

3

Circulation, Open Space, Conservation, and Greenhouse Gas Reduction



3. Circulation, Open Space, Conservation, and Greenhouse Gas Reduction

Responsible management of the built and natural environments now and in the future is essential to ensure the well-being of current and future generations. This chapter focuses on the city's transportation system, along with open space, resource conservation, and greenhouse gas (GHG) emissions.

Mobility is the potential for movement and the ability to get from one place to another in our everyday lives. How we travel to jobs, schools, homes, shopping, and leisure affects our quality of life, and our mobility choices influence the time we spend commuting and how much air pollution we generate and breathe.

Like much of the United States, Santa Rosa's built environment caters to the automobile. Jobs and housing in Santa Rosa are balanced enough that more than one-third of employed community members live and work locally. The majority of destinations for community members are within five miles, yet driving alone is still the most common way to get around.

Over several decades, improvements to the transportation system have broadened the range of options for community members, including the Sonoma Marin Area Rail Transit (SMART) train, expanded bus routes, and new active transportation facilities (walking and

wheeling). This General Plan 2050 aims to expand transportation options further and support the mobility needs of everyone in Santa Rosa to reduce dependence on single-occupant vehicles and fossil fuels.

Open space in and around Santa Rosa offers multiple community benefits, including visual enjoyment, watershed protection, recreation use, and reduction of hazard risk. Local open space areas include undeveloped lands with significant wildlife habitat and other natural resources, plus more than 100 miles of creeks within the city limits. Conservation is the preservation and protection of resources. It is closely linked with GHG emissions reduction, and both affect every facet of community life.

General Plan Conservation Elements traditionally include agricultural lands, air quality, biological resources and habitat, energy, and open space. General Plan 2050 also integrates GHG emissions reductions in this chapter and throughout the Plan. The City's approach to GHG emissions reductions emphasizes conservation to reduce GHG emissions from transportation, solid waste, water, wastewater, and other services and meet State and local pollution-reduction targets. The separate Santa Rosa GHG Reduction Strategy, which replaces the prior Community Climate

Action Plan, provides an ongoing work program to meet those targets.

Chapter Contents

- Circulation
- Open Space and Conservation
- GHG Emissions

The Vision for Santa Rosa is the foundation for the goals in this chapter and their associated policies and actions, especially these two statements from the Vision:

- **Connected:** High-quality, reliable, and safe transit service, bicycle and pedestrian facilities, and other forms of mobility connect all ages across the city and region at all times and support healthy lifestyles, clean air, equity, and resilience.
- **Sustainable:** Natural resources are restored, protected, and expanded to provide accessible green space for everyone in all neighborhoods, mitigate drought, and minimize greenhouse gas emissions.

Figure 3-1 illustrates some of the key concepts in this chapter.

Circulation

The circulation network significantly influences the lives of community members. It affects:

- **Public health** by how well it promotes active transportation and reduces auto travel, which impacts local air quality.
- **Equity** by how easily community members of all ages, abilities, and income levels can access their daily needs.

- **Individual and City economic health** by how well it supports access to employment, shopping, recreation, and entertainment.
- **Quality of life** by how easy, affordable, dependable, efficient, and enjoyable it is to move around the city.

Everyone in Santa Rosa needs an equitable and efficient transportation network to meet their needs locally and reduce their dependence on single-occupant vehicles. Some policies and actions in this chapter, as in the other chapters, elevate the needs of Equity Priority Areas, and some goals, policies, and actions focus on the Areas of Change identified through the General Plan update public input process.

Equity Priority Areas or EPAs are areas in Santa Rosa where residents suffer most from economic, health, and environmental burdens. The General Plan prioritizes the environmental justice needs and health and equity considerations of EPAs in the goals, policies, and actions of this and other chapters of the General Plan. EPAs are depicted on Figure 2-4 and discussed in more detail in Chapters 2 and 6, Land Use and Economic Development and Health, Equity, and Environmental Justice.

Areas of Change are places where the City will focus efforts to address housing, services, connectivity, and/or infrastructure needs to help make these complete neighborhoods. Goals, policies, and actions throughout the General Plan prioritize Areas of Change for implementing actions that promote complete neighborhoods, such as active transportation infrastructure, quality housing, healthy food options, opportunities for social connections, and access to parks and commercial services.

Areas of Change are depicted on Figure 2-5 and discussed in more detail in Chapter 2, Land Use and Economic Development.

General Plan 2050 opens opportunities for the city to reduce vehicle miles (VMT) and GHG emissions. The General Plan combines land use changes and transportation improvements to achieve a projected reduction in VMT per “service population” (which encompasses all trip types—to work, school, shopping, etc.). **Figure 3-2** compares existing and projected VMT per service population in Santa Rosa and Sonoma County.

Figure 3-3 depicts the city’s existing transportation network, and **Figure 3-4** shows the major circulation network improvements in General Plan 2050 that, together with its policies and actions, support more walking, wheeling, and transit use, as well as the comfort and safety of all modes of travel.

Figure 3-1: Visualizing the Concepts

► CIRCULATION, OPEN SPACE, CONSERVATION, AND GREENHOUSE GAS REDUCTION

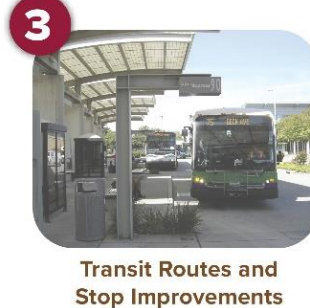
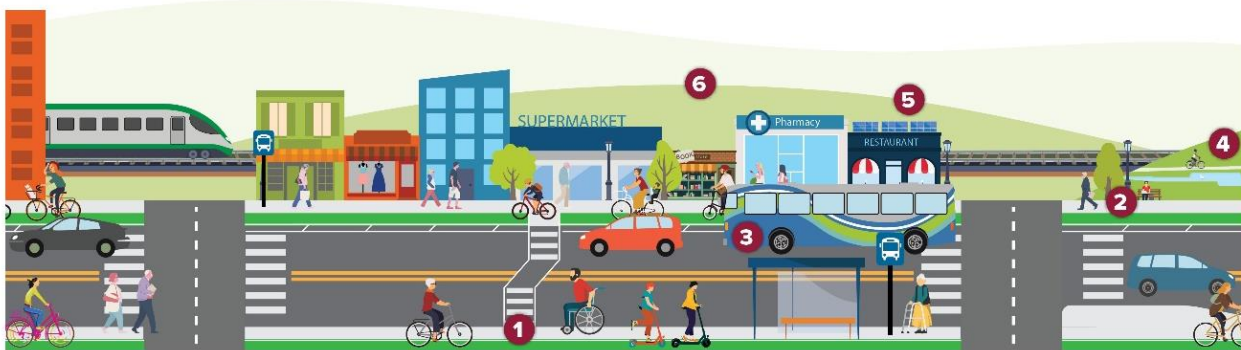
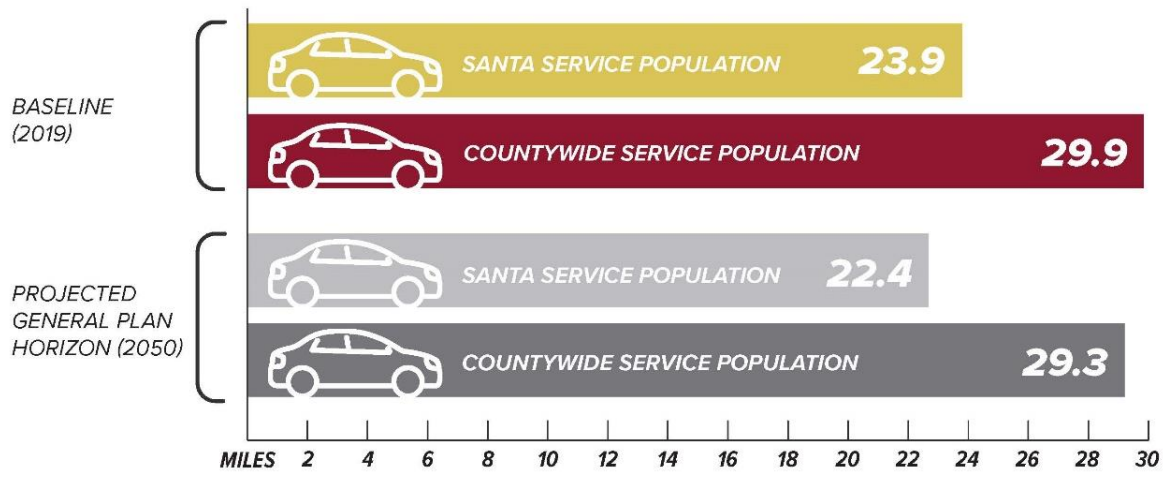


Figure 3-2: Existing and Projected VMT per Service Population



VMT per Service Population is based on the **total** VMT, including all types of vehicular travel, such as travel to work, school, shopping, and recreation.

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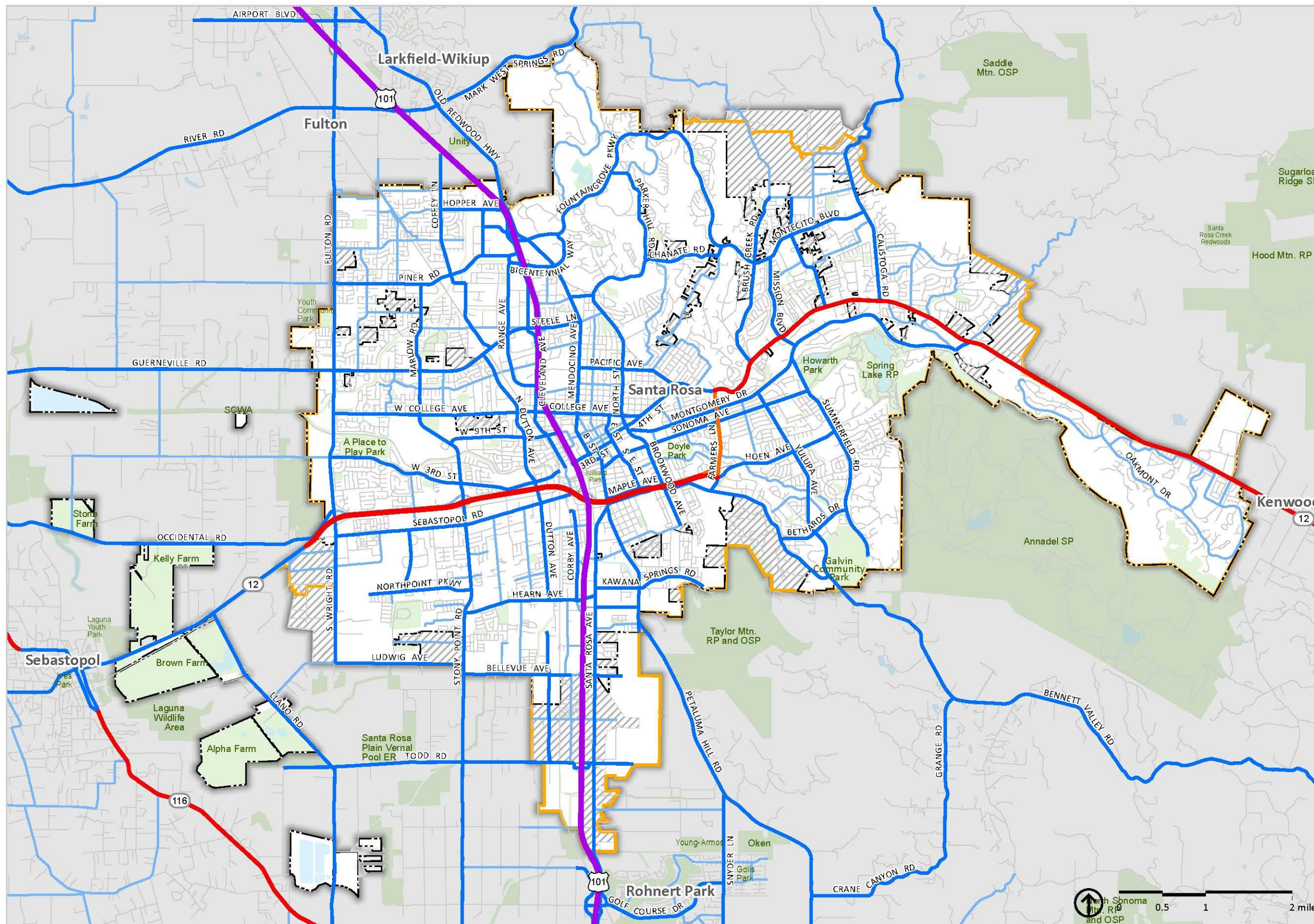


Figure 3-3
Transportation
Network

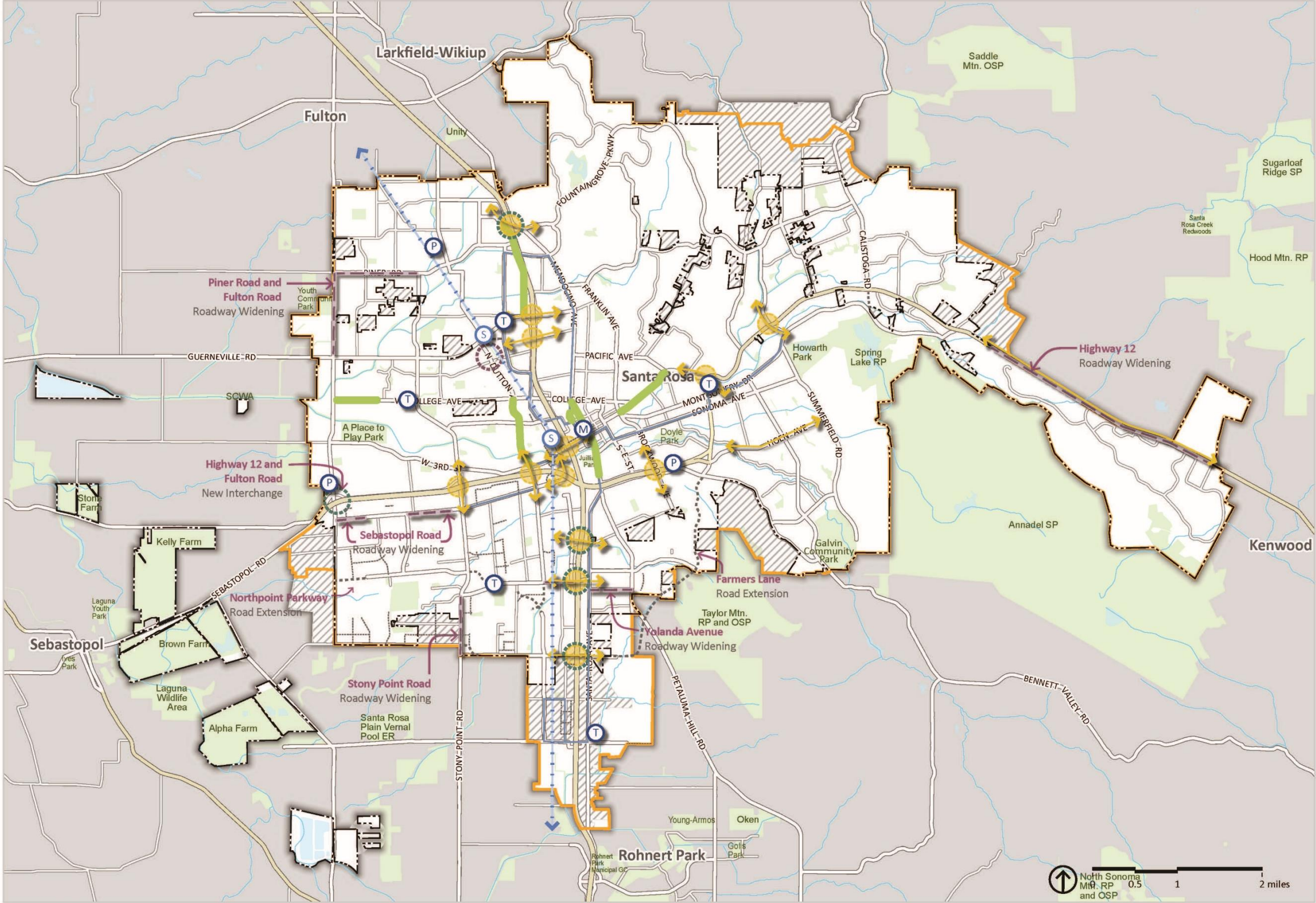
- City Limits
- Urban Growth Boundary
- City Sphere of Influence
- Planning Area
- Road Classification**
- US Highway
- State Highway
- Arterial/State Highway
- Arterial
- Collector
- Local Road
- On/Off Ramps

Source: City of Santa Rosa 2023



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Figure 3-4
**Planned Transportation
 Network Improvements**



Source: City of Santa Rosa 2023



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Transit Network

CityBus and Regional Transit

Santa Rosa CityBus provides local fixed-route transit and paratransit, with regularly scheduled service to residential neighborhoods, educational facilities, and major job centers. CityBus covers areas of the city with the highest need for transit service, and its ridership levels are the highest in Sonoma County and in the top ten for transit providers in the Bay Area.

Regional transit operators that serve Santa Rosa include Sonoma County Transit, Golden Gate Transit, Mendocino Transit, Greyhound, and the Sonoma Marin Area Rail Transit (SMART) commuter rail system. These regional services connect Santa Rosa with Marin County, Mendocino County, San Francisco, Contra Costa County, and beyond. CityBus coordinates extensively with Sonoma County Transit, Petaluma Transit, Golden Gate Transit, and SMART at monthly meetings of the Sonoma County Transportation Authority (SCTA). CityBus, Golden Gate Transit, and Sonoma County Transit offer paratransit services through a next-day reservation system.

The Santa Rosa Transit Mall is the busiest transit hub in the North Bay, served by five operators. It provides affordable and accessible connections to regional jobs, education, shopping, and recreation.

SMART makes direct commuter rail connections between Santa Rosa and Larkspur and has two stations in Santa Rosa: the Downtown Station and the North Santa Rosa Station. The Downtown Station is within walking distance of the Santa Rosa Transit Mall and has fixed-route service on six CityBus routes. The North Station is near the Coddington Transit hub.

Paratransit

The City of Santa Rosa offers next-day ADA paratransit service seven days a week to those who are unable (temporarily or permanently) to use Santa Rosa CityBus because of a disability or health condition. This service will pick up and drop off three-quarters of a mile from CityBus routes, in conformance with the Americans with Disabilities Act (ADA).

Zero-Emissions Bus Rollout Plan

CityBus developed a Zero-Emission Bus (ZEB) Rollout Plan to meet California's Innovative Clean Transit (ICT) regulation (13 CCR § 2023.1). The ZEB Rollout plans for CityBus to reach full electrification of its 41-vehicle fleet by 2037, three years in advance of the ICT requirement.

Coordinated Fare Payments Across Systems

Clipper is a regional fare payment system and the all-in-one transit card for the Bay Area. Passengers can add value to their card and ride any transit system in the Bay Area (seniors, youth, persons with disabilities and low-income riders receive discounts on all transit systems). Clipper riders receive a discount when transferring between SMART, CityBus, Golden Gate Transit, and Sonoma County transit.

Fare Free Programs

CityBus has worked to remove barriers to transit by developing fare-free programs for veterans, youth 12th grade and younger, paratransit riders, and Santa Rosa Junior College students. These fare-free programs are also available to employers, residential projects, and any other group of 50 people or more who work under a single entity.

CityBus Improvements

Between March 2015 and August 2016, the City completed a comprehensive redesign of the CityBus system, called Reimagining CityBus. It was the most significant change in Santa Rosa transit service since 1958, when transit service started. The redesign created a new transit system for Santa Rosa, with 15-minute service in high-ridership corridors, more direct routes, more two-way service to reduce transit travel time, and a more convenient and useful bus system. The new bus system is a roadmap for creating a modern transit system that meets the current and future needs of community members. The redesigned bus system is organized into two phases. The City launched Phase One in May 2017. Phase Two will improve rapid bus routes with transit signal priority corridors. The City will improve late night and weekend service as funding becomes available. The Short-Range Transit Plan (SRTP) updates and further develops this approach every 3 to 5 years, as required by the Metropolitan Transportation Commission.

Active Transportation Network

Santa Rosa's comprehensive active transportation network is poised to grow and make the city a walking and bicycling destination. The city has a mild climate, is relatively flat, and has a large network of sidewalks and bicycle infrastructure. The League of American Bicyclists designated Santa Rosa as a silver-level Bicycle Friendly Community, which the City hopes to raise to platinum status. Ongoing updates to the Bicycle and Pedestrian Master Plan call for improvements to the active transportation network to adapt to community input and changes in bicycle technology.

The active transportation network provides access to transit, schools, open space, hospitals, other key destinations, and urban areas such as the downtown, with opportunities for walking and using wheeled devices—wheelchairs,

bicycles, scooters, and shared devices (e.g., bicycle and scooter rentals).

The pedestrian network forms the backbone of the city's transportation network. Almost all trips begin and end with walking or using a wheelchair or stroller, so an accessible pedestrian network is critical to get people where they need to go. Sidewalks, pathways, and crosswalks make up the pedestrian network and provide a comfortable walking environment separated from vehicle traffic. The pedestrian network is also essential for ADA compliance, ensuring access and mobility for users of all ages and abilities.

Currently, most streets have sidewalks or pathways on at least one side. In the city limits, property owners are responsible for sidewalk maintenance. Some parts of the city are not required to provide sidewalks, including rural hillside developments or areas built under County jurisdiction and later annexed into the city. **Figure 3-5** shows planned pedestrian network improvements.

The comprehensive and connected bicycle network strives to be safe, comfortable, and attractive for people of all ages and skill levels. Its design emphasizes direct and comfortable bicycling routes. The City's Bicycle and Pedestrian Master Plan calls for adding Class I and Class IV facilities (separated paths) and upgrading existing Class II and Class III on-road facilities to Class I or Class IV. These ongoing improvements are intended to ensure that the bicycle network offers comprehensive accessibility for all, with a goal of increasing the use of bicycles for all types of trips citywide and lowering transportation-related GHG emissions. Bicycles are more equitable than cars for moving around the city, and they increase health-promoting physical activity among community members.

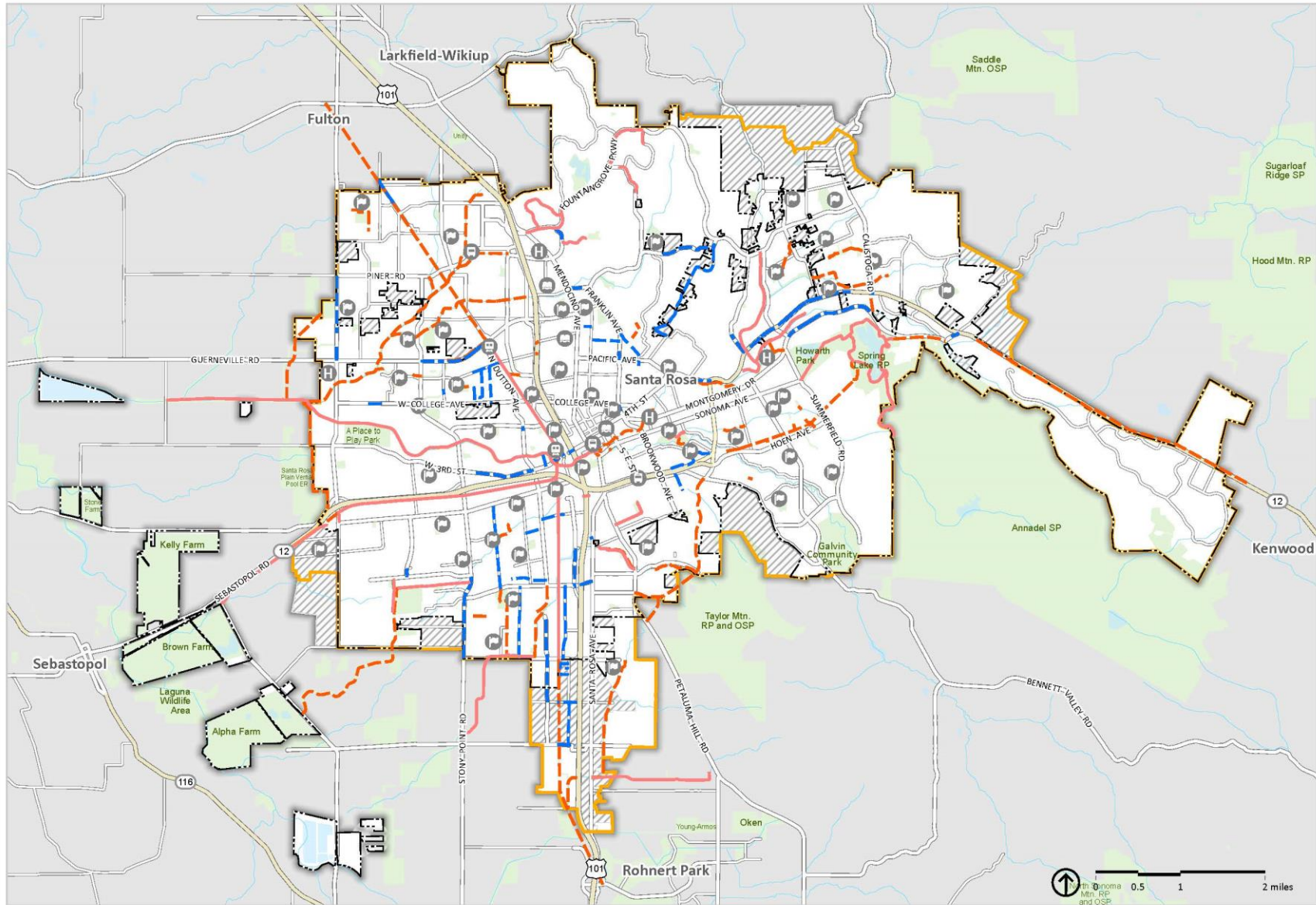


Figure 3-5
Planned
Pedestrian Network
Improvements

- City Limits
 - Urban Growth Boundary
 - City Sphere of Influence
 - Planning Area
 - Existing Class I Shared-Use Path
 - Proposed Class I Shared-Use Path
 - Proposed Sidewalk
- Destinations**
- School
 - SMART Station
 - Transit Hub
 - Hospital
 - Library

Adapted from the 2018 Bicycle and Pedestrian Master Plan.



The California Department of Transportation designates four classes of bicycle facilities:

Class I shared use paths are paved trails completely separated from the street. They allow two-way travel and are often considered the most comfortable for children and inexperienced riders.

Class II bicycle lanes are striped preferential lanes on the roadway for one-way bicycle travel.

Class III bicycle routes are signed routes where people bicycling share a travel lane with people driving.

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 or vehicle parking aisle.

The City aims to replace vehicle trips of five miles or less with bicycling or walking by offering a network that is safe, convenient, comfortable, and continuous; that links neighborhoods with schools, parks, shopping areas, transit, and employment centers; and that people of all ages and abilities can use. This General Plan includes policies and actions that reinforce the shift away from single-occupant vehicles by increasing the mileage of the active transportation network, filling gaps between existing facilities, improving what is already on the ground, and other improvements. **Figure 3-6** depicts the existing and planned bicycle facilities network, as presented in the 2018 Bicycle and Pedestrian Master Plan.

Roadway Classifications

The City Design Guidelines define roadways in Santa Rosa; require adequate egress for all travelers, including emergency vehicles; and call for visually attractive streetscapes that complement surrounding uses. Roadways in the city fall into four major categories: highways,

regional/arterial streets, transitional/connector streets, and local streets.

Highways

Highways carry local and long-distance traffic at high speeds to, from, and through Santa Rosa. The highways (U.S. 101 and SR-12) are the responsibility of the State Department of Transportation. Regional transit operators Golden Gate Transit and Sonoma County Transit have services on some local highways.

Regional/Arterial Streets

Regional or arterial streets are major points of connection with each other, neighborhoods, and the rest of region. They include Parkways and Boulevards.

Parkways

Parkways bring people into the city or carry traffic through natural areas. Speeds may be 45 mph or higher. When parkways enter town, they become boulevards. Local transit operates on some parkways. Bicycle and pedestrian amenities may include:

- Bike lanes or separated bike lanes
- Sidewalks
- Planter strips and shade tree

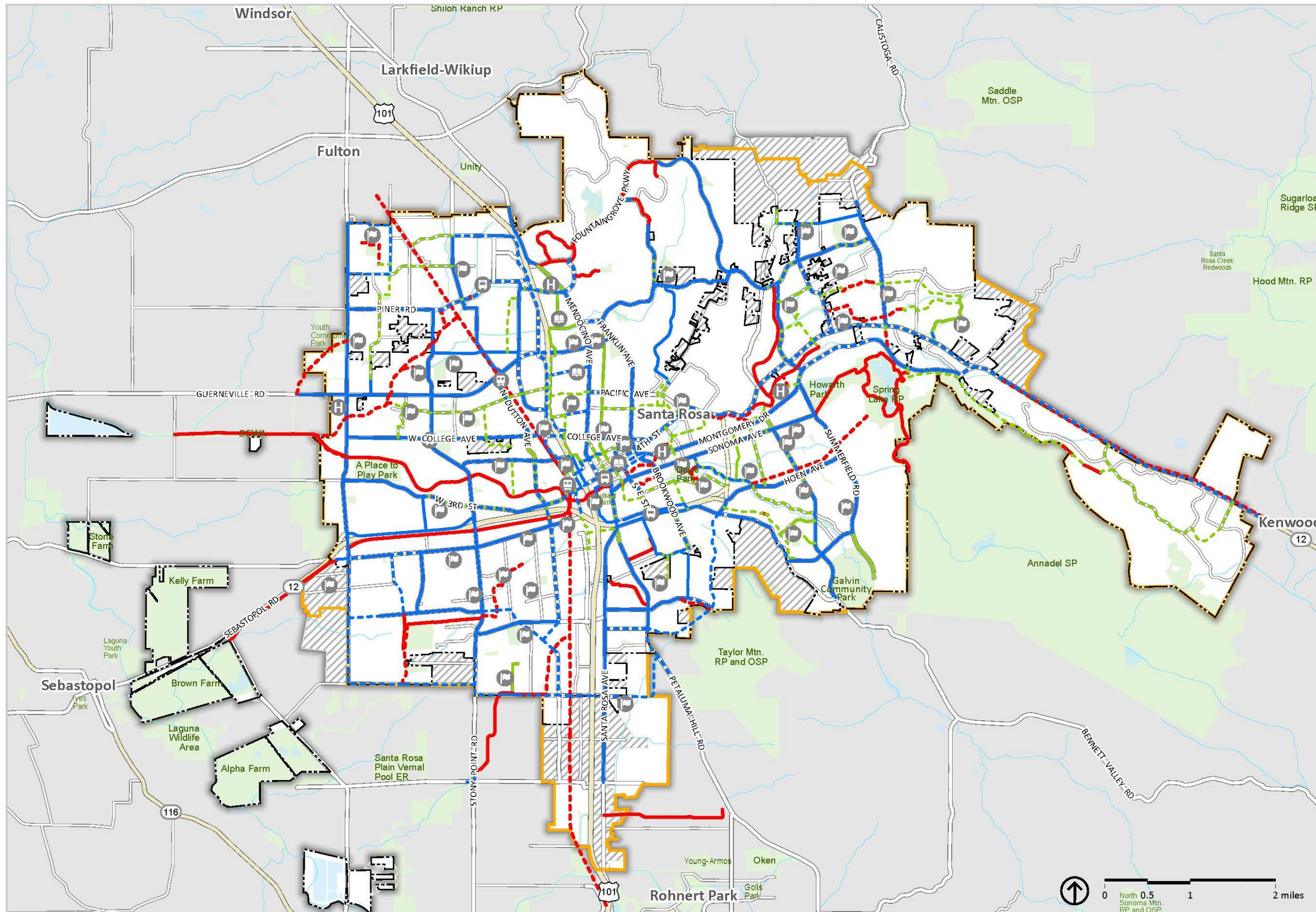


Figure 3-6
Existing and
Planned
Bicycle Network

- City Limits
- City Sphere of Influence
- Urban Growth Boundary
- Planning Area
- Existing Bike Route**
 - Class 1
 - Class 2
 - Class 3
- Proposed Bike Route**
 - Class 1
 - Class 2
 - Class 3
- Destinations**
 - School
 - SMART Station
 - Transit Hub
 - Hospital
 - Library



Adapted from the 2018 Bicycle and Pedestrian Master Plan.

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Boulevards

Boulevards provide multilane access to commercial and mixed-use areas and carry some regional traffic, with vehicle speeds of 30 to 40 mph. Local transit operates on some boulevards. Bicycle and pedestrian amenities may include:

- Bike lanes or separated bike lanes
- Sidewalks on both sides
- Neck-downs at intersections to support pedestrian crossings
- Planter strips and shade trees

Transitional/Collector Streets

Transitional or collector streets connect residential neighborhoods to commercial centers and service commercial districts. Transitional streets include Avenues and Main Streets.

Avenues

Avenues connect neighborhoods to commercial centers and other neighborhoods and serve as major transit routes. Vehicle speeds are typically 35 mph. - Bicycle and pedestrian amenities may include:

- Bike lanes or separate bike lanes
- Sidewalks on both sides
- Neck-downs at intersections to support pedestrian crossings
- Planter strips and shade trees

Main Streets

Main streets provide access to neighborhood commercial and mixed-use areas. Vehicle speeds are typically 25 to 30 mph. Local transit operates on some main streets. Bicycle and pedestrian amenities may include:

- Bike lanes or separate bike lanes
- Sidewalks on both sides
- Bulb-outs at intersection and midblock to support pedestrian crossings
- Planter strips and shade trees

Local Streets

Local streets primarily provide access to neighborhood destinations and make connections within neighborhoods for pedestrian, vehicular, and utility access. Traffic speeds are 10 to 25 mph. The local streets category includes Trails, Alleys, Lanes, Neighborhood Streets, and Minor Streets.

Trails

Trails are multiuse, linear pathways through neighborhoods or along creeks, not intended for motorized vehicles. They often follow their own rights-of-way or utility corridors. Trail use supports VMT reduction, community health, and other City goals. Amenities may include:

- Pedestrian and bicycle accessible
- Shade trees
- Lighting
- Wayfinding signage
- Benches
- Trash cans
- Bike repair stations

Alleys

Alleys are slow speed (10 mph), secondary access ways running behind and sometimes between rows of houses or commercial buildings. Alleys can give service workers easy access to utilities and sanitation and give residents access to garages, backyards, and accessory units.

Lanes

Lanes are narrow, often single-lane, roads that access a small number of homes (typically 12 or fewer), usually near parks, nature preserves, or other locations conducive to limited access. Depending on length, lanes may have sidewalks.

Neighborhood Streets

Neighborhood streets generally serve residential areas with 100 or fewer homes or up to 1,000 average daily trips (ADT). These streets usually extend from two to six blocks. Local transit operates on some neighborhood streets. Pedestrian amenities may include:

- Sidewalks on both sides
- Neck-downs at intersections to support pedestrian crossings
- Shade trees

Minor Streets

Minor streets accommodate 1,000 or more ADT. Pedestrian amenities may include:

- Sidewalks on both sides
- Bulb-outs or neck-downs at intersections to support pedestrian crossings
- Shade trees

Scenic Roads

Scenic roads carry vehicles through areas of notable beauty and/or with natural resources, landmarks, historic features, or cultural interest points. Regulations protect and enhance the aesthetic values of scenic routes by governing the development of property and placement of outdoor advertising. Local transit operates on some scenic roads. Santa Rosa’s scenic roads are:

1. Melita Road
2. Los Alamos Road

3. Calistoga Road (north of Badger Road)
4. Highway 12 (from Highway 101 west to Fulton Road)
5. Highway 12 (from Farmers Lane to Calistoga Road)
6. Highway 12 (from Calistoga Road to Oakmont)
7. Montecito Avenue (north of Norte Way to Chanate)
8. Brush Creek and Wallace Roads
9. Fountaingrove Parkway
10. Bennett Valley Road (south of Farmers Lane)
11. Montgomery Drive (from Mission Boulevard to Melita Road)
12. Chanate Road (from Mendocino Avenue to Fountaingrove Parkway)
13. Petaluma Hill Road (from Colgan Avenue to the Urban Growth Boundary)
14. Highway 101 (contiguous from northern to southern city limit)
15. Los Olivos Road
16. Manzanita Avenue
17. Newanga Avenue
18. Francisco Avenue
19. Channel Drive
20. Wright Road South
21. Ludwig Avenue
22. Burbank Avenue (from the northerly boundary of Roseland Creek Community Park to Hearn Avenue)

Goals, Policies, and Actions

Goal 3-1: Provide an integrated land use and transportation system with safe and efficient movement of people and goods for all modes of travel that prioritizes reduction of transportation-related GHG emissions.

Policy 3-1.1: Work with MTC and applicable partner agencies to adopt VMT thresholds.

Action 3-1.1: Develop local guidelines for calculating the projected VMT of future development projects and transportation improvements.

Action 3-1.2: Require an analysis of projected VMT as part of the environmental review process for projects with the potential to increase VMT.

Action 3-1.3: Adopt and maintain screening criteria for different land uses and project types to determine when a VMT analysis will be required as part of the environmental review process.

Action 3-1.4: Adopt and maintain thresholds to determine when a VMT impact is “significant” under the California Environmental Quality Act (CEQA).

Action 3-1.5: Continue to work with SCTA and other local and regional partners to reduce VMT with existing techniques and explore feasibility of new techniques as they arise.

Action 3-1.6: Work with SCTA and other local and regional partners to develop a VMT mitigation bank alternative for eligible projects to fund VMT reduction efforts.

Action 3-1.7: Develop a process to prioritize projects and programs on the

capital improvement projects list, including multimodal components, that support VMT reduction, particularly those in EPAs.

Policy 3-1.2: Promote land use, transportation demand management (TDM), and street design practices that reduce VMT and dependence on single-occupancy vehicle trips.

Action 3-1.8: Use the Urban Streets Design Guide and the Urban Bikeways Design Guide to plan roadway improvements and new development.

Action 3-1.9: Continue to reduce or eliminate vehicle parking requirements and increase bicycle parking to prioritize a car-free environment in high density areas.

Action 3-1.10: Require developers of sites within a quarter mile of transit corridors to integrate transit-supportive components, such as unlimited pass programs, transit-serving pedestrian infrastructure, and/or transit subsidies, as appropriate.

Action 3-1.11: Work with local employers to expand transportation demand management (TDM) programs and other efforts to help meet employee transportation needs through alternative modes that reduce single-occupancy automobile trips, such as:

- Unlimited access to transit service.
- Paid incentives to bike commuters.
- Provision of bicycle facilities.
- Carpooling and vanpooling incentives.

- Trip reduction incentive programs.
- Car sharing programs.
- Staggered work shifts, flex time (e.g., 9/80 work schedule), and telecommuting.
- Paid-parking disincentives for single-occupant vehicles.

Action 3-1.12: *Continue to require TDM measures for applicable residential and commercial developments to reduce VMT generated by the development.*

Action 3-1.13: *Implement a TDM program for City employees—potentially in partnership with other local governments, public agencies, and transit providers—and promote the program as a model for local large employers.*

Action 3-1.14: *Establish a framework for City transportation investment and project decisions that prioritizes, in order:*

1. Active transportation modes, including walking, bicycling, and transit.
2. Other shared vehicles such as carpool, vanpool, and rideshare / transportation network companies.
3. Private vehicles.

Action 3-1.15: *Inventory and map the city’s existing pedestrian network—including sidewalks, trails, and ADA accessibility features—to inform future pedestrian network improvements.*

Action 3-1.16: *Require multimodal and electric-vehicle infrastructure in new development.*

Action 3-1.17: *When necessary to help ensure safety, guide travelers using different modes to separate, parallel streets as part of multistreet corridors.*

Action 3-1.18: *Engage Santa Rosa community members, prioritizing those in EPAs and Areas of Change, in planning for transportation facilities and services.*

Policy 3-1.3: Improve infrastructure, sidewalk and bicycle linkages, and access to transit and active modes of transportation to better meet daily commuting needs and minimize VMT, especially in EPAs and Areas of Change.

Action 3-1.19: *Develop viable solutions for regional through-traffic on north-south corridors, such as by extending Farmers Lane, and travel on east-west corridors, such as by improving the Mendocino Avenue overcrossing of Highway 101, while remaining cognizant of the multimodal need on each corridor.*

Action 3-1.20: *Participate in discussions addressing regional through-traffic with SCTA, the County of Sonoma, MTC, and other municipalities.*

Action 3-1.21: *Support efforts to acquire local, regional, State, and federal funding for transportation improvements, including reconstruction of key interchanges to accommodate all modes of transportation, including active transportation.*

Action 3-1.22: Explore alternative circulation network improvements to accommodate regional through-traffic, focusing on regional/arterial street circulation and regional transportation routes.

Action 3-1.23: Identify and analyze high-commute-trip corridors and improve them by:

- Preparing and implementing corridor plans.
- Developing Park-n-Ride lots to encourage mixed-mode commuting.
- Designating and implementing mobility hubs as defined by MTC.

Action 3-1.24: Enhance pedestrian and public transportation routes to support safe access to retail food establishments.

Policy 3-1.4: Reduce traffic volumes and speeds in neighborhoods.

Action 3-1.25: Minimize through-traffic in residential neighborhoods and avoid traffic volumes greater than those dictated by street design and classification by providing attractive regional/arterial streets to accommodate cross-town traffic.

Action 3-1.26: Continue to require grid street patterns in new residential areas to disperse local neighborhood traffic and limit excessive volumes on any one street.

Action 3-1.27: Implement traffic-calming techniques on local streets that experience high-speed or cut-through traffic to improve neighborhood livability:

- Narrow streets.
- Add on-street parking.
- Add chicanes, chokers, or diverters.
- Rough-pave crosswalks.
- Add rumble strips.
- Add planted islands.

Action 3-1.28: Include traffic calming by default in regular paving and maintenance projects unless infeasible due to engineering or in cases where transit or emergency access may be blocked.

Action 3-1.29: Improve traffic flow and reduce neighborhood traffic impacts in all quadrants of the city by completing needed improvements on arterial and collector streets.

Goal 3-2: Provide a safe and accessible active and public transportation network that reduces dependence on single occupancy vehicles, prioritizing Equity Priority Areas and Areas of Change.

Policy 3-2.1: Plan, build, and maintain a safe, complete, continuous, convenient, and attractive pedestrian, bicycle, and multiuse trail network in Santa Rosa that is equitably accessible for all ages and abilities.

Action 3-2.1: Monitor the proportions of travel that use different transportation options to track progress in diversifying the city's mode split.

Action 3-2.2: Support active transportation by pursuing available grants and ensure that the active transportation network, especially approaches to schools, are safe

for cyclists and pedestrians, with needed amenities such as sidewalks, crosswalks, bike lanes, and traffic calming.

Action 3-2.3: *Implement and update the City's Bicycle and Pedestrian Master Plan, as appropriate.*

Action 3-2.4: *Identify and address active transportation deficiencies, prioritizing EPAs.*

Action 3-2.5: *Continue to implement the Sonoma County Vision Zero Action Plan and the City of Santa Rosa Vision Zero Implementation Plan to eliminate collisions and traffic fatalities.*

Action 3-2.6: *Upgrade streets throughout Santa Rosa for safe and convenient walking, including sufficient and continuous sidewalks and safe pedestrian crossings at reasonable distances to encourage access and mobility for seniors, children, and people with disabilities and strollers.*

Action 3-2.7: *If it is not feasible to provide a continuous pedestrian route, provide a safe alternate route that minimizes any extra distance.*

Action 3-2.8: *Prioritize pedestrian projects along transit corridors that provide access to transit stops.*

Action 3-2.9: *Link the various citywide pedestrian paths, where possible.*

Action 3-2.10: *Develop and implement standards and requirements for sidewalks in the auto mall area.*

Action 3-2.11: *Integrate multiuse trails along creek corridors, railroad rights-of-way, and in park designs.*

Action 3-2.12: *Continue to upgrade curb ramps in compliance with the Americans with Disabilities Act.*

Action 3-2.13: *Provide street lighting that is energy efficient, attractive, appropriate to the character and scale of the neighborhood or district, and that contributes to pedestrian, bicycle, and vehicular safety.*

Action 3-2.14: *Update the Zoning Code to require that building plans and pedestrian facilities allow for easy pedestrian access from sidewalks, transit stops, other pedestrian facilities, and parking lots.*

Action 3-2.15: *Update the Zoning Code to require construction of attractive pedestrian walkways and areas in new residential, commercial, office, and industrial developments.*

Action 3-2.16: *Update the Zoning Code to require any new developments with cul-de-sacs or other limited street connectivity layouts to provide enhanced connectivity for pedestrians and bicyclists.*

Action 3-2.17: *Allow sharing or parallel development of pedestrian walkways and bicycle paths where safe to maximize the use of public rights-of-way.*

Action 3-2.18: *Support pedestrian and bicyclist needs by incorporating them into regular planning activities for all City projects, and include pedestrian facility funding in all appropriate funding requests.*

Action 3-2.19: *Expand the citywide system of designated bikeways to better serve bicyclists of all ages and abilities and maximize bicycle use*

for commuting, recreation, and local transport.

Action 3-2.20: Develop street standards with separated and/or protected bicycle lanes.

Action 3-2.21: Provide bicycle lanes along all regional/arterial streets and high-volume transitional/collector streets, prioritizing protected bicycle lanes except where infeasible due to engineering or obstruction of access for transit or emergency access.

Action 3-2.22: Finish or bridge incomplete or disconnected bicycle routes.

Action 3-2.23: Maintain all roadways and bicycle facilities so they provide safe and comfortable conditions for bicyclists.

Action 3-2.24: As part of the City's Capital Improvement Program, or street and intersection projects constructed by private developers, install and construct bicycle facilities, including Class I paths, Class II and IIB lanes, Class III route signs and road paint, or Class IV separated paths.

Action 3-2.25: Improve intersections of bicycle and pedestrian multiuse trails with highly trafficked roads through improvements such as painted crosswalks, beacon lights, or other improvements as warranted to increase user ease and safety. Ensure that there are no physical barriers to bicyclists or pedestrians as they cross high traffic roadways at intersections with Class I or Class IV facilities.

Action 3-2.26: Update the Zoning Code to require the highest level of bicycle facility protection that is practicable, as part of the

development review and entitlement process, to encourage bicycle use and comfort.

Action 3-2.27: Work with local education providers to ensure that students have safe pedestrian access to school sites throughout the city.

Action 3-2.28: Support Safe Routes to School by pursuing available grants and ensuring that approaches to schools are safe for cyclists and pedestrians by providing needed amenities such as sidewalks, crosswalks, bike lanes, and traffic calming on streets near schools and community centers.

Policy 3-2.2: **Increase transit ridership to reduce GHG emissions and provide convenient and efficient public transportation to workplaces, shopping, and other destinations.**

Action 3-2.29: Identify first/last mile challenges citywide and work with transit and rideshare companies to provide solutions.

Action 3-2.30: Continue to require TDM measures for new development, including CityBus / Sonoma County Transit / SMART waivers or discounts for project occupants.

Action 3-2.31: Provide convenient, efficient routes to major employment, education, recreation, community, and shopping centers throughout the city, SMART stations, and shopping centers.

Action 3-2.32: Continue to implement and periodically update Transit Master Plans such as Reimagining CityBus and the Short-Range Transit Plan, and

work with MTC and other agencies on regional transit-supporting initiatives.

Action 3-2.33: *Establish standards that require new development to provide transit improvements to meet demand from the project, including but not limited to:*

- Direct, paved pedestrian access to transit stops.
- Bus turnouts and weather-protected shelters.
- Bus-ready travel lanes.

Action 3-2.34: *Improve the reliability, efficiency, frequency, and travel time of transit service to meet or exceed performance standards of the most recent Santa Rosa CityBus Short Range Transit Plan and improve transit service along corridors where increased densities are planned.*

Action 3-2.35: *Work with local and regional transportation agencies to coordinate multimodal connections throughout the city, including timed transfers connecting different transit routes and future rail service, bicycle parking and lockers at transit centers, and transit stops at park-and-ride lots.*

Action 3-2.36: *Identify and develop opportunities to improve pedestrian, bicycle, micromobility (such as bike or scooter share), and bus transit connections between existing transit stations, to SMART stations, and to future mobility hubs.*

Action 3-2.37: *Encourage ridership on public transit systems through*

marketing and promotional efforts and incentives.

Action 3-2.38: *Coordinate plans for transit system changes and expansions with local land use planning to ensure consistency with adopted transit service allocation, service design, and equity policies.*

Action 3-2.39: *Work with private and public sector partners on “safe ride home” transit programs and advertising campaigns targeting wine industry tourists or anyone under the influence of alcohol.*

Action 3-2.40: *Work with SCTA and MTC to promote Safe Routes to Transit projects and programs and submit applications for funding of local Safe Routes to Transit projects and programs.*

Action 3-2.41: *Expand the hours of transit service, including during nights and weekends.*

Action 3-2.42: *Invest resources to ensure that the Transit Mall, Downtown SMART Station, and North SMART Station are active, safe, and efficiently accessed by local transit.*

Action 3-2.43: *Support the integration of transit services in Sonoma County and the region for the benefit of the riding public, including but not limited to, integrating passenger information, real-time arrival, fare structures, and coordinating service planning.*

Policy 3-2.3: **Ensure that the transit system serves all members of the community equitably, especially in EPAs.**

Action 3-2.44: *Evaluate local transit services to identify and address any accessibility barriers, including for*

children, seniors, those with disabilities, and nonnative English speakers.

Action 3-2.45: Reduce the cost of transit, especially for low-income individuals and those residing in EPAs, by expanding the unlimited Pass Program that serves students through grade 12, SRJC students, City employees, paratransit users, and veterans.

Action 3-2.46: Develop an accumulator transit pass that reduces the cost burden for frequent riders.

Action 3-2.47: Work with SCTA and local transit operators to explore financial incentives, reduced fares for public transportation, and a subregional or countywide universal basic mobility program.

Action 3-2.48: Identify strategies to increase low-income residents' access to transit hubs, jobs, and areas with goods and services, such as by enhancing existing transit hubs, constructing new transit hubs, and/or providing new first/last mile services.

Policy 3-2.4: Continue to support SMART rail service.

Action 3-2.49: Support efforts to construct future SMART stations in Santa Rosa, including in south Santa Rosa.

Action 3-2.50: Preserve options for future SMART rail stations by zoning land in proximity to the potential station sites for higher residential densities and/or mixed-use development.

Action 3-2.51: Support SMART efforts to promote tourist rail excursions as well as rail service for commuting and other travel purposes.

Action 3-2.52: Support SMART efforts to provide multi-use trails adjacent to new rail lines creating a regional trail network for active transportation and recreation.

Goal 3-3: Ensure that traffic-related impacts of proposed land uses are evaluated and mitigated.

Policy 3-3.1: Make sure that new development does not impede efficient, safe, and free-flowing circulation.

Action 3-3.1: Require traffic studies for development projects that may have a substantial impact on the circulation system.

Action 3-3.2: Monitor level of service (LOS) at intersections to ensure that improvements or alterations to improve corridor LOS do not cause severe impacts at any single intersection.

Action 3-3.3: In areas other than the downtown, strive to meet intersection LOS D to maintain adequate operations of the street network and minimize cut through traffic on residential streets.

Action 3-3.4: Monitor regional/arterial street LOS at regular intervals to determine if local LOS goals are being met, and provide information needed to maintain a calibrated citywide traffic model.

Action 3-3.5: Coordinate transportation plans with those of Sonoma County, MTC, and the State of California.

Action 3-3.6: Revise the Zoning Code to require site design to focus through-traffic on regional/arterial streets,

and employ the following design techniques to increase driver safety and traffic efficiency:

- Reduce the number of driveways and intersections.
- Combine driveways to serve numerous small parcels.
- Avoid residential access.
- Install and facilitate timing of traffic signals.
- Ensure continuous sidewalks.

Action 3-3.7: *Construct or require roundabouts in lieu of stop/signal-controlled intersections, where appropriate, to improve safety, reduce delay and idling time, and lower vehicle emissions.*

Action 3-3.8: *Periodically update City impact fees to require that development projects pay a fair share of costs for multimodal transportation systems improvements and ensure the adequacy of funding for needed transportation system improvements.*

Action 3-3.9: *Favor transportation alternatives to reduce demand on existing facilities in lieu of widening roadways and further impacting the natural environment.*

Policy 3-3.2: Identify, preserve, and enhance City-designated scenic roads throughout Santa Rosa in both rural and developed areas.

Action 3-3.10: *Update the Zoning Code to develop standards for scenic roadways identified in the General Plan that do not have corresponding development standards in the Zoning Code, including:*

- Highway 12 (from Highway 101 west to Fulton Road)
- Highway 12 (from Farmers Lane to Calistoga Road)
- Fountaingrove Parkway
- Bennett Valley Road (south of Farmers Lane)
- Montgomery Drive (from Mission Boulevard to Melita Road)
- Chanate Road (from Mendocino Avenue to Fountaingrove Parkway)
- Petaluma Hill Road (from Colgan Avenue to the UGB)
- Highway 101 (contiguous from northern to southern City limit)
- Newanga Avenue
- Channel Drive
- Wright Road South
- Ludwig Avenue

Action 3-3.11: *Provide bikeways along scenic roads where right-of-way exists or where its acquisition will not jeopardize roadway character.*

Action 3-3.12: *Discourage on-street parking along scenic roads; bus stops or scenic overlooks may be provided at appropriate intervals.*

Action 3-3.13: *Ensure that the size, number, and placement of signage along scenic roads does not detract from the area’s scenic character as much as feasible.*

Open Space and Conservation

Open Space

The benefits of open space include visual enjoyment, natural resource conservation (e.g., plant and wildlife habitats, creek corridors, hillsides, and soils), water quality protection, recreational use, and hazard reduction (e.g., flood control and fire management).

Open spaces in and around Santa Rosa include agriculture, greenbelts (community separators), natural resources, and parks and recreation areas. Preservation of open space for each of these uses is important to the quality of life and semirural character valued by community members. General Plan policies address public access to these areas and expansion of the regional open space network. A continuous network of open space land has more benefits for plant and habitat conservation than disconnected open spaces. Figure 2-6, General Plan Land Use, shows designated open space areas.

Agricultural Resources

Agricultural resources in the Santa Rosa planning area give community members a sense of rural character and access to fresh goods and produce. Conserving agricultural resources—including crop fields, grazing land, and vineyards—will help sustain the sense of nature for the greater Santa Rosa area and contribute to the region's health and economic vitality.

Biological Resources and Waterways

Biological resources in the Santa Rosa area are concentrated on the Santa Rosa plain to the west and in the uplands to the east, with creeks forming critical connections. Sensitive resources

on the plain include numerous vernal pools and their associated species, as well as surrounding grasslands, and upland resources to the east include hillside open spaces, creeks, and woodlands. Biological resources within the city include sensitive plants and animals, creeks, and wetlands, including vernal pools.

Santa Rosa Creek originates in the headwaters of Mount Hood and runs roughly east to west through the city and into the Laguna de Santa Rosa. Other streams, including the lower reaches of Matanzas Creek, run through or near the city on their way to joining Santa Rosa Creek.

Citywide Creek Master Plan

The Citywide Creek Master Plan sets goals and policies for specific waterways in Santa Rosa. The plan details the creek environments in the city and designates areas for recreation, enhancement, or preservation. The City expects the Master Plan to improve wildlife habitats and increase recreational opportunities, drainage capacity, and flood control.

Vegetation

Vegetation types in Santa Rosa include grasslands, woodlands, riparian areas, and vernal pools. Small areas of discrete habitat, such as vernal pools, support distinct sets of plant and animal species, which are generally sensitive to human disturbance.

Wildlife

Different vegetation types provide habitat for different species of wildlife, and the mingling of different habitats is an advantage for species that use the “edges” between them. Open space areas support smaller species, including songbirds, rodents, and insects, and provide habitat for sensitive species, including nesting raptors.

The streams flowing through the city provide both instream and riparian habitat. Aquatic species need instream habitat, and Santa Rosa Creek and several of its tributaries carry aquatic species such as steelhead/rainbow trout. Riparian habitat supports its own community of plants and animals, including amphibians, and functions as a migration corridor between habitats separated by development. Both types of habitats support a variety of animal species, from streambed invertebrates to the larger fishes and animals such as herons and egrets that feed on them. Preserving wildlife habitat and restoring riparian corridors protects wildlife species and provides tranquil open spaces within the city’s urban landscape.

Air Quality

Reducing air pollutants benefits community health and quality of life. The City of Santa Rosa works with the Bay Area Air Quality Management District to address air quality in Santa Rosa, which has generally improved with cleaner motor vehicles, less agricultural and residential burning, and reformulated consumer products.

Efficient and sustainable development patterns, strong connections between different land uses, clean and renewable energy sources, alternative transportation modes, open space preservation, and construction dust abatement have all contributed to better air quality in Santa Rosa, but there is still room for improvement.

Goals, Policies, and Actions

Goal 3-4: Protect, expand, maintain, and restore natural resources, open space, and agricultural land.

Policy 3-4.1: Maximize the benefits of open space, including by supporting

recreation and conservation where possible.

- Action 3-4.1:** Cooperate with public and private entities to create new multiuse trails and public access pathways to parks, open spaces, and drainage ways in and near the city.
- Action 3-4.2:** Monitor and support the progress of the Sonoma County Agricultural Preservation and Open Space District in acquiring Santa Rosa properties.
- Action 3-4.3:** Coordinate with public and private entities to link open spaces with a network of paths and trails, including Sonoma Water access roads and the Bay Area Ridge Trail.
- Action 3-4.4:** Collaborate with regional agencies and private landowners to link inaccessible open spaces where such linking would benefit the protection of special environments and life systems such as wetlands, plant communities, and wildlife habitats and corridors.
- Action 3-4.5:** Promote the use of properties unsuitable for development due to hazards or other safety constraints—as defined in Chapter 5, Safety, Noise, and Public Services and Facilities—for open space uses if they can be safely integrated and do not require infrastructure, such as fishing, wildlife observation uses.
- Action 3-4.6:** Preserve, enhance, and expand an integrated network of open space to support other uses and benefits, such as habitat, recreation, natural resources, historic and tribal resources,

water management, nature-based climate resilience, and aesthetics.

Policy 3-4.2: Conserve agricultural land and soils.

Action 3-4.7: *Ensure the City's Natural Resources Program prioritizes land management techniques and agricultural practices that reduce erosion and soil loss on City-owned properties.*

Action 3-4.8: *Conduct a carbon sequestration feasibility study of City-owned open space, parks, agricultural lands, and other conservation lands, and implement the recommendations as feasible. This study should assess carbon storage potential by land use type and identify strategies to facilitate carbon sequestration.*

Action 3-4.9: *Encourage the Sonoma County Agricultural Preservation and Open Space District to acquire open space in and surrounding Santa Rosa, including:*

- The Community Separator between Santa Rosa and Rohnert Park.
- Taylor Mountain.
- Areas west and north of the UGB.
- The Santa Rosa Creek corridor.

Action 3-4.10: *Support Sonoma County efforts to preserve unincorporated lands adjacent to and near the Santa Rosa UGB as viable agricultural resources and to support the agriculture economy and environmental quality.*

Policy 3-4.3: Conserve creeks, wetlands, vernal pools, wildlife

ecosystems, rare plant habitats, and waterways.

Action 3-4.11: *Use existing (and/or restore historical) natural features and ecosystem processes for conservation, preservation, or sustainable management of open space, including, but not limited to, aquatic or terrestrial vegetated open space, systems and practices that use or mimic natural processes, and other engineered systems to provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife.*

Action 3-4.12: *Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species; use the environmental review process and comply with the applicable regulations and standards, such as federal policy of no net loss of wetlands; use mitigation measures such as:*

- Avoidance of sensitive habitat.
- Clustered development.
- Transfer of development rights.
- Compensatory mitigation, such as restoration or creation.

Action 3-4.13: *Require a qualified biologist to conduct a biological resource assessment as part of environmental review for*

proposed development on sites with natural habitat conditions that may support special-status species, sensitive natural communities, or regulated wetlands and waters. The biologist should determine the presence or absence of any sensitive resources that could be affected by proposed development, assess potential impacts, and define measures for protecting the resource and surrounding buffer habitat, in compliance with City policies and State and federal laws.

Action 3-4.14: *Continue to require that potential significant impacts on special-status species, occurrences of sensitive natural communities, or regulated wetlands and waters be minimized during the environmental review process through adjustments and controls on the design, construction, and operations of a proposed project, or require appropriate compensatory mitigation where such impacts are unavoidable.*

Action 3-4.15: *Continue to require that development activities avoid nests of native birds when in active use to ensure compliance with the State Fish and Game Code and the federal Migratory Bird Treaty Act when construction is initiated on development sites. If initial vegetation removal and site disturbance cannot be restricted outside the nesting season (September 1 through January 31), require that a preconstruction survey for nesting birds be conducted by a qualified biologist during the bird-nesting*

season (February 1 through August 31). Where an active nest is found on the site, an adequate setback should be established around any nest of a native bird species when it is in active use until the young have fledged and are no longer dependent on the nest. The nest setback distance should be defined by a qualified biological consultant with input from the California Department of Fish and Wildlife, with the setback zone fenced or flagged, and all construction disturbance restricted from this zone until the qualified biologist has confirmed the nest is no longer in use.

Action 3-4.16: *Inventory wetlands, floodplains, marshlands, and adjacent lands that could potentially support climate adaptation (e.g., through flood management, filtration, or other beneficial ecosystem services) and mitigation (e.g., carbon sequestration).*

Sequestration is the natural removal of GHGs from the atmosphere by soils and plants. When previously undeveloped land is developed, it can release previously sequestered emissions.

Action 3-4.17: *Protect high quality wetlands and vernal pools from development or other activities.*

Action 3-4.18: *Implement the Citywide Creek Master Plan and promote a “one water” approach that teaches preservation and stewardship of local creeks and water resources.*

Action 3-4.19: *Establish and annually evaluate mitigation fees for environmentally sensitive resource lands and/or*

endangered species habitat areas that are subject to development and apply mitigation fees, as appropriate.

Action 3-4.20: *Periodically review the status of local creeks and plan for ongoing restoration, planning, and stewardship.*

Action 3-4.21: *Seek funding to maintain and restore citywide creeks, including for recreational opportunities linked to creeks as well as for flood control.*

Action 3-4.22: *Continue to consult with the California Department of Fish and Wildlife to identify significant environments and priorities for acquisition or maintenance of open space areas based on biological and environmental concerns and develop a strategy for maintaining areas that will preserve the populations of plants and animals currently found within the UGB.*

Action 3-4.23: *Implement storm water pollution prevention outreach to increase community awareness of pollution impacts to creeks and preserve waterways.*

Action 3-4.24: *Do not create additional channelized waterways unless no other alternative is available to protect human health, safety, and welfare.*

Action 3-4.25: *Restore channelized waterways to a more natural condition, as feasible, that allows for more natural hydraulic functioning, including connection with the stream channel and the natural water table; and development of meanders, pools, riffles, and other stream features, allowing for*

growth of riparian vegetation that effectively stabilizes banks, screens pollutants from runoff entering the channel, enhances fisheries, and provides other opportunities for natural habitat restoration.

Action 3-4.26: *Ensure that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, does not disrupt or pollute the waterway, and provides an adequate setback buffer.*

Action 3-4.27: *Encourage multiple use of waterways, including:*

- Flood mitigation and storage;
- Groundwater recharge;
- Opportunities for restoration and stewardship;
- Climate adaptation;
- Wildlife habitats;
- Passive recreational open space uses;
- Nature study;
- Pedestrian and bicycle circulation; and
- Other compatible outdoor uses.

Policy 3-4.4: **Orient development and buildings toward creeks while providing privacy, security, and an open transition between public and private open spaces.**

Action 3-4.28: *Require new development along channelized waterways to establish an ecological buffer zone between the waterway and*

development that also provides opportunities for multiuse trails and recreation.

Action 3-4.29: Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.

Policy 3-4.5: Protect groundwater recharge areas, particularly creeks and riparian corridors.

Action 3-4.30: Identify and map groundwater recharge areas and provide groundwater recharge area maps to local agencies to foster planning that protects groundwater supplies.

Action 3-4.31: Update the Municipal Code to require low-impact development measures to reduce pollutants and runoff flows from new development and redevelopment projects. Develop rain gardens and other low impact development features to improve water quality and biodiversity and enhance livability.

Policy 3-4.6: Achieve and maintain ambient air quality standards.

Action 3-4.32: Continue to review all new construction projects and require dust abatement actions from the CEQA Handbook of the Bay Area Air Quality Management District.

Action 3-4.33: Ensure all new development is electric vehicle charging ready at a minimum.

Action 3-4.34: Amend the Zoning Code to prohibit drive-through retail and drive-through service land uses in all Zoning Districts and provide incentives for legal nonconforming drive-through uses to discontinue their drive-throughs.

Action 3-4.35: Review and amend the City's Building Code and Zoning Code to facilitate the installation of electric vehicle charging infrastructure at existing development, prioritizing properties in EPAs.

Action 3-4.36: Support efforts to install and operate electric vehicle charging stations and clean fuel stations on private property throughout the city, including hydrogen and sustainably sourced biofuels, as supported by market conditions.

Action 3-4.37: Expand installation and operation of vehicle charging stations on City properties, including curbside in areas of the community where other options are limited.

Action 3-4.38: Budget for clean fuels and zero emission vehicles in the City's long-range capital expenditure plans to transition the existing fleet of gasoline- and diesel-powered vehicles, and work to make the City's fleet among the cleanest in the North Bay by:

- Purchasing zero-emission vehicles whenever possible that meet or exceed requirements under the California Advanced Clean Fleets Regulation. If zero-emission vehicles are not available, purchase plug-in

hybrids or other vehicle types to minimize emissions.

- Using biodiesel and pollution-reducing fuel additives in the City's diesel fuel vehicles.

Action 3-4.39: *Implement the City's Wood Burning Appliance code to reduce particulate matter emissions from wood-burning appliances.*

Greenhouse Gas Reduction

The 2050 General Plan presents an integrated and cross-sector approach to reducing GHG emissions in Santa Rosa. The General Plan integrates goals, policies, and actions that support reductions from community and municipal sources of emissions, supported by a stand-alone GHG Reduction Strategy (**Appendix A**). The GHG Reduction Strategy presents all City GHG reduction measures and includes quantification and other details consistent with CEQA Guidelines Section 15183.5 to support ongoing reductions through 2050. For the first time, the General Plan incorporates the community's progressive GHG reduction goals, State goals, and community-wide GHG reductions. Like the previous Community-Wide Climate Action Plan (CCAP), the integrated Strategy includes GHG reduction measures and implementation programs based on the City's ongoing implementation of the CCAP, an updated GHG emissions inventory, and projections of future GHG emissions. The General Plan and GHG Reduction Strategy are consistent with State and Bay Area Air Quality Management District CEQA Guidelines. The GHG Reduction Strategy builds on a strong record of climate action stewardship in Santa Rosa and supports other, ongoing community efforts to reduce pollution and improve community health, such as those led by the Regional Climate Protection Authority.

On August 2, 2005, the Santa Rosa City Council adopted Resolution 26341, which established two targets:

- Reduce GHGs from City government operations to 20 percent below 2000 levels by 2010.
- Reduce community-wide GHGs to 25 percent below 1990 levels by 2015, a level estimated to be 37 percent below 2007 baseline levels.

In 2012, the City adopted the CCAP, which is now replaced by the goals, policies, and actions of this General Plan and the companion GHG Reduction Strategy. Similar to the CCAP, the City's Municipal Climate Action Plan (MCAP) includes GHG emissions inventories and reduction measures, but it focuses on the GHG emissions associated with municipal facilities and operations, such as City buildings, vehicles, and lighting.

In 2019, the City Council formed its Climate Action Subcommittee to provide guidance and oversight for implementation and update of the City's CCAP and MCAP.

On January 14, 2020, the Council adopted the Climate Emergency Resolution, setting a goal of achieving carbon neutrality by 2030 (15 years ahead of the recently established State goal). The resolution underscores the urgency of local climate action to address future hazards and enhance community resiliency. It commits the City to ongoing efforts related to climate change and GHG reductions by City departments and collaboration with the Regional Climate Protection Authority.

In December 2022, the California Air Resources Board adopted an update to the State's Climate Change Scoping Plan, which details the pathway to achieve carbon neutrality by 2045 consistent with adopted GHG emissions reduction targets. The State's adopted targets are:

- Reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Reduce GHG emissions to 85 percent below 1990 levels by 2045.
- Achieve statewide net carbon neutrality by 2045.

Many common activities of daily life generate GHG emissions. Some daily activities release GHG emissions in the location of the activity, such as natural gas combustion in homes or businesses. Other activities release GHG emissions elsewhere, such as power plants in other communities that generate electricity used in Santa Rosa. In a few cases, an activity generates emissions partially in Santa Rosa and partially elsewhere, such as vehicle trips between Santa Rosa and another community.

A community-wide GHG emissions inventory, included in **Appendix A**, identifies GHG emissions that result from activities of residents, employees, and other community members. The City prepared community-wide GHG inventories for calendar years 2000, 2007, and 2019 that assesses GHG emissions from the following sectors: transportation, residential energy, nonresidential energy, solid waste, off-road equipment, agriculture, water and wastewater, and land use and sequestration. In 2019, Santa Rosa’s community-wide GHG emissions totaled 949,310 MTCO_{2e} (metric tons of carbon-dioxide equivalent). This is a 28 percent decrease in emissions since 2007. Transportation is the highest-emitting sector, representing 53 percent of emissions in 2019. The nonresidential energy, residential energy, and off-road equipment are the second-, third-, and fourth-highest emitting sectors, respectively, in 2019.

The City also prepared inventories of municipal GHG emissions, that is, GHG emissions from City operations, for the calendar years 2000, 2007, and 2010. In 2007, Santa Rosa’s municipal GHG emissions were 29,440 MTCO_{2e}, approximately 3 percent of community-wide emissions. From

2000 to 2010, municipal GHG emissions decreased by 5 percent. The City prepared a Municipal Operations Climate Action Plan in 2010 that included GHG reduction targets for 2020, 2035, and 2050, with the ultimate goal to reduce municipal GHG emission to at least 83 percent below 2007 levels by 2050. The City has completed the most feasible GHG reduction measures in the MCAP.

Energy

The City of Santa Rosa depends on energy to maintain a vital economy and desirable lifestyle. The city needs electricity and natural gas to light, heat, and cool structures and power office equipment, industrial machinery, public services, and home appliances. The community also uses petroleum products to move people and products along transportation corridors. Energy is vital to the continued functioning of housing, employment, transportation, and public services and facilities in Santa Rosa.

Reduced energy use and a shift to clean and renewable energy sources in housing, commercial structures, public facilities, and transportation can help support the local economic vitality, reduce costs, reduce GHG emissions, and enhance sustainability and reliability of the energy grid.

Goals, Policies, and Actions

Goal 3-5: Achieve net carbon neutrality by 2030.

Policy 3-5.1: Significantly reduce community-wide and municipal GHG emissions, achieving at least an 85 percent reduction of GHG emissions from community sources no later than 2045 with a commitment to accelerate reductions, as feasible, in

support of the City’s and State’s carbon neutrality goals.

- Action 3-5.1:** *Consider the effects of climate change in updating or amending the General Plan, disaster planning, City projects, infrastructure planning, future policies, and City investments.*
- Action 3-5.2:** *Eliminate the use of fossil fuels as an energy source in all new building construction.*
- Action 3-5.3:** *Reduce the use of fossil fuels as an energy source in the existing building stock at the time of building alteration through requirements for all-electric appliances.*
- Action 3-5.4:** *Evaluate and adopt reach codes and other policies to decarbonize the building stock.*
- Action 3-5.5:** *Implement the actions in the GHG Reduction Strategy to achieve the City’s GHG reduction goals.*
- Action 3-5.6:** *Continue regular inventories of community-wide and municipal GHG emissions, at least every five years, consistent with the GHG Reduction Strategy and this General Plan.*
- Action 3-5.7:** *Provide public information to educate residents and businesses on the GHG Reduction Strategy and to support individual changes in energy and water use, transportation mode choices, material use, and waste reduction.*
- Policy 3-5.2: Reduce energy use and increase energy efficiency in existing and new commercial, industrial, and public structures.**
- Action 3-5.8:** *Require regular energy audits of existing City-owned and operated*

structures, identifying levels of existing energy use and potential conservation and efficiency measures.

- Action 3-5.9:** *Develop a capital project list and funding strategy to complete energy efficiency projects, and adjust the list annually to add new programs as needed.*
- Action 3-5.10:** *Encourage energy audits and energy-efficient retrofits of buildings throughout the city.*
- Action 3-5.11:** *Guide project applicants toward site planning, solar orientation, cool roofs, and landscaping that decrease summer cooling and winter heating needs.*
- Action 3-5.12:** *Encourage new buildings to exceed State energy efficiency requirements and/or be certified by the U.S. Green Building Council’s LEED (Leadership in Energy and Environmental Design) Program or equivalent certification, where cost-effective and equitable.*
- Action 3-5.13:** *Require new City facilities to be zero net energy to the extent feasible.*
- Action 3-5.14:** *Consider updating the Zoning Code to require use of low carbon construction materials.*
- Action 3-5.15:** *Assess the effectiveness of the City’s environmentally sensitive preferred purchasing and green fleet conversion programs and update the programs, as needed, to support the City’s GHG reduction goals.*
- Action 3-5.16:** *Use education and incentives to promote and sustain energy-conserving design and practices.*

Policy 3-5.3: Increase the use of renewable, carbon free, and distributed energy resources throughout the city.

Action 3-5.17: Revise any existing codes and policies that constrain or prohibit the installation of environmentally acceptable forms of distributed energy generation.

Action 3-5.18: Encourage new and existing buildings to include battery energy storage systems, especially buildings with solar energy installations and municipal buildings that provide essential community services.

Action 3-5.19: Participate in State and local efforts to develop appropriate policies and review procedures for the installation of photovoltaic solar and other forms of distributed energy generation.

Action 3-5.20: Continue to participate in utility-sponsored renewable energy programs that allow the city to receive a significant portion of energy from renewable sources.

Action 3-5.21: Assist low-income homeowners and small business owners with identifying financing options for installation of rooftop solar energy systems, energy storage, and electrification of existing buildings.

Action 3-5.22: Support the development of local-serving renewable energy projects that expand the availability of local renewable energy, provide sustainable local jobs, and support local and regional housing, economic development, and sustainability goals and initiatives.

Action 3-5.23: Encourage the establishment of neighborhood renewable-energy microgrids to support resilience.

Action 3-5.24: Support State and utility efforts to improve grid resilience and capacity.

Policy 3-5.4: Continue the City's role as a leader in sustainability and climate action.

Action 3-5.25: Integrate GHG emissions reduction and climate resilience into all municipal projects, policies, and procedures as feasible.

Action 3-5.26: Designate a Climate Action Coordinator to lead implementation of the City's GHG Reduction Strategy and climate policies and actions in this General Plan.

Action 3-5.27: Designate and support a Climate Action Lead in each City department.

Action 3-5.28: Continue to support an Interdepartmental Climate Action Implementation Committee.

Action 3-5.29: Support the growth of green businesses in Santa Rosa that support a carbon neutral economy.