6th St., to add public spaces and provide more pedestrian connections to surrounding streets





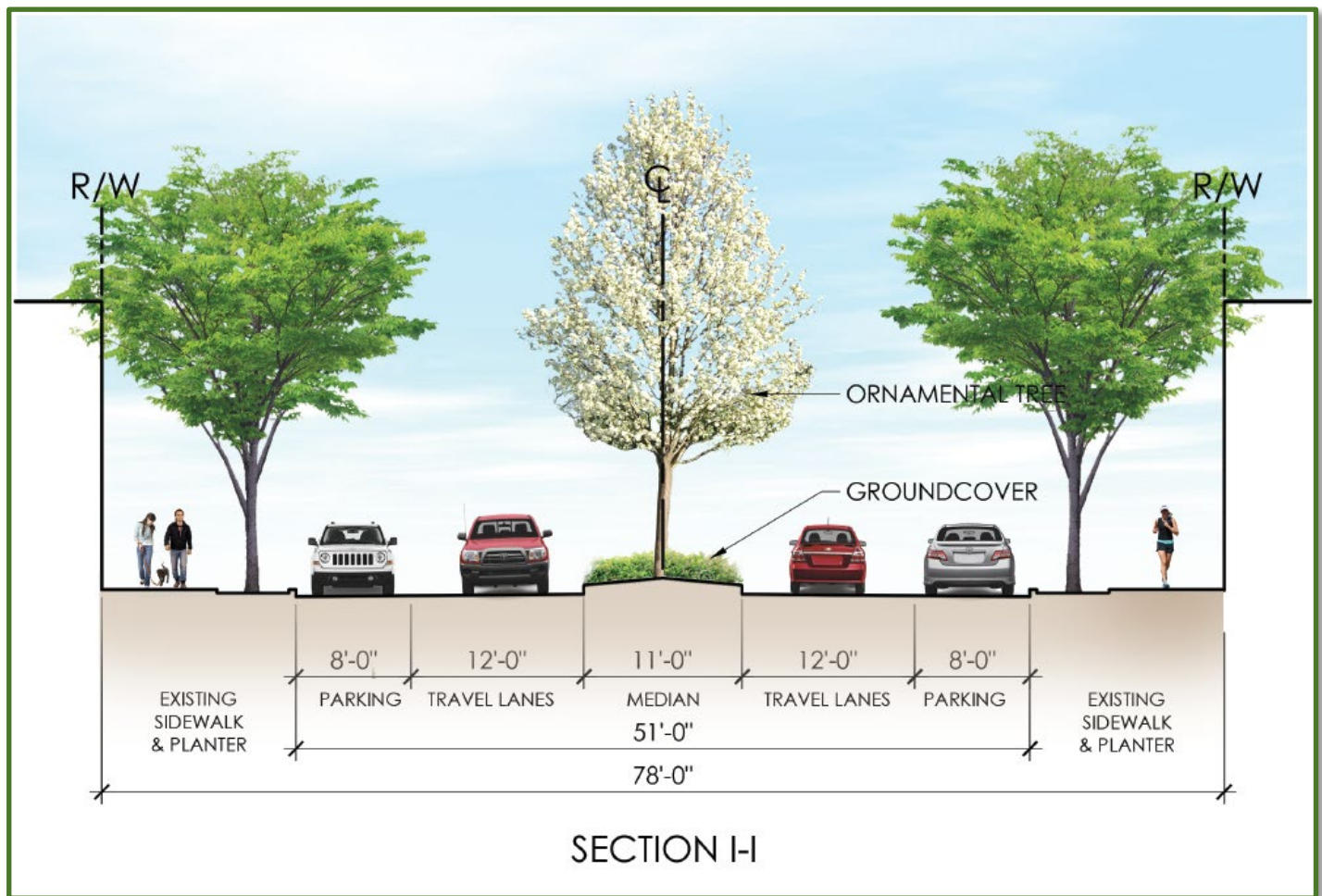
D Street between 4th Street & 6th Street (see sections E-E & F-F, above): D Street runs North to South in the heart of the downtown business district and is the primary feeder off Yosemite Avenue:

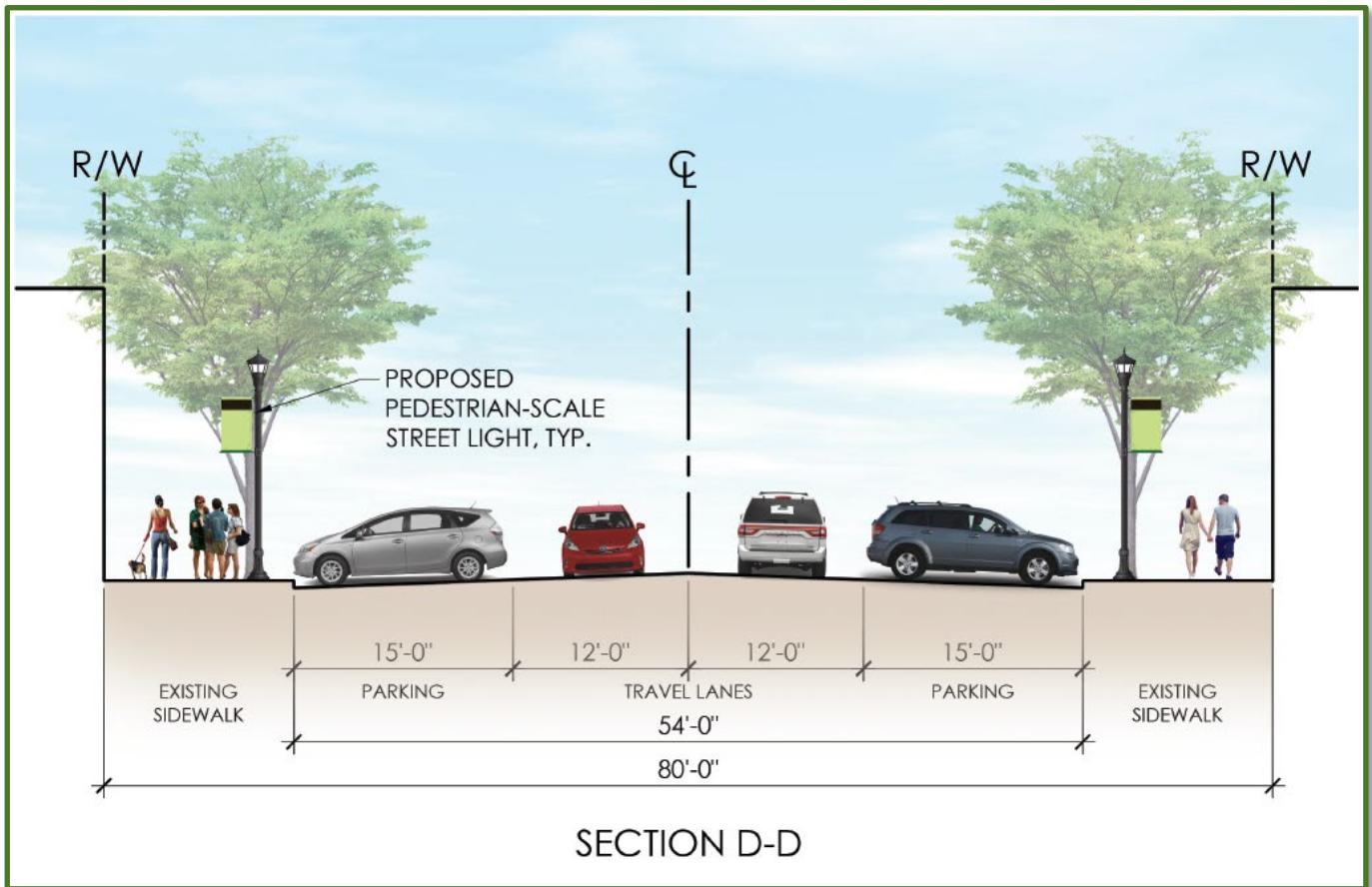
- Enhanced landscape architectural features:
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera.
- Upgraded roadway facilities:
 - Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
 - RRFB protected crosswalk at D St. and 5th St.

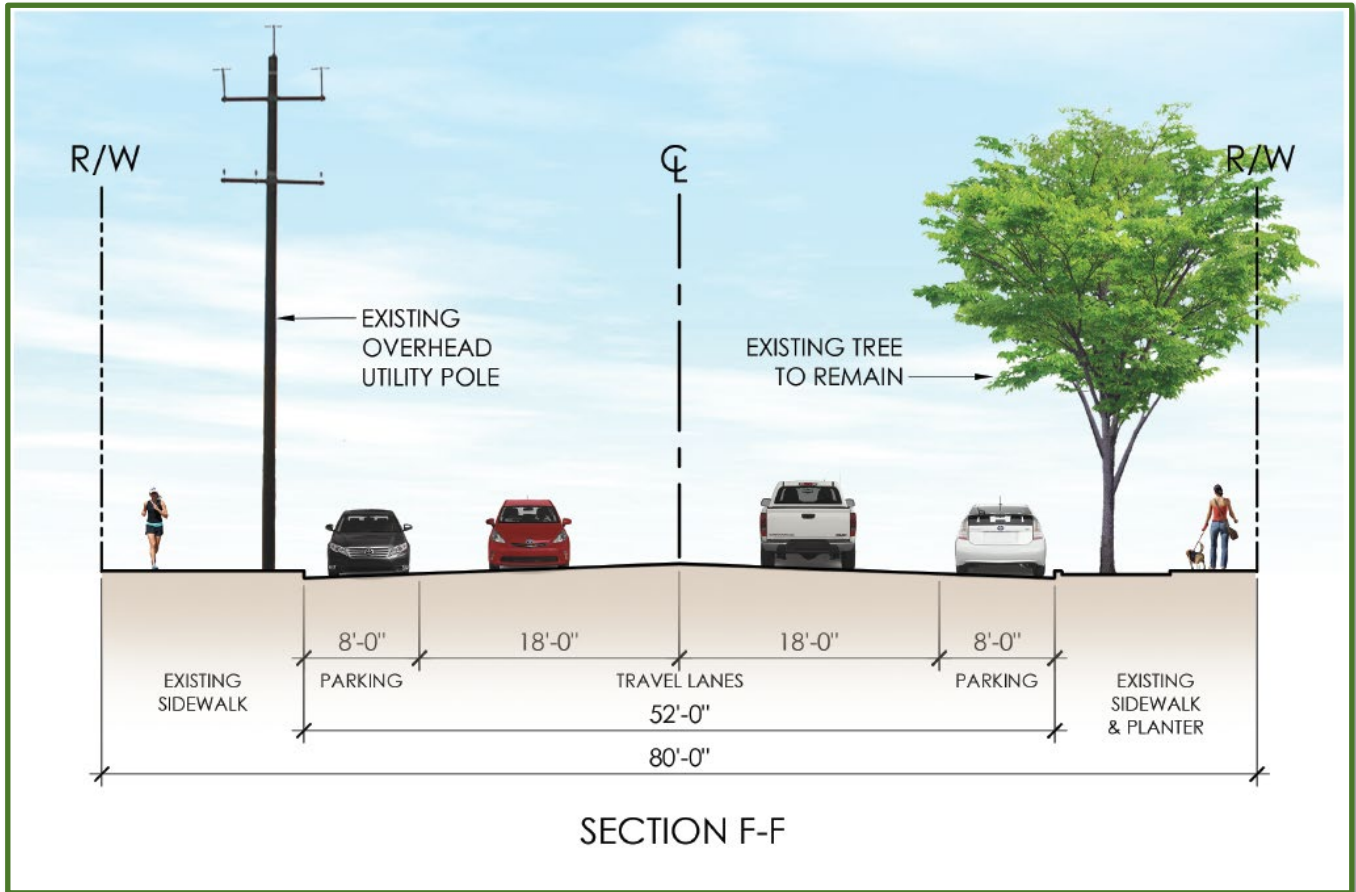
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- Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
- Space Activation:
 - Utilizing bulb-outs at intersection of D St. & 5th St. for additional public space at intersections.
 - Activating 'parklets' at unused space adjacent to diagonal on-street parking between Yosemite Ave & 6th St.







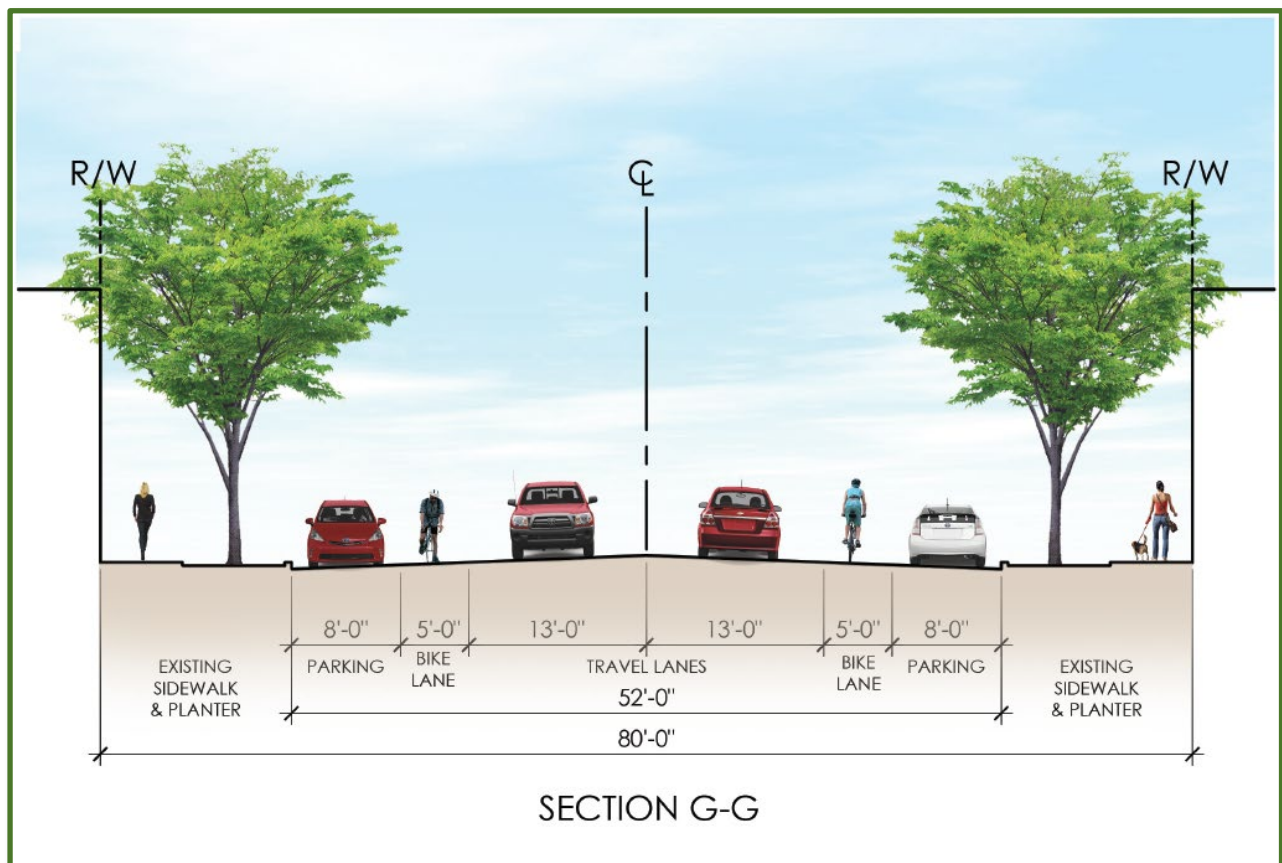
C, B, & A Streets between 4th Street & 6th Street (see sections I-I, D-D, & F-F, above): To the South, these three streets act run through the business district and provide valuable on-street parking. While to the North, these three streets act as wide residential boulevards that have a great opportunity for enhancements to help slow down traffic and add aesthetic character to the neighborhood:

- Enhanced landscape architectural features:
 - Adding a planted median with ornamental tree, shrub, and groundcover plantings which acts as a pedestrian safe refuge at crosswalks, between 4th St. & 5th St.
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera in all areas currently without street lighting.
- Upgraded roadway facilities:

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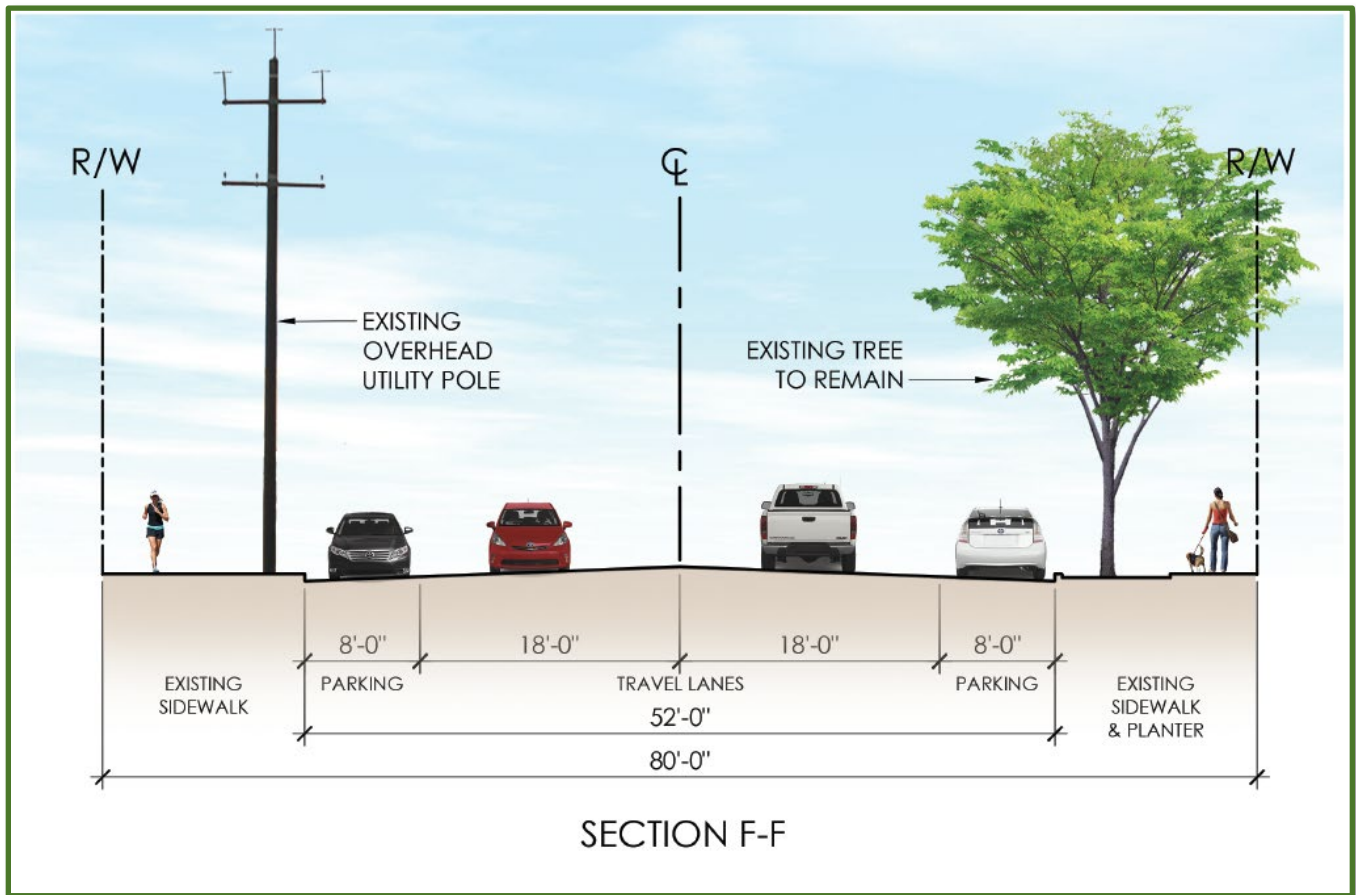
- Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
- RRFB protected crosswalk at B St. & Yosemite Ave, as well as A St. & Yosemite Ave.
- Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
- Space Activation:
 - Utilizing bulb-outs at intersection of C St. & 5th St. for additional public space at intersections.
 - Activating ‘parklets’ along C St. at unused space adjacent to diagonal on-street parking between 5th St. & 6th St.



Lake Street, between 4th Street & 6th Street (see section G-G, above): Lake Street provides important access to Downtown Madera from the residential district to the North. Reconfiguring a five-way intersection into a four-way intersection will help to improve safety for pedestrians, as well as motorists in along this street:

- Enhanced landscape architectural features:
 - Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera in all areas currently without street lighting.
- Upgraded roadway facilities:
 - Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
 - Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.
 - Signalizing and reconfiguring the 4th St. and Lake St. intersection to enhance pedestrian and vehicular safety.

- o Providing class II bicycle facilities along the entire corridor.



Flume & High Streets, between 4th Street & Yosemite Avenue (see section F-F, above): At the East end of the downtown core, Flume & High Streets serve the area around the John W. Wells Youth Center and Park area.

- Enhanced landscape architectural features:
 - o Improved pedestrian experience through opportunities to add enhanced paving, at all street corner sidewalk areas and crosswalks, that compliments existing architectural elements and wide sidewalks.
 - o Pedestrian scale decorative street lighting that further enhances the historic character of Downtown Madera in all areas currently without street lighting.
- Upgraded roadway facilities:

- Bulb-outs at all street corners to create a narrower roadway to calm traffic, enhanced pedestrian safety sightlines, and space for downtown themed landscape planting scheme.
- Enhanced crosswalks with high visibility paving at all intersections to create a safer pedestrian experience.

6.2 Selected Master Plan

After carefully reviewing steering committee and public feedback, we concluded that a ‘road diet’ may be an option in the future, if Caltrans abandons use of Yosemite Avenue as SR 145 and transfers ownership back to the City of Madera, but at this time a road diet was not seen as a good option for Yosemite Avenue as SF 145. Concerns about traffic were high with a road diet, as well as concerns about traffic migrating to other streets in the downtown core, in order to avoid a Yosemite ‘road diet’ entirely.

The selected master plan keeps 4 travel lanes along Yosemite Avenue and adds many improvements that will increase multimodal use, increase pedestrian safety, and add aesthetic enhancements that are desired by the community.

See part of the selected master plan on the next page. The selected master plan can be found in the Appendix.

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7. RECOMMENDED POLICIES

7.1 Alley Activation Policies

Traditional alleys are not maintained by the city. Property owners, surrounding an alley, can band together to request repaving and/or alley improvements by the city. An appropriate place to start would be to work with the local planning departments and economic development agency to create improvement guidelines and/or special area ordinances. Improvements within these special areas, to assist in alley activation, may include:

- Wall Murals – Businesses and the city can work together with the local arts council for art in public places.
- Green Alleys – The creation of vertical gardens or drainage improvements would need to be applied to the city at a case by case basis.
- Barricades – Moveable and/or temporary vehicle barricades to use alleys for pedestrian and bike use only during key district events.
- Gathering Space – Utilize alley loaded parking and/or surface storage for outdoor dining or seating spaces. A variance or conditional use permit may be required allowing a waiver of parking requirements and/or accessibility requirements.
- Establishing Alley Names – Establishing names for each alley gives them more credence and connection to the community.
- Utility Improvements – Lighting replacements and improvements to make the alleys more comfortable and aesthetically pleasing, as well as undergrounding of power lines where applicable.

7.2 Maintenance Policies

Traditional downtown cores that provide a welcoming place for people to visit typically require augmented maintenance, due to added and enhanced amenities on offer to the public. This kind of maintenance usually goes beyond what a city would typically provide, therefore business owners may decide to work with the city and an economic development agency to create a special maintenance/management district. Augmented maintenance within these districts may include:

- Trash removal
- Street cleaning

- Sidewalk cleaning
- Management of loudspeaker system
- Landscape maintenance
- Graffiti removal
- Event management

8. IMPLEMENTATION & NEXT STEPS

8.1 Overview of Costs

The proposed project is estimated to cost \$33.3 million dollars. The unit costs are based on recent unit costs for similar improvements. The table, on the following page, shows the cost of various project elements.

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SR-145 COST ESTIMATE MATRIX																												
IMPROVEMENTS	STREET										ADDITIONAL ITEMS																	
	EAST TO WEST					NORTH TO SOUTH									MISC ITEMS (10%)			MOBILIZATION (10%)		CONTINGENCY (30%)		TOTAL ELEMENT (THOUSAND)		SOFT COSTS (25%) (THOUSAND)		GRAND TOTAL PER ELEMENT (THOUSAND)		
	4TH STREET	5TH STREET	YOSEMITE AVENUE	6TH STREET	H STREET	G STREET	GATEWAY DRIVE	E STREET	D STREET	C STREET	B STREET	A STREET	LAKE STREET	FLUME STREET	VINEYARD AVENUE	HIGH STREET	INTERSECTIONS											
NUMBER OF INTERSECTIONS	9	10	12	10	2	4	4	4	4	4	4	4	4	3	2	2	-											
CONCRETE SIDEWALK ⁽¹⁾	522	559	794	715	21	117	220	226	151	233	158	227	242	193	109	79	1775	634	634	2,283	9,894	2,473	12,367					
CURB AND GUTTER ⁽²⁾	84	115	119	107	6	11	34	60	32	53	24	35	36	29	17	12	270	105	105	376	1,630	408	2,038					
MEDIAN CURB ⁽³⁾	0	0	24	0	0	12	0	0	0	11	11	10	0	0	0	0	2	7	7	25	109	27	137					
STAMPED AC	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	234	24	24	85	369	92	461					
SLURRY SEAL	160	60	230	0	0	40	0	30	40	0	40	20	20	40	0	0	140	82	82	295	1,279	320	1,599					
HOT MIX ASPHALT ⁽⁴⁾	18	161	0	298	0	0	102	32	33	97	25	66	65	33	33	0	168	113	113	407	1,765	441	2,207					
TRAFFIC STRIPES AND PAVEMENT MARKINGS	38	75	50	39	0	2	35	8	10	10	4	4	15	4	2	0	81	37	37	135	584	146	730					
TREES	9	0	32	26	0	0	6	3	0	3	3	3	0	0	0	0	0	8	8	30	131	33	164					
LANDSCAPE/IRRIGATION ⁽⁵⁾	113	109	113	0	0	101	0	60	27	110	61	59	0	0	0	0	1316	207	207	745	3,228	807	4,034					
SOUND SYSTEM SPEAKERS	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	6	28	7	35					
REMOVE EXISTING STREET LIGHTING	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	17	6	6	23	101	25	126					
COBRA/DECORATIVE STREET LIGHTING	104	92	564	230	35	46	23	35	46	23	46	92	69	46	23	35	610	212	212	762	3,301	825	4,126					
HAWK SYSTEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	20	20	72	312	78	390					
RECTANGULAR RAPID FLASHING BEACONS	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	350	40	40	144	624	156	780					
SIGNAL MODIFICATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	400	40	40	144	624	156	780					
RAILROAD WARNING DEVICE MODIFICATION	0	0	200	200	0	0	0	0	0	0	0	0	0	0	0	0	0	40	40	144	624	156	780					
DRAINAGE (8%)	84	94	180	129	5	26	34	36	27	43	30	41	36	28	15	10	445	126	126	454	1,969	492	2,462					
MISC ITEMS (10%)	105	117	225	162	6	33	42	45	34	54	37	52	45	35	19	13	556	-	158	521	-	-	-					
MOBILIZATION (10%)	124	138	265	191	7	39	50	54	40	64	44	61	53	41	22	15	656	186	-	614	-	-	-					
CONTINGENCY (30%)	407	456	874	629	24	128	164	176	132	210	145	201	174	134	72	49	2166	567	558	-	-	-	-					
TOTAL STREET (THOUSAND)	1,765	1,978	3,787	2,727	104	554	709	764	572	909	627	873	755	582	311	212	9,385	GRAND TOTAL FOR WHOLE PROJECT							26,700			
SOFT COST (THOUSAND)	441	494	947	682	26	139	177	191	143	227	157	218	189	146	78	53	2,346								6,700			
GRAND TOTAL PER STREET (THOUSAND)	2,207	2,472	4,734	3,409	130	693	886	955	715	1,137	784	1,091	944	728	389	265	11,732								33,300			

- (1) Includes: Roadway excavation for bulbout locations
(2) Includes: Removal of existing curb and gutter
(3) Includes: Roadway excavation for new medians
(4) Includes: Cold plane
(5) Does not include: Trees

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The following are assumptions that were made for the different items within the estimate:

- The concrete sidewalk quantity includes new sidewalk within bulb-out locations, missing segments, and 50% of all existing sidewalk assumed to need replacement to meet ADA compliance. The concrete sidewalk pricing also includes the cost for the roadway excavations for the proposed bulb-out locations. The curb and gutter pricing includes the cost for new curb and gutter and the removal of the existing curb and gutter.
- The median curb pricing includes the cost for the roadway excavation for the new medians.
- The hot mix asphalt pricing includes the cost for a 2" cold plane of the existing HMA.
- The landscaping/irrigation pricing accounts for the costs for the vegetation and irrigation necessary for the areas. This price does not include any new trees. Trees were separated out of the landscaping/irrigation item and are a stand-alone item.
- It is assumed that Right of Way will not need to be acquired. The cost estimate matrix has been developed to easily determine the construction costs of the individual elements or an entire street.

Total Cost for Project Element

For the cost of an individual item (i.e. concrete sidewalk) for the entire study area, look to the farthest right, as seen in the dark purple box.

IMPROVEMENTS	SR-145 COST ESTIMATE MATRIX																	ADDITIONAL ITEMS				GRAND TOTAL PER ELEMENT (THOUSAND)		
	STREET																	MISC ITEMS (10%)	MOBILIZATION (10%)	CONTINGENCY (10%)	TOTAL ELEMENT (THOUSAND)		SOFT COST (20%) (THOUSAND)	GRAND TOTAL PER ELEMENT (THOUSAND)
	EAST TO WEST								NORTH TO SOUTH															
	4TH STREET	5TH STREET	Yosemite AVENUE	6TH STREET	7TH STREET	8TH STREET	GATEWAY DRIVE	9TH STREET	10TH STREET	11TH STREET	12TH STREET	13TH STREET	14TH STREET	LAKE STREET	FLUME STREET	VINEYARD AVENUE	HIGH STREET							
NUMBER OF INTERSECTIONS	9	10	12	10	2	4	4	4	4	4	4	4	4	4	3	2	2	634	634	2,783	9,894	2,473	12,367	
CONCRETE SIDEWALK ⁽¹⁾	522	559	754	8																				
CURB AND GUTTER ⁽²⁾	84	115	119	107	6	11	34	60	32	53	24	35	36	29	17	12	270	155	105	376	1,630	408	2,038	
MEDIAN CURB ⁽³⁾	0	0	24	0	0	12	0	0	0	11	11	10	0	0	0	0	2	7	7	25	109	27	137	
STAMPED AC	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	234	24	24	85	369	92	461	
SLURRY SEAL	160	60	230	0	0	40	0	30	40	0	40	20	20	40	0	0	140	82	82	295	1,279	320	1,599	
HOT MIX ASPHALT ⁽⁴⁾	18	161	0	298	0	0	102	32	33	97	25	66	65	33	33	0	168	113	113	407	1,765	441	2,207	
TRAFFIC STRIPES AND PAVEMENT MARKINGS	38	75	50	29	0	2	35	8	10	10	4	4	15	4	2	0	81	37	37	135	584	146	730	
TREES	9	0	32	26	0	0	6	3	0	3	3	3	0	0	0	0	0	8	8	30	131	33	164	
LANDSCAPE/IRRIGATION ⁽⁵⁾	113	109	193	0	0	101	0	60	27	110	61	59	0	0	0	0	1316	207	207	745	3,228	807	4,034	
SOUND SYSTEM SPEAKERS	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	6	28	7	35	
REMOVE EXISTING STREET LIGHTING	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	17	6	6	23	101	25	126	
COBRA/DECORATIVE STREET LIGHTING	104	92	564	230	35	46	23	35	46	23	46	92	69	46	23	35	607	212	212	762	3,301	825	4,126	
HAWK SYSTEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	20	20	72	312	78	390	
RECTANGULAR RAPID FLASHING BEACONS	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	350	40	40	144	624	156	780	
SIGNAL MODIFICATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	400	40	40	144	624	156	780	
RAILROAD WARNING DEVICE MODIFICATION	0	0	200	200	0	0	0	0	0	0	0	0	0	0	0	0	0	40	40	144	624	156	780	
DRAINAGE (10%)	84	94	180	129	5	26	34	36	27	43	30	41	36	28	15	10	445	126	126	454	1,969	492	2,462	
MISC ITEMS (10%)	105	119	225	162	6	33	42	45	34	54	39	52	45	35	19	13	556	158	158	521	-	-	-	
MOBILIZATION (10%)	124	138	265	191	7	39	50	54	40	64	44	61	53	41	22	15	656	186	186	614	-	-	-	
CONTINGENCY (10%)	407	456	874	629	24	128	164	176	132	210	145	201	174	134	72	49	2166	567	568	-	-	-	-	
TOTAL STREET (THOUSAND)	1,765	1,978	3,787	2,727	104	554	709	764	572	909	627	873	755	582	311	212	9,385						24,700	
SOFT COST (THOUSAND)	441	494	947	682	26	139	177	191	143	227	157	218	189	146	78	53	2,344						6,700	
GRAND TOTAL PER STREET (THOUSAND)	2,207	2,472	4,734	3,409	130	693	886	955	715	1,137	784	1,091	944	728	389	265	11,722						31,400	
																		GRAND TOTAL FOR WHOLE PROJECT				31,400		

(1) Includes: Roadway excavation for bulb-out locations
(2) Includes: Removal of existing curb and gutter
(3) Includes: Roadway excavation for new medians
(4) Includes: Cold plane
(5) Does not include: Trees

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For the cost for an entire street, look to the last row.

SR-145 COST ESTIMATE MATRIX																																											
	EAST TO WEST					STREET												ADDITIONAL ITEMS																									
	4TH STREET	5TH STREET	YORBA LANE AVENUE	6TH STREET	H STREET	5TH STREET	GATEWAY DRIVE	E STREET	D STREET	C STREET	B STREET	A STREET	LAKE STREET	FLAME STREET	VINEYARD AVENUE	HIGH STREET	INTERSECTIONS	HAZ TDM (100)	HAZ TDM (100)	CONTINGENCY (10%)	TOTAL ELEMENT (THOUSAND)	SOFT COSTS (10%) (THOUSAND)	GRAND TOTAL PER ELEMENT (THOUSAND)																				
NUMBER OF INTERSECTIONS	9	10	12	10	2	4	4	4	4	4	4	4	4	4	3	2	2	-	634	634	2,263	9,894	2,473	12,367																			
CONCRETE SIDEWALK ⁽¹⁾	522	559	794	715	21		220	226	151	233	158	227	242	193	109	79	1775	-	-	-	-	-	-	-																			
CURB AND GUTTER ⁽²⁾	84	115	119	107	6		34	60	32	53	24	35	36	29	17	12	270	105	105	376	1,630	408	2,038																				
MEDIAN CURB ⁽²⁾	0	0	24	0	0		0	0	0	11	11	10	0	0	0	0	2	7	7	25	109	27	137																				
STAMPED AC	0	0	2	0	0		0	0	0	0	0	0	0	0	0	0	234	24	34	85	369	92	461																				
SLURRY SEAL	160	60	230	0	0		0	30	40	0	40	30	20	40	0	0	140	82	82	295	1,279	320	1,599																				
HOT MIX ASPHALT ⁽³⁾	18	161	0	298	0		102	32	33	97	25	66	65	33	33	0	168	113	113	409	1,765	441	2,206																				
TRAFFIC STRIPES AND PAVEMENT MARKINGS	38	75	50	39	0		35	8	10	10	4	4	15	4	2	0	81	37	37	135	584	146	730																				
TREES	9	0	32	26	0		6	3	0	3	3	0	0	0	0	0	0	8	8	30	131	33	164																				
LANDSCAPE/IRRIGATION ⁽⁴⁾						10	0	60	27	100	61	59	0	0	0	0	136	207	745	3,228	807	4,034																					
SOUND SYSTEM SPEAKERS	0	0	18	0	0		0	0	0	0	0	0	0	0	0	0	0	3	2	4	28	7	35																				
REMOVE EXISTING STREET LIGHTING	0	0	48	0	0		0	0	0	0	0	0	0	0	0	0	17	6	6	23	101	25	126																				
COBNAID/DECORATIVE STREET LIGHTING	104	92	564	230	35	44	23	35	46	23	46	92	69	46	23	35	610	212	762	3,301	825	4,126																					
HAWK SYSTEM	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	200	20	20	72	312	78	390																				
RECTANGULAR RAPID FLASHING BEACONS	0	0	50	0	0		0	0	0	0	0	0	0	0	0	0	350	40	40	144	624	156	780																				
SIGNAL MODIFICATION	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	400	40	40	144	624	156	780																				
RAILROAD WARNING DEVICE MODIFICATION	0	0	200	200	0		0	0	0	0	0	0	0	0	0	0	0	0	0	40	144	624	156	780																			
DRAINAGE (BS)	84	94	180	129	5	26	34	36	27	43	30	41	36	28	15	10	445	126	126	454	1,969	492	2,462																				
MISC ITEMS (10%)	105	117	225	162	6	33	42	43	34	54	37	52	43	35	19	13	556	158	521	-	-	-	-																				
MOBILIZATION (10%)	124	138	265	191	7	39	50	54	40	64	44	61	53	41	22	15	656	186	-	614	-	-	-																				
CONTINGENCY (10%)	407	456	874	629	24	128	164	176	132	210	145	201	174	134	72	49	2166	557	-	-	-	-	-																				
TOTAL STREET (THOUSAND)	1,765	1,978	3,787	2,727	104	554	709	764	572	909	627	873	755	582	311	212	9,385						26,700																				
SOFT COST (THOUSAND)	441	494	947	682	26	139	197	191	143	227	157	218	189	146	78	53	2,346						6,700																				
GRAND TOTAL PER STREET (THOUSAND)	2,207	2,473	4,734	3,409	130	693	898	955	715	1,137	784	1,091	944	728	389	265	11,732						33,390																				
(1) Includes Roadway excavation for subgrade locations																																											
(2) Includes: Removal of existing curb and gutter																																											
(3) Includes: Roadway excavation for new medians																																											
(4) Includes: Curb plans																																											
(5) Does not include: Trees																																											

For the cost of an element on a specific street, look to the intersecting cell.

8.3 Funding Sources

The projects identified in this plan are eligible for funding from various local, state, and federal programs. These programs will leverage the work done by the City, stakeholders, and the community to design and construct project improvements. This section discusses these various programs and anticipated Calls for Projects as well as key grant application components.

8.3a Grant Funding Programs

Development Impact Fees:

Development Impact Fees (DIF) are paid by new residential and commercial development projects and can only be used to pay for improvements that can be demonstrated to serve new residents and businesses. A nexus study is required by state law for implementation. The nexus study calculates the new increment of development, estimates the portion of an improvement project attributable to that increment of growth, and allocates the costs across the new development projects by land use. The City has a DIF to help pay for capital projects that the City undertakes to support the City's infrastructure, such as park, water, sewer, street, and storm drain facilities or improvements. One of these impact fees is the Street Development Impact Fees, which could be used to fund sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, pavement rehabilitations, and traffic signals. As redevelopment occurs within the project area, the City could allocate Street DIF funds towards these improvements.

Measure T:

In November 2006, Madera County voters approved the extension of the ½ cent sales tax, named Measure T. Measure T is projected to generate more than \$213 million over its 20-year lifecycle that can be used to fund the design, right of way acquisition, and construction of transportation projects in Madera County. Measure T consists of several programs. 51% of funds go towards the Commute Corridors/Farm to Market Program (Regional Transportation Program) and are directed to meet the improvement needs of regional streets and highway. 44% of funds go towards the Safe Routes to School and Jobs Program (Local Transportation Program) and are directed toward rehabilitating aged local systems, and could be applied to increase road capacity, provide for pedestrian/bicycle improvements, and public transit enhancements or for other transportation improvements. 2% of funds go towards the Transit Enhancement Program and are directed toward expanding or enhancing public transit programs that address the transit dependent population. 2% of funds go towards the Environmental Enhancement Program and are

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directed toward improving air quality and the environment such as pedestrian and bicycle facilities.

Based upon the *MCTC Measure T 2019-20 Annual Work Program*, the City has \$6,624,928 available in Regional Transportation Program funds, \$2,520,810 available in Local Transportation Program funds (including \$979,791 reserved for matching funds), \$440,444 available in Transit Enhancement Program funds, and \$432,017 available in Environmental Enhancement Program funds. A combination of funds from these programs can be allocated to fund improvements fund sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, pavement rehabilitations, landscape and street trees, and traffic signals.

Community Development Block Grant:

The City participates in the Community Development Block Grant (CDBG) entitlement program. The Department of Housing and Urban Development (HUD) offers CDBG grants that can support a wide array of infrastructure improvements that provides benefit to low- and moderate-income persons, prevent or eliminate slums or blight, and help to remediate urgent threats to the health or welfare of the community for which other funds are not available. Improvements that are eligible for CDBG funding include sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, pavement rehabilitations, landscaping and street trees, and traffic signals. The City's CDBG Commission determines which Public Services and Capital Projects/Public Improvements projects receive CDBG funds for each fiscal year. The City could submit eligible projects to the CDBG Commission for approval and inclusion in future CDBG Action Plans.

Road Maintenance and Rehabilitation Account:

Senate Bill 1 (SB 1) dedicated approximately \$1.5 billion per year in new formula revenues, Road Maintenance and Rehabilitation Account (RMRA), apportioned by the State Controller to cities and counties for road maintenance and rehabilitation, safety projects, grade separations, complete streets components, and traffic control devices. Each year, cities and counties must submit a proposed project list adopted at a regular meeting by their council that is then submitted to the California Transportation Commission. The funds can be programmed to eligible projects at the City's discretion. The City received \$1,088,400 in RMRA funds for Fiscal Year 2019-20.

The City could elect to program future fiscal year RMRA funds for improvements within the study area. Eligible improvements include sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, pavement rehabilitations, and traffic signals.

Highway User Tax Account:

Similar to RMRA funds, the Highway User Tax Account (HUTA) are State gasoline and diesel tax revenues are apportioned by the State Controller to cities and counties for design, construction, maintenance, and operation of public streets and highways. Funds are distributed to cities by population. The City received \$1,629,150 in HUTA funds for Fiscal Year 2019-20. HUTA funds can be programmed by the City for the design and construction of sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, pavement rehabilitations, and traffic signals.

Transportation Development Act:

The Transportation Development Act (TDA) was signed by the Governor on November 4, 1971 and became effective July 1, 1972. The TDA provides two major sources of funding for public transportation: the Local Transportation Fund (LTF) and the State Transit Assistance Fund (STA). The LTF is derived from $\frac{1}{4}$ percent of the $7\frac{1}{2}$ percent statewide general sales tax and returned to the County in which it was collected. The STA funds are derived from statewide sales tax on diesel fuel and returned to each county based on a formula of population and fare revenues. TDA provides transportation revenues to local jurisdictions for the development and support of public transportation. TDA also provides some funding for bicycle and pedestrian projects and when certain conditions are met, streets and roads. The main purpose and priority of TDA, however, is to provide funding for public transportation. MCTC is responsible for the administration and distribution of funds to local TDA recipients, including the City. The City can apply for LTF funds for the design and construction of bicycle and pedestrian facilities and bus stops and STA funds for delivery of bus stops within the project.

Local Partnership Program:

The Local Partnership Program (LPP) was created by the Road Repair and Accountability Act of 2017 (Senate Bill 1). The program receives \$200,000,000 annually from Senate Bill 1 (SB 1) to fund road maintenance and rehabilitation with a 15-year design life, sound walls, and other transportation improvement projects as well as reduce Vehicle Miles Traveled (VMT). LPP is comprised of two components; Formulaic and Competitive. The funding split between the two components is anticipated to be 60% Formulaic and 40% Competitive. Formulaic funds are

distributed by formula to regional, transit, and local agencies that have passed a dedicated transportation sales tax or toll and are distributed in proportion based on the county's population. Competitive component funds are eligible for agencies with voter approved taxes, tolls, and fees, or with imposed fees dedicated solely to transportation. LPP is on a two-year cycle, with the Formulaic Component Cycle 3 and Competitive Component Cycle 2 applications due in June 2020.

The City's project is eligible for both Formulaic and Competitive funds due to Measure T and the Streets DIF. The City can discuss the opportunity of receiving Formulaic Cycle 3 or 4 funds from MCTC and/or submit an application for Competitive Component Cycle 2. Eligible project components include sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, pavement rehabilitations, and traffic signals.

Urban Greening Grant:

California voters passed the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of in November 2006. These Proposition 68 bond funds are administered by the California Natural Resources Agency. The Urban Greening Grant Program funds projects that reduce greenhouse gas emissions by sequestering carbon, decreasing energy consumption and reducing VMT. Urban Greening Grant funds projects that increased non-motorized access to community destinations concurrently with improving water quality and stormwater management, as well as the planting of shade trees. A minimum of 25% of the funds must go towards disadvantaged communities. The last programming cycle, Round 3, funded 11 projects totaling \$19,000,000.

The Urban Greening Grant Round 4 is anticipated to be announced in March 2020. The City could submit an application to fund landscape and street trees and bicycle and pedestrian facilities within the project area.

Congestion Mitigation and Air Quality:

The Congestion Mitigation and Air Quality Improvement (CMAQ) Program is to fund transportation projects or programs that will contribute to attainment of maintenance of National Ambient Air Quality Standards (NAAQS). The program was first implemented under the Clean Air Act Amendments of 1990 to support surface transportation projects and other related efforts that improve air quality and provide congestion relief. Funding can be expended on

projects that reduce ozone precursor emissions, (including nitrogen oxides (NO_x) and volatile organic compounds (VOC)), carbon monoxide (CO), and particulate matter (PM) emissions or PM precursor emissions from transportation. This program will also assist in meeting the intent of SB 375, also known as the Sustainable Communities Protection Act of 2008. MCTC, acting in its role as a Metropolitan Planning Organization (MPO), programs CMAQ funds for projects within the County. MCTC issues a call for projects every other year for CMAQ funds. For the most recent, 2019 Cycle, MCTC made 85% of CMAQ competitively available and 15% of the funds were apportioned to each local jurisdiction.

The next call for projects is anticipated in Summer 2021. The City could elect to submit an application for CMAQ-eligible improvements including sidewalk improvements, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, and transit facilities. These improvements in the project area reduce traffic congestion and improve air quality.

Surface Transportation Block Grant:

The Surface Transportation Block Grant (STBG) program, also referred to as the Regional Surface Transportation Program (RSTP), was established by California State Statute utilizing Surface Transportation Program Funds that are identified in Section 133 of Title 23 of the United States Code. RSTP funds originate from the federal gasoline excise tax. The State distributes the funds to regional agencies and counties based on population. For Madera County, the funds are distributed to MCTC for allocation. This program provides flexible funding that may be used by state and local agencies for projects to preserve and improve the conditions and performance on any Federal aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital and intercity passenger projects. MCTC is also permitted to participate in an exchange of these federal funds to non-federal State Highway Account funds, which can reduce administrative burdens. MCTC accepts applications annually for RSTP funds.

In any year, the City can submit an application for RSTP funds for the design and construction of various projects of this study. This includes sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, pavement rehabilitations, landscaping and street trees, and traffic signals. The application will include project name, project description, category of eligibility, and the estimated amount of funds to be expended.

Active Transportation Program:

The Active Transportation Program (ATP) was created by Senate Bill 99 to encourage increased use of active modes of transportation, such as walking and biking. ATP consolidates funding from various transportation programs at both the State and federal level, including the federal Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), State Safe Routes to School, and SB 1. ATP consists of three components: the Statewide competition (50%), Metropolitan Planning Organization (MPO) projects for regions with 200,000 or more residents (40%), and small urban and rural regions with populations of less than 200,000 (10%). A minimum of 25% of the funds must go towards disadvantaged communities. The program can fund both the design and construction of capital improvements as well as non-infrastructure projects. Calls for Projects occur every other year. The most recent programming cycle, Cycle 4, awarded \$237,566,000 in funds through the Statewide competition, \$174,885,000 in funds through the MPO component, and \$43,756,000 through the small urban and rural component.

The next Call for Projects, Cycle 5, is scheduled to be released in March 2020 and due in June 2020. The project study area is located both within a SB 535 designated Disadvantaged Community and a AB 1550 designated Low Income Community. The City could submit an application for sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, and street trees within the project area.

Highway Safety Improvement Program:

The Highway Safety Improvement Program (HSIP) is a federal funding program administered by Caltrans. The intent of the program is to reduce traffic fatalities and serious accidents through strategic infrastructure improvements. There are two components to the program, the Common Benefit/Cost Ratio (BCR) and Set-Aside. The BCR component requires a benefit/cost (B/C) calculation to demonstrate the effectiveness of the improvements and to prioritize projects. Recent Set-Asides have included high friction surface treatment, guardrail upgrades, horizontal curve signing, and pedestrian crossing enhancements. The Set-Asides do not require a B/C calculation. Typically, Caltrans issues calls for projects every other year. The most recent cycle, Cycle 9, was issued in April 2018 and funded 221 projects totaling \$182,000,000.

HSIP Cycle 10 is anticipated to be announced in April/May 2020. The City could submit HSIP applications for both Common BCR and, depending on the guidelines, Set-Asides. The Common BCR application should focus on safety improvements in high collision areas including bicycle facilities, intersection improvements, crosswalks, and sidewalks. If there is another Set-Aside for

pedestrian crossing enhancements, the application could include multiple crosswalk enhancements in the study area.

State Highway Operations and Protection Program:

The purpose of the State Highway Operations and Protection Program (SHOPP) is to maintain the integrity of the State Highway System (SHS). Funding for this program is provided through state and federal gas tax revenues. This funding source is specific to Caltrans and is not a grant program. Projects are nominated for funding within each Caltrans District office. Proposed projects are sent to Caltrans Headquarters for programming on a competitive basis statewide. Individual Districts are not guaranteed a minimum level of funding. SHOPP projects are based on statewide priorities within each program category (i.e. safety, rehabilitation, operations, etc.) within each Caltrans District. Eligible projects must be consistent with the State's Transportation Asset Management Plan (TAMP). The SHOPP is updated every even year, with the 2020 SHOPP being adopted by April 2020.

The City could approach Caltrans District 6 regarding improvements to Yosemite Avenue, including pavement rehabilitation, crosswalks, bulb-outs, medians, lighting, and traffic signals. If these elements are consistent with the TAMP and the District agrees, the improvements could be included in the 2022 SHOPP.

State Transportation Improvement Program:

The State Transportation Improvement Program (STIP) is the largest funding program in the state. It consists of a combination of state and federal funds allocated to each county and can fund a wide variety of public improvements. Eligible projects can be both on and off the SHS. A Project Study Report (PSR) or equivalent is required for projects to be eligible for STIP funds. The counties, for Madera County it is MCTC, nominate projects for the STIP through the Regional Transportation Improvement Program (RTIP). STIP is updated every even year and programs projects over a five-year period. For the 2020 STIP, MCTC submitted the RTIP in December 2019 and the STIP will be adopted in March 2020.

The City can discuss with MCTC the opportunity to receive STIP funds for projects in the study area for the 2022 STIP. STIP funds could be used for the design and construction of sidewalks, bulb-outs, crosswalks, pedestrian actuated crossings, bicycle facilities, pavement rehabilitations,

landscaping and street trees, and traffic signals. A PSR would need to be prepared prior to MCTC’s submission of the RTIP.

8.3b Grant Application Components

Funding agencies often update grant guidelines and requirements for each funding program’s cycle. There are several items that are typically required in competitive grant applications. These key items to complete prior to submitting a grant application are listed below. These descriptions are based on recent grant applications funding cycles and grant application requirements are subject to change.

Resolution from Agency Supporting the Project:

A resolution from an agency supporting the project is required for Urban Greening Grant applications, but not required for Caltrans ATP and HSIP applications.

Disadvantaged Community Analysis:

Typically, funding agencies prioritize or require funds to be distributed to areas that are considered socioeconomically or environmentally “disadvantaged.” The most common formulas used to identify disadvantaged communities include the top 25 percent of CalEnviroScreen 3.0 Census Tracts,¹ median incomes that are lower than 80 percent of the statewide average, or 75 percent of students in the project area that qualify for free/reduced lunches. See the CalEnvironScreen Demographics Map Exhibit, in the Appendix, for information that could be used to support a disadvantaged community analysis for the study area. Assessment of disadvantaged communities is required for Caltrans ATP and Urban Greening Grant applications, but not required for HSIP applications.

Cost-Benefit Analysis:

A cost-benefit analysis is required for all Urban Greening Grant, LPP, and HSIP applications, but only required for Caltrans ATP grant applications requesting over \$7 million dollars in funding.

Statement of Project Need:

A statement of project need is required for most competitive grant applications, including Caltrans ATP, HSIP, and Urban Greening Grants. Most applications require a short project title (less than 200 characters), followed by an executive-level project description (200 words or less), and a longer statement of need (500-1,000 words). The existing conditions analysis in Chapter 4.3 of this plan, with full report in the Appendix, could be used to support a statement of

project need, generally, for the study area. For specific projects, Chapter 4 identifies key issues that the project will address, which can also support the project need statement.

Cost Estimate:

A preliminary cost estimate is required for most infrastructure project applications, with costs often separated into environmental studies and permits (PA&ED), preliminary engineering and pre-construction (PS&E), ROW acquisition, and construction (CON). Caltrans ATP, LPP, and HSIP applications require that such estimates be prepared by a registered engineer licensed in the State of California. See Appendix for Preliminary Cost Estimate Exhibit.

Collision Statistics in Project Area:

Collision statistics are required for Caltrans ATP, LPP, and HSIP applications, but not required for Urban Greening Grant applications. See the Chapter 6 of the Existing Conditions Report in the Appendix for collision statistics in the study area.

Bicycle and Pedestrian Counts in Project Area:

Bicycle and pedestrian counts are required for Caltrans ATP and LPP applications, but not required for HSIP or Urban Greening Grant applications.

Community Outreach:

Documentation of outreach may include a brief written description of outreach conducted, sign-in sheets, images of events, and promotional materials of events. Such documentation is recommended for most competitive grant applications; it is optional for HSIP applications and required for ATP and Urban Greening Grant applications. A summary of the community outreach for this plan, is provided in Chapter 5, with a full report in the Appendix of this report.

Letters of Support:

Letters of support are recommended for most competitive grant applications; they are optional for HSIP applications and required for ATP, LPP, and Urban Greening Grant applications.

9. ACKNOWLEDGEMENTS

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Letters of Support

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Madera Chamber of Commerce:

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Leadership Counsel for Justice & Accountability:

Leslie Martinez, Policy Advocate

Madera County Transportation Commission:

Andrew J. Medellin, Chair

10.APPENDIX

Master Plan

Conceptual Estimates

Letters of Support

Analysis & Other Supporting Documents

Public Participation & Outreach Plan

Meeting Minutes & Meeting Summary Reports

Past Studies

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