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Table of Contents

1. Introduction ................................................................. 1-1
   Why Develop a Master Plan? ............................................ 1-1
   Purpose of the Plan Update ............................................. 1-1
   Benefits of Bicycling and Walking ............................... 1-2
   Relationship to Other Documents ............................... 1-3
   Plan Update Organization ............................................. 1-5
   Summary ............................................................................ 1-5

2. Vision & Goals ............................................................ 2-1
   Overview ........................................................................ 2-1
   Vision ............................................................................. 2-1
   Goals ............................................................................. 2-2
   Policies and Actions ...................................................... 2-3

3. Santa Rosa Today ....................................................... 3-1
   Local Context ................................................................ 3-1
   Equity ............................................................................ 3-6
   Biking and Walking Today .......................................... 3-10
   Collisions ..................................................................... 3-26
   User Experience and Perceived Comfort .................... 3-33

4. Outreach ................................................................. 4-1
   Online Survey .............................................................. 4-1
   Online Mapping Tool .................................................... 4-3
   City Website and Social Media .................................. 4-4
   Public Open Houses .................................................... 4-5
   Stakeholder Interviews ................................................. 4-6
   Pop Up Events .......................................................... 4-9
   City Board, Commission, and Council Meetings ............ 4-11

5. Projects, Programs, & Policies ..................................... 5-1
   Projects .......................................................................... 5-2
   Citywide Projects ...................................................... 5-27
   Programs ....................................................................... 5-29
   Policy Changes .......................................................... 5-35

6. Implementation Plan .................................................. 6-1
   Project Evaluation ..................................................... 6-1
   Funding Strategies ..................................................... 6-13
   Environmental Assessment ........................................ 6-17

   Appendix A. Recommendation Tables ......................... A-1
   Appendix B. Design Guidelines .................................... B-1
Table of Figures

Figure 3-1: Population by Age in Santa Rosa and Sonoma County ........................................... 3-1
Figure 3-2: Priority Development Areas ................................................................. 3-3
Figure 3-3: Major Destinations .................................................................... 3-4
Figure 3-4: Transit Connections ........................................................................ 3-5
Figure 3-5: Median Household Income ............................................................ 3-6
Figure 3-6: Vehicles Available ....................................................................... 3-6
Figure 3-7: Communities of Concern ................................................................ 3-8
Figure 3-8: CalEnviroScreen ............................................................................. 3-9
Figure 3-9: Existing Bikeways – Citywide ...................................................... 3-14
Figure 3-10: Existing Bikeways – Downtown .................................................... 3-15
Figure 3-11: Existing Bikeways – Northwest .................................................. 3-16
Figure 3-12: Existing Bikeways – Northeast ....................................................... 3-17
Figure 3-13: Existing Bikeways – Southwest ..................................................... 3-18
Figure 3-14: Existing Bikeways – Southeast ..................................................... 3-19
Figure 3-15: Bicycle Parking ........................................................................... 3-20
Figure 3-16: Bicycle Collision Severity ............................................................ 3-26
Figure 3-17: Bicycle Involved Collisions .......................................................... 3-27
Figure 3-18: Collisions by Bicyclist Age Range ................................................. 3-28
Figure 3-19: Pedestrian Collision Severity ....................................................... 3-29
Figure 3-20: Collisions by Pedestrian Age Range .............................................. 3-29
Figure 3-21: Pedestrian Involved Collisions ..................................................... 3-30
Figure 3-22: High Injury Network ................................................................ 3-32
Figure 3-23: Bicyclist Level of Traffic Stress on All Roads vs Arterials .................. 3-35
Figure 3-24: Bicyclist Level of Traffic Stress - Citywide ................................... 3-36
Figure 3-25: Bicyclist Level of Traffic Stress - Arterials .................................... 3-37
Figure 4-1: Comfort on Bikeway Types ............................................................. 4-1
Figure 5-1: Bikeway Projects – Citywide ......................................................... 5-3
Figure 5-2: Bikeway Projects – Downtown ......................................................... 5-4
Figure 5-3: Bikeway Projects – Northwest ......................................................... 5-5
Figure 5-4: Bikeway Projects – Northeast ......................................................... 5-6
Figure 5-5: Bikeway Projects – Southwest ......................................................... 5-7
Figure 5-6: Bikeway Projects – Southeast ............................................................ 5-8
Figure 5-7: Pedestrian Projects – Citywide ...................................................... 5-10
Figure 5-8: Pedestrian Projects – Downtown ...................................................... 5-11
Figure 5-9: Pedestrian Projects – Northwest ..................................................... 5-12
Figure 5-10: Pedestrian Projects – Northeast .................................................... 5-13
Figure 5-11: Pedestrian Projects – Southwest .................................................... 5-14
Figure 5-12: Pedestrian Projects – Southeast .................................................... 5-15
Figure 5-13: Crossing Locations – Citywide ....................................................... 5-19
Figure 5-14: Crossing Locations – Downtown .................................................... 5-20
Figure 5-15: Crossing Locations – Northwest ..................................................... 5-21
Figure 5-16: Crossing Locations – Northeast ..................................................... 5-22
Figure 5-17: Crossing Locations – Southwest .................................................... 5-23
Figure 5-18: Crossing Locations – Southeast ..................................................... 5-24
Figure 6-1: Short Term Improvements ............................................................. 6-4
Figure 6-2: Long Term Improvements .............................................................. 6-5
Figure 6-3: Opportunity Improvements ............................................................ 6-6
Figure 6-4: Low Priority Improvements ............................................................ 6-7
Figure 6-5: First Phase Projects ...................................................................... 6-12
Table of Tables

Table 3-1: Community of Concern Factors and Thresholds ....3-7
Table 3-2: Bikeway Mileage in 2010 and 2018 .........................3-10
Table 3-3: Bicycle Locker Locations .................................3-13
Table 3-4: Santa Rosa Bicycling and Walking to Work
  Mode Share.............................................................................3-23
Table 3-5: Top Ten Bicycle Count Locations .........................3-23
Table 3-6: Top Ten Pedestrian Count Locations....................3-24
Table 3-7: Annual Bicycle Collisions in Santa Rosa ..........3-26
Table 3-8: Top Bicycle Collision Intersections......................3-28
Table 3-9: Annual Pedestrian Collisions.............................3-29
Table 3-10: Top Pedestrian Collision Intersections ............3-29
Table 3-11: High Injury Bicycle Corridors..........................3-31
Table 3-12: High Injury Pedestrian Corridors.......................3-31
Table 4-1: Top Survey Comment Themes ............................4-2
Table 5-1: Existing and Proposed Bikeway Mileage ..............5-2
Table 6-1: Linear Projects by Implementation Category .......6-3
Table 6-2: Crossing Locations by Implementation
  Category..................................................................................6-3
Table 6-3: Priority Evaluation Criteria.................................6-8
Table 6-4: First Phase – Class I Shared Use Paths ...............6-10
Table 6-5: First Phase – On Street Bikeways .......................6-10
Table 6-6: First Phase – Sidewalks.................................6-11
Table 6-7: First Phase – Studies........................................6-11
Table 6-8: Funding Source Eligibilities by Project Type......6-16
1. **Introduction**

**Why Develop a Master Plan?**

Santa Rosa is a vibrant city committed to improving the quality of life for residents and visitors by providing walking and bicycling as convenient, comfortable, and healthy modes of transportation and recreation. The largest city in Sonoma County, Santa Rosa is a gateway to the Redwood Empire and to Sonoma Valley wine country, drawing visitors from across the country and around the world.

The Bicycle and Pedestrian Master Plan Update is a critical tool for guiding city staff and the development community in building a balanced transportation system that is pedestrian and bicycle friendly and encourages residents to use these modes of transportation. The ultimate goal is a shift from driving single occupancy vehicles to more walking and bicycling as a normal part of daily life.

**Purpose of the Plan Update**

This Bicycle and Pedestrian Master Plan Update establishes a long term vision for improving walking and bicycling in Santa Rosa by updating the previous plan adopted by the City Council in 2010.

The Plan Update provides a strategy to develop a comprehensive bicycling and walking network to provide access to transit, schools, and downtown alongside support facilities like bicycle parking and pedestrian amenities. These network improvements are paired with education, encouragement, enforcement, and evaluation programs. This document also identifies a plan to implement these projects and programs through prioritization and phasing to ensure implementation is manageable and fundable. This Plan Update represents a long-term, aspirational vision for walking and bicycling in Santa Rosa, and recognizes that limited funding and resources will require phased implementation of the proposed improvements over many years.

The Bicycle and Pedestrian Master Plan Update process provided opportunities for elected and appointed members of the City’s Boards, Commissions, and the public to participate in the development process of the Plan Update by evaluating, commenting, and suggesting ideas for walking and bicycling, and then using the Plan Update as a guide for future input on specific projects. Updates to the Plan are necessary as a progressive city is rarely static and the needs of a viable city are dynamic. Ideally, the Plan Update should be reviewed every two years to update maps, project lists, and priorities as facilities are completed and to keep pace with the development landscape.
Benefits of Bicycling and Walking

Public Health
In *A Portrait of Sonoma County (2014)*, the Sonoma County Department of Health Services found the Sheppard neighborhood near downtown Santa Rosa to have one of the lowest life expectancies in the county at 76.6 years – nearly a decade less than Central Bennett Valley in eastern Santa Rosa, where the average life expectancy is 85.7 years. This wide variation between tracts in the same city suggests neighborhood amenities and characteristics can have a striking impact on health. Central Bennett Valley is adjacent to hundreds of acres of state parkland and includes Strawberry Park, with nearly six acres of open space and sports facilities. Sheppard is between two state highways and has only one acre of developed park within the neighborhood—and while the park provides walking areas, it lacks sports facilities or other active recreation opportunities. Among the 99 Sonoma County tracts evaluated, 13 of the bottom 20 are located in Santa Rosa.

Physical inactivity is now widely understood to play a significant role in the most common chronic diseases in the United States, including heart disease, stroke, and diabetes and each year approximately 280,000 adults in the United States die prematurely due to obesity-related illnesses. A 2004 study published in the American Journal of Preventive Medicine by Frank et al. reported that for each additional 60 minutes spent in a car daily, there is a six percent increase in the chances of being obese. Creating a physical environment that encourages bicycling and walking, and improves access to parks and active recreation opportunities in other neighborhoods, is a key strategy to fight obesity and inactivity and has been shown to have substantial impacts on health with a relatively small public investment. *A Portrait of Sonoma County* identifies interventions that support safe walking, bicycling, and recreation opportunities as effective strategies to address public health concerns in the County and Santa Rosa, including a focus on sidewalks, street lights, and access to parks.

Collision Reduction
Conflicts between people walking, bicycling, and driving result from poor behavior as well as insufficient or ineffective design. Encouraging development and redevelopment in which bicycling and walking are supported can enhance safety and comfort levels for all users. Designated bicycling and walking facilities, in addition to well-designed crossings, reduce the risk of crashes and injuries.

Equity
Bicycling and walking are inexpensive and broadly accessible forms of transportation. The average annual operating cost of a bicycle is $308, compared to $8,220 for the average car. Bicycling and walking are affordable means of transportation for low-income and disadvantaged residents. Access to active transportation provides added freedom and independence for youth and parents (who may otherwise be transporting their children) as well as for some people who cannot drive and those who have chosen not to drive.

Quality of Life
Creating conditions where walking and bicycling are accepted and encouraged increases a community’s livability in ways that are difficult to measure but should not be overlooked. The design, land use patterns, and transportation systems that comprise the built environment have a profound impact on quality of life issues. The aesthetic quality of a community improves when visual and noise pollution caused by automobiles is reduced and when green space is reserved for facilities that allow people of all ages to recreate and travel in pleasant settings.
Economy
Active transportation programs and projects encourage more bicycling and walking, which leads to a better quality of life. This higher quality of life can attract more diverse and creative people, leading to higher economic growth for a city and region. Additionally, people who commute using active modes of transportation save money on annual automobile operating costs, and may see additional savings in health care costs. On a community-wide scale, bicycle and pedestrian infrastructure projects are generally far less expensive than automobile-related infrastructure.

Environmental
Replacing driving trips with bicycling or walking trips has a measurable impact on reducing greenhouse gases in the atmosphere that contribute to climate change. Fewer vehicle trips and vehicle miles traveled translate into fewer pollutants released into the air, including carbon dioxide, nitrogen oxides, and hydrocarbons. This not only reduces our contribution to climate change, but also improves the health and quality of life for residents who are vulnerable to asthma or other chronic respiratory diseases.

Relationship to Other Documents
Santa Rosa’s General Plan 2035 guides the physical development of the City and sets out a vision for Santa Rosa where:

Complete streets provide safe access for pedestrians, bicyclists, motorists, and transit users of all ages and abilities. Neighborhood-scale retail and service uses, schools, and recreational facilities are connected by bicycle and pedestrian paths and transportation management programs and bicycle/pedestrian improvements have reduced the number of single-occupancy cars on regional/arterial streets.

The Bicycle and Pedestrian Master Plan Update helps the City realize this ambitious vision along with implementing goals, policies, and recommendations adopted through complementary City planning efforts such as the City’s Creek Master Plan, Climate Action Plan, Downtown Station Area Specific Plan, North Santa Rosa Specific Plan, Roseland/Sebastopol Avenue Specific Plan, and corridor plans for Mendocino Avenue, Santa Rosa Avenue, and Sebastopol Avenue.

The Bicycle and Pedestrian Master Plan Update also helps the City do its part to achieve larger regional and state goals embraced in Sonoma County’s General Plan 2040, Countywide Bicycle and Pedestrian Master Plan, Plan Bay Area 2040, Caltrans District 4 Bicycle Plan, and Toward an Active California: State Bicycle and Pedestrian Plan.

This Plan Update will help Santa Rosa continue to meet the following goals.

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Santa Rosa
General Plan 2035
- Provide attractive and safe streets for pedestrians and bicyclists
- Develop a citywide system of designated bikeways that serves both experienced and casual bicyclists, and which maximizes bicycle use for commuting, recreation, and local transport
- Develop a safe, convenient, and continuous network of pedestrian sidewalks and pathways that link neighborhoods with schools, parks, shopping areas, and employment centers
- Reduce traffic volumes and speeds in neighborhoods

Climate Action Plan
- Reduce greenhouse gas emissions by 25 percent below 1990 levels by 2020

Sonoma County
General Plan 2040
- Reduce Sonoma County’s greenhouse gas emissions by achieving a non-motorized trips mode share of five percent for all trips and ten percent for trips under five miles long by 2020

Countywide Bicycle and Pedestrian Plan
- Develop and maintain a comprehensive countywide bicycle and pedestrian transportation system, which includes projects, programs, and policies that work together to provide safe and efficient transportation opportunities for bicyclists and pedestrians

Comprehensive Transportation Plan
- Shift transportation mode four percent from single occupant vehicle trips to bicycle and pedestrian trips due to changing attitudes, improved safety, improved non-auto infrastructure, pedestrian/bike/transit friendly land use changes

Toward an Active California: State Bicycle and Pedestrian Plan
- Triple bicycling trips and double walking and transit trips statewide by 2020 (relative to 2010).
Plan Update Organization

- **Chapter 1: Introduction** outlines the Plan Update’s purpose and explains its place in the context of other planning efforts and initiatives.
- **Chapter 2: Vision & Goals** captures the vision and policy framework for Santa Rosa’s Bicycle and Pedestrian Plan Update. The chapter includes performance metrics.
- **Chapter 3: Santa Rosa Today** provides an inventory of present-day walking and bicycling in Santa Rosa, including physical conditions of facilities as well as education, enforcement, and encouragement programs.
- **Chapter 4: Outreach** chronicles how stakeholders and thousands of residents shaped the Plan Update through a comprehensive engagement process.
- **Chapter 5: Projects, Programs & Policies** describes and maps the specific projects, programs, and policy changes recommended to meet the active transportation needs of Santa Rosa’s residents and visitors.
- **Chapter 6: Implementation Plan** presents a strategy to evaluate and prioritize projects and provides details on funding opportunities to advance the Plan Update through phased implementation.

Summary

Santa Rosa is well poised to increase walking and bicycling for transportation. It has a mild climate most of the year, is relatively flat, and has a large network of existing sidewalks and growing network of on-street bikeways and off-street shared-use paths. The City has installed bicycle parking in much of the downtown and transit services connect destinations in the region and beyond.

These investments and natural assets provide a foundation upon which the City can continue to build a high-quality citywide network for bicycling and walking—one that is accessible and comfortable for everyday use by residents and visitors of all ages and abilities.
2. Vision & Goals

Overview

The goals of the Santa Rosa Bicycle and Pedestrian Master Plan Update reflect the priorities expressed by the community throughout the public outreach phase of this Plan Update. Discussions with City departments, best practices across the nation, and input from community stakeholders have shaped the proposed strategies and policies intended to help the City achieve these goals.

All of the following goals, strategies, and policies support the larger citywide “Complete Streets” policy, which instructs staff to consider the needs of all modes of travel when developing any transportation facility. The goals, strategies, and policies are designed to guide the work of City staff and elected officials, partner agencies, and private developers to improve the livability, economic vitality, and non-motorized accessibility for residents and visitors throughout Santa Rosa. Reducing the amount of driving and automobile ownership is an overarching vision embodied in the Plan Update.

The Santa Rosa Bicycle and Pedestrian Plan Update is organized around a vision statement, three overarching goals tied to relevant performance measures, and a series of specific policies and actions.

Bicycle and Walk Friendly Community Designation

Santa Rosa is currently recognized as a Bicycle Friendly Community at the Bronze level by the League of American Bicyclists. This voluntary assessment and award program evaluates communities on ten criteria that they believe affect three key outcomes: ridership, crashes, and fatalities. These goals, policies, and actions are designed specifically to help elevate the city to a Silver or higher designation (Gold, Platinum, and Diamond) in the near future. Santa Rosa is not currently recognized as a Walk Friendly Community by the UNC Highway Safety Research Center. Taking the actions listed in this chapter will position the City for recognition through this national program.

Glossary of Terms

Vision: A strong statement that serves as an aspirational guide
Goals: Broad, long-range targets for making the vision a reality
Performance Measures: How we mark progress in meeting the goals and policies
Policies: What we want to achieve in terms of outcomes
Actions: Specific strategies for how to achieve the goals and policies

Vision

Santa Rosa is a community where walking and bicycling are comfortable and convenient for people of all ages and abilities.
Goals

Goal 1: Increase Access and Comfort
Design bicycle and pedestrian facilities that are accessible and comfortable for people of all ages and abilities to use.

Performance Measures:
- Increase the share of people walking and bicycling to work to five percent by 2025 and ten percent by 2040.
- Increase the share of students walking or bicycling to school to ten percent by 2025 and 20 percent by 2040.
- Reduce the number of severe and fatal collisions to zero by 2040.¹
- Reduce the percent of arterial streets that are LTS 4 from 57 percent to 40 percent by 2040 (see Chapter 3 for information about LTS)
- Complete all Short Term projects recommended in this Plan Update by 2030 and High Priority projects by 2040.

Goal 2: Maintain and Expand the Network
Identify, develop, and maintain a complete and convenient bicycle and pedestrian network.

Performance Measures:
- Complete all Studies recommended in this Plan Update by 2040.
- Double the number of short-term and secure long-term bicycle parking locations by 2040.
- Maintain adequate pavement quality, striping, and sign visibility and signal/beacon functionality on all bicycle and pedestrian facilities.
- Start tracking and begin publishing annual bicycle and pedestrian counts by 2021.

Goal 3: Support a Culture of Walking and Biking
Increase awareness and support of bicycling and walking through programs and citywide initiatives.

Performance Measures:
- Increase the share of people walking and bicycling to work to five percent by 2025 and ten percent by 2040.
- Increase the share of students walking or bicycling to school to ten percent by 2025 and 20 percent by 2040.
- Increase the number of Bicycle Friendly Businesses to include all of the top ten largest employers in Santa Rosa by 2025.

¹ There are many factors that contribute to severe and fatal collisions that are not within the control of the City. This measure recognizes that the City will continue to monitor severe and fatal collisions, respond with appropriate solutions when these collisions occur, and act proactively to create an environment where the safety of the most vulnerable road users is prioritized.
Policies and Actions

Planning

Policy 1: Integrate bicycle and pedestrian network and facility needs into all city planning documents and capital improvement projects.

Action 1.1 Review the City’s Capital Improvement Program (CIP) list on an annual basis to ensure that recommended projects from this Plan Update are incorporated at the earliest possible stage of both new capital projects and maintenance of existing facilities.

Action 1.2 Follow a multi-disciplinary project scoping process that incorporates the needs of all modes and stakeholders, both internal and external. The design process should include the City divisions, departments, and staff responsible for emergency response, parking, law enforcement, maintenance, and other affected areas.

Action 1.3 Utilize the Regional Complete Streets (Routine Accommodation) Checklist to assure consideration of pedestrian and bicycle facility needs in City transportation projects and roadway improvements.

Action 1.4 Evaluate all streets during pavement resurfacing to determine if bicycle facilities can be provided (e.g. bike lanes, wider curb lanes or shoulders) when the striping is reapplied.

Action 1.5 Ensure that all traffic impact studies, analyses of proposed street changes, and development projects address impacts on bicycling and walking facilities. Specifically, the following should be considered:

- Safety of future bicycle and pedestrian operations (based on conformity to Plan Update design guidelines and City, State, and Federal design standards)

Action 1.6 Require new development, or reconstruction if applicable, to address the pedestrian and bicycle circulation element based on the above considerations.

Action 1.7 Conduct regular pedestrian and bicycle counts pursuant to regional methodology as part of before and after project implementation.

Policy 2: Coordinate with other agencies and stakeholders to incorporate Santa Rosa Bicycle and Pedestrian Plan Update elements.

Action 2.1 Work with adjacent governmental entities, public service companies, coordinating agencies, transit agencies, and the Santa Rosa Junior College to ensure that Plan Update recommendations are incorporated into their planning and areas of responsibility, and vice versa.

Action 2.2 Work with transit providers to improve bicycle and pedestrian access (first/last mile connections) to transit stations and the comfort of transit stops and onboard transit vehicles, especially during peak commute hours, and to provide secure bike parking, benches, and covered waiting areas at stations and stops.

Action 2.3 Establish an ad-hoc Bicycle and Pedestrian Advisory Board Sub-Committee to monitor the launch of the one-year bikeshare pilot program funded by MTC. The Sub-Committee may evaluate the program and report to City Council the successes and opportunities to expand the program to other areas of the city. A bikeshare business plan may be needed as a next step.
Design

Policy 3: Design a Low Stress Bikeway Network suitable for the “Interested but Concerned,” to include people of all ages and ability levels riding bicycles.

Action 3.1 Design a network of continuous Low Stress Bikeways as identified in this Plan Update. Projects that improve comfort at intersections and along corridors with high stress should be prioritized.

Action 3.2 Utilize the design guidelines in this Plan Update, guidance from North American City Transportation Officials (NACTO), and most recent State and Federal design standards and guidelines to develop plans for on-street bicycle facilities along corridors and at intersections.

Action 3.3 Follow a multi-disciplinary design process that incorporates and balances the needs of all modes and stakeholders, both internal and external; the design process should include the City divisions, departments, and staff responsible for emergency response, parking, law enforcement, maintenance, and other affected areas as well as other responsible external stakeholder agencies.

Action 3.4 Continue to install bicycle-sensitive loop detectors at all signalized intersections with accurately-placed pavement markings placed such that the bicycle detection symbol is off-center of the travel lane and not on the right edge of the travel lane. Consider benefits and costs of infrared, video, and microwave detection.

Policy 4: Design an accessible, connected, convenient, and comfortable pedestrian network to serve people of all ages and abilities.

Action 4.1 Include sidewalks on all new or retrofitted roadways.

Action 4.2 Identify and construct sidewalks in areas where they are incomplete.

Action 4.3 Continue to enforce the sidewalk maintenance program to ensure that adjacent property owners maintain the sidewalk properly.

Action 4.4 Plan and develop well-connected streets, sidewalks, and pathways that provide the most direct paths of travel for pedestrians. Provide connections between or through cul-de-sacs and remove barriers to walking where feasible.

Action 4.5 Continue to install lead pedestrian interval phases in traffic signal timing in the urban core and outside the urban core, as warranted, to encourage walking and facilitate crossing busy regional or high-volume transitional streets.

Action 4.6 With community input, review signal locations on an annual basis to identify and adjust for increased pedestrian clearance time where needed.

Action 4.7 With community input, routinely evaluate locations for enhancing crosswalks.
Policy 5: Design accessible, comfortable, and continuous off-street paths that contribute to the framework of Santa Rosa’s active transportation network.

**Action 5.1** Utilize the design guidelines in this Plan Update and most recent State and Federal design standards and guidelines to develop plans for ADA-compliant off-street trails (Class I shared-use paths).

**Action 5.2** Utilize Crime Prevention Through Environmental Design (CPTED) principles in the design of trails.\(^2\)

**Action 5.3** Identify opportunities for trailhead enhancements to include gateway treatments, public art, wayfinding, and placemaking.

Policy 6: Develop an easy to read, unified, and comprehensive wayfinding system for bicyclists, pedestrians, and trail users.

**Action 6.1** Pursue grant funding to develop a consistent citywide wayfinding program and replace all prior wayfinding signs.

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**Funding**

Policy 7: Leverage existing funding to maximize project delivery.

**Action 7.1** Utilizing funds as a local match, aggressively pursue funding from available grant sources.

**Action 7.2** Actively develop projects from the Plan Update to position the City to best compete for grant funding.

**Action 7.3** Follow the Plan Update’s prioritization recommendations, which include equity and other funding-agency-determined factors in scoring.

**Action 7.4** Seek to submit grant applications for projects that most competitively match with funding agency criteria.

Policy 8: Continue and enhance the City’s annual commitment of local funds for bicycle and pedestrian project implementation.

**Action 8.1** Continue preparing an annual Work Plan including the status of pedestrian and bicycle projects in this Plan Update that have been completed, are in progress, and are proposed for the budget year showing scope, schedule, and budget by fund source.

**Action 8.2** Through the CIP process, assess and prepare for upcoming staffing, consultant, and capital funding needs as projects arise.\(^3\)

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\(^2\) CPTED is a multidisciplinary approach to reducing criminal behavior that includes designing public spaces and pathways to promote visibility, reduce or eliminate hiding places, and promote desired activity and natural surveillance, among other tools.

\(^3\) According to the League of American Bicyclists, the average Bronze Bicycle Friendly Community invests nine percent of all funding spent on transportation on bicycle projects each year.
Project Delivery

Policy 9: Construct projects within the Plan Update utilizing all available internal and external resources.

Action 9.1 If additional internal support is required, establish a full-time pedestrian and bicycle coordinator position to lead internal and external coordination and guide the implementation of this Plan Update’s projects and programs.

Action 9.2 Continue to support a representative Bicycle and Pedestrian Advisory Board to assist City staff in the planning, design, and implementation of projects that positively impact bicycle and pedestrian travel and safety.

Policy 10: Ensure that bicyclists and pedestrians have accommodation in work zones.

Action 10.1 Incorporate routine accommodation for pedestrian and bicycle facilities when developing priority lists for overlay and construction projects, maintenance, and in the City’s guidelines.

Operations & Maintenance

Policy 11: Maintain designated facilities to be comfortable and free of hazards to bicycling and walking.

Action 11.1 Sweep streets regularly, with priority given to those with higher pedestrian and bicycle traffic.

Action 11.2 Trim overhanging and encroaching vegetation to maintain a clear path of travel along pedestrian and bicycle facilities.

Action 11.3 Develop and implement an appropriate minimum paving surface standard for bicycle boulevards and other low stress bikeways.

Action 11.4 Update repaving project selection methodology to prioritize bicycle boulevards and other low stress bikeways to ensure that the minimum paving surface standard is maintained.

Action 11.5 Incorporate maintenance needs into design of separated bikeways to ensure proper maintenance after construction.

Action 11.6 Work with homelessness navigation centers, the Police Department, and the Department of Housing and Community Services to provide services to unhoused residents encamped on trails.

Policy 12: Maintain bicycle parking.

Action 12.1 Develop a procedure for inspection and prompt replacement of damaged bicycle racks.

Action 12.2 Remove abandoned bicycles from bicycle racks and donate to local non-profit community bicycle shops for use in youth education programs.

Action 12.3 Encourage event organizers to provide and publicize valet bicycle parking. Amend Santa Rosa event permitting process to require secure valet bicycle parking at events over a certain size.
Programs

Policy 13: Educate pedestrians, bicyclists, motorists, and the public about roadway safety and the benefits of bicycling and walking.

Action 13.1 Develop a comprehensive Vision Zero strategy that outlines engineering, enforcement, education and encouragement actions.

Action 13.2 Support the continuation and expansion of bicycle safety education programs such as those taught by Sonoma County Bicycle Coalition.

Policy 14: Encourage all Santa Rosa Public Schools to participate in the Safe Routes to School program.

Action 14.1 Continue to support walk audits at Santa Rosa public schools and utilize improvement plans to pursue grant funding for implementation.

Action 14.2 Continue City staff participation in countywide Safe Routes to School task forces.

Policy 15: Support police enforcement activities targeted at both bicyclists and motorists that educate and reinforce proper and safe behaviors.

Action 15.1 Establish a bicycle ticket diversion program per the Bicycle Traffic School bill (AB 902) that allows bicyclists who are ticketed for certain infractions to attend a class on safe bicycle riding to reduce or eliminate their fines.

Action 15.2 Focus data-driven enforcement efforts on behaviors with greatest crash risk and/or injury severity such as vehicle speeding or bicyclist wrong-way riding.

Policy 16: Increase bicycling and walking through targeted marketing and promotion.

Action 16.1 Provide current and easily accessible information about the Santa Rosa bicycle network, bicycle programs, and bicycle parking. This includes distribution of online bicycle maps, maintaining up-to-date City web pages, and providing opportunities for continued public feedback.

Action 16.2 Encourage major employers to continue, develop, or expand bicycle promotion programs for their employees and recognize those companies designated a Bicycle Friendly Business by the League of American Bicyclists

Action 16.3 Encourage the use of bicycles for City employee commute and work travel purposes so that the City is seen as a model employer.

Action 16.4 Continue to sponsor the annual Bicycle and Walk to Work Week in May to receive input on the pedestrian and bicycle program as well as to educate the public as to the benefits of walking and bicycling and the Transportation Demand Management program.

Action 16.5 Continue to offer and expand, if possible, the City’s Free Ride Program.

Evaluation

Policy 17: Measure bicycling and walking activity through an annual count program.

Action 17.1 Establish an annual count program using a professional data collection firm or the installation of permanent automated counters at key locations around the city.

Action 17.2 Make the data publicly available on an on-going or at least annual basis.

Policy 18: Report annually on the implementation of this Plan Update.

Action 18.1 Prepare and present a report to the Bicycle and Pedestrian Advisory Board describing the progress in:

- Achieving the three Goals of the Plan Update in terms of their specific performance measures
- Implementing the Policies and Actions of this Plan Update
3. Santa Rosa Today

This chapter describes the active transportation landscape in Santa Rosa, including a discussion of related themes that inform the recommended infrastructure projects, programs, and policies in the community.

Local Context

Demographics

Santa Rosa is home to 173,165 residents, according to 2016 American Community Survey five-year estimates. This represents more than one third of the Sonoma County population of 497,776. When compared to the county population, Santa Rosa is slightly younger, with more residents under 10 years old and between 20-34 years old, as shown in Figure 3-1.

![Figure 3-1: Population by Age in Santa Rosa and Sonoma County](image)

Santa Rosa families participate in a Kidical Mass ride
Land Use & Major Destinations

This Bicycle & Pedestrian Master Plan Update will support Santa Rosa’s Priority Development Areas (PDAs), the areas where the City plans to focus development in denser, mixed-use areas along transit routes shown in Figure 3-2. In conjunction with this development and transit service, high-quality bicycling and walking infrastructure within PDAs is intended to offer improved alternatives to driving. The existing and planned land uses in Santa Rosa will inform the recommendations in this Plan Update in an effort to maximize the number of people who will have access to walking and bicycling networks.

Major destinations in Santa Rosa include schools, parks, healthcare facilities, shopping centers, city hall, county administration, and transit stations, mapped in Figure 3-3. These destinations are dispersed throughout the four quadrants of the city, and will require a comprehensive network of active transportation facilities to allow people to walk or bicycle instead of driving. Employment density is highest in the downtown area and in northern Santa Rosa along Highway 101 where Kaiser Permanente Medical Center and several federal and county offices are located.

Transit Access

Santa Rosa is served by several transit providers and routes that offer connections to local and regional destinations. Santa Rosa CityBus and Sonoma County Transit both offer local bus service, and the Sonoma-Marin Area Rail Transit (SMART) station downtown has service to the Sonoma County Airport as well as Rohnert Park, Petaluma, Novato, and San Rafael. Golden Gate Transit also offers bus service between Santa Rosa and San Francisco. See Figure 3-4 for a map of frequently used transit routes in the city.

Many bicyclists use transit for a portion of their trip, making bicycling access to transit stops and stations an important part of the active transportation network. Between 2013 and 2018, approximately 30,000 bicycles were brought on CityBus trips each year.
FIGURE 3-2

Priority Development Area

Low Density
Medium Density
High Density
Commercial + High Mix Use
Industrial

LAND USE INTENSITY

Destination + Boundaries

City Hall
SMART Station
Park
City Limits
Urban Growth Boundary

Map produced February 2018.

PRIORITY DEVELOPMENT AREAS
SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018
Equity

Equity issues are an important part of all planning processes, including development of this Plan Update. Historically, communities with large populations of people of non-white races or ethnicities and low income households have received less investment from their local governments, including an uneven spatial distribution of facilities and safety improvements for people walking and bicycling. A review of citywide factors related to walking, bicycling, and equity identified neighborhoods that are disproportionately burdened by pollution or other negative impacts. These and other considerations informed the projects and prioritization recommended in this Plan Update.

Income and Vehicle Access

While Sonoma County has a higher median household income at $66,833 than the state of California at $63,783, Santa Rosa is slightly less affluent than both the county and state with a median household income of $62,705. Median income varies widely between cities in Sonoma County, as shown in Figure 3-5. The other two large cities—Rohnert Park and Petaluma—have median household incomes of $60,333 and $80,907 respectively. All median income figures are from the American Community Survey 2016 5-year estimates.

Just two percent of households in Santa Rosa lack access to a vehicle, as shown in Figure 3-6. Nearly 80 percent of households have access to two or more vehicles. These rates are nearly identical to countywide vehicle access.

With such widespread vehicle access, few households rely on walking or bicycling out of necessity. To create significant shifts in trips away from driving, walking and bicycling must be convenient and comfortable options to attract more people.
Communities of Concern

As part of the San Francisco Bay Area’s long-range integrated transportation and land use/housing strategy, Plan Bay Area, the Association of Bay Area Governments (ABAG), and the Metropolitan Transportation Commission (MTC) analyzed the distribution of benefits and burdens that would result from implementation of the region’s preferred planning scenario. To conduct this analysis, ABAG and MTC, along with extensive input from an Equity Working Group and other stakeholders, identified “Communities of Concern” throughout the Bay Area region that meet at least four thresholds listed in Table 3-1.

Table 3-1: Community of Concern Factors and Thresholds

<table>
<thead>
<tr>
<th>Factor</th>
<th>% of Regional Population</th>
<th>Community of Concern Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minority Population</td>
<td>54%</td>
<td>70%</td>
</tr>
<tr>
<td>Low Income (&lt;200% of poverty) Population</td>
<td>23%</td>
<td>30%</td>
</tr>
<tr>
<td>Limited English Proficiency Population</td>
<td>9%</td>
<td>20%</td>
</tr>
<tr>
<td>Zero-Vehicle Households</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Seniors 75 and Older</td>
<td>6%</td>
<td>10%</td>
</tr>
<tr>
<td>Population with a Disability</td>
<td>18%</td>
<td>25%</td>
</tr>
<tr>
<td>Single-Parent Families</td>
<td>14%</td>
<td>20%</td>
</tr>
<tr>
<td>Cost-Burdened Renters</td>
<td>10%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: Appendix A: Detailed Methodology, Plan Bay Area (2013).

In the City of Santa Rosa, the three Communities of Concern include the Roseland neighborhood southwest of the Highway 101 and SR 12 interchange, an area north of College Avenue and west of Highway 101, and the downtown area east of Highway 101 between College Avenue and Sonoma Avenue. See Figure 3-7 for a map of Communities of Concern. The walking and bicycling improvements recommended in this Plan Update will consider the benefits and burdens of those projects on these communities.

CalEnviroScreen

The California Office of Environmental Health Hazard Assessment developed the CalEnviroScreen tool to help identify communities that are disproportionately burdened by multiple sources of pollution. It combines pollution data (such as ozone concentrations and drinking water contaminants) with population indicators (such as birth weight and educational attainment).

This is also a tool used in California’s Active Transportation Program grant application scoring. Communities that score in the most burdened 25 percent of the state are considered to be disadvantaged and receive a small advantage in the competitive funding process. Areas in Santa Rosa that meet this threshold are mapped in Figure 3-8.
COMMUNITIES OF CONCERN

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-7

- Community of Concern

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced February 2018.

City of Santa Rosa
Map produced February 2018.
CalEnviroScreen 3.0
SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-8

SCORE (PERCENTILE)

- 1 - 25% (Lowest Scores)
- 26 - 50%
- 51 - 75%
- 76 - 100% (Highest Scores)

*Scoring is based on environmental, health, and socioeconomic conditions. Areas with higher scores are faced with more adverse conditions and areas with lower scores are faced with less adverse conditions.

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced February 2018.
Biking and Walking Today

Existing Bicycle Network

The California Department of Transportation (Caltrans) designates four classes of bicycle facilities: Class I shared use paths, Class II bicycle lanes, Class III bicycle routes, and Class IV separated bikeways. The City’s current bicycle network has approximately 113 miles of bikeways, and has grown by 40 percent since the last Bicycle and Pedestrian Master Plan Update in 2010 (see Table 3-2). Descriptions of each bikeway class are included in the following section, and bikeways are mapped in Figure 3-9 through Figure 3-14 to show where they currently exist in Santa Rosa.

<table>
<thead>
<tr>
<th>Bikeway Type</th>
<th>2010 Miles</th>
<th>2018 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I Shared Use Paths</td>
<td>13</td>
<td>30.9</td>
</tr>
<tr>
<td>Class II Bicycle Lanes</td>
<td>46</td>
<td>69.2</td>
</tr>
<tr>
<td>Class III Bicycle Routes</td>
<td>18</td>
<td>12.8*</td>
</tr>
<tr>
<td>Class III Bicycle Boulevards</td>
<td>0</td>
<td>0.3</td>
</tr>
<tr>
<td>Class IV Separated Bikeways</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>77</td>
<td>113.2</td>
</tr>
</tbody>
</table>

*Several miles of Class III bicycle routes were upgraded to Class II bicycle lanes

Class I Shared Use Paths

Class I shared use paths are paved trails completely separated from the street. They allow two-way travel by people bicycling and walking, and are often considered the most comfortable facilities for children and inexperienced riders as there are few potential conflicts between people bicycling and people driving.

There are currently 30.9 miles of Class I shared use paths in Santa Rosa.
Class II Bicycle Lanes

Class II bicycle lanes are striped preferential lanes on the roadway for one-way bicycle travel. Some bicycle lanes include a striped buffer on one or both sides to increase separation from the traffic lane or from parked cars, where people may open doors into the bicycle lane. Buffered Class II bicycle lanes were recently installed on 3rd Street from Morgan Street to B Street, where 3rd Street passes underneath Santa Rosa Plaza.

There are currently 69 miles of Class II bicycle lanes and 0.2 miles of buffered bicycle lanes in Santa Rosa.

Class III Bicycle Routes

Class III bicycle routes are signed routes where people bicycling share a travel lane with people driving. Because they are shared facilities, bicycle routes are only appropriate on quiet, low-speed streets with relatively low traffic volumes. Some Class III bicycle routes include shared lane markings or “sharrows” that recommend proper bicycle positioning in the center of the travel lane and alert drivers that bicyclists may be present. Others include more robust traffic calming features to promote bicyclist comfort and are known as “bicycle boulevards.” The Santa Rosa Fire Department should be included in discussions about new or altered features on bicycle boulevards, to ensure access for emergency responders is maintained.

There are currently 12.8 miles of Class III bicycle routes in Santa Rosa and 0.3 miles of bicycle boulevard on Jennings Avenue.
Class IV Separated Bikeways

Class IV separated bikeways are on-street bicycle facilities that are physically separated from motor vehicle traffic by a vertical element or barrier, such as a curb, bollards, or vehicle parking aisle. They can allow for one- or two-way travel on one or both sides of the roadway.

No Class IV separated bikeways exist in Santa Rosa.

Existing Support Facilities

Support facilities are also needed to attract and maintain bicyclists by considering their needs throughout their journey. People are less likely to ride their bicycles to destinations without secure bicycle parking. Other support facilities include showers or lockers at destinations, repair stations with basic tools, and wayfinding or guide signs to help bicyclists navigate along the way.

A complete bicycle network must include secure bicycle parking at each end of every trip. Bicycle parking can generally be divided into two categories: short-term bicycle racks and long-term higher-security parking.

The City has installed short-term bicycle parking throughout downtown on sidewalks, plazas, and in parking garages. These racks have been funded primarily through the Transportation Fund for Clean Air, provided by the Bay Area Air Quality Management District. Currently, 62 bicycle racks are installed through downtown Santa Rosa, as shown in Figure 3-15.

Long-term bicycle parking is available in the form of on-demand bike lockers. BikeLink, a private vendor, has installed 80 lockers at 12 locations across the city listed in Table 3-3. To use the lockers, bicyclists purchase a BikeLink card online or at one of three vendors in the city. Once activated, the card can be loaded with funds to purchase time at 3-5 cents per hour.
From September 2017 to October 2018, the 12 bicycle lockers at the Santa Rosa Downtown SMART station combined averaged more than 100 rentals per month (each locker is rented an average of 9.14 times per month). At the Santa Rosa North station, the four lockers combined averaged just over 20 rentals per month (each locker rented an average of 5.08 times per month). The average rental length at Santa Rosa Downtown is just over 11 hours, while lockers at the Santa Rosa North station are rented for an average of 15 hours. At both locations, nearly all rentals occur on weekdays—93 percent at Santa Rosa Downtown and 98 percent at Santa Rosa North.

Table 3-3: Bicycle Locker Locations

<table>
<thead>
<tr>
<th>Locker Location</th>
<th>Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Rosa Junior College</td>
<td>36</td>
</tr>
<tr>
<td>Bailey Field</td>
<td>4</td>
</tr>
<tr>
<td>Tauzer Gym</td>
<td>4</td>
</tr>
<tr>
<td>Pioneer Hall</td>
<td>4</td>
</tr>
<tr>
<td>Quinn Swim Center</td>
<td>4</td>
</tr>
<tr>
<td>Doyle Library</td>
<td>8</td>
</tr>
<tr>
<td>Plover Hall</td>
<td>8</td>
</tr>
<tr>
<td>Analy Village</td>
<td>4</td>
</tr>
<tr>
<td>SMART – Santa Rosa Downtown</td>
<td>12</td>
</tr>
<tr>
<td>SMART – Santa Rosa North</td>
<td>4</td>
</tr>
<tr>
<td>Sonoma County Permit Resource Management</td>
<td>12</td>
</tr>
<tr>
<td>Sonoma County La Plaza</td>
<td>8</td>
</tr>
<tr>
<td>Sonoma County Hall of Justice</td>
<td>8</td>
</tr>
</tbody>
</table>
EXISTING BIKEWAYS

DOWNTOWN

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-10

DESTINATIONS + BOUNDARIES

City Hall
SMART Station
Shopping Center
School
Hospital
Park

Map produced February 2018.
NORTHWEST QUADRANT
SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-11
EXISTING BIKEWAYS
- Class I Shared-Use Path
- Class II Bike Lane
- Class III Bike Route

DESTINATIONS + BOUNDARIES
- City Hall
- SMART Station
- Shopping Center
- School
- Hospital
- Park
- City Limits
- Urban Growth Boundary

Map produced February 2018.
EXISTING BIKEWAYS

- **Class I Shared-Use Path**
- **Class II Bike Lane**
- **Class III Bike Route**

**DESTINATIONS + BOUNDARIES**

- City Hall
- SMART Station
- Shopping Center
- School
- Hospital
- Park
- City Limits
- Urban Growth Boundary

Map produced February 2018.
FIGURE 3-13
EXISTING BIKEWAYS

- **Class I Shared-Use Path**
- **Class II Bike Lane**
- **Class III Bike Route**

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Shopping Center
- School
- Hospital
- Park
- City Limits
- Urban Growth Boundary

Map produced February 2018.

City Hall
SMART Station
Shopping Center
School
Hospital
Park
City Limits
Urban Growth Boundary

Map produced February 2018.
FIGURE 3-14

EXISTING BIKEWAYS

- Green: Class I Shared-Use Path
- Blue: Class II Bike Lane
- Purple: Class III Bike Route

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Shopping Center
- School
- Hospital
- Park
- City Limits
- Urban Growth Boundary

Map produced February 2018.
BICYCLE PARKING

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-15

- Bicycle Rack
- Class I Shared-Use Path
- Class II Bike Lane
- Class III Bike Route

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Shopping Center
- School
- Hospital
- Park

Map produced February 2018.
Existing Pedestrian Network

There are many features that contribute to a convenient and comfortable walking environment. Significant investments and commitments to future improvements have been made that continue to enhance the pedestrian experience in Santa Rosa.

Funding Commitments

In the 2017-2018 Capital Improvement Program (CIP), Traffic Safety and Transportation projects focus on street rehabilitation, traffic safety, bicycle and pedestrian safety, and street lighting. Projects related to improving circulation and safety for all users were funded at almost $3 million, representing approximately 24 percent of the total budget request for transportation projects. These projects include traffic signal improvements, sidewalk installations, pedestrian signal installations, traffic calming, and bikeway improvements.

$1,500,000 has been committed to date for LED streetlight replacements, which last longer and require less maintenance than alternatives. This will allow the city to improve and expand lighting, creating a more comfortable walking environment.

The City has also committed $1.2 million from the General Fund in an ongoing effort to implement facility improvements for people with disabilities, in compliance with the Americans with Disabilities Act (ADA). These improvements often include sidewalk gap closures, pavement repairs, or curb ramps.

Sidewalks

Sidewalks form the backbone of the pedestrian transportation network. Most streets in the City have sidewalks or pathways on at least one side. Within the City limits, sidewalk maintenance is the responsibility of the property owner. Some parts of the City are not required to provide sidewalks. These include rural hillside developments, such as portions of the Fountaingrove area, or areas previously built out while under County jurisdiction and subsequently annexed into the City, such as the Castlerock subdivision and Roseland community.

High Visibility Crosswalks

Crosswalks are a legal extension of the sidewalk and provide guidance for pedestrians who are crossing roadways by defining and delineating their path of travel. Crosswalks are not required to be marked, however marked crosswalks alert drivers of a pedestrian crossing point and increase yielding to pedestrians. Markings can be standard parallel lines or the “continental” high visibility pattern shown in the image above, which enhances visibility of the crossing and is becoming best practice. Crosswalks in school zones are yellow.

The City conducted a review of uncontrolled crossings in 2014, which evaluated 185 crossing locations. The study included a robust data collection effort, and made detailed recommendations for each location to improve accessibility and comfort, including additional pavement markings for visibility, beacons or traffic controls, and visibility improvements such as parking removal or vegetation maintenance. The City was recently awarded a Highway Safety Improvement Program (HSIP) grant to implement the recommended improvements at approximately 100 of the uncontrolled crossings. Unfunded locations will be carried forward in this Bicycle & Pedestrian Master Plan Update.
Pedestrian Hybrid Beacons

Pedestrian hybrid beacons are used to enforce motorist yielding to pedestrians at uncontrolled crosswalk locations. The beacon, when activated by a person wishing to cross, flashes yellow before displaying a solid red signal to motorists, requiring them to stop. Pedestrians are then shown a WALK signal, and may cross the road. When the WALK phase is complete, the beacon flashes yellow before returning to a dark inactive state. Operation of the beacon is illustrated in the graphic below.

Santa Rosa recently installed a hybrid beacon at this crossing on Montgomery Drive at Spring Lake Village.

Rectangular Rapid Flashing Beacons

Rectangular Rapid Flashing Beacons or RRFBs increase visibility of uncontrolled or midblock crosswalks with bright LED lights activated by a pedestrian push button.

Santa Rosa has multiple RRFBs throughout the City, including at 3rd Street and Courthouse Square.

Barriers to Active Transportation

Two freeways cross the City, dividing it into four quadrants. Highway 101 runs north-south through Santa Rosa, and State Route (SR) 12 runs east-west. The SMART rail line also runs north-south through the City, west of Highway 101. These transportation features create challenges for people walking and bicycling in some places, as crossings are limited.
Bicycle and Pedestrian Trips

The most consistent bicycling and walking data comes from American Community Survey 5-year estimates, which record the mode of transportation people use to commute to work. Over the most recent five years of available data, shown in Table 3-4, bicycling in Santa Rosa has remained steady just above one percent while walking has decreased slightly from 3.3 percent to 2.6 percent.

<table>
<thead>
<tr>
<th>Year</th>
<th>Bicycle Mode Share</th>
<th>Walking Mode Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>1.2%</td>
<td>3.3%</td>
</tr>
<tr>
<td>2013</td>
<td>1.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>2014</td>
<td>1.0%</td>
<td>2.7%</td>
</tr>
<tr>
<td>2015</td>
<td>1.2%</td>
<td>2.8%</td>
</tr>
<tr>
<td>2016</td>
<td>1.3%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

In addition to reviewing data on mode of transportation to work, the City of Santa Rosa also conducts bicycle and pedestrian counts at locations around the city. In 2018, counts conducted on the SMART Trail at 9th Street and at Sebastopol Road reported an average of 576 pedestrians and 53 bicyclists using the trail each day. Active transportation use was highest on weekdays, and peaked from approximately 7 - 10 a.m. and from 3 - 6 p.m., suggesting residents may be using the path to commute to work.

By comparison, counts conducted in 2016 on the nearby Joe Rodota Trail showed a daily average of 265 people bicycling along that trail. These counts showed consistent use during both weekdays and weekends, with weekend days showing peak hours similar to the SMART trail. This suggests the Joe Rodota Trail is used for both commuting to work and for weekend recreational use.

Hourly counts of people walking and bicycling were also gathered from multiple agencies in Santa Rosa that collect this data, including the Sonoma County Transportation Authority (SCTA), and the Metropolitan Transportation Commission (MTC). From these hourly counts, average daily walking and bicycling trips were extrapolated and compared to identify cross streets that currently have the most people walking and bicycling in the City. Locations with high bicycling activity are listed in Table 3-5 and locations with high walking activity are listed in Table 3-6. Four locations are popular for both bicycling and walking:

- Mendocino Avenue and Pacific Avenue
- Sonoma Avenue and Brookwood Avenue
- Mendocino Avenue and Steele Lane
- Santa Rosa Avenue and 2nd Street

<table>
<thead>
<tr>
<th>Street</th>
<th>Cross Street</th>
<th>Daily Bicycle Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanda Rosa Creek</td>
<td>Stony Point Road</td>
<td>807</td>
</tr>
<tr>
<td>Joe Rodota Trail</td>
<td>Prince Memorial Greenway</td>
<td>711</td>
</tr>
<tr>
<td>Joe Rodota Trail</td>
<td>Dutton Avenue</td>
<td>629</td>
</tr>
<tr>
<td>Humboldt Street</td>
<td>College Avenue</td>
<td>561</td>
</tr>
<tr>
<td>Mendocino Avenue</td>
<td>Pacific Avenue</td>
<td>546</td>
</tr>
<tr>
<td>Sonoma Avenue</td>
<td>Brookwood Avenue</td>
<td>546</td>
</tr>
<tr>
<td>Joe Rodota Trail</td>
<td>South Wright Road</td>
<td>386</td>
</tr>
<tr>
<td>Santa Rosa Avenue</td>
<td>2nd Street</td>
<td>379</td>
</tr>
<tr>
<td>Mendocino Avenue</td>
<td>Steele Lane</td>
<td>350</td>
</tr>
<tr>
<td>Stony Point Road</td>
<td>Sebastopol Road</td>
<td>307</td>
</tr>
</tbody>
</table>
### Programs

Programs help support walking and bicycling by sharing information, promoting comfort, and creating a vibrant active transportation culture. Communities that have the highest rates of walking and bicycling consistently use a “5Es” approach, with four types of programs complementing Engineering improvements:

- **Education** - providing safety education for people walking, riding bicycles, and driving, as well as education about the environmental and health benefits of active transportation and the facilities available in the community
- **Encouragement** - promoting bicycling and walking as fun and efficient modes of transportation and recreation
- **Enforcement** - enforcing laws and good behavior for people walking, bicycling, and driving
- **Evaluation** - monitoring the success of the effort through counts, surveys, and review of relevant data

The City and its partners have been carrying out the following programs in recent years to support bicycling and walking.

**Safe Routes to School**

The City participates in the Sonoma County Safe Routes to School (SRTS) program, led by the Sonoma County Bicycle Coalition with support from Sonoma County Department of Health Services and SCTA. Many schools participate in program activities, including in-school bicycling and walking safety education, student and family bicycle rodeos, Walk and Bike to School Days, and more. The SRTS program also includes evaluation components to measure changes in walking and bicycling rates along with program activity effectiveness. Over the last four years, the City and its partners have conducted walking audits or other program activities at 20 elementary and middle schools in Santa Rosa. During the 2017-2018 school year, all five public high schools were reviewed for bicycle and pedestrian access.

### Table 3-6: Top Ten Pedestrian Count Locations

<table>
<thead>
<tr>
<th>Street</th>
<th>Cross Street</th>
<th>Daily Walking Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Rosa Avenue</td>
<td>2nd Street</td>
<td>2,511</td>
</tr>
<tr>
<td>Mendocino Avenue</td>
<td>Pacific Avenue</td>
<td>2,432</td>
</tr>
<tr>
<td>B Street</td>
<td>4th Street</td>
<td>1,964</td>
</tr>
<tr>
<td>Davis Street</td>
<td>4th Street</td>
<td>1,071</td>
</tr>
<tr>
<td>Middle Rincon Road</td>
<td>Badger Road</td>
<td>1,032</td>
</tr>
<tr>
<td>Sonoma Avenue</td>
<td>Brookwood Avenue</td>
<td>825</td>
</tr>
<tr>
<td>Morgan Street</td>
<td>4th Street</td>
<td>767</td>
</tr>
<tr>
<td>Mendocino Avenue</td>
<td>Steele Lane</td>
<td>679</td>
</tr>
<tr>
<td>Yulupa Avenue</td>
<td>Bethards Drive</td>
<td>639</td>
</tr>
<tr>
<td>Davis Street</td>
<td>6th Street</td>
<td>567</td>
</tr>
</tbody>
</table>
Bike to Work Day

Bike to Work Day, celebrated in May each year, is a day when people are encouraged to try bicycling to work. Coordinated by the Sonoma County Bicycle Coalition, civic organizations and local business partners host “energizer stations” along popular commute routes to offer snacks and other giveaways to people who participate. In 2017, nearly 1,000 people visited 12 energizer stations in Santa Rosa as part of Bike to Work Day. The City participates by staffing a downtown Energizer station in front of City Hall.

Free Ride Trip Reduction Incentive Program

The City sponsors a “Free Ride – Trip Reduction Incentive Program” for employers in the city to encourage commute alternatives such as bicycling, walking, transit, and carpooling. Incentives include discounted transit passes and a chance to win a $50 gift card. Approximately 1,532 people are signed up for the program. To date, more than 263,536 one-way bicycle commute trips and more than 74,150 one-way walking commute trips have been recorded.

There is also a guaranteed ride home component, where a registered participant may get a free taxi ride home in an emergency. This reduces the need to commute by car because a person is worried they might need to pick up a sick child from school or for some other emergency.

These incentives are part of the City’s Transportation Demand Management (TDM) program and administered by the Santa Rosa Transit Division through a Transportation Fund for Clean Air grant.

Emergency Ride Home

The SCTA recently launched a program offering employees anywhere in the county a free ride home to encourage active transportation commuting in addition to carpooling and transit. If a family emergency arises, the carpool driver must leave unexpectedly, or your bike is stolen, for example, you can take a taxi or app-based rideshare home and be reimbursed up to $125.

Targeted Enforcement

The Santa Rosa Police Department conducts targeted enforcement to address behaviors that contribute to bicycle or pedestrian crashes on an ongoing basis, as funding and resources are available. The Department recently secured a grant from the Office of Traffic Safety to fund education and enforcement activities, including:

- Traffic safety education presentations on bicycle and pedestrian safety
- Additional patrols at intersections with increased incidents of bicycle or pedestrian collisions
- Speed limit, red light, and stop sign enforcement

Similar targeted enforcement efforts in the past have focused on reducing illegal turns by drivers, failures to yield to pedestrians in crosswalks, and bicyclist helmet laws.
Collisions

Data on bicycle- and pedestrian-related collisions can provide insight into locations or roadway features that tend to have higher collision rates, as well as behaviors and other factors that contribute to collisions. These insights will inform the recommendations in this Plan Update to address challenges facing people bicycling and walking.

Collision data involving people walking and bicycling was acquired from the Statewide Integrated Traffic Records System (SWITRS), where the California Highway Patrol and local law enforcement agencies upload collision reports. Ten years of data were evaluated, from September 1, 2007 through August 31, 2017.

A total of 9,706 collisions were reported in Santa Rosa during the study period, 6.5 percent of which involved people bicycling and 5.9 percent of which involved people walking.

Bicycle-Related Collisions

During the study period, 628 collisions in Santa Rosa involved a person riding a bicycle. Only four of these were fatal, but nearly 600 resulted in an injury. See Table 3-7 and Figure 3-17.

Table 3-7: Annual Bicycle Collisions in Santa Rosa

<table>
<thead>
<tr>
<th>Year</th>
<th>Bicycle Collisions</th>
<th>Injuries</th>
<th>Fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007*</td>
<td>18</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>65</td>
<td>55</td>
<td>2</td>
</tr>
<tr>
<td>2009</td>
<td>76</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>70</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>64</td>
<td>62</td>
<td>1</td>
</tr>
<tr>
<td>2012</td>
<td>75</td>
<td>71</td>
<td>1</td>
</tr>
<tr>
<td>2013</td>
<td>59</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>47</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>63</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>56</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>2017*</td>
<td>35</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>628</td>
<td>591</td>
<td>4</td>
</tr>
</tbody>
</table>

*2007 data reflects September 1 through December 31. 2017 data reflects January 1 through August 31.

Overall during the study period, fewer than one percent of bicycle collisions were fatal. Over seven percent resulted in severe injury, and approximately five percent did not result in any injury. Figure 3-16 shows collision severity for the study period.
As shown in Figure 3-18, no bicyclists under 10 years old were involved in collisions during the study period. Bicyclists between 10 and 54 years old are overrepresented among collision victims compared to the general population, with 10-19 showing the largest discrepancy.

Figure 3-18: Collisions by Bicyclist Age Range

Nearly 80 percent of collisions occurred during daylight hours, and an additional 15 percent occurred at night where street lights were present and functioning.

Examining only those bicycle collisions that occurred within 500 feet of a school, 74 of 146 collisions occurred during school hours between 7 am and 4 pm, and 19 of those school-hour collisions involved bicyclists under 18 years old.

The majority of the bicycle-involved collisions during the study period were attributed to three violations that lend insight into behaviors that contribute to collisions:

- Violating the right of way of a driver (25 percent)
- Wrong side of the road (24 percent)
- Improper turning (18 percent)

When evaluating the locations where bicycle-involved collisions are more likely to occur, six locations approach an average of one collision every two years, as shown in Table 3-8.

Table 3-8: Top Bicycle Collision Intersections

<table>
<thead>
<tr>
<th>Location</th>
<th>Bicycle-Involved Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corby Ave &amp; Hearn Ave</td>
<td>12</td>
</tr>
<tr>
<td>College Ave &amp; Mendocino Ave</td>
<td>8</td>
</tr>
<tr>
<td>Mendocino Ave &amp; Pacific Ave</td>
<td>6</td>
</tr>
<tr>
<td>Sonoma Ave &amp; South E St</td>
<td>6</td>
</tr>
<tr>
<td>1st St &amp; Santa Rosa Ave</td>
<td>5</td>
</tr>
<tr>
<td>3rd St &amp; Santa Rosa Ave</td>
<td>5</td>
</tr>
</tbody>
</table>
Pedestrian-Related Collisions

During the study period, 573 collisions in Santa Rosa involved a person walking. Thirty-three of these were fatal collisions, and over 500 resulted in an injury. See Table 3-9 and Figure 3-21.

Table 3-9: Annual Pedestrian Collisions

<table>
<thead>
<tr>
<th>Year</th>
<th>Pedestrian Collisions</th>
<th>Injuries</th>
<th>Fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007*</td>
<td>23</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>45</td>
<td>43</td>
<td>1</td>
</tr>
<tr>
<td>2009</td>
<td>54</td>
<td>49</td>
<td>4</td>
</tr>
<tr>
<td>2010</td>
<td>49</td>
<td>46</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>66</td>
<td>56</td>
<td>8</td>
</tr>
<tr>
<td>2012</td>
<td>74</td>
<td>69</td>
<td>4</td>
</tr>
<tr>
<td>2013</td>
<td>51</td>
<td>47</td>
<td>3</td>
</tr>
<tr>
<td>2014</td>
<td>48</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>2015</td>
<td>49</td>
<td>44</td>
<td>4</td>
</tr>
<tr>
<td>2016</td>
<td>69</td>
<td>66</td>
<td>4</td>
</tr>
<tr>
<td>2017*</td>
<td>45</td>
<td>41</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>573</td>
<td>528</td>
<td>33</td>
</tr>
</tbody>
</table>

*2007 data reflects September 1 through December 31. 2017 data reflects January 1 through August 31.

Overall during the study period, just under six percent of pedestrian collisions were fatal. Nearly 15 percent resulted in severe injury, and only about three percent did not result in any injury. Figure 3-19 shows collision severity for the study period.

As shown in Figure 3-20, pedestrians between 10 and 54 years old are overrepresented among collision victims compared to the general population.

Figure 3-19: Pedestrian Collision Severity

Figure 3-20: Collisions by Pedestrian Age Range

Just under 60 percent of collisions occurred during daylight hours, and an additional 38 percent occurred at night where street lights were present and functioning.

Examining only those pedestrian collisions that occurred within 500 feet of a school, 49 of 138 collisions occurred during school hours between 7 am and 4 pm, and 16 of those school-hour collisions involved pedestrians under 18 years old.

Over 80 percent of the pedestrian-involved collisions during the study period were attributed to two violations that lend insight into behaviors that contribute to collisions:

- Violating the right-of-way of a pedestrian (44 percent)
- Pedestrian violation (37 percent)

When evaluating the locations where pedestrian-involved collisions are more likely to occur, two locations average more than one collision every two years, as shown in Table 3-10.

Table 3-10: Top Pedestrian Collision Intersections

<table>
<thead>
<tr>
<th>Location</th>
<th>Pedestrian-Involved Collisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd St &amp; D St</td>
<td>10</td>
</tr>
<tr>
<td>McConnell Ave &amp; Mendocino Ave</td>
<td>7</td>
</tr>
</tbody>
</table>
PEDESTRIAN COLLISIONS

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-21

PEDESTRIAN COLLISIONS
from January 2007 to December 2016

- 1 - 2
- 3 - 7
- 8 - 17
- 18 - 47

DESTINATIONS + BOUNDARIES

City Hall
SMART Station
Shopping
School
Hospital
Park
City Limits
Urban Growth Boundary

Map produced February 2018.
Source: TIMS.
High-Injury Network

To identify street segments in the City where serious collisions are occurring at a greater frequency, a high-injury network was developed based on the number and proximity of collisions that resulted either in death or severe injury to a person bicycling or walking. The City’s street network was evaluated for segments where three or more fatal or severe injury collisions occurred that met a threshold for concentration.

For bicycle-involved collisions, this threshold was set at 0.5 fatal or severe-injury collisions per 1,000 feet. For pedestrian-involved collisions, the threshold is one fatal or severe-injury collision per 1,000 feet. These high-injury network segments are listed in Table 3-11 and Table 3-12, and mapped in Figure 3-22.

Table 3-11: High Injury Bicycle Corridors

<table>
<thead>
<tr>
<th>Street</th>
<th>Start/End</th>
<th>Fatal &amp; Severe Injury Collisions</th>
<th>Collisions per 1K ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mendocino Ave</td>
<td>Elliott Ave to 10th St</td>
<td>5</td>
<td>1.0</td>
</tr>
<tr>
<td>Santa Rosa Ave</td>
<td>Petaluma Hill Rd to Colgan Ave</td>
<td>3</td>
<td>0.9</td>
</tr>
<tr>
<td>Guerneville Rd/ Steele Ln</td>
<td>Dutton Ave to Rowe Dr</td>
<td>5</td>
<td>0.8</td>
</tr>
<tr>
<td>Sebastopol Rd</td>
<td>Mattson Rd to Dutton Ave</td>
<td>6</td>
<td>0.6</td>
</tr>
<tr>
<td>Stony Point Rd</td>
<td>College Ave to Campbell Dr</td>
<td>5</td>
<td>0.5</td>
</tr>
<tr>
<td>Montgomery Dr</td>
<td>Farmers Ln to Mission Blvd</td>
<td>3</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Table 3-12: High Injury Pedestrian Corridors

<table>
<thead>
<tr>
<th>Street</th>
<th>Start/End</th>
<th>Fatal &amp; Severe Injury Collisions</th>
<th>Collisions per 1K ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Rosa Ave</td>
<td>Charles St to Mill St</td>
<td>3</td>
<td>4.7</td>
</tr>
<tr>
<td>3rd St</td>
<td>Gate Way to Stony Point Rd</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>Santa Rosa Ave</td>
<td>Court Rd to Bellevue Ave</td>
<td>4</td>
<td>2.2</td>
</tr>
<tr>
<td>Piner Rd</td>
<td>Bay Village Cir to Coffey Ln</td>
<td>3</td>
<td>2.1</td>
</tr>
<tr>
<td>Mendocino Ave</td>
<td>McConnell Ave to 4th St</td>
<td>9</td>
<td>1.6</td>
</tr>
<tr>
<td>Farmers Ln</td>
<td>Long Dr to Sonoma Ave</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td>Guerneville Rd/ Steele Ln</td>
<td>Coffey Ln to Mendocino Ave</td>
<td>8</td>
<td>1.3</td>
</tr>
<tr>
<td>Stony Point Rd</td>
<td>Glenbrook Dr to Sebastopol Rd</td>
<td>5</td>
<td>1.3</td>
</tr>
<tr>
<td>4th St</td>
<td>Mendocino Ave to College Ave</td>
<td>4</td>
<td>1.2</td>
</tr>
<tr>
<td>3rd St</td>
<td>Hwy 101 to E St</td>
<td>3</td>
<td>1.2</td>
</tr>
<tr>
<td>Range Ave</td>
<td>Bicentennial Way to Guerneville Rd</td>
<td>5</td>
<td>1.1</td>
</tr>
<tr>
<td>College Ave</td>
<td>Link Ln to Mendocino Ave</td>
<td>5</td>
<td>1.0</td>
</tr>
</tbody>
</table>
HIGH INJURY NETWORK
SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-22

COLLISION CORRIDORS
As determined by the rate of roadway collisions resulting in severe injury between 2007 and 2017

- Bicycle and Pedestrian
- Bicycle
- Pedestrian

DESTINATIONS + BOUNDARIES
- City Hall
- SMART Station
- Shopping
- School
- Hospital
- Park
- City Limits
- Urban Growth Boundary

Map produced April 2018.
Source: TIMS.
User Experience and Perceived Comfort

Traffic stress is the perceived sense of danger associated with riding in or adjacent to vehicle traffic. Studies have shown that traffic stress is one of the greatest deterrents to bicycling. The less stressful—and therefore more comfortable—a bicycle facility is, the wider its appeal to a broader segment of the population. A bicycle network will attract a large portion of the population if it is designed to reduce stress associated with potential motor vehicle conflicts and if it connects people bicycling with where they want to go.

Bikeways are considered low stress if they involve very little traffic interaction by nature of the roadway's vehicle speeds and volumes (e.g., a shared, low-traffic neighborhood street) or if greater degrees of physical separation are placed between the bikeway and traffic lane on roadways with higher traffic volumes and speeds (e.g., a separated bikeway on a major street).

Types of Bicyclists

Research indicates that the majority of people in the United States (56-73 percent) would bicycle if dedicated bicycle facilities were provided. However, only a small percentage of Americans (1-3 percent) are willing to ride if no facilities are provided.¹ This research into how people perceive bicycling as a transportation choice has indicated that most people fall into one of four categories, illustrated below.

Bicycle Level of Traffic Stress

To better meet the needs of the “Interested, But Concerned” cyclist, planners developed the Bicycle Level of Traffic Stress (Bicycle LTS) analysis as an objective, data-driven evaluation model to help identify streets with high levels of traffic stress. The analysis uses roadway network data (i.e. posted speed limit, street width, number of travel lanes, intersection conditions, presence and character of bikeway facilities, and land use context) to determine bicyclist comfort level.

The combination of these criteria creates four levels of traffic stress for the existing roadway network. The lower the number, the lower the stress and the higher the level of comfort for people on bicycles. LTS 1 & 2 roads are typically the roadways that appeal to the “Interested, but Concerned” cyclists.

Level 1: All Ages and Abilities
Level 1 includes off-street shared use paths and some very low-stress roadways suitable for all ages and abilities.

The Joe Rodota Trail is an example of a Level 1 facility.
Level 1 makes up six percent of the entire network in Santa Rosa.

Level 2: Average Adult
Level 2 includes roadways that are comfortable enough that the mainstream adult population would ride a bicycle on them.

Humboldt Street from College Ave to Lewis Road is an example of a Level 2 street.
Level 2 makes up 68 percent of the entire network in Santa Rosa.

Level 3: Confident Adult
Level 3 includes arterial roadways with bicycle facilities that are probably only comfortable for an experienced, confident bicyclist.

Yulupa Avenue from Creekside Road to Montgomery Drive is an example of a Level 3 street. Note that having standard Class II bicycle lanes does not outweigh other factors such as traffic volume and speeds for this road to be considered low-stress.
Level 3 makes up 11 percent of the entire roadway network in Santa Rosa and 43 percent of arterial streets.

---

2 The Level of Traffic Stress (LTS) analysis used for Santa Rosa is adapted from the 2012 Mineta Transportation Institute (MTI) Report 11-19: Low-Stress Bicycling and Network Connectivity.
Level 4: Fearless Adult

Level 4 includes arterial roadways with no bicycle facilities ridden only by strong or fearless bicyclists.

Santa Rosa Avenue from Maple Ave to W Third Street is an example of a Level 4 street

Level 4 makes up 15 percent of the entire roadway network and 57 percent of arterial streets.

Results

The level of traffic stress scores shown in Figure 3-24 illustrate the low stress connections and gaps throughout Santa Rosa. The Bicycle LTS results map approximates the user experience for the majority of Santa Rosa residents, however people may have differing opinions of traffic stress depending on their own experiences. While a majority of Santa Rosa’s entire network scored a Level 1 and 2 (74 percent total), these facilities are minor local roads or off-street paths typically surrounded by higher stress arterials where most average adults would not feel comfortable riding. When only arterial roadways are examined, which serve as the direct connections to most destinations, nearly 57 percent are Level 4.

Figure 3-23: Bicyclist Level of Traffic Stress on All Roads vs Arterials

Multi-use trails offer a low stress route that helps cut across these barriers, however the majority of residents may not feel comfortable bicycling outside their immediate neighborhood using local streets. This means that getting from residential areas to major destinations may not be possible given most people's tolerance for mixing with traffic—even on streets that have bicycle lanes.
LEVEL OF TRAFFIC STRESS
SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-24
ROADWAYS AND PAVED TRAILS
- Level 1 All Ages and Abilities
- Level 2 Average Adult
- Level 3 Confident Adult
- Level 4 Fearless Adult

DESTINATIONS + BOUNDARIES
- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced February 2018.
LEVEL OF TRAFFIC STRESS
SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 3-25

ARTERIAL ROADWAYS
- Level 1 All Ages and Abilities
- Level 2 Average Adult
- Level 3 Confident Adult
- Level 4 Fearless Adult

DESTINATIONS + BOUNDARIES
- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced February 2018.
4. Outreach

Engaging the Santa Rosa community has been a priority throughout this update to the Bicycle & Pedestrian Master Plan. A variety of outreach opportunities were used to seek input from diverse Santa Rosa residents and community members. The plan development process also included extensive coordination with partner agencies and other City departments to ensure this Plan Update meets community needs, advances initiatives of local and regional partners, and includes projects and programs that can feasibly be implemented.

Throughout the planning process, ongoing outreach ensured a continuous feedback loop that informed the final project list and Plan Update. Specific events and opportunities included:

- Online Survey
- Online Interactive Mapping Tool
- City Website and Social Media
- Public Open Houses
- Stakeholder Interviews
- Pop Up Events
- City Board, Commission, and Council Meetings
  - Bicycle and Pedestrian Advisory Board
  - Waterways Advisory Committee
  - Community Advisory Board
  - Planning Commission
  - City Council

This chapter presents an overview of the format and approach for each outreach opportunity, along with a summary of feedback received.

Online Survey

A community survey was developed to gather input on walking and bicycling challenges, preferences, and opportunities throughout Santa Rosa. The survey was made available online in both Spanish and English from February through June 2018, and advertised at all outreach events, through City newsletter and email notifications, and distributed by community groups. Participation in the survey was also encouraged by awarding a gift card to a randomly selected respondent. More than 1,300 people responded to the survey.

A summary of responses is provided below.

When asked about their comfort on a variety of bikeways, respondents expressed a preference for facilities that separate bicyclists from motorists. Shared use paths and separated bikeways were ranked most comfortable, while bicycle routes and streets with no bicycle facility were ranked least comfortable. See Figure 4-1.

![Figure 4-1: Comfort on Bikeway Types](image-url)
Survey respondents stated a clear desire for walking and bicycling improvements in the community. Nearly 90 percent strongly or somewhat agreed they would like to travel by bicycle more than they currently do, and nearly 95 percent strongly or somewhat agreed they would like to walk more.

Health or recreation was the most common purpose for both bicycling and walking trips, with more than 40 percent of respondents bicycling and over 80 percent walking for health once a week or more.

Survey respondents overwhelmingly indicated that increased separation between facilities for different modes of transportation would encourage them to walk or bicycle more often. This separation, mentioned in 238 comments, includes buffering bicycle or pedestrian facilities from motor vehicle traffic, grade separation for challenging crossings, and providing dedicated space for both bicyclists and for pedestrians on some highly used paths.

One common feature survey respondents said would improve their walking experience was enhanced crosswalks (mentioned in 102 responses). Of these, more than half expressed a desire for in-pavement flashing lights at crosswalks. Other crossing improvements mentioned included RRFBs or pedestrian hybrid beacons, curb extensions, refuge islands, high visibility markings, and beacons or stop controls on busy streets.

An improved sidewalk network was mentioned in responses 118 times, including both filling missing sidewalk segments and providing wide sidewalks with ample room for passing and walking abreast.

Finally, maintenance was mentioned in 111 comments. Specific needs reported included sweeping and debris removal, trimming vegetation, and resurfacing or repairing paved facilities to provide a smooth, level surface.

Topics mentioned in 40 or more survey comments are listed in Table 4-1 with the number of responses they appeared in.

<table>
<thead>
<tr>
<th>Comment Theme</th>
<th>Number of Mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased separation between road users, including grade separated crossings of highways and busy streets, buffers between streets and sidewalks or bicycle paths, and dedicated bicycling and walking areas on shared use paths</td>
<td>238</td>
</tr>
<tr>
<td>Improved sidewalks</td>
<td>118</td>
</tr>
<tr>
<td>Improved maintenance of walking and bicycling facilities including sweeping, vegetation trimming, and pavement repairs</td>
<td>111</td>
</tr>
<tr>
<td>Enhanced crosswalks</td>
<td>102</td>
</tr>
<tr>
<td>Better connectivity along existing networks</td>
<td>81</td>
</tr>
<tr>
<td>Address concerns about personal security related to homeless encampments</td>
<td>75</td>
</tr>
<tr>
<td>Enforcement, including targeting stopping at signals and stop signs; distracted driving, walking, and bicycling; and speeding</td>
<td>72</td>
</tr>
<tr>
<td>Bicycle network improvements, including green markings in potential conflict areas, bicycle detection at signals, and eliminating parking in bicycle lanes</td>
<td>58</td>
</tr>
<tr>
<td>Traffic calming</td>
<td>57</td>
</tr>
<tr>
<td>Secure bicycle parking</td>
<td>57</td>
</tr>
<tr>
<td>Increased lighting on sidewalks and at crossings</td>
<td>56</td>
</tr>
<tr>
<td>Providing bicycle lanes or other bikeways, especially on busier roads</td>
<td>48</td>
</tr>
<tr>
<td>Education for people driving, bicycling, and walking on the rights and responsibilities of all transportation users and on how to safely share space</td>
<td>44</td>
</tr>
<tr>
<td>Pedestrian amenities including seating, restrooms, trash receptacles, and water fountains</td>
<td>42</td>
</tr>
<tr>
<td>Traffic signal improvements including pedestrian countdown signals, leading pedestrian intervals, and longer “walk” phases</td>
<td>40</td>
</tr>
</tbody>
</table>
Online Interactive Mapping Tool

An interactive mapping tool was posted on the City's website was used throughout development of this Plan Update to gather input and feedback from the community directly on a map of the city.

In early project phases from February through June, 2018, community members were encouraged to draw routes or place pins on the map and add comments to identify desired walking or bicycling improvements, challenging locations, and other information about the walking and bicycling environment. Nearly 800 comments were received during this phase. This input informed the recommended bicycling and walking network improvements.

In the second phase of development from July through September, 2018, the draft recommended walking and bicycling networks were displayed on the map and community members were invited to “like” or “dislike” projects to show their preferences, in addition to adding comments on specific projects and seeing the feedback left by others. More than 900 votes on projects were recorded along with approximately 420 comments on the draft recommendations. This input helped prioritize projects and refine the networks.
City Website and Social Media

For all community outreach opportunities, including the online survey and interactive mapping tool, the City leveraged their existing website, social media accounts, and newsletter mailing list to share information about the Plan Update process and encourage Santa Rosa residents to engage with the project team.

Website

The City created a section on their website for this Bicycle and Pedestrian Master Plan Update. All online communications and project flyers pointed to this website, where community members were able to learn about the planning process, see upcoming outreach events, and download draft maps and other deliverables at key milestones.

Social Media

The City has nearly 16,000 followers on Facebook and over 34,500 subscribers on Nextdoor. Throughout the Plan Update process, posts on these platforms notified residents of upcoming events, draft documents available for review, online engagement tools, and other project milestones.

Newsletter

In addition to their social media presence, the City sent email newsletters to more than 11,000 subscribers. The City’s Transportation and Public Works Out in the Field newsletter has more than 9,200 subscribers, and the email list for this Plan Update has more than 1,800. These newsletters were used to announce open houses and other events, encourage participation, and share updates about the project.

Promotional Material

An information card was also created in both English and Spanish with the project website and Community Open Houses listed. The cards were available at all outreach events and placed at various businesses, community centers, and libraries throughout the City. The Sonoma County Bicycle Coalition inserted 650 cards into participant goodie bags on Bike to Work Day (May 18, 2018) and members of the Community Advisory Board hand-delivered 350 cards to residents near the Rincon Valley Library to encourage attendance at the second Open House held there.
Public Open Houses

Three open houses were held at key milestones during the planning process to gather input from the community and refine the Plan Update.

Open House 1

The first open house was held April 18, 2018, at Montgomery High School. Stations at the open house shared findings from Chapter 2 including the existing walking and bicycling networks and programs, a review of collision locations, and the results of the Level of Traffic Stress analysis. A brief presentation described the planning process and an update on progress made since the 2010 Plan was adopted.

Input from approximately 20 residents who attended the open house informed the recommended projects and programs in this Plan Update. Key themes included:

- Improve crossings along major roads and across Highway 101
- Close gaps in the sidewalk network
- Build more shared use paths with improved connections to destinations and on-street networks
Open House 2
Midway through the project, a second open house was held on July 25 at Rincon Valley Library. The open house was attended by nearly 90 residents, who reviewed draft network maps for bicycling and walking improvements in Santa Rosa. Attendees provided feedback on the draft networks, which helped refine and prioritize the project list.

Jim Pedgrift of the Bicycle and Pedestrian Advisory Board welcomed nearly 90 attendees at the July Open House

Open House 3
A complete draft of this Plan Update 2018 was presented at a third open house on November 8, 2018.

[This section will be completed following the third open house.]

Stakeholder Interviews
To gain deeper insights into the needs and priorities of key community stakeholders, interviews were conducted with representatives of eleven groups in the city or region. Interviews were conducted over the phone or in person. Key topics from each interview are summarized below.

- Santa Rosa Cycling Club and Sonoma County Bicycle Coalition (April 5, 2018)
  - Need for secure bicycle parking, including lockers or other long-term parking solutions
  - Need for valet bicycle parking at all large events
  - Desire for enhanced bicycle facilities in Santa Rosa including green markings at conflict areas or bike boxes
- Safe Routes to School Partners (April 12, 2018)
  - Highest priority challenges include multi-lane roads and uncontrolled crossings
  - Need for better visibility between road users
  - Need for funding for education and encouragement
- Neighborhood Revitalization Program (April 19, 2018)
  - Limited storage space for bicycles at home leads some residents to rely more on walking and transit
  - Education about wrong-way bicycling was a past focus area
  - Desire for increased education and encouragement for kids to walk and bicycle
- Villages at Wild Oak (April 19, 2018)
  - Concerns about bicyclists sharing space with seniors walking on paths
  - Need for education on sharing the road and consensus-building between residents and people walking or bicycling
- Sonoma County Transit and Sonoma County Regional Parks (April 25, 2018)
  - Opportunity to align county and city trail and on-street bikeway connections
  - Desire for trail segments from 2010 Plan to be carried forward along with six new trail segments for consideration
- Santa Rosa Junior College and Junior College Neighborhood Association (April 30, 2018)
  - Desire for clear, measurable targets for bike infrastructure and mode share
  - Need for secure bike parking
  - Improved connections to SMART and other transit
  - Access through the neighborhood and to campus
- Redwood Chapter for the Blind (May 2, 2018)
  - Educate bicyclists about audible signals when approaching or passing pedestrians with vision impairments
  - Need for longer “walk” phases at some signals
- Council on Aging (May 8, 2018)
  - Concerns about personal security for older adults walking on trails
  - Need for lighting, seating, shade, and other amenities
  - Desire to promote community walking events to promote health and foster social connections
- Santa Rosa Police Department (May 8, 2018)
  - Downtown Safety Unit and Sonoma County Parks working together to address concerns about homeless along trails
  - Periodically does targeted enforcement based on identified safety needs, including programs funded by the Office of Traffic Safety
  - Need for education for all transportation users about sharing the road safely and rules of the road for each mode
- Roseland Community Building Initiative Meeting (June 21, 2018)
  - Concerns about speed of traffic on arterial streets
  - Desire for pedestrian network gaps to be addressed

- Sutter Health (July 25, 2018)
  - Improve connections with transit
  - Need for enforcement to address concerns about aggressive driving
  - Working to promote bicycling and walking among staff with programs like a safe ride home, providing secure covered bicycle parking, and partnering with the Sonoma County Bicycle Coalition
Pop Up Events

The project team also participated in six pop-up events in Santa Rosa, which provided opportunities for additional input into the Plan Update and helped raise awareness of the update process.

At each event, the project team discussed the project with attendees and gathered input about challenges and opportunities to improve walking and bicycling in Santa Rosa. This feedback informed documentation of existing networks along with development of draft network recommendations. The six events are listed below with feedback themes.

- **Welcome Roseland (January 20, 2018)**
  - Pedestrian priorities include shade, increased lighting, and beacons at uncontrolled crossings
  - Bicycling priorities include shared use paths, buffered bicycle lanes, and separated bikeways

- **Highway 101 Overcrossing Public Meeting (March 29, 2018)**
  - Need for bicycle connections and secure bicycle parking at Santa Rosa Junior College
  - Desire for SMART path to connect further north toward the airport
  - Split opinions on possible alternatives presented for the Highway 101 Overcrossing
Earth Day on Stage (April 21, 2018)
  o Desire for more creek trails and connections to regional trails
  o Need for improved crossings, especially at the railroad and highways
  o Preference for bicycle lanes (with buffers where feasible) on existing streets
Sonoma County Human Race (April 28, 2018)
  o Need for education about wrong-way bicycling
  o Concerns about biking on roads that are narrow, higher speed, and do not have dedicated bicycle facilities
  o Desire for improved SMART trail connections
  o Desire for improved connections to nearby communities
Cinco de Mayo Festival (May 5, 2018)
  o Increase lighting on trails
  o Need for secure bicycle parking
  o Improve connections to and within the Roseland community
Summer Resource Fair at Coddington Mall (June 16)
  o Need for wider bicycle lanes
  o Desire for separated facilities for active transportation
City Board, Commission, and Council Meetings

**Bicycle and Pedestrian Advisory Board**

Draft deliverables were presented to the City’s Bicycle and Pedestrian Advisory Board (BPAB) at six of their meetings during development of this Plan Update. Meeting months and presentation topics are outlined below.

- February 2018: Draft Bicycle Friendly Community Assessment
- March 2018: Draft Existing Conditions and Level of Traffic Stress
- April 2018: Draft Design Guidelines
- July 2018: Draft Network Recommendations
- August 2018: Draft Program and Policy Recommendations
- November 2018: Administrative Draft Plan Update

In addition to these six meetings, a survey was sent to BPAB members in September 2018 to gather feedback on draft prioritization criteria.

BPAB feedback guided development of this Plan Update by providing both strategic direction and specific input throughout the planning process.
Waterways Advisory Committee
Because Santa Rosa has a robust network of trails along the many creeks in the City, the Waterways Advisory Committee (WAC) was a key partner in developing recommendations to improve and expand the trail network. Staff presented to the WAC three times during the Plan Update process, in June, August, and November 2018.

- June 2018: Introducing the Project
- August 23, 2018: Draft Network Recommendations
  - Identified additional recommendations from the Citywide Creeks Master Plan to be incorporated
  - Closing sidewalk gaps and improving pedestrian access to parks are priorities
- November 2018: Administrative Draft Plan Update
  - [This section will be completed following the WAC meeting in November]

Community Advisory Board
The project team presented to the Community Advisory Board on March 28, 2018 to share information about the Plan Update and encourage them to participate in upcoming public outreach activities.

Planning Commission
[This section will be completed following the Planning Commission meeting in December]

City Council
[This section will be completed following the City Council meeting in February]
5. Projects, Programs, & Policies

The active transportation network described in this Plan Update seeks to provide the Santa Rosa community with convenient, comfortable, and healthy transportation choices.

Built on the needs and opportunities identified through the evaluation of existing conditions, progress made since the development of the 2010 Plan, extensive community input, and data-driven analyses, this chapter presents the projects, programs, and policy changes for the City of Santa Rosa. Improvements identified during previous planning efforts or studies were also reviewed for this Plan Update, including the Uncontrolled Crossing Study and numerous Safe Routes to School Audit reports.

Recommendations are considered planning-level, meaning they should be used as a guide when implementing projects. In some cases, traffic impact analysis and more detailed design analysis will be required to evaluate specific site conditions and develop designs that reflect conditions and constraints.

This chapter includes the following sections:

- **Projects** describes the proposed bicycling and walking infrastructure improvements, including sections for crossing improvements and for studies at locations where further analysis or community outreach is necessary to determine the most appropriate improvement type for the location.
- **Citywide Projects** describes improvements that should be pursued throughout Santa Rosa as opportunities arise, but specific locations for these improvements have not been identified in this Plan Update.
- **Programs** includes recommended education, encouragement, enforcement, and evaluation activities to be pursued or expanded by the City and its partners.
- **Policy Changes** includes changes to municipal codes, operating procedures, or other policies that will support a more walkable and bikeable Santa Rosa.

For a table of infrastructure recommendations and studies, see Appendix A.
Projects

Bicycle Network Projects

Bicycle network projects are categorized based on the four classifications recognized by Caltrans, along with two sub-classifications, described in detail in Chapter 3 and the Design Guidelines in Appendix B. These include:

- **Class I Shared Use Paths**: Dedicated paths for walking and bicycling completely separate from the roadway

- **Class II Bicycle Lanes**: Striped lanes for bicyclists
  - **Class II Buffered Bicycle Lanes**: Bicycle lanes that include a striped “buffer” area either between the bicycle lane and travel lane or between the bicycle lane and parked cars

- **Class III Bicycle Routes**: Signed routes for bicyclists on low-speed, low-volume streets where lanes are shared with motorists
  - **Class III Bicycle Boulevards**: Bicycle routes that are further enhanced with traffic calming features or other treatments to prioritize bicyclist comfort

- **Class IV Separated Bikeways**: On-street bicycle facilities with a physical barrier between the bicycle space and motor vehicle lanes, including bollards, curbs, or parking

Nearly 120 miles of new bikeways are proposed in this Plan Update, which would more than double the current 113 miles of bikeways in the City. A summary of existing and proposed bicycle network improvements is provided in Table 5-1 and mapped in Figure 5-1 through Figure 5-6.

<table>
<thead>
<tr>
<th>Bikeway Type</th>
<th>Existing Miles</th>
<th>Proposed Miles</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I Shared Use Paths</td>
<td>13</td>
<td>30.9</td>
<td>64</td>
</tr>
<tr>
<td>Class II Bicycle Lanes</td>
<td>58</td>
<td>69.0</td>
<td>113</td>
</tr>
<tr>
<td>Class II Buffered Bicycle Lanes</td>
<td>0.2</td>
<td>1.9</td>
<td>4</td>
</tr>
<tr>
<td>Class III Bicycle Routes</td>
<td>18</td>
<td>12.8*</td>
<td>121</td>
</tr>
<tr>
<td>Class III Bicycle Boulevards</td>
<td>0.3</td>
<td>6.5</td>
<td>17</td>
</tr>
<tr>
<td>Class IV Separated Bikeways</td>
<td>2.2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>89</strong></td>
<td><strong>113.2</strong></td>
<td><strong>322</strong></td>
</tr>
</tbody>
</table>

*Some Class III Bicycle Routes were upgraded to Class II Bicycle Lanes*
RECTIFIED BIKEWAYS

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-1

PROPOSED
- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIIB Buffered Bicycle Lane
- Class III Bicycle Route
- Class IIIIB Bicycle Boulevard
- Class IV Separated Bikeway
- Study

EXISTING
- Class I Shared-Use Path
- Class II Bike Lane
- Class III Bike Route

DESTINATIONS + BOUNDARIES
- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.
RECOMMENDED BIKEWAYS

DOWNTOWN

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-2

PROPOSED
- Green: Class I Shared-Use Path
- Blue: Class II Bicycle Lane
- Dark Blue: Class IIB Buffered Bicycle Lane
- Purple: Class III Bicycle Route
- Red: Class IIB Bicycle Boulevard
- Light Green: Class IV Separated Bikeway
- Orange: Study

EXISTING
- Green: Class I Shared-Use Path
- Blue: Class II Bike Lane
- Purple: Class III Bike Route

DESTINATIONS + BOUNDARIES
- P: City Hall
- SMART Station
- Light Green: Park
- White: City Limits
- Beige: Urban Growth Boundary

Map produced October 2018.
RECOMMENDED BIKEWAYS

NORTHWEST QUADRANT

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-3

PROPOSED
- Green: Class I Shared-Use Path
- Light Blue: Class II Bicycle Lane
- Blue: Class IIIB Buffered Bicycle Lane
- Purple: Class III Bicycle Route
- Red: Class IIIIB Bicycle Boulevard
- Green: Class IV Separated Bikeway
- Orange: Study

EXISTING
- Green: Class I Shared-Use Path
- Blue: Class II Bike Lane
- Purple: Class III Bike Route

DESTINATIONS + BOUNDARIES
- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.

City of Santa Rosa
RECOMMENDED BIKEWAYS

SOUTHWEST QUADRANT

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-5

PROPOSED

- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIB Buffered Bicycle Lane
- Class III Bicycle Route
- Class IIIIB Bicycle Boulevard
- Class IV Separated Bikeway
- Study

EXISTING

- Class I Shared-Use Path
- Class II Bike Lane
- Class III Bike Route

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.

City of Santa Rosa
Pedestrian Network Projects

The pedestrian network includes Class I Shared Use Paths, discussed in the previous section, along with sidewalks. Sidewalks and pathways are an essential element of a pedestrian network. They not only provide a comfortable walking space separate from the roadway, but are also a foundational element of Americans with Disabilities Act (ADA) compliance.

Sidewalks and pathways should provide a smooth surface free of obstructions at least five feet wide. In some areas, where high pedestrian activity is expected, wider sidewalks may be desirable. Sidewalks and pathways can either be adjacent to the curb or separated by a planted landscaping strip, as shown below.

There are many streets in Santa Rosa with sidewalks or pathways, but the network is inconsistent. Not every street without a sidewalk or pathway is recommended for improvement in this Plan Update due to limited available public right of way. Instead, sidewalk and pathway recommendations are focused on those corridors where they are likely to serve large numbers of pedestrians or address a priority community concern.

This Plan Update includes 22.9 miles of proposed sidewalks, mapped in Figure 5-7 through Figure 5-12 along with existing and proposed Class I shared use paths.
PEDESTRIAN RECOMMENDATIONS

DOWNTOWN

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-8

PROPOSED

- Class I Shared-Use Path
- Sidewalk
- Study

EXISTING

- Class I Shared-Use Path

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.
PEDESTRIAN RECOMMENDATIONS
SOUTHWEST QUADRANT
SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-11

PROPOSED
- Class I Shared-Use Path
- Sidewalk
- Study

EXISTING
- Class I Shared-Use Path

DESTINATIONS + BOUNDARIES
- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.
Crossings

In addition to network projects for bicycling and walking, locations for new or improved crossings have been gathered and consolidated through this Plan Update from the numerous public outreach events and a review of past plans including the Uncontrolled Crosswalk Analysis and multiple Safe Routes to School assessment reports.

Specific facility recommendations and designs for these locations will be developed by the City on a case-by-case basis due to the highly varied context at each intersection or midblock crossing location. Some locations represent multiple alternatives identified for possible crossings, and improvements may not ultimately be recommended at all locations. Some typical crosswalk markings and enhancements are described on the following pages, as well as in the Design Guidelines in Appendix B.

Crossing locations were also identified where a trail crossing of a creek may be developed. These locations are identified as trail bridges and will be considered separately from crossings of the roadway network.

Crossing locations and trail bridges are mapped in Figure 5-13 through Figure 5-18.

Crosswalk Markings

While legal crosswalks exist at all intersections, crosswalk markings highlight crossings to motorists, increasing awareness that people may be crossing the street. Crosswalk markings can also be used to guide people walking to desired crossing locations, or to designate legal midblock crosswalks.

Standard “transverse” markings consist of two parallel lines that mark the edges of the crosswalk, shown at left and right in the illustration top right.

High visibility crosswalk markings can include “continental” crosswalks with bold white bars that run perpendicular to the pedestrian path of travel (shown top and bottom in the illustration top right), and “ladder” crosswalks which combine continental markings with the traditional transverse lines.

These markings are more noticeable to drivers and are typically used at uncontrolled crossings, where slower walkers are expected (near schools and senior centers), and where high numbers of pedestrian related crashes have occurred. In school areas, crosswalk markings are yellow.
Curb Extensions
Curb extensions improve visibility of pedestrians and reduce crossing times by shortening the length of the crossing. This may reduce pedestrian collisions by reducing the length of time that pedestrians are exposed to potential conflicts with motorists. Curb extensions also narrow the perceived roadway width for drivers, which may reduce speeds. At signalized intersections, curb extensions can reduce delays by allowing for shorter pedestrian “walk” phases due to the reduced crossing distance.

Curb extensions extend the sidewalk or curb line out into the parking lane on a street, reducing the effective street width. They can only be used where there is on-street parking, and should not encroach into bicycle lanes.

Advance Stop or Yield Line
Advance stop bars are placed six to ten feet before a marked crosswalk to indicate to motorists where they should stop. At uncontrolled or midblock crossings, yield lines are used instead of stop bars. Advance stop bars or yield lines improve visibility of pedestrians by discouraging drivers from encroaching into the crosswalk. This is especially important at uncontrolled crossings on multi-lane streets, where a vehicle stopped too close to a crosswalk may hide a pedestrian from view of an approaching driver in the second lane.

Pedestrian Refuge Island
Pedestrian refuge islands can improve pedestrian comfort and reduce collisions by providing a safe waiting area in the median on wide or busy streets. This allows people walking to cross the roadway in two stages, waiting for a gap in one direction of oncoming traffic at a time.

The waiting area should be protected by a physical barrier on either side, such as raised median islands or planters. The crossing surface should remain level through the waiting area, and may be angled to encourage pedestrians to face oncoming traffic as they approach the second crossing leg. Refuge islands may be combined with beacons or other treatments to further improve challenging crossings.

Rectangular Rapid Flashing Beacon
Rectangular Rapid Flashing Beacons (RRFBs) are used to increase visibility of pedestrians at marked crosswalks where traffic signals or stop signs are not warranted. They consist of a pedestrian crossing sign supplemented by a pair of bright rectangular lights that flash in a rapid alternating pattern when a pedestrian presses a button. Many assemblies are solar powered stand-alone units that can be installed without costly wiring work.
Pedestrian Hybrid Beacon

Pedestrian hybrid beacons, sometimes referred to as HAWK beacons, are a traffic control device that can be activated by a pedestrian to stop cross traffic. The beacon consists of three lights on an overhead mast arm that remain dark until a pedestrian presses a button to request a walk phase. Yellow lights flash in an alternating pattern to alert motorists that a red phase will be starting, followed by a solid red light that requires motorists to stop. A pedestrian signal shows a “walk” phase during this red signal, followed by a flashing hand and then “do not walk” phase. After the pedestrian phase concludes, the red signal goes dark and motorists may proceed.

Lead Pedestrian Interval

Lead pedestrian intervals improve visibility of pedestrians at signalized intersections by beginning the “walk” phase a few seconds before the complementary green signal for drivers. This allows pedestrians to get a head start across the street, bringing them forward into the field of view of drivers who may be turning across the crosswalk.
CROSSINGS

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-13

- Crossing Location
- Trail Bridge

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.
CROSSINGS
DOWNTOWN

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-14

- Crossing Location
- Trail Bridge

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.
DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

CROSSINGS
NOR THEA QUADRANT

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-16

- Crossing Location
- Trail Bridge

Map produced October 2018.
CROSSINGS
SOUTHWEST QUADRANT

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 5-17

- Crossing Location
- Trail Bridge

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.
Studies
A number of locations, including both bicycle and pedestrian corridors, require greater community outreach and/or analysis than can be conducted as part of this planning process. At some locations, further study is needed to determine whether bicycling or walking facilities are feasible. At others, a preferred facility has been identified but further study or outreach is needed to develop a detailed design or alignment that balances the needs of all community members.

Studies are mapped with bicycle, pedestrian, and crossing projects on previous pages, and are described briefly below.

Oakmont Connection Alternatives
After the removal of a portion of the designated Bicycle Route 231, multiple alternative routes are identified for study to create a new walking and bicycling connection to SR 12 and the planned Sonoma Valley Trail through the Oakmont neighborhood. Some alternatives also have potential to create improved access for emergency vehicles into the Oakmont neighborhood. Community outreach produced differing opinions on acceptable locations for connections, suggesting a need for further study and more intensive engagement with neighborhood residents to identify a preferred route.

Montgomery Drive Bicycle Facilities
Bicycle facilities are recommended for further study on Montgomery Drive from Summerfield Road eastward, ending near Spring Lake and Boas Drive. This entire corridor was recommended for Class II bicycle lanes in the 2010 plan, and the segment west of Mission Boulevard was identified as part of the HIN during this Plan Update. Montgomery Drive is narrow through this section; providing bicycle facilities may require widening the road or providing a separate Class I shared use path.

A second study for bicycle facilities on Montgomery Drive is recommended in this Plan Update between Alderbrook Drive and Hahman Drive. This segment was also identified as a priority in the 2010 plan.

College Avenue Complete Streets Study
Between Kowell Lane and Morgan Street, College Avenue is a highly used corridor with limited right of way and a strong demonstrated need for bicycling and walking improvements. Between Link Lane and Mendocino Avenue, this corridor is part of the HIN identified during this Plan Update. The width, lane configuration, and on-street parking presence vary along the corridor, creating challenges for people walking and bicycling. A complete streets study is recommended to develop a corridor plan that balances the needs of all modes of transportation.

Connection from SMART to Coddingtown Mall
A study is recommended to identify a desirable route for people walking and bicycling between the SMART Santa Rosa North station and Coddingtown Mall, consistent with the station area plan. This may include an off-street connection between Range Avenue and Herbert Street, or across Steele Creek south of Guerneville Road. Once a preferred route is established and built, wayfinding signs should be installed to create a comfortable and easy-to-navigate connection.

4th Street Bikeway
4th Street is an important connection from D Street in downtown Santa Rosa to Farmers Lane where it becomes State Route 12. This corridor has limited space available, and was identified as part of the pedestrian HIN during this Plan Update. A study is necessary to evaluate alternatives to provide bicycling or walking facilities while balancing high traffic volumes and other needs.

Brookwood Avenue Pedestrian Improvements
Brookwood Avenue from 2nd Street to Sonoma Avenue, across Santa Rosa Creek, was identified by the community during outreach for this Plan Update. A study should evaluate opportunities to improve pedestrian access and comfort along this corridor, including considering pedestrian-scale lighting.
Santa Rosa Bicycle & Pedestrian Master Plan Update 2018

Bennett Valley Road Trail
This study should evaluate alternatives to provide a Class I shared use path or other bicycling and walking connection along Bennett Valley Road from Farmers Lane to Yulupa Avenue. This Plan Update includes projects that connect to each end of this study: a Class I shared use path extending south from the intersection at Farmers Lane will connect to Yolanda Avenue, and Class II bicycle lanes will continue southeast on Bennett Valley Road from the intersection with Yulupa Avenue.

McConnell Avenue Bicycle Boulevard
Between Mendocino Avenue and North Street, McConnell Avenue is a candidate to create a bicycle boulevard connection on McConnell Avenue. This connection was identified as a desired bikeway by the community during outreach for this Plan Update, and will be studied for feasibility including consideration of traffic speeds and volumes, parking utilization, neighborhood outreach, and crossings or connections at either end of the new facility.

Car-Free Elliott Avenue
Elliott Avenue, on the north edge of the Santa Rosa Junior College Campus, is an attractive route for people walking and bicycling. The street could potentially have significantly increased active transportation uses pending the outcome of the Highway 101 overcrossing environmental review. Community members expressed a desire for the City to consider closing Elliott Avenue to car traffic and creating a bicycle and pedestrian mall connecting the future Highway 101 overcrossing and Mendocino Avenue.

Roseland Creek Trail
The Roseland neighborhood, newly annexed into the City of Santa Rosa, developed as an unincorporated area of Sonoma County and lacks sidewalks or other pedestrian connections in places. A shared use path along Roseland Creek would create a comfortable connection for people walking and bicycling between Stony Point Road and Burbank Avenue, potentially creating an alternative that allows bicyclists and pedestrians to avoid Stony Point Road which was identified as part of the HIN.

Stony Point Road Corridor Study
Stony Point Road is an important artery of the bicycle and pedestrian network in Santa Rosa, providing a north-south connection across State Route 12 from Guerneville Road to Sebastopol Road. It is also a busy, high-speed arterial street, with average daily traffic volumes between 20,000 and 30,000 and posted speed limits of 35 to 40 mph. The corridor is also part of the HIN for both bicyclists and pedestrians, with fatal or severe injury collisions occurring at a higher frequency than other corridors in the community. This Plan Update recommends this corridor be studied from Guerneville Road to Sebastopol Road for bicycle or pedestrian facilities that increase comfort and may reduce the frequency and severity of collisions.
Citywide Projects

In addition to specific infrastructure projects and related programmatic efforts, some amenities are needed citywide to complete the active transportation network. These amenities should be installed as a matter of policy in conjunction with any City project as opportunities arise, or when development occurs. Citywide amenities recommended in this Plan Update include a comprehensive wayfinding program and secure bicycle parking.

Wayfinding

Wayfinding signs direct bicyclists or pedestrians along the existing network and to key community destinations. Signs typically include distance or time and direction (using an arrow) to key destinations. Santa Rosa currently does not have a consistent wayfinding sign program implemented throughout the city.

The California Manual on Uniform Traffic Control Devices (CA MUTCD) includes standard bicycle wayfinding signs, but they are also used for Class III Bicycle Route signs. This may cause confusion for bicyclists, and does not serve pedestrian wayfinding or trail users. Some cities have modified the standard sign to change “bike route” to “bikeway,” and others have developed and installed non-standard enhanced wayfinding signs that include unique branding for the community. The non-standard option provides the most flexibility to meet community needs and serve both bicyclists and pedestrians.

This Plan Update recommends the City develop and implement a comprehensive wayfinding program for bicyclists and pedestrians, integrating this program with SMART station and downtown wayfinding initiatives.

Bicycle Parking

No bicycling network is complete without convenient and secure bicycle parking. Bicycle parking can take many forms, from a simple bicycle rack to secure storage in a locker or gated area. This Plan Update recommends the City continue to expand its bicycle parking as opportunities arise and new development occurs.

Short Term Bicycle Parking

Bicycle parking can be categorized into short-term and long-term parking. Bicycle racks are the preferred device for short-term bicycle parking. These racks serve people who leave their bicycles for relatively short periods of time, typically for shopping or errands, dining, or recreation. Bicycle racks provide a high level of convenience and moderate security. The rack types illustrated below and recommended for use in Santa Rosa are consistent with the Association of Pedestrian and Bicycle Professionals (APBP) Essentials of Bike Parking: Selecting and Installing Bike Parking that Works (2015). The City may also choose to partner with local artist groups to pursue customized racks that serve as bicycle parking in addition to public art. Where possible, on-street bicycle corrals can be used to provide increased bicycle parking where high demand or limited sidewalk space exists.
Long Term Bicycle Parking
Long-term bicycle parking includes bike lockers and secure parking areas (SPAs) and serves people who intend to leave their bicycles for longer periods of time. Bike lockers may vary in design and operation including keyed lockers that are rented to one individual on an annual or monthly basis or e-lockers that can be reserved online in hourly increments and unlocked with a credit card or an access code.

These facilities provide a higher level of security than bicycle racks, and are typically found at transit stations, multifamily residential buildings, and commercial buildings, though they may also be useful in Downtown Santa Rosa, near SMART stations, or in other areas where bicyclists running multiple errands would benefit from a secure place to store parcels in addition to their bicycle.

Pedestrian Scale Lighting
Pedestrian scale lighting is a type of lighting with frequent lampposts at low height that illuminate the walking area. This typically includes poles 12 to 15 feet high spaced 25 to 30 feet apart, directly above walking areas. Pedestrian scale lighting not only increases visibility of pedestrians for drivers at night, it contributes to a more comfortable and inviting streetscape for people walking at night.

Pedestrian scale lighting should be appropriately designed to illuminate only the areas needed and be no brighter than necessary. Street trees should be appropriately maintained so they do not obstruct illumination from the lighting along sidewalks and pathways.

This Plan Update recommends the City evaluate locations where pedestrian scale lighting may improve pedestrian comfort and encourage walking, including Downtown, the junior college area, and trails.

Amenities
Sidewalk and trail furnishings like benches, shade structures, restrooms, water fountains, and trash receptacles contribute to a cleaner, more comfortable, and more pedestrian-oriented public realm. These elements not only encourage the activation of Santa Rosa's sidewalk and trail networks, they contribute to a more accessible pedestrian network for all residents. The City has adopted a Street Furnishings Palette as part of its Design Guidelines for the downtown core area, which may be expanded to include recommended furnishings for trails and other areas of the community. Seniors and those with mobility impairments will benefit from frequent places to stop and rest, and this was a priority identified by the community during outreach for this Plan Update.

This Plan Update recommends the City identify and pursue opportunities to provide amenities in the downtown, near transit stops, and along trails in the community.
Programs

This section describes recommended bicycle and pedestrian related programs for the City of Santa Rosa. The recommendations are organized in four E’s:

- **Education** programs are designed to improve safety and awareness. They can include programs that teach students how to safely cross the street, or teach drivers where to anticipate bicyclists and how to share the road safely.

- **Encouragement** programs provide incentives and support to help people leave their car at home and try walking or bicycling instead.

- **Enforcement** programs enforce legal and respectful walking, bicycling, and driving. They include a variety of approaches, ranging from police enforcement to neighborhood signage campaigns.

- **Evaluation** programs are an important component of any investment. They help measure success at meeting the goals of this Plan Update and to identify adjustments that may be necessary.

The fifth E commonly included in discussions of active transportation is Engineering, which is reflected by the recommended infrastructure projects listed in this chapter.

Programs recommended on the following pages should include outreach and education in both English and Spanish to serve the diverse Santa Rosa community. Given limited staff time and resources available, programs should be implemented or continued as funding and resources allow. Partnering with local organizations and other agencies is a key strategy to sustainable program activity.

Education

**Updated “StreetSmarts” Campaign**

Santa Rosa has joined other California cities in implementing “StreetSmarts” media campaigns. StreetSmarts uses print media, radio, and television to educate the community about safe driving, bicycling, skateboarding, and walking behavior. As part of this campaign, the City distributed posters with messages that addressed issues such as: red light running, speeding, bicycle safety, crosswalk safety and compliance, school zone speed compliance, and stop sign compliance.

This Plan Update gives Santa Rosa an opportunity to update these messages to address the most current priorities they have heard from the community, including not texting while driving or walking, how to securely lock your bicycle, the importance of being seen at night as a pedestrian or bicyclist, and helping drivers understand where to anticipate bicyclists. One message identified by the community as a priority is increasing awareness of California’s Three Foot Passing law, which requires drivers to overtake bicyclists only when there is sufficient room for a three-foot clearance. The County is currently running a related campaign that the City could support with their own artwork and messaging.

Artwork for the updated campaign could be created by local students as part of a Traffic Safety Poster Contest, or photos of local families on streets that will be familiar to the community could be used. Posters could also highlight and share information about newly completed projects, such as green transition areas. Funding could be provided by a grant from the California Office of Traffic Safety.

To maximize engagement and effectiveness of the campaign, the city can develop messaging and choose graphics with involvement from the Bicycle and Pedestrian Advisory Board, Sonoma County Bicycle Coalition, law enforcement, schools, business owners, civic leaders, and community advocates.
Bicycle Safety Education for Adults
The Sonoma County Bicycle Coalition (SCBC) currently offers Smart Cycling classes once a month at their office in downtown Santa Rosa, in addition to periodically offering on-bicycle educational rides for adults. These courses are based on a curriculum from the League of American Bicyclists that focuses on how bicyclists should behave so they are safer, more predictable, and can be confident riding on streets both with and without dedicated bicycle facilities. The SCBC classes also incorporate photos and video clips of local streets to help students understand how various scenarios apply to real Santa Rosa locations.

This Plan Update recommends continuing these classes, which the City can support by advertising the classes and/or providing meeting space.

Safe Routes to School
Santa Rosa benefits from a robust Safe Routes to School (SRTS) program coordinated by Sonoma County Transportation Authority (SCTA) and the Sonoma County Bicycle Coalition. Twenty-six schools in the City participate in activities with the SRTS program, but involvement varies from school to school.

This Plan Update recommends the City seek grant funding to prepare a SRTS Plan to document and evaluate effectiveness of existing program activities, and identify priority programs to expand to all schools. This should include Suggested Routes to School maps at all schools, which help families plan their walking or bicycling trip to school by highlighting enhanced crossings and bikeways, and continued participation in school walking audits to identify infrastructure improvements.

Encouragement
Hire a Bicycle and Pedestrian Coordinator
This Plan Update recommends hiring a staff person who can work on bicycle and pedestrian projects and program coordination full time. This person ensures that all planning, public works, and transportation projects account for bicyclists and pedestrians. They can also write grant applications to fund projects and programs and be tasked to support all bicycle and pedestrian coordination with the public and neighboring jurisdictions.

If funding is not available to create a new position, the City may consider hiring interns to work on bicycle and pedestrian projects until a full-time staff member can be funded. Some organizations and foundations will fund staff member salaries, fellowships, or contractor salaries for a set period of time. The City may consider applying for grants from one or more of these foundations.

Social Walks/Rides
Supporting social walks and bicycle rides in Santa Rosa can provide many benefits to the community. People who are uncomfortable bicycling or walking alone, or who are unfamiliar with the best routes to use, will benefit from having a group to show them the way. Rides can also be used as informal education opportunities to remind participants about safe walking and bicycling behavior and sharing the road, or combined with other efforts like tours of historic neighborhoods.

This Plan Update recommends the City partner with or support local organizations who wish to host rides or walks, for example the Council on Aging and the Sonoma County Bicycle Coalition.
Walking & Biking Ambassadors
During the public outreach activities conducted for this Plan Update, the community repeatedly expressed concerns about personal security and comfort when bicycling or walking in Santa Rosa, especially on the extensive creek trail network. These trails provide a high quality experience for walking and bicycling separated from high-traffic streets, but can be secluded with minimal surveillance.

An ambassador program could recruit volunteers to act as eyes on the trail, report maintenance needs, share educational materials and maps, and provide a friendly presence on the trail network. Staffing needs for this program could be limited to coordinating occasional volunteer training sessions. Trusted volunteers may be enlisted to help with program coordination, and grant funds could be pursued to offer a stipend to ambassadors or coordinators.

The Guadalupe River Park Conservancy in San Jose operates a volunteer trail ambassador program, where volunteers wear green vests to identify themselves and spend at least 45 minutes each week bicycling or walking on the trail. In addition to reporting maintenance needs, ambassadors carry small kits with supplies for basic first aid, bicycle repairs, graffiti removal, or other tasks based on their interest and preference.

This Plan Update recommends Santa Rosa consider a pilot Walking & Biking Ambassador program in partnership with the Bicycle & Pedestrian Advisory Board, the Southeast Greenway Team, and the Sonoma County Bicycle Coalition.

Adopt-a-Trail Program
The City of Santa Rosa may consider a voluntary Adopt-a-Trail Program to assist with maintenance and cleanup of trails in the community. This program may be combined or coordinated with the Walking and Biking Ambassador Program, if desired.

The City of Sonoma supports maintenance of its trail network through a voluntary Adopt-a-Bike-Path Program. Participants commit to maintain their adopted section of pathway for one year, including maintaining it at least once per month.

Maintenance activities performed as part of the program include litter removal and vegetation trimming, and participants are encouraged to discuss additional ideas with the Public Works Director. Path adopters are recognized on a sign on their section of trail.

Bike Rack Program
Bike Rack programs coordinate and streamline bike rack installations. The program could be managed by an intern who could work with staff and business owners to install bike racks and bike corrals citywide. This also ensures bike racks are properly installed as to not block sidewalks while still being usable for bicyclists.

Currently, there are no bike corrals installed in Santa Rosa. The City could evaluate installing bike corrals in high-traffic locations such as in vehicle parking spots on the corners of 4th and 5th Streets in downtown. This not only sends a statement that secure bike parking is important to the city and community members, but bike corrals increase visibility at intersections for all roadway users. An increase in visibility should reduce the risk of a collision in these locations.

The city could also develop customized bike racks. These racks can serve as a “brand,” highlighting the Santa Rosa identity as a bicycle-friendly community and can double as art features.

Where appropriate, this program could also coordinate with local businesses to provide bicycle lockers or other secure parking for employees and long-term visitors. Secure long-term parking is a key component of the bicycle network to encourage employees to bicycle instead of driving, and helps reduce bicycle theft. Bicycle lockers should also be considered in downtown Santa Rosa and at commercial hubs to serve people shopping or running multiple errands who would like a secure place to store their bicycle and deposit purchases or other items during their trip.
Bicycle Friendly Business Program

Bicycle Friendly Business programs recognize businesses who make it easy and convenient for both employees and customers to arrive by bicycle. This requires different strategies to accommodate the different needs of customers and employees. To accommodate customers, providing bicycle parking and supporting City bicycling projects can make it safer and easier to travel by bicycle. Some businesses also choose to offer discounts or incentives to people who arrive by bicycle.

For employees, offering secure long-term parking for bicycles is key. This could include a secure gated bicycle parking area, or access to bicycle lockers. If space is not available for dedicated secure bicycle parking, business owners and landlords can consider allowing employees and tenants to bring bicycles inside and store them in their workspace or another designated location. Providing changing areas, showers, or lockers to store belongings can also make it easier for employees to bicycle to work.

By recognizing businesses who support bicycling, Santa Rosa can support their local economy while fostering partnerships with the Chamber of Commerce and business owners to build community support for bicycling projects and programs. The League of American Bicyclists has a Bicycle Friendly Business program similar to the BFC program, and some communities have chosen to develop their own programs. Sutter Hospital was recently awarded the City’s first Bicycle Friendly Business award from the League.

SMART Corridor Bike Share

In November 2017, the Metropolitan Transportation Commission (MTC) approved over $800,000 for a bike share pilot program in Sonoma and Marin counties along the SMART train corridor. The program is considering employing GPS-enabled dockless bikes that do not require bikes to be placed at more traditional docking stations. These counties predict that the presence of shared bikes around SMART stations could free up space currently being used by people bringing bikes onto SMART trains. Instead, people can used shared bike near stations for their first mile and last mile commutes.

SMART has carried approximately 537,000 passengers and 46,000 bicycles since beginning passenger service in August 2017. This means nearly one in twelve riders are bringing a bicycle on board with them, and trains are quickly reaching capacity for bicycles. Supporting a regional bicycle sharing program could reduce the number of bicycles brought on board if riders have access to a shared bicycle at each end of their transit trip.

The City of Santa Rosa can support Sonoma County in these efforts, and help the county determine guidelines for the traditional or dockless bikes that best serve the needs of Santa Rosa residents. In addition, Santa Rosa can help advertise and gain interest for the bike sharing system.

The City may also study shared e-scooters as an alternative or complement to bike share. Shared scooter systems have become increasingly popular, and according to a survey of system users in Portland, up to 34 percent of scooter trips taken by residents replaced a trip that would otherwise have been taken in a car. Among visitors to the city, 48 percent of scooter trips replaced a car trip.
**Enforcement**

**Bait Bike Program**

Bike theft is a concern in the Santa Rosa community, with many residents identifying it as a barrier that currently discourages them from bicycling more often.

Bait bike programs involve a bicycle outfitted with a discrete tracking device monitored by the local police department. The bicycle should be nondescript and consistent with the character of bicycles ridden in the community. Periodically, the police department will lock the bait bike at a location where thefts have been reported, and monitor the tracking device. When the bicycle is stolen, police can then use the location data to recover the bicycle and cite the thief. These programs can be particularly effective in prosecuting ‘organized’ bicycle theft operations that remove bicycles from the community to be sold in bulk at another location.

Both Sonoma County and the City of Santa Rosa have used GPS tracking of “bait” items to apprehend thieves in the past. Sonoma County has implemented a bait bike program on occasion, and the Santa Rosa Police Department has used bait packages to target package thieves during the holiday season.

Citations should be monitored and routinely reviewed to ensure the bait bike program is not disproportionately targeting disadvantaged or minority communities in Santa Rosa. Similarly, bait bike deployment locations should be selected to provide geographic equity covering all parts of the City evenly.

An alternative model to this traditional bait bike program involves inexpensive Bluetooth devices being installed on as many bicycles as possible in the community. In Davis, CA, the local bike club used donations to purchase small trackers called Tiles and install them inconspicuously on bicycles as requested. The Tiles pair with a smartphone app that shows the location of your bicycle. If a stolen bicycle is reported as “lost” through the app, any smartphones with the Tile app in the vicinity of the missing bicycle will receive an alert and can help law enforcement retrieve the bicycle.

An outreach campaign should be paired with the launch of a bait bike program to publicize the effort and discourage theft by emphasizing that local police are taking bicycle theft seriously. It can also be a deterrent to thieves if they know the bicycle they are stealing may be a bait bike.

**Targeted Enforcement**

The Santa Rosa Police Department currently conducts targeted enforcement periodically based on requests from the community or focus areas of grant funding received.

This Plan Update recommends continuing these efforts, with a focus on those behaviors that create the greatest risk or potential conflict, and care should be taken that programs do not unfairly target specific demographics or modes of transportation. This Plan Update also recommends continuing current educational enforcement activities, where officers stop individuals and discuss the unsafe behavior observed without issuing citations.

Behaviors and locations for targeted enforcement should be reviewed each year based on collision data and community input. Behaviors cited as challenges during public outreach for this Plan Update include drivers failing to stop at red lights and yield to pedestrians in crosswalks, parking in bicycle lanes, pedestrians crossing streets illegally, and bicyclists riding on the wrong side of the road.
**Evaluation**

**Annual Report Card**

An annual report card assesses the City’s progress toward goals and objectives outlined in this Plan Update, implementation of its projects and programs, and changing mode splits for active transportation. Annual report cards can also incorporate a review of effectiveness to evaluate costs and benefits of various efforts and adjust investments to maximize results.

This Plan Update recommends the City work with the BPAB to develop an Annual Report Card that tracks progress toward implementing this Plan Update and incorporates annual collision data, SRTS program and participation data, and other relevant information to highlight successes and challenges of improving walking and bicycling each year. Specific performance measures identified by the City and the community should be included in this card on an annual basis to track key metrics over time and better understand successes and challenge areas.
Policy Changes

The following recommended changes include policies, operational changes, and municipal code revisions that support the goals of this Plan Update or address community-identified barriers to walking and bicycling in Santa Rosa.

Vision Zero Policy

Vision Zero is a traffic philosophy that rejects the idea that traffic crashes are accidents, and instead asserts that serious injuries or fatalities on the transportation system are preventable and unacceptable.

The more Santa Rosa understands where and why crashes happen, the more different departments can take actions to reduce them. The City can use this understanding to develop roadway designs that prioritize bicycling, walking, and other transportation facilities that enhance comfort and can be implemented quickly to adapt and respond to identified challenges.

The high-injury network identified in this 2018 Plan Update is a strong start to developing this understanding. Asking additional questions about the causes and locations of crashes can help the City re-prioritize funding for projects that target behaviors and locations that may be contributing to crashes:

- What are the total number of crashes (all modes)? Of these crashes, how many were fatal or severe injuries?
- What were the most striking contributing factors?
- How are the crashes affected by posted speed, road class, or other identifiable feature of the road?

An inclusive process and equitable outcomes are a core component of adopting Vision Zero. Santa Rosa has emphasized their commitment to equity in this 2018 Plan Update by offering inclusive outreach opportunities and identifying projects near schools, around housing for seniors and people with disabilities, and neighborhoods most reliant on public transportation. In addition, actions can be taken to address equity in enforcement.

As part of this Plan Update, the City and the Bicycle and Pedestrian Advisory Board reached out to the City of Fremont to discuss their Vision Zero program.

This Plan Update recommends the City consider whether adoption of a Vision Zero Policy is an appropriate step to increase the City’s existing commitment for all users of its diverse transportation systems. MTC awards additional points in their Regional Active Transportation Program competitive grant process for communities that have adopted a Vision Zero Policy.

The Vision Zero Network has resources and case studies available to guide cities as they develop and implement Vision Zero Action Plans. More information at:

visionzeronetwork.org/project/roadmapforaction
**School Zone Speed Limits**

On January 1, 2008, AB 321 took effect allowing local governments to extend school zones up to 1,000 feet and reduce speed limits within 500 feet of a school site to 15 mph in residential neighborhoods or on highways with speed limits of 30 mph or less.

In Santa Rosa from 2007 to 2017, nearly 300 crashes involving a bicyclist or pedestrian occurred within 500 feet of a school campus—146 crashes involving a bicyclist, and 138 crashes involving a pedestrian. More than 40 percent of these occurred during school hours, between 7 am and 4 pm.

At 15 mph, more than 90 percent of pedestrians are likely to survive a crash with only minor injuries. As speeds increase, however, crash severity increases dramatically. At 30 mph most crashes result in serious injuries to pedestrians, and nearly half may be fatal. At 40 mph, 90 percent of pedestrians will be killed in a crash. Reducing speeds even slightly can have a profound effect on safety for people walking and bicycling to school.

Cities that have already enacted this law include Berkeley, San Francisco, Los Angeles, and the City of Goleta.

This Plan Update recommends the City enact this law around eligible schools. AB 321 requires engineering and traffic surveys to be conducted to indicate that the existing speed limit is not appropriate. Santa Rosa can work with the Transportation and Public Works department to determine an evaluation and implementation schedule that accommodates staff capacity. In addition, Santa Rosa can work with local law enforcement to educate parents and drivers about the new policy and why certain school areas were selected.

**Vehicle Miles Traveled**

Transportation is the largest contributor to greenhouse gas emissions in Santa Rosa and the City’s 2012 Climate Action Plan recommends several strategies to reduce the number of miles residents and visitors travel daily by automobile. Following the passage of Senate Bill (SB) 743, CEQA guidelines will change how transportation impacts are measured by transitioning from auto delay calculated as Level of Service (LOS) to vehicle miles traveled (VMT). This Plan Update recommends the City adopt VMT as its standard for evaluating vehicle miles travelled and greenhouse gas emission impacts of transportation projects.

To help make this transition, the Metropolitan Transportation Commission (MTC) offers Priority Development Area grants to assist municipalities in transitioning their general plans to implement VMT-based transportation impact standards.

**Street Sweeping**

Residential streets in Santa Rosa are currently swept once per month, and collector and arterial streets are swept more frequently. Despite this, community members expressed concerns about debris in bicycle lanes and on shared use paths.

This Plan Update recommends reviewing street sweeping practices and street sweeper driver training to ensure on-street bicycle lanes are swept at least monthly, and that they are cleared of any glass or other debris following a collision.
Vegetation Maintenance

In many places in Santa Rosa, landscaping and vegetation near sidewalks and bikeways has overgrown into the travelway and creates challenges for people walking and bicycling. Overgrown vegetation can not only create mobility challenges by narrowing the usable travelway, it can limit visibility and contribute to debris on the pathway. Routinely trimming back vegetation and mowing pathway shoulders contributes to a safer and more comfortable active transportation environment.

This Plan Update recommends the City promote the online MySantaRosa application for reporting vegetation in need of maintenance to property owners, and develop a policy to respond to reports within a reasonable timeframe.

Waste Tote Placement

In areas with curbside trash or recycling collection, waste totes improperly placed in bicycle lanes can create challenges for people riding bicycles either by placing them at risk of colliding with a tote or by forcing them to merge into the travel lane to avoid the obstacle.

This Plan Update recommends the City provide clear instruction on its website and in utility bills mailed to residents about proper placement of waste totes. Where on-street parking exists, totes should be placed near the curb within the parking aisle. Where no on-street parking exists, residents should be instructed to place totes against the curb to minimize intrusion into the bicycle lane.

The City should also consider working with waste management companies to add reflective markings to totes to increase their visibility at night and reduce the risk of a bicyclist colliding with a misplaced tote, in addition to stenciling “Do Not Place In Bicycle Lane” on totes to remind residents of proper placement.

Bicycle Parking at Large Events

Chapter 11-40 of the Santa Rosa Municipal Code currently addresses the procedures and requirements to apply for an event permit within the City. This Plan Update recommends revising Section 11040.040 Permit – Conditions for Issuance to require events expected to draw more than 5,000 attendees must provide secure, attended bicycle parking for attendees at no charge. Key considerations include:

- A space that is enclosed and secured on three sides (“corral”) must be provided, with the fourth side consisting of tables for checking in bicycles
- The corral must be in a visible and easily accessible location within one block of the event
- Bicycle parking must be offered for the full duration of the event, including the bicycle parking attendants having access to the location at least one hour before and one hour after the event for setup and break down
- Availability and location of free bicycle parking must be noticed on all event promotion where transportation or directional information for the event is advertised, in the same format and with an equal amount of space as parking and transportation information for other modes
- Bicycle parking must be attended and monitored at all times with a number of staff sufficient for the size of the event and whether attendees are expected to arrive for a single start time or arrive throughout the event
- Bicycles will be checked in and returned with a claim check to ensure the correct bicycle is released to each person, and bicycle valet attendants will record and share the number of bicycles parked at the event in order to better estimate the space needed for the following year
- The valet bicycle parking service provider shall have insurance; should the event sponsor provide the bicycle parking service, bicycles checked in must be insured against theft

The City of Oakland operates a successful bicycle parking policy for large events, and may be a resource to Santa Rosa.
6. Implementation Plan

This Plan Update includes projects, programs, and policy changes intended to create a more walkable, bikeable Santa Rosa. Implementation of this Plan Update will require community support and political leadership in addition to significant funding.

This chapter outlines a strategy towards implementation of the infrastructure projects and includes the following sections:

- Project Evaluation presents the method and data sources used to prioritize projects for implementation, along with a summary of the results
- Funding Strategies provides an overview of competitive funding sources and eligibilities for the projects in this Plan Update

The intent of evaluating projects is to create a strategic list to guide implementation. The project list and evaluation results are flexible concepts that serve as guidelines. Over time as development occurs or other changes to land uses and the transportation network take place, this framework can be used to reevaluate remaining projects and continue pursuing implementation of this Plan Update.

A detailed list of all projects is included in Appendix A. Typical costs for each type of infrastructure project are included in the Design Guidelines in Appendix B.

Project Evaluation

The evaluation strategy described in this chapter reflects a systematic approach to determine each project’s community benefit in a manner that is feasible, fundable, and sustainable.

Studies for crossings and corridor improvements were evaluated and ranked on an individual basis, separate from proposed infrastructure projects.
Implementation Categories

Projects are sorted into four Implementation Categories based on the results of two evaluations: project priority and project readiness. Each project was scored “high” or “low” on each axis, resulting in the four implementation categories represented in the graphic below.
**Short term** improvement projects are rated high priority and high feasibility, and represent projects that could be pursued for implementation within the first three to five years.

**Long term** improvement projects are rated high priority and low feasibility. They may require more study or analysis than short term projects, or more significant funding for construction.

**Opportunity** improvements represent projects rated lower priority and high feasibility, and may be pursued when nearby development or an overlapping project creates an opportunity to include these easy to implement projects.

**Low priority** improvements are those projects rated lower priority and low feasibility. They represent challenging projects that may not add significant value for a greater portion of the community walking or bicycling network on their own, but are part of a long term vision for active transportation.

Projects are summarized by implementation category in Table 6-1 and Table 6-2, and mapped in Figure 6-1 through Figure 6-4.

### Table 6-1: Linear Projects by Implementation Category

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Short Term</th>
<th>Long Term</th>
<th>Opportunity</th>
<th>Low Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Miles</td>
<td>No.</td>
<td>Miles</td>
</tr>
<tr>
<td>Class I Shared Use Paths</td>
<td>14</td>
<td>12.34</td>
<td>50</td>
<td>23.05</td>
</tr>
<tr>
<td>Class II Bicycle Lanes</td>
<td>17</td>
<td>4.80</td>
<td>7</td>
<td>3.10</td>
</tr>
<tr>
<td>Class II Buffered Bicycle Lanes</td>
<td>2</td>
<td>2.08</td>
<td>1</td>
<td>0.60</td>
</tr>
<tr>
<td>Class III Bicycle Routes</td>
<td>4</td>
<td>1.60</td>
<td>116</td>
<td>34.16</td>
</tr>
<tr>
<td>Class III Bicycle Boulevards</td>
<td>1</td>
<td>0.46</td>
<td>17</td>
<td>7.06</td>
</tr>
<tr>
<td>Class IV Separated Bikeways</td>
<td>1</td>
<td>1.78</td>
<td>2</td>
<td>0.23</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>8</td>
<td>2.15</td>
<td>63</td>
<td>20.88</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
<td>10.26</td>
<td>33</td>
<td>18.89</td>
</tr>
</tbody>
</table>

### Table 6-2: Crossing Locations by Implementation Category

<table>
<thead>
<tr>
<th>Crossing Type</th>
<th>Short Term</th>
<th>Long Term</th>
<th>Opportunity</th>
<th>Low Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossing Locations</td>
<td>10</td>
<td>5</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>Trail Bridges</td>
<td>2</td>
<td>2</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>10</td>
<td>7</td>
<td>17</td>
<td>36</td>
</tr>
</tbody>
</table>
SHORT TERM IMPROVEMENTS

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 6-1

- Class II Bicycle Lane
- Class IIB Buffered Bicycle Lane
- Class III Bicycle Route
- Class IV Separated Bikeway

Crossing Location

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary
LOW PRIORITY

SANTA ROSA BICYCLE & PEDESTRIAN MASTER PLAN UPDATE 2018

FIGURE 6-4

- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIIB Bicycle Boulevard
- Class IV Separated Bikeway

- Crossing Location
- Trail Bridge

DESTINATIONS + BOUNDARIES

- City Hall
- SMART Station
- Park
- City Limits
- Urban Growth Boundary

Map produced October 2018.
Priority Evaluation

Using data from early phases of this Plan Update process, five criteria listed in Table 6-3 were used to evaluate the priority of infrastructure projects. Input from the community and the Bicycle and Pedestrian Advisory Board informed the weighting of these criteria in evaluating overall priority.

Each project received a priority score out of ten possible points, with projects scoring 6 or more considered high priority and projects scoring 5 or less considered low priority.

### Table 6-3: Priority Evaluation Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collision Reduction</td>
<td>Collisions involving bicyclists or pedestrians from September 2007 through August 2017 were analyzed to identify a High Injury Network (HIN) in Santa Rosa, where bicycle or pedestrian related collisions that result in either fatalities or severe injuries are occurring at a relatively high frequency in relation to the citywide street network. For more information about the HIN, see Chapter 3. Projects located on HIN corridors were awarded points. Class I shared use paths, which are not located on the existing street network, were awarded points if they provide a parallel alternative route to a HIN corridor. Trail bridge projects along Class I paths that provide these alternative routes were also awarded points.</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Improving walking and bicycling access to destinations including schools and transit hubs was identified as a priority by the Santa Rosa community. Projects within one quarter-mile of a SMART station, Santa Rosa City Bus transit station, or school were awarded points.</td>
</tr>
<tr>
<td>Comfort Network</td>
<td>Speed limits, travel lanes, daily traffic volumes, and other information about Santa Rosa streets was analyzed to develop a Level of Traffic Stress (LTS) score from one to four for every street segment in the city, with low scores representing relatively low-stress segments and high scores representing high-stress segments. For more information about this analysis, see Chapter 3. Projects along streets with an average LTS score of 3 or 4 were awarded points. Because Class I shared use paths and trail bridges provide a walking and bicycling path completely separated from potential traffic stress, all Class I and trail bridge projects were awarded points.</td>
</tr>
<tr>
<td>Gap Closure</td>
<td>Closing gaps in the bicycling and walking network is important to create a seamless, connected transportation facility. Network projects that close a gap between two existing facilities were awarded points. Crossing projects were awarded points if a sidewalk or trail exists on both sides of the crossing.</td>
</tr>
<tr>
<td>Equity</td>
<td>Active transportation investments in disadvantaged communities support equity and provide access to transportation choices for neighborhoods that may be more reliant on bicycling, walking, or transit. Projects located in a Community of Concern identified by the Metropolitan Transportation Commission (MTC) were awarded points. For more information about Community of Concern boundaries in Santa Rosa, see Chapter 3. Boundaries may change; the most recent boundaries are published by MTC.</td>
</tr>
</tbody>
</table>
Feasibility Evaluation

In addition to evaluating the priority of each project, this implementation strategy also considers the complexities to design, construct, and maintain the project in a feasibility evaluation. Typically, projects were rated as high or low feasibility based on the bikeway class, project type, or other treatments included. Some projects were reassigned after this initial evaluation based on site-specific considerations.

High Feasibility

In general, high feasibility projects include:

- Most Class II Bicycle Lanes and Class II Buffered Bicycle Lanes, where right of way is available or a road diet is feasible
- Class III Bicycle Routes

Low Feasibility

In general, low feasibility projects include:

- Class I Shared Use Paths
- Class II Bicycle Lanes and Class II Buffered Bicycle Lanes that may require parking removal, additional right of way, or further study
- Class III Bicycle Boulevards
- Class IV Separated Bikeways
- Sidewalks
- Trail Bridges
First Phase

The Short Term and Long Term Implementation Categories together include nearly 60 linear projects likely to provide a great benefit to walking and bicycling in the Santa Rosa community. Given limited resources compared to this volume of improvements, this Plan Update recommends the City focus on a short list of transformative projects and studies to be implemented first. This list includes 28 projects from both the Short Term and Long Term categories, and is expected to be reevaluated in the future as projects are completed.

First Phase projects are listed alphabetically by location in Table 6-4 through Table 6-7. This order is not intended to reflect any one project being prioritized above another.

Table 6-4: First Phase - Class I Shared Use Paths

<table>
<thead>
<tr>
<th>Type</th>
<th>Location</th>
<th>Cross Street A</th>
<th>Cross Street B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I Shared Use Path</td>
<td>Highway 101 Overcrossing</td>
<td>Coddington Mall</td>
<td>Santa Rosa Junior College</td>
</tr>
<tr>
<td>Class I Shared Use Path</td>
<td>Jennings Avenue</td>
<td>at SMART Tracks</td>
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</tr>
<tr>
<td>Class I Shared Use Path</td>
<td>Roseland Creek Trail</td>
<td>Burbank Avenue</td>
<td>McMinn Avenue</td>
</tr>
<tr>
<td>Class I Shared Use Path</td>
<td>SMART Trail:</td>
<td>Prince Memorial Greenway</td>
<td>3rd Street</td>
</tr>
<tr>
<td>Class I Shared Use Path</td>
<td>Segment A</td>
<td>4th Street</td>
<td>6th Street</td>
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<tr>
<td>Class I Shared Use Path</td>
<td>Segment B</td>
<td>Guerneville Road</td>
<td>City Limits</td>
</tr>
<tr>
<td>Class I Shared Use Path</td>
<td>Segment C</td>
<td></td>
<td></td>
</tr>
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<td>Class I Shared Use Path</td>
<td>Southeast Greenway</td>
<td>Farmers Lane</td>
<td>Spring Lake Park</td>
</tr>
<tr>
<td>Class I Shared Use Path</td>
<td>Taylor Mountain Regional Park</td>
<td>Bennett Valley Road/ Farmers Lane</td>
<td>Petaluma Hill Road/ Yolanda Avenue</td>
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Table 6-5: First Phase - On Street Bikeways

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<thead>
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<th>Type</th>
<th>Location</th>
<th>Cross Street A</th>
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<tr>
<td>Class II Buffered Bicycle Lanes</td>
<td>3rd Street</td>
<td>Davis Street</td>
<td>Morgan Street</td>
</tr>
<tr>
<td>Class II Bicycle Lanes</td>
<td>7th Street</td>
<td>B Street</td>
<td>Mendocino Avenue</td>
</tr>
<tr>
<td>Class III Bicycle Route</td>
<td>B Street</td>
<td>4th Street</td>
<td>3rd Street</td>
</tr>
<tr>
<td>Class II Bicycle Lanes</td>
<td>Dutton Avenue</td>
<td>3rd Street</td>
<td>Sebastopol Road</td>
</tr>
<tr>
<td>Class II Bicycle Lanes</td>
<td>Guerneville Road</td>
<td>3rd Street</td>
<td>Sebastopol Road</td>
</tr>
<tr>
<td>Class II Bicycle Lanes</td>
<td>Range Avenue</td>
<td>Range Avenue</td>
<td>Illinois Avenue</td>
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<td>Class II Bicycle Lanes</td>
<td>Piner Road</td>
<td>Marlow Road</td>
<td>Cleveland Avenue</td>
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<td>Class II Bicycle Lanes</td>
<td>Range Avenue</td>
<td>Piner Road</td>
<td>Russell Avenue</td>
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<td>Class II Bicycle Lanes</td>
<td>Santa Rosa Avenue</td>
<td>Sonoma Avenue</td>
<td>Maple Avenue</td>
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<tr>
<td>Class II Bicycle Lanes</td>
<td>Sebastopol Road</td>
<td>Avalon Avenue</td>
<td>Sebastopol Ave</td>
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Table 6-6: First Phase – Sidewalks

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<th>Type</th>
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<th>Cross Street A</th>
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<tr>
<td>Sidewalk</td>
<td>3rd Street</td>
<td>70 ft east of Roberts Avenue</td>
<td>250 ft west of Wilson Street</td>
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<td>Sidewalk</td>
<td>Chanate Road</td>
<td>Mendocino Avenue</td>
<td>Lomitas Avenue</td>
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<td>Sidewalk</td>
<td>Fulton Road</td>
<td>Appletree Drive</td>
<td>Guerneville Road</td>
</tr>
<tr>
<td>Sidewalk</td>
<td>Guerneville Road</td>
<td>Marlow Road</td>
<td>Ridley Avenue</td>
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<tr>
<td>Sidewalk</td>
<td>Sonoma Avenue</td>
<td>Farmers Lane</td>
<td>Village Court Transit Hub</td>
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Table 6-7: First Phase – Studies

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<th>Type</th>
<th>Location</th>
<th>Cross Street A</th>
<th>Cross Street B</th>
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</thead>
<tbody>
<tr>
<td>Study</td>
<td>4th Street</td>
<td>D Street</td>
<td>Farmers Lane</td>
</tr>
<tr>
<td>Study</td>
<td>Brookwood Avenue</td>
<td>2nd Street</td>
<td>Sonoma Avenue</td>
</tr>
<tr>
<td>Study</td>
<td>College Avenue</td>
<td>Kowell Lane</td>
<td>Morgan Street</td>
</tr>
<tr>
<td>Study</td>
<td>Elliott Avenue</td>
<td>Armory Drive</td>
<td>Mendocino Avenue</td>
</tr>
<tr>
<td>Study</td>
<td>Montgomery Drive</td>
<td>Alderbrook Drive</td>
<td>Hahman Drive</td>
</tr>
<tr>
<td>Study</td>
<td>Northeast Connections:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Santa Rosa Creek Trail</td>
<td>Melita Road</td>
<td>SR 12</td>
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<td></td>
<td>Channel Trail</td>
<td>SR 12</td>
<td>Channel Drive</td>
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<tr>
<td></td>
<td>Melita Road</td>
<td>SR 12</td>
<td>Stone Bridge Road</td>
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<td></td>
<td>Channel Trail</td>
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<td>Channel Drive</td>
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<tr>
<td>Study</td>
<td>Roseland Creek Trail</td>
<td>Stony Point Road</td>
<td>Burbank Avenue</td>
</tr>
<tr>
<td>Study</td>
<td>Stony Point Road</td>
<td>Guerneville Road</td>
<td>Sebastopol Road</td>
</tr>
</tbody>
</table>
Funding Strategies
A variety of sources exist to fund bicycle and pedestrian infrastructure projects, programs, and studies. Local and regional funding sources that can be used for construction or maintenance of bicycle or pedestrian improvements, along with competitive grant programs, are described below.

Eligibilities for the funding programs listed in this section are summarized in Table 6-8 on page 6-16.

Local and Regional Funding Sources

Transportation Funds for Clean Air
Money in the Transportation Funds for Clean Air program, established by Assembly Bill 434, is generated by a $4 vehicle registration surcharge in the nine Bay Area counties. The funds may be used on projects that reduce vehicle emissions, including bicycle and pedestrian projects, and can also be used as a match for competitive state or federal programs.

Funds are programmed by the Bay Area Air Quality Management District (BAAQMD) and Sonoma County Transportation Authority (SCTA).

Bicycle Facilities Grant Program
Throughout the nine-county Bay Area, the Bicycle Facilities Grant program strives to reduce emissions from on-road vehicles and improve air quality by helping residents and commuters shift modes to bicycling and walking as alternatives to driving for short distances and first-and-last mile trips. BAAQMD has grant programs that fund both on-street facilities and bicycle parking facilities.

Funds are programmed by the BAAQMD.

One Bay Area Grant
In Sonoma County, One Bay Area grant funds are administered by SCTA. The program emphasizes funding for projects within Priority Development Areas in the region that are in-line with housing and land-use goals. Santa Rosa has received two One Bay Area 2 grants, including a project funding the design of a bicycle and pedestrian bridge over Highway 101.

Funds are programmed by SCTA.

Transportation Development Act Article 3
Transportation Development Act Article 3 (TDA 3) provides funding annually for bicycle and pedestrian projects. Two percent of TDA funds collected within the county are used for TDA 3 projects. Metropolitan Transportation Commission policies require that all projects be reviewed by a BPAC or similar body before approval.

Funds are programmed by SCTA.

Measure M
Measure M is a one-quarter cent sales tax in Sonoma County to fund transportation projects including maintenance and traffic safety improvement projects. Four percent of revenues are set aside for bicycle and pedestrian projects. Two projects in Santa Rosa have already been identified by the SCTA as priorities to receive funding: the Santa Rosa Creek Trail, the Highway 101 bicycle and pedestrian overcrossing, and bicycle lanes on Old Redwood Highway, Mendocino Avenue, and Santa Rosa Avenue.

Funds are programmed by SCTA.

Regional Measure 3
Regional Measure 3 uses toll revenue from the Bay Area’s seven state-owned toll bridges. The money from Regional Measure 3 funds a variety of highway and transit projects throughout the region.

Funds are programmed by the Metropolitan Transportation Commission.
Competitive Grant Programs

California Active Transportation Program
California’s Active Transportation Program (ATP) funds infrastructure and programmatic projects that support the program goals of shifting trips to walking and bicycling, reducing greenhouse gas emissions, and improving public health. Competitive application cycles occur every one to two years, typically in the spring or early summer. Eligible projects include construction of bicycling and walking facilities, new or expanded programmatic activities, or projects that include a combination of infrastructure and non-infrastructure components. Typically no local match is required, though extra points are awarded to applicants who do identify matching funds.

Funds are programmed by the California Transportation Commission (CTC).

Sustainable Transportation Planning Grants
Caltrans Sustainable Transportation Planning Grants are available to communities for planning, study, and design work to identify and evaluate projects, including conducting outreach or implementing pilot projects. Communities are typically required to provide an 11.47 percent local match, but staff time or in-kind donations are eligible to be used for the match provided the required documentation is submitted.

Funds are programmed by Caltrans.

Highway Safety Improvement Program
Caltrans offers Highway Safety Improvement Program (HSIP) grants every one to two years. Projects on any publicly owned road or active transportation facility are eligible, including bicycle and pedestrian improvements. HSIP focuses on projects that explicitly address documented safety challenges through proven countermeasures, are implementation-ready, and demonstrate cost-effectiveness.

Funds are programmed by Caltrans.

Solutions for Congested Corridors Program
Funded by SBI, the Congested Corridors Program strives to reduce congestion in highly traveled and congested through performance improvements that balance transportation improvements, community impacts, and environmental benefits. This program can fund a wide array of improvements including bicycle facilities and pedestrian facilities. Eligible projects must be detailed in an approved corridor-focused planning document. These projects must include aspects that benefit all modes of transportation using an array of strategies that can change travel behavior, dedicate right of way for bikes and transit, and reduce vehicle miles traveled.

Funds are programmed by the CTC.

Office of Traffic Safety
Under the Fixing America’s Surface Transportation (FAST) Act, five percent of Section 405 funds are dedicated to addressing nonmotorized safety. These funds may be used for law enforcement training related to pedestrian and bicycle safety, enforcement campaigns, and public education and awareness campaigns.

Funds are programmed by the California Office of Traffic Safety.

Recreational Trails Program
The Recreational Trails Program helps provide recreational trails for both motorized and nonmotorized trail use. Eligible products include: trail maintenance and restoration, trailside and trailhead facilities, equipment for maintenance, new trail construction, and more.

Funds are programmed by the California Department of Parks and Recreation.
Affordable Housing and Sustainable Communities Program
The AHSC program funds land-use, housing, transportation, and land preservation projects that support infill and compact development that reduces greenhouse gas emissions. Projects must fall within one of three project area types: transit-oriented development, integrated connectivity project, or rural innovation project areas. Fundable activities include: affordable housing developments, sustainable transportation infrastructure, transportation-related amenities, and program costs.
Funds are programmed by the Strategic Growth Council and implemented by the Department of Housing and Community Development.

Cultural, Community and Natural Resources Grant Program – Proposition 68
Proposition 68 authorizes the legislature to appropriate $40 million to the California Natural Resources Agency to protect, restore, and enhance California’s cultural, community, and natural resources. One type of eligible project that this program can fund are projects that develop future recreational opportunities including: creation or expansion of trails for walking, bicycling, and/or equestrian activities and development or improvement of trailside and trailhead facilities, including visitor access to safe water supplies.
Funds are programmed by the California Natural Resources Agency.

Urban Greening Grants
Urban Greening Grants support the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Projects must include one of three criteria, most relevantly: reduce commute vehicle miles travels by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools. Eligible projects include green streets and alleyways and non-motorized urban trails that provide safe routes for travel between residences, workplaces, commercial centers, and schools.
Funds are programmed by the California Natural Resources Agency.
### Funding Eligibility Table

**Table 6-8: Funding Source Eligibilities by Project Type**

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>On-Street Bikeways</th>
<th>Trails</th>
<th>Safe Routes to School</th>
<th>Safe Routes to Transit</th>
<th>Crossings/Intersections</th>
<th>Programs</th>
<th>Studies</th>
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<td><strong>Local and Regional Programs</strong></td>
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<td>Transportation Funds for Clean Air (SCTA)</td>
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</table>
Environmental Assessment

Based on Planning and Economic Development (PED) staff, no additional environmental review is necessary for the Plan Update 2018 because there are no new or more severe impacts that might come from this Plan Update than what was covered in the scope of the environmental review completed for the 2010 Bicycle and Pedestrian Master Plan. An environmental assessment has been completed by the PED staff and it has been determined that no additional review is necessary for the Plan Update 2018.