Existing Conditions Report

Transportation

September 23, 2021

CITY OF
PETALUMA GENERAL PLAN

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Transportation

This chapter provides contextual background on the City's transportation system that will help inform the Petaluma General Plan Update, and covers the following topic areas:

- Review of transportation regulatory setting and context in terms of federal, state, regional, and local plans and policies related to transportation
- Summary of local travel patterns including mode share, commute patterns, and vehicle ownership
- Description of existing transportation infrastructure and services, including roadways and motor vehicle travel, transit service, bicycle and pedestrian mobility, freight and truck travel, and other transport modes such as water transport and air travel
- Overview of emerging transportation trends such as micromobility, carsharing and ridehailing, electric vehicles, and other emerging transportation technologies such as autonomous vehicles, sidewalk robots, and drones
- Discussion of potential transportation network disruptions such as flooding and wildfires

Key Findings and Opportunities

Several recent policy changes at the state and local level, such as Senate Bill 743 (SB 743) and the City's Climate Emergency Framework, will shape the City's transportation goals in the future. SB 743 directed changes to the California Environmental Quality Act (CEQA) Guidelines for assessing transportation impacts, shifting the metric from vehicle delay to vehicle miles traveled (VMT), which encourages infill development and travel by more sustainable modes like walking, biking, and public transit. The City's SB 743 Implementation Program has recently set ambitious VMT thresholds so that future growth supports the City's climate and greenhouse gas (GHG) reduction goals. The City's recently adopted Climate Emergency Framework has established the city's intent to prioritize equity and climate justice, mitigation and sequestration, adaptation and social resilience, and community engagement in future planning efforts.

Petaluma's downtown and historic districts are enjoyable places for people to walk and the City benefits from having its own transit service, *Petaluma Transit*. However, most trips in Petaluma are made by private vehicle, reflecting the suburban nature of the city and the distance between Petaluma and major job centers. Approximately 73 percent of Petaluma residents drive to work alone compared to 77 percent in Sonoma County and 64 percent for the entire Bay Area. Higher proportions of people driving alone can result in traffic congestion during peak hours of the day, as well as higher VMT and GHG emissions, which run counter to the City's climate goals and policies. Within Petaluma, physical barriers such as the Petaluma River, the SMART right-of-way, and U.S. 101 constrain crosstown travel for all modes, and result in higher levels of vehicle congestion on key roadways that provide access to and through downtown such as East Washington Street, Lakeville Street, and East D Street. These barriers are particularly acute for people walking and biking and the existing gaps in bike and pedestrian networks in Petaluma inhibit the use of multimodal transportation, particularly for less experienced cyclists. While U.S. 101 through Petaluma is currently being widened from four to six lanes (scheduled to be completed in late 2022), travel through Petaluma on has historically been constrained by the narrowing of U.S. 101 from six to four lanes through Petaluma, with extensive congestion during peak commute hours and on weekends.

However, several opportunities exist to encourage greater use of sustainable modes like walking, biking, and public transit in Petaluma to help achieve the City's climate goals. Petaluma is currently served by

the Sonoma-Marin Area Rail Transit (SMART) commuter rail service at the Downtown Petaluma station, and will be served in the future at the planned Petaluma North/Corona Station. Petaluma is also served by Sonoma County Transit and Golden Gate Transit, which provide inter-city and regional connectivity, with a hub at the Copeland Street Transit Mall adjacent to the Downtown Petaluma station. Further, the Marin-Sonoma Bikeshare Pilot Program will provide shared electric bikes around the Downtown Petaluma station and in Downtown Petaluma to support last-mile connectivity. Focusing future growth around the regional transit hubs and improving connections for people walking and biking to transit, schools, and key destinations like Downtown Petaluma and shopping centers could encourage use of sustainable modes for existing and future residents and reduce VMT. In addition, the General Plan Update will leverage the findings of several ongoing efforts to improve walking and biking in Petaluma, such as Sonoma County's Vision Zero effort and Petaluma's Local Roadway Safety Plan and Bicycle and Pedestrian Master Plan update.

The City of Petaluma will also need to consider and adapt to emerging transportation technologies (e.g., bikeshare, micromobility, electric vehicles, ridehailing, autonomous vehicles) and potential transportation network disruptions, including the increased frequency and severity of hazardous events like wildfires and flooding associated with climate change. The General Plan Update represents an opportunity to plan for these new transportation realities and provide flexibility to respond to changing transportation conditions.

Transportation Context & Regulatory Setting

The purpose of this section is to provide background on the state, regional, and local plans and policies related to mobility and the transportation network in the City of Petaluma.

Federal Agencies and Regulations

Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency of the United States Department of Transportation (U.S. DOT) responsible for the federally-funded roadway system, including the interstate highway network and portions of the primary state highway network, such as U.S. 101. FHWA funding is currently provided through the INVEST in America Act, passed by Congress in 2021 to replace Fixing America's Surface Transportation (FAST) Act funding. INVEST Act funding can be used to fund local transportation improvements in Petaluma, such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, and transit system upgrades.

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the United States Access Board, an independent federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not yet been formally adopted, they have been widely followed by jurisdictions and agencies nationwide in the last decade. The guidelines, last revised in July 2011, address issues including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way. The guidelines apply to all proposed transportation facilities (e.g., new roadways, sidewalks) in the City of Petaluma.

Federal Transit Administration

The Federal Transit Administration (FTA) is the agency within the U.S. DOT that provides funding and technical assistance to public transit systems. Petaluma Transit receives funding directly from the FTA: Section 5307 funding is used to replace buses and paratransit vans and to support preventative maintenance and paratransit provision, and Section 5310 funds services such as travel training for the elderly or for people with disabilities.

State Plans and Policies

The following section is a summary of California plans and policies related to transportation and mobility that could help inform Petaluma's General Plan Update.

Caltrans Complete Streets

Caltrans, the state Department of Transportation, first released its ”complete streets policy” Deputy Directive 64 in 2001, which has since been updated in 2008 (DD 64—R1) and again in 2014 (DD 64—R2). The State of California passed the Compete Streets Act, Assembly Bill 1358, in 2008. This act requires that each municipality include a complete streets policy as part of the subsequent general plan update.

Assembly Bill 32 and Senate Bill 375

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, commits the State of California to reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board (CARB) coordinates the response to comply with AB 32. Senate Bill (SB) 375 is the means for achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks can help the state comply with AB 32. SB 375 requires Metropolitan Planning Organizations (MPOs)—such as the Metropolitan Transportation Commission (MTC) in the San Francisco Bay Area—to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by CARB.

Assembly Bill 1358

Assembly Bill 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include “complete street” policies in their general plans. These policies address the safe accommodation of all users, including bicyclists, pedestrians, motorists, freight, public transit vehicles and riders, children, the elderly, and the disabled. These policies can apply to new streets as well as the redesign of existing corridors.

Senate Bill 743

Senate Bill 743 (Stats. 2013, Ch. 386) creates several statewide CEQA[1] changes that are relevant to the project. First, it requires the Governor’s Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metrics beyond TPAs. OPR selected vehicle miles traveled (VMT) as the preferred transportation impact metric and applied their discretion to require its use statewide. Second, this legislation establishes that aesthetic and parking impacts of a residential, mixed-use residential, or employment center projects on an infill site within a TPA shall not be considered significant impacts on the environment. Third, the new CEQA Guidelines that implement this legislation, state that vehicle LOS and similar measures related to vehicle delay shall not be used as the sole basis for determining the significance of transportation impacts, and that as of July 1, 2020, this requirement shall apply statewide.

[1] CEQA refers to the California Environmental Quality Act. This statute requires identification of any significant environmental impacts of state or local action including approval of new development or infrastructure projects. The process of identifying these impacts is typically referred to as the environmental review process.

To aid in SB 743 implementation, the following non-binding state guidance has been produced.

- *Technical Advisory on Evaluating Transportation Impacts in CEQA,* California Governor's Office of Planning and Research, December 2018[2]
- *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, California Air Resources Board, January 2019[3]
- *Draft VMT-Focused Transportation Impact Study Guide*, Caltrans, May 20, 2020[4]

The *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* provides recommendations for VMT reduction thresholds that would be necessary to achieve the State's GHG reduction goals.

In the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), OPR provides additional information on assessing VMT and setting significance thresholds. Caltrans' *Draft VMT-Focused Transportation Impact Study Guide* supports the use of the OPR recommendations for land use projects and plans. As described under **Local Plans and Policies**, Petaluma has recently adopted local SB 743 VMT implementation guidelines and thresholds.

Assembly Bill 747

Assembly Bill 747 (Section 65302.15) requires that general plan safety elements protect communities from unreasonable risks related to geologic hazards, flooding, and wildland and urban fires, and include climate adaptation and resilience strategies. In addition, it requires that safety elements address evacuation routes for identified fire and geologic hazards. AB 747 was passed in October 2019 and becomes effective in January 2022.

Innovative Clean Transit

CARB's Innovative Clean Transit regulation, adopted December 2018, requires that public transit agencies gradually transition to zero-emission bus fleets and encourages improved mobility and connectivity for transit riders. Petaluma Transit is required to operate a 100% zero-emission fleet by 2040.

Regional Plans & Policies

The following section highlights key regional agencies, plans, and policies related to transportation and mobility that could help inform the Petaluma General Plan Update.

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area (Bay Area). It is responsible for developing

[2] Technical Advisory on Evaluating Transportation Impacts in CEQA http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf
[3] California Air Resources Board 2017 Scoping Plan https://ww2.arb.ca.gov/sites/default/files/2019-01/2017_sp_vmt_reductions_jan19.pdf
[4] Caltrans Transportation Impact Study Guide https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf).

the regional transportation plan and prioritizing regional transportation projects for state and federal funding. MTC is designated a regional transportation planning agency (RTPA) by the State of California and a metropolitan planning organization (MPO) by the federal government. MTC plays a key role in coordinating transportation investments in the Bay Area, and distributes FHWA and FTA funding to county and local jurisdictions, including emergency relief funds such as CARES, CRRSSA, and ARP.

Plan Bay Area 2040 is overseen by MTC and Association of Bay Area Governments (ABAG). Adopted in 2017, it serves as the region's SCS and the RTP and integrates transportation and land use strategies to manage GHG emissions and for future population growth. Plan Bay Area 2050, which is currently released for public comment, will provide an update to the region's previous iteration of the plan. The draft Plan Bay Area 2050 focuses on four key issues: the economy, the environment, housing, and transportation.

MTC Resolution 3765 (Complete Streets Policy) was adopted in 2006 to ensure all projects funded with regional funds consider the accommodation of pedestrians, cyclists, public transit users and drivers as part of project planning, design, funding and construction. MTC's Complete Streets Checklist, established through this resolution, works in conjunction with One Bay Area Grants (OBAG) and the Active Transportation Program (ATP) to utilize funding to support MTC's regional transportation priorities, which include improvements for people walking and biking, and Safe Routes to School projects.

Sonoma County Transportation Authority

The Sonoma County Transportation Authority (SCTA) is the county's Congestion Management Agency. SCTA works with local jurisdictions to provide countywide transportation planning to help meet demands and improve Sonoma County's transportation system. SCTA produces long range documents and assists local jurisdictions in local specific plans, like Station Area Plans around transit stations and Priority Development Area plans for transit-oriented and walkable communities. In addition, the SCTA developed and maintains the countywide travel model used to estimate future year traffic volumes and calculate VMT in a manner consistent with SB 743 throughout the County.

Countywide Bicycle & Pedestrian Master Plan, adopted in 2014, identifies key bicycle and pedestrian connections in each of the nine incorporated cities in Sonoma County, as well as unincorporated Sonoma County, and provides guidance on connectivity between cities in Sonoma County. The document also identifies educational and encouragement programs that promote greater shifts in bicycle and pedestrian mode share within Sonoma County.

Shift Sonoma County – Low Carbon Transportation Action Plan is a low carbon transportation plan adopted by SCTA in 2018. Shift Sonoma County identifies key mode shift and fuel shift (i.e., carbon-based fuels to electric) opportunities and provides a framework for interagency coordination. This plan also includes a model Transportation Demand Management (TDM) ordinance for local jurisdictions to consider.

Sonoma County Vision Zero is the county's strategy to eliminate all traffic fatalities and injuries, while increasing safe, equitable, and health mobility options for all. SCTA recently launched the Sonoma County Vision Zero Data Dashboard, which shows major patterns in crash data from around the county, and provides the ability to overlay other relevant data layers to contextualize crash data. The dashboard currently presents data from 2015 to 2020.

Local Plans & Policies

The following section is a summary of the local plans and policies related to transportation and mobility, both approved and in progress, that could help inform the City's General Plan Update.

Central Petaluma Specific Plan

The 2003 Central Petaluma Specific Plan (CPSP) is intended to redirect growth in Central Petaluma with a specific emphasis on the Petaluma River as a source of connectivity and identity. It seeks to promote sustainable and mixed-use development, historic preservation, and multimodal transportation to facilitate this growth. The plan calls for an expansion of employment, mixed uses and region-serving commercial activity in the area generally bounded by Petaluma Boulevard, Lakeville Street/Highway, and U.S. 101, while maintaining river-dependent industrial uses. The CPSP also encourages transit use and pedestrian and bicycle circulation by creating new local streets to improve access. The CPSP also introduced the adoption of the SmartCode.

SmartCode

The SmartCode is a form-based regulatory code that implements the objectives of the CPSP. It prescribes not only allowed uses, but also development standards for both the public and private realm. The SmartCode is based on the Transect, a method of organizing land usage along a spectrum of rural to urban. The SmartCode aims to shape Central Petaluma's sense of place by specifying standards for building functions, thoroughfares, parking, and historic preservation.

SMART Station Area Master Plan

The 2013 SMART Station Area Master Plan (SAMP) provides a framework to guide future development around Petaluma's existing and proposed Sonoma-Marin Area Rail Transit (SMART) stations and to support and increase transit ridership. The SAMP encourages the development and redevelopment of the Petaluma Downtown Station Area and Petaluma North/Corona Station Area into a pedestrian-oriented, livable, mixed-use environment that both capitalizes on and supports SMART train ridership. Key objectives of the SAMP include improving connectivity, developing urban design standards, identifying infrastructure needs, and providing a financing plan.

Petaluma Bicycle and Pedestrian Master Plan

The goal of Petaluma's current Bicycle and Pedestrian Master Plan (BPMP), adopted in 2008 as an appendix to the 2025 General Plan, is to facilitate the development of a safe and integrated bicycle and pedestrian system throughout Petaluma and to make Petaluma a more pedestrian- and bicycle-friendly community. The BPMP was prepared consistent with Section 891.2 of the California Streets and Highways Code to be eligible to apply for competitive grant funding for bicycle and pedestrian projects administered by Caltrans. The Plan identifies goals, policies, and programs related to bicycle and pedestrian mobility; documents existing conditions for bicycle, pedestrian, and multi-use trail facilities; and proposes new facilities, specific improvements, and programmatic recommendations to support the Plan's goals. At the time of writing (Summer 2021), the City of Petaluma began the process of updating the BPMP in parallel with the General Plan Update.

Petaluma Local Roadway Safety Plan

The City of Petaluma is also in the process of preparing a Local Roadway Safety Plan (LRSP), which takes a data-driven approach to safety planning in coordination with local stakeholders in order to reduce traffic fatalities and serious injuries on public roadways. Starting in 2022, having an adopted LRSP will be required for jurisdictions to be eligible for Highway Safety Improvement Program (HSIP) grant funding. This study includes stakeholder and public outreach, collision data analysis to identify key risk factors, countermeasure selection, and priority project identification, and is anticipated to be completed by the end of 2021.

Petaluma Transit Short Range Transit Plan

MTC requires that transit operators develop a Short Range Transit Plan (SRTP) in order to receive federal funding through the regional Transportation Improvement Program (TIP). Petaluma's SRTP was most recently adopted in 2016 and is a strategic document that sets the 10-year vision for transit service in Petaluma. The SRTP is due to be updated through 2022.

Petaluma Climate Emergency Framework

In 2019, Petaluma City Council adopted a climate crisis resolution (Resolution No. 2019-055) that elevates climate mitigation and adaptation in policies and planning, and established a Climate Action Commission to guide the City on matters related to climate change. The City's Climate Emergency Framework, adopted in January 2021, is the result of collaboration between the Climate Action Commission, City staff, and community volunteers. The four main topics addressed in the framework are equity and climate justice, mitigation and sequestration, adaptation and social resilience, and community engagement. The guidelines and measurable goals outlined in the plan will be applied in the City's future planning efforts to ensure that all future plans include climate adaptation and mitigation efforts. The transportation sector is the largest contributor to CO_2 emissions in Petaluma, accounting for 59% of CO_2 emissions in 2010 and 64% of emissions in 2015. The Climate Emergency Framework aims to reduce transportation-related emissions in Petaluma by reducing VMT, promoting policies that support infill development and increased density, shift vehicle trips to active transportation modes and public transit, and encourage the adoption of electric vehicles.

SB 743 Implementation Program

In accordance with SB 743, Petaluma City Council adopted local VMT Implementation Guidelines and established VMT thresholds on June 21, 2021. The VMT Implementation Guidelines shifts the focus away from vehicle delays on local roadways to regional traffic patterns and reducing GHG emissions and establishes the methods, VMT metrics, thresholds of significance, screening criteria, and mitigation strategies for CEQA evaluation of discretionary projects. Given the City's commitment to climate resilience, City Council adopted a significance threshold in alignment with CARB's identified reduction at 16.8% below baseline VMT levels. The VMT Implementation Guidelines noted that this threshold will be revisited and updated as appropriate through the General Plan Update process to establish a threshold level that best aligns with the City's commitment to the climate emergency and reflective of the forthcoming Climate Action and Adaption Plan.

Transportation Demand Management

Transportation Demand Management (TDM) refers to a set of strategies intended to reduce the demand for private automobile travel. Petaluma's Trip Reduction Ordinance, originally adopted in 1992 and most recently updated in 1996, requires all Petaluma employers with over one hundred employees to designate a transportation coordinator, provide information about commute alternatives to employees, and administer annual commute surveys. In addition, the City would designate a transportation administrator to coordinate the distribution of commute alternatives information and annual employee commute surveys. Regionally, SCTA's *Shift Sonoma County* effort provides countywide coordination and support on TDM.

With the City's recent adoption of SB 743 guidelines and Climate Emergency Framework, which place importance on VMT as a key transportation metric that influences GHGs, implementing and monitoring the performance of TDM strategies will be increasingly important for both existing and new employers, residential developments, and other projects.

Development Impact Fees

The City of Petaluma assesses transportation impact fees through Development Impact Fee program, which was initially adopted on May 19, 2008 to implement the policies of the 2025 General Plan. The purpose of the traffic development impact fee is to provide funds for the construction and implementation of improvements to key elements of the citywide transportation system sufficient to accommodate the development's share of traffic volumes generated by the new development. Fees are based on a "per unit" or "per square foot basis," depending on the land use. The traffic impact fee was last updated in 2012 and will be updated to reflected the City's future transportation needs based on the updated land use plan.

Travel Characteristics

Residents of the City of Petaluma use many different modes of transportation for daily trips. The proportion of travelers taking different transportation modes (e.g., driving alone, riding transit, biking, walking) is referred to as "mode share." The U.S. Census *American Community Survey* (ACS) includes data on commute mode share patterns. Commute mode shares for Petaluma and Sonoma County residents are summarized in **Table 1**.

Table 1: Mode Share for Commute Trips

	Petaluma	Sonoma County
Population	60,767	499,772
Mode	Mode Share	Mode Share
Drive Alone	73%	75%
Carpool	12%	11%
Public Transit	3%	2%
Walk	2%	3%
Bicycle	<1%	1%
Work From Home	9%	7%
Other	1%	<1%

Sources: 2019 American Community Survey 5-Year estimates, Tables A00001 and A09005, 2014-2019, Retrieved by Fehr & Peers, 2021.

In both Petaluma and Sonoma County, most commuters (approximately 85%) either drive alone or carpool to work. Public transit use in Petaluma for commuting (3%) is slightly higher than the Sonoma County average (2%). However, residents of Petaluma tend to walk and bike slightly less compared to countywide averages (3% and 4%, respectively). While the transit and bicycle mode share in Petaluma is low compared to automobile mode share, low-income and underserved populations are a disproportionately large share of those modes. Approximately 54% of Petaluma Transit riders are K-12 students; 75% of riders earn a household income of less than $35,000; and over half (54%) of riders are Hispanic.

Commute Patterns

Commute patterns into and out of Petaluma, based on Longitudinal Employer-Household Dynamics (LEHD) data for 2018, are shown below in **Table 2.** Petaluma experiences a net influx of workers each day, with approximately 18,800 residents commuting out of Petaluma and approximately 22,400 workers commuting into Petaluma. In comparison, 6,000 workers both live and work in Petaluma. Of the 24,800 employed Petaluma residents, approximately 76% are employed outside of Petaluma. Approximately 18% commute to other locations within Sonoma County, 17% to Marin County, 7% to San Francisco, and 3-5% to Alameda, Contra Costa, Santa Clara, and Napa counties. Of the approximately 28,400 workers employed in Petaluma, approximately 20% live in Petaluma. Of the 80% of workers who commute from outside Petaluma, 15% live in Rohnert Park, 60% live elsewhere in Sonoma County, and 5% live in Marin or Solano counties.

According to a recent SCTA study[5] on countywide travel patterns, approximately 15% of vehicle trips within Sonoma County either start or end in Petaluma. Within Petaluma, the largest generators include the East Washington commercial corridor and Downtown Petaluma.

Table 2: Petaluma Commute Flows

	Home Locations of Petaluma Workers	Work Locations of Petaluma Residents
Sonoma County	61%	48%
City of Petaluma	21%	24%
Marin County	5%	17%
San Francisco County	2%	7%
Alameda County	3%	5%
Solano County	5%	<2%
Contra Costa County	3%	3%
Napa County	3%	3%
Santa Clara County	<2%	3%
All Other Locations	17%	14%

Sources: Longitudinal Employer-Household Dynamics (LEHD), 2018 Retrieved by Strategic Economics, 2021.

[5] Sonoma County Travel Behavior Study, 2020. https://scta.ca.gov/wp-content/uploads/2020/02/Sonoma_TBS_2-7-2020_web.pdf

Vehicle Ownership

Vehicle ownership is a key household characteristic that can help inform the transportation needs of a community. **Table 3** summarizes vehicle ownership rates in Petaluma and Sonoma County. The majority of households in Petaluma and Sonoma County own 1 or 2 vehicles, and approximately one quarter of households own three or more vehicles. Five percent of households in Petaluma are car-free, similar to the countywide average.

Table 3: Household Vehicle Ownership

	Petaluma	Sonoma County
Petaluma Households	22,655	189,374
No. Vehicles Available	Percent of Households	Percent of Households
No Vehicles	5%	5%
1 Vehicle	27%	29%
2 Vehicles	43%	39%
3 Vehicles	16%	18%
4 Vehicles	7%	7%
5 or More Vehicles	3%	3%

Sources: 2019 American Community Survey 5-Year estimates, Table A10030, 2014 – 2019 Retrieved by Fehr & Peers, 2021.

Roadway System

This section describes the existing regional highway system and the local street circulation system for Petaluma. The regional highway system and roadway classifications described in this section are illustrated in **Figure 3** below.

Regional Highways

U.S. Highway 101 (U.S. 101) is a major north-south freeway that extends northward from San Francisco and the Golden Gate Bridge as a four-to-eight lane divided freeway through Marin County, reducing to four lanes with alternating freeway and highway segments through northern Marin County and into Sonoma County before continuing to the North Coast counties of Mendocino, Humboldt, and Del Norte. Access to Petaluma from U.S. 101 is provided via interchanges at the Lakeville Highway Interchange (State Route 116), East Washington Street, and Petaluma Boulevard. In Petaluma, U.S. 101 is a four-lane freeway (two lanes in each direction) that bifurcates the City; the Marin-Sonoma Narrows HOV Widening Project will expand U.S. 101 to three lanes in each direction by late 2022. It is anticipated that upon completion of the project, highway congestion through Petaluma will be significantly reduced.

State Route 116 (SR 116) is an east-west highway that orients northwest-southeast through Petaluma. The route runs from State Route 1 on the coast near Jenner to State Route 121 south of Sonoma, connecting with U.S. 101 at Lakeville Street, to the east of downtown Petaluma, and running concurrently with U.S. 101 throughout most of central and northern Petaluma. To the east of U.S. 101, SR 116 is Lakeville Highway, a four-lane road with additional storage lanes for turning movements. West of U.S. 101, Lakeville Highway continues as a City-maintained (non-Caltrans) roadway named Lakeville Street.

Local Circulation

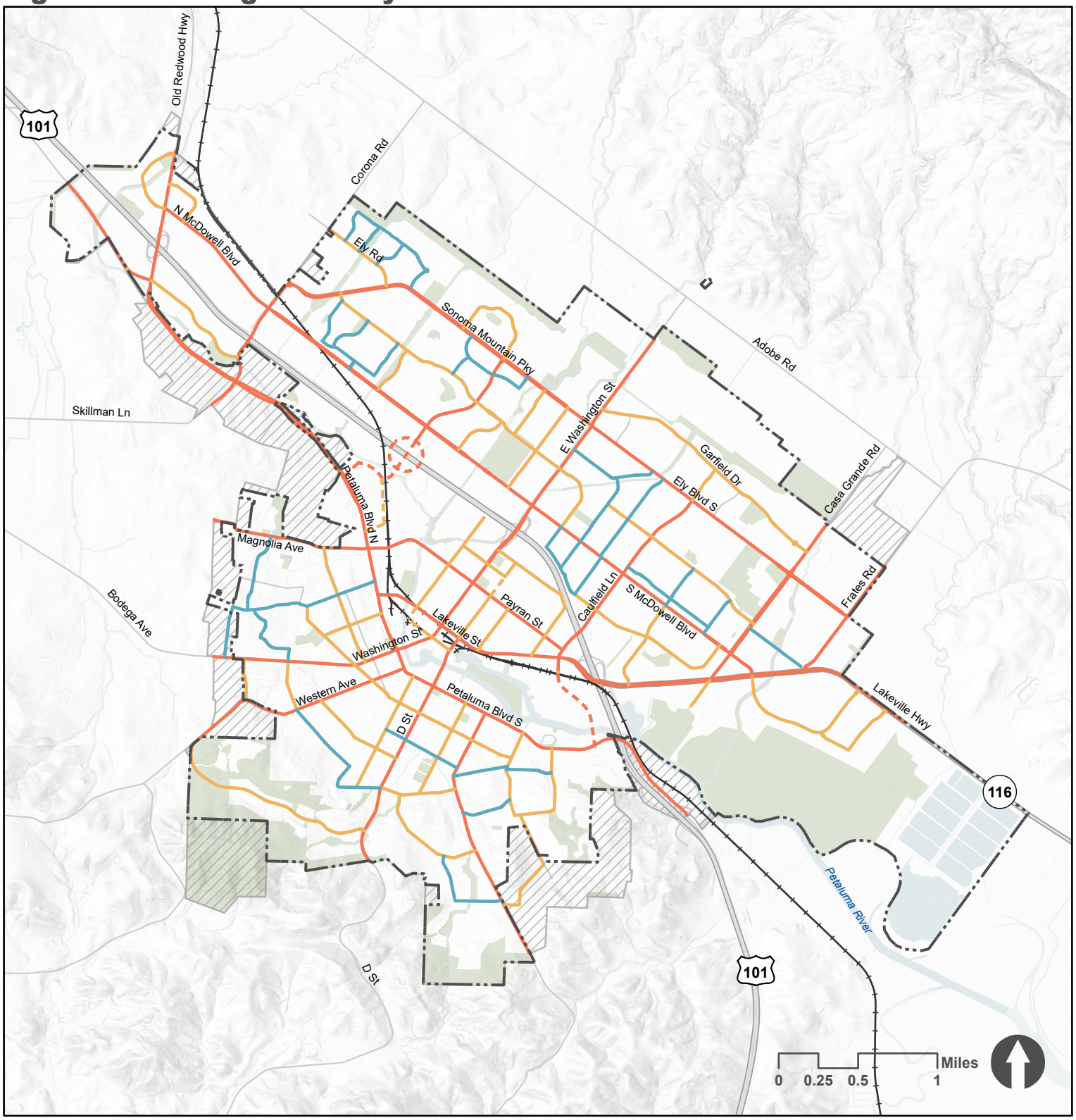
Petaluma's local road network includes approximately 177 miles of streets, 8 bridges, 52 signalized intersections, and 5,458 streetlights.[6] Petaluma uses both functional classifications and street typologies to describe its streets. This chapter describes Petaluma's roadway network based on classifications in the 2025 General Plan. As land uses and the streets that serve them evolve, changes in classifications may be needed.

The following roadway functional classifications categorize streets by purpose, location, and typical land uses to which they provide access. Each of these roadway types is described in more detail below and existing roadway classifications are mapped on **Figure 1**Error! Reference source not found., as designated in the 2025 General Plan.

- Arterials
- Collectors
- Connector
- Local streets

[6] City of Petaluma (2021). "Infrastructure Presentation." Measure U Workshop Meeting, Petaluma City Council, March 8, 2021. Accessed at https://petaluma.granicus.com/GeneratedAgendaViewer.php?view_id=31&event_id=45335

Figure 1. Existing Roadway Network



City Limit

Urban Growth Boundary / Sphere of Influence

Arterial

Collector

Connector

Proposed Arterial

Proposed Collector

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Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

The functional classification system is often considered an automobile-centric method of planning and does not typically consider travel characteristics and multimodal priorities; consequently, Petaluma also defines street typologies that extend the existing functional roadway classifications to consider the street's relation to surrounding land uses, travel speeds, and multiple modes of transportation. As outlined in the 2025 General Plan Existing Conditions, Opportunities, and Challenges Report, they are:

- Residential Streets
- Main Streets
- Mixed-Use Streets
- Commercial Streets
- Industrial Streets
- Boulevards
- Private Streets

Since the street network in Petaluma does not consistently align with cardinal directions (e.g., North, South, etc.), those that generally run parallel with U.S. 101 are generally described with a north-south orientation for simplicity, and streets running perpendicular to U.S. 101 are described with an east-west orientation.

Arterials

Arterials are typically higher-volume, higher-speed roadways with limited access to adjacent parcels. The primary function of arterials is to connect regional highways with the local roadway network. The following roadways are defined in the 2025 General Plan as arterials:

- Ely Boulevard
- Lakeville Street / Lakeville Highway
- Payran Street
- McDowell Boulevard
- Petaluma Boulevard
- Sonoma Mountain Parkway
- Stony Point Road
- Casa Grande Road
- Caulfield Lane
- Corona Road
- D Street
- Frates Road
- I Street
- Magnolia Avenue
- Old Redwood Highway
- Rainier Avenue
- Washington Street / Bodega Avenue
- Western Avenue

Collectors

Collector streets serve as principal traffic arteries within residential and commercial areas. Major collectors are those with four lanes of travel, and minor collectors are those with two travel lanes. The following roadways are defined as collector streets in the 2025 General Plan:

- 6th Street
- B Street
- Bantam Way
- Crinella Drive
- East D Street
- East Madison Street
- Ellis Street
- Ely Road
- Fair Street
- G Street
- Garfield Drive
- Howard Street
- Industrial Avenue
- Keokuk Street
- Madison Street
- Maria Drive
- McNear Avenue
- Mountain View Avenue
- Monroe Street
- North Webster Street
- Oak Street
- Pine View Way
- Purrington Road
- Rainier Circle
- St. Francis Drive
- Sunnyslope Avenue
- Sunnyslope Road
- Windsor Drive

Connectors

The 2025 General Plan classifies collector streets as those that provide low-speed, medium-volume access within and between neighborhoods and nearby collector and arterial streets.

Local Streets

The 2025 General Plan classifies local streets as those that provide direct connections to residences and businesses. They are typically designed as lower-speed streets and typically allow on-street parking.

Near-Term Planned Roadway Improvements

This section describes roadway improvements that will be implemented in the near-term in or around Petaluma.

Caltrans' Marin-Sonoma Narrows HOV Widening Project (MSN) would widen U.S. 101 from four to six lanes to provide high-occupancy vehicle (HOV) lanes in both directions. HOV lanes on U.S. 101 have been completed north of Petaluma to Santa Rosa and from Central Marin County through Novato, in addition to several interchanges in Petaluma to close the gap in HOV lanes between Novato and north of Petaluma. The final Sonoma County segment of the MSN Project is currently under construction through Petaluma between the Petaluma Boulevard South interchange and the Old Redwood Highway interchange and is anticipated to be complete by late 2024. The timing for the final Marin County segment

between Novato and the Sonoma County border is currently unknown, since its construction has been delayed by litigation.[7]

The **Petaluma Boulevard Road Diet** project, scheduled for 2022, would reduce the cross-section of Petaluma Boulevard from D Street east to Crystal Lane Roundabout to two travel lanes with a center turn lane.

In addition to these specific roadway projects, the City's 2019 Pavement Management Plan (PMP) assessed roadway pavement condition and recommended a multi-year maintenance plan to optimize the City's overall Pavement Condition Index (PCI). PCI is a measure of pavement quality that ranges from 1 to 100, where a newly constructed street would have a PCI of 100, and a failed street would have a PCI under 25. Petaluma's roadway network has an average PCI of 42, the lowest of all cities in the San Francisco Bay Area, indicating that pavement quality is generally in poor condition. The PMP is presented to City Council and the public several times a year, as part of the City's annual budget cycle and for some grant funding applications (e.g., Senate Bill (SB)1). The current PCI for roadways in Petaluma is shown in **Figure 2**.

Long-Term Potential Roadway Improvements

This section describes roadway improvements that may be implemented in the long-term.

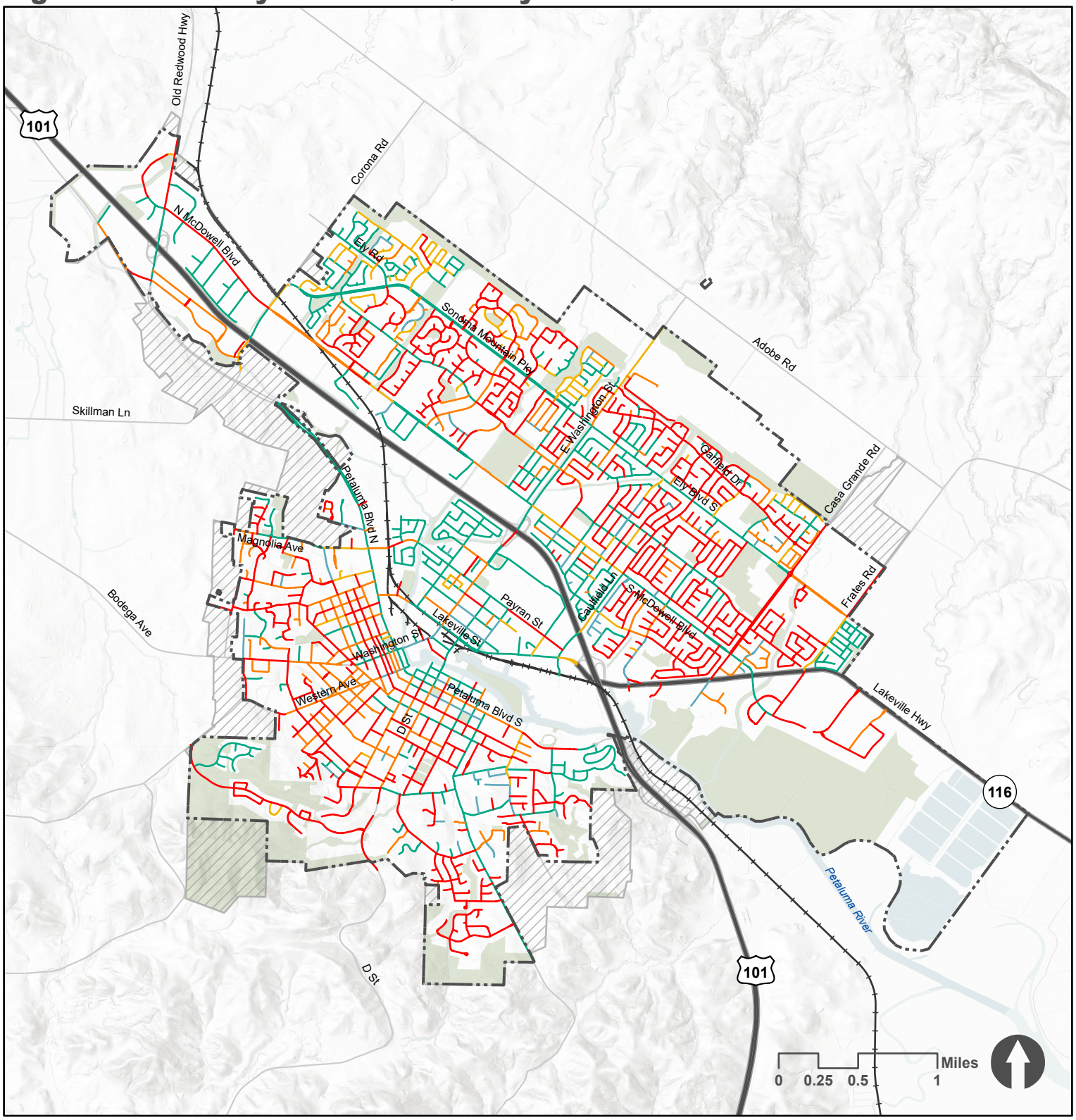
The **Rainier Crosstown Connector** would extend Rainier Avenue from McDowell Avenue to Petaluma Boulevard North to provide an additional east-west connection for vehicles, transit, pedestrians, and bicyclists across U.S. 101, SMART, and the Petaluma River.[8] The crosstown connector will go under Caltrans's new U.S. 101 Rainier overcrossing and go over the Petaluma River and the SMART tracks. The new Caltrans overpass is being constructed with the MSN C2 U.S. 101 widening project. The City completed the Environmental Impact Report and preliminary design for the crosstown connector in 2015. A related project envisioned in Petaluma's 2025 General Plan would include the construction of a new partial-cloverleaf interchange at Rainier Avenue with auxiliary lanes in both directions between the Rainier Avenue and East Washington Street interchanges. This related project would require separate environmental approvals from the crosstown connector.

The **North Petaluma Boulevard Grid** improvements would provide a grid of streets near North Petaluma Boulevard adjacent to the Rainier Avenue extension and a planned southward extension of Industrial Avenue.

The proposed **Caulfield Bridge/Extension** would connect Caulfield Lane from its existing terminus at Hopper Street to the existing roundabout at Petaluma Boulevard South and Crystal Lane Roundabout via a new bridge over the Petaluma River. This extension would provide additional connectivity across the Petaluma River for vehicles, transit, pedestrians, and bicyclists.

[7] Caltrans (2021). *The Marin-Sonoma Narrows Project*. Accessed at https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-marin-sonoma-narrows on July 14, 2021
[8] https://cityofpetaluma.org/rainier-crosstown-connector/

Figure 2. Roadway Pavement Quality



City Limit

Urban Growth Boundary / Sphere of Influence

Category I - Very Good

Category II - Good (Non-Load)

Category III - Good (Load)

Category IV - Poor

Category V - Very Poor

CITY OF PETALUMA
GENERAL PLAN UPDATE

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

Motor Vehicle Travel

Figure 3 presents how motor vehicle – and multimodal – travel in Petaluma is constrained by physical barriers such as the Petaluma River, the SMART right-of-way, and U.S. 101. Washington Street, Payran Street, and D Street are the key routes across the Petaluma River between the east and west sides of the City. Similarly, Old Redwood Highway, Corona Road, East Washington Street, Caulfield Lane, and Lakeville Street/Highway are the key routes for travel across U.S. 101.

Because there are limited opportunities to cross these linear features, congestion “hot spots” can form during peak commute or school periods, generally between 7:00 to 9:00 am and 4:00 to 6:00 pm. Congestion is most pronounced on East Washington Street, Lakeville Street, and East D Street that provide access to and through downtown. The City’s long-term plans to construct additional "crosstown connectors” and bridges over the Petaluma River at Rainier Avenue and Caulfield Lane would provide additional opportunities for travel across these barriers and may help to relieve the existing connectors.

In addition, the narrowing of U.S. 101 from six to four lanes in Petaluma results in traffic on U.S. 101 in and around Petaluma, particularly during peak commute hours and on weekends. As described above, the Petaluma segment of the MSN Project is currently underway and is anticipated to be complete by late 2024.

The City is currently undertaking a review of roadway safety through the LRSP, which will inform recommendations about future improvements or investments.

Motor Vehicle Parking

This section briefly describes existing motor vehicle parking conditions in Petaluma, including public parking facilities, private parking standards, and electric vehicle infrastructure.

Public Parking

In 2012, the City inventoried the public parking supply in downtown Petaluma, which has remained generally consistent over time. At that time, there were approximately 660 on-street spaces in downtown Petaluma and 980 off-street spaces located in off-street garages or parking lots. No on-street parking in Petaluma is currently metered. The City does not currently have an inventory of on- or off-street bike parking inventory.

Downtown Petaluma’s three main public parking facilities are the Keller Street Garage, the Theater District Parking Garage at C Street and 2nd Street, and the A Street Parking Lot, located on Keller Street between Washington Street and Western Avenue, and the surface lot in the center of the block bounded by 4th Street, B Street, Keller Street, and Western Ave., respectively.

The Keller Street Garage has 336 total spaces, consisting of a mix of four-, eight- and ten-hour spaces, EV charging spaces, ADA spaces, and motorcycle parking. Based on 2018 occupancy counts, Keller Street Garage’s weekday occupancy is approximately 40% at 9:00 AM, peaks at over 90% at midday, and averages 60 to 70% in the afternoon. The Theater District Parking Garage has 530 parking stalls, a privately managed parking garage that includes 216 spaces that are allocated to free general public use per an easement agreement with the City of Petaluma. Due to the private ownership, no parking occupancy data was collected in the 2018 parking occupancy study. The A Street Parking Lot has 45

public spaces (two-hour parking and ADA spaces), as well as 48 additional private (reserved) spaces. The A Street lot's weekday occupancy ranges between 30 to 70% throughout the day.

Private Parking Standards

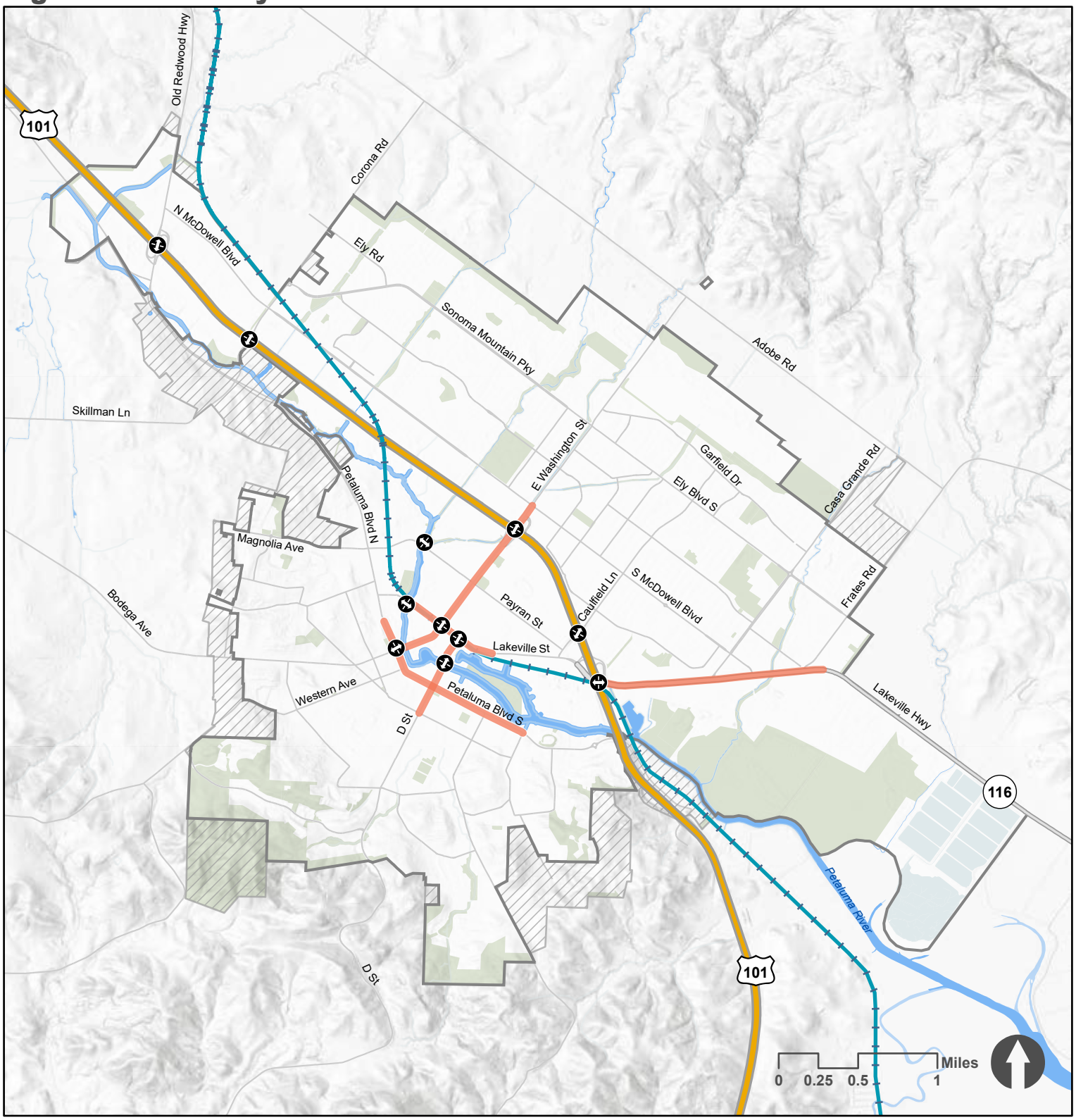
Parking standards in Petaluma are determined by the City's development review process to ensure that the number of parking spaces provided is adequate for each land use. Parking standards for the majority of the City are provided in Chapter 11 of the City's Zoning Code. Standards in downtown Petaluma are defined in the City's SmartCode. Each building and land use is required to provide parking; details about parking minimums and other requirements are listed in Section 4.10 (Urban Standards Table) of the City's SmartCode. Standards for accessible parking spaces are required in compliance with the Uniform Building Code (UBC), the Federal Accessibility Guidelines, and the California Code of Regulations Title 24. The City of Petaluma is currently evaluating whether private parking standards should be updated.

Electric Vehicle Infrastructure

Electric vehicle (EV) charging infrastructure is becoming more commonplace in Petaluma, and will likely grow in importance in relation to the City's climate goals. Currently, there are approximately 40 Level 2 station ports and 20 Level 3 station ports, located throughout the City at locations including the Keller Street Garage, City Hall, Deer Creek Village, and East Washington Plaza.[9] However, many major destinations throughout Petaluma lack adequate EV charging infrastructure, which may make it challenging to meet future demand. The Petaluma City Council adopted an ordinance on July 19, 2021 streamlining the permitting process for EV chargers to make it easier to install a charger at homes or businesses.

[9] ChargeHub (2021). *Petaluma EV Charging Station Info*. Accessed at https://chargehub.com/en/countries/united-states/california/petaluma.html on July 14, 2021

Figure 3. Roadway Network Constraints



City Limit

Urban Growth Boundary / Sphere of Influence

Major Crosstown Barriers

U.S. 101

Petaluma River

SMART Right-of-Way

Opportunity to Cross Major Barriers

Congestion Hot Spots

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

CITY OF PETALUMA GENERAL PLAN UPDATE

Transit Network

Transit providers serving Petaluma include local and intercity bus as well as passenger rail. The existing transit network within Petaluma is shown in **Figure 4.** This service levels and schedules described below reflect conditions as of the time of writing (Summer 2021). Due to the ongoing COVID-19 pandemic, most transit services are still operating under reduced schedules compared to pre-COVID-19 service levels.

SMART

Sonoma-Marin Area Rail Transit (SMART) is a commuter rail line serving Sonoma and Marin Counties. The existing SMART line serves 12 stations between the Sonoma County Airport and the Larkspur Ferry Terminal; several additional stations are planned – including infill stations along the route and north of the current terminus to Windsor and Cloverdale. Petaluma is currently served by the Downtown Petaluma station and transit center on Copeland St and will be served by the future Petaluma North/Corona Station, which would be located on the north side of the City near McDowell Boulevard/Corona Road. SMART also plans to construct a rail-side trail system along the length of the tracks, which has been partially completed, including several segments within Petaluma. Weekday service operates at 30- to 90-minute headways with more frequent service focused on the peak periods and direction of commute travel. SMART is funded through a dedicated ¼ cent sales tax that currently runs through 2029.

Petaluma Transit

Petaluma Transit is a local, public bus service serving commuter and community routes in Petaluma. Petaluma Transit currently offers service for six routes:

- **Route 2** runs from the Safeway Eastside Transit Center to Old Redwood Highway east of North McDowell Boulevard. Route 2 operates at 30-minute headways on weekdays between 6:30 AM to 8:30 PM, on Saturdays between 7:30 AM to 7:30 PM, and on Sundays between 8:30 AM to 4:30 PM.
- **Route 3** loops from the Safeway Eastside Transit Center along Maria Drive, Sonoma Mountain Parkway, Ely Boulevard, Frates Road, and South McDowell Boulevard. Route 3 operates on 30-minute headways on weekdays between 6:30 AM to 7:30 PM.
- **Route 10** runs from the Gossage Park & Ride to the Copeland Transit Mall and Petaluma Market. Route 10 operates at hourly headways on weekdays from 7:32 AM to 6:15 PM.
- **Route 11** runs north-south from the Safeway Eastside Transit Center to Petaluma Market Station, to the Copeland Transit Mall. Route 11 operates on 30-minute headways on weekdays from 6:30 AM to 8:00 PM and weekends from 7:30 AM to 8:00 PM.
- **Route 24** runs from the D Street SMART Station to Lakeville and then Kaiser Hospital. Route 24 operates on 30-minute headways on weekdays from 6:15 AM to 6:45 PM.
- **Route 33** runs in a loop from the Safeway Eastside Transit Center along South McDowell Boulevard and Sonoma Mountain Parkway. Hourly service is offered on weekdays from 7:00 AM to 8:00 PM and weekends and holidays from 8:00 AM to 8:00 PM.

- **Routes 301, 302, 303, 311, 312, and 501** provide limited AM and afternoon school trip service when Petaluma City Schools are in service.

Sonoma County Transit

Sonoma County Transit (SCT) is the primary inter-city transit provider in Sonoma County. SCT provides local transit services in the City of Petaluma along with services to the City of Santa Rosa and other areas of Sonoma County. There are three SCT routes that operate within Petaluma: Route 40, Route 44, and Route 48.

Route 40 provides service between Downtown Petaluma and Sonoma. The line travels along Lakeville Street and terminates at the Copeland Street Transit Mall. Routes 44 and 48 provide service between Downtown Petaluma and Santa Rosa. Route 44 travels along McDowell Boulevard and East Washington Street. Route 48 travels along Old Redwood Highway and Petaluma Boulevard.

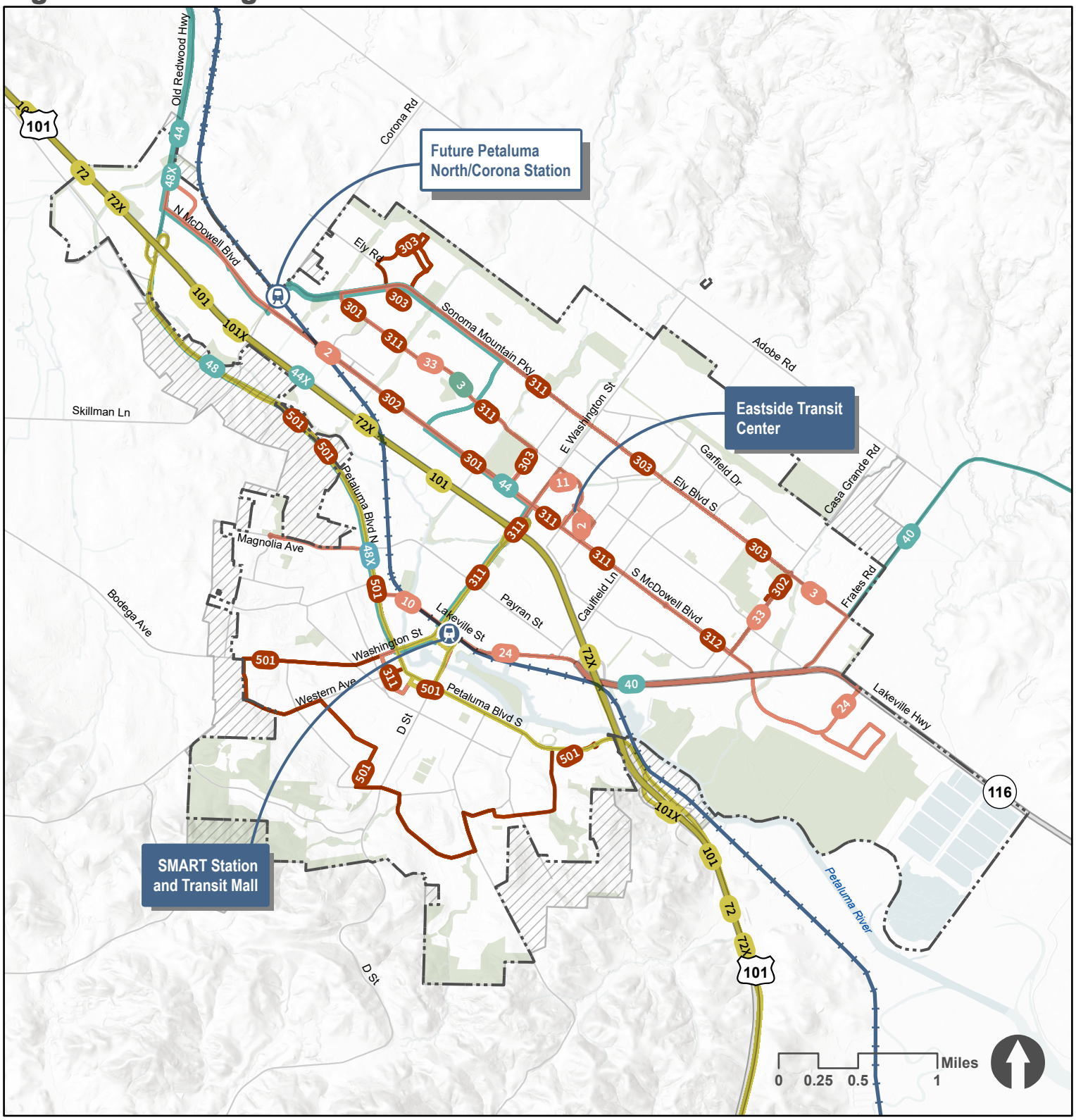
Golden Gate Transit

Golden Gate Transit (GGT) is the primary long-distance regional transit provider in Sonoma County. GGT routes are focused to provide peak period, peak direction bus service to destinations in Marin County and San Francisco. Two GGT bus routes currently serve Petaluma: Route 72 and Route 101. Route 72 stops at 4th and C Streets with approximately 20-minute headways during morning commute hours. Route 101 stops hourly at the Copeland Street Transit Mall.

Other Transit Services

Petaluma Transit and SCT also provide paratransit services within their respective service areas for riders who are unable to use the fixed-route services. In addition, Petaluma People Service Center operates a volunteer driver program (iRIDE) that serves seniors who are unable to drive but who may not qualify for paratransit services.

Figure 4. Existing Transit Network



City Limit

Urban Growth Boundary / Sphere of Influence

Golden Gate Transit

Petaluma Transit

Petaluma Transit - School Tripper Service

Sonoma County Transit

Sonoma Marin Area Rail Transit

CITY OF PETALUMA GENERAL PLAN UPDATE

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

Bicycle and Pedestrian Mobility

A robust network of pedestrian and bicycle facilities is critical to achieving the reductions to VMT envisioned as a part of the City's Climate Emergency Framework. While Petaluma does not currently have a formal Complete Streets policy, the 2025 General Plan and 2008 Bicycle and Pedestrian Master Plan (BPMP) encouraged a complete streets approach to planning. Recommendations from the General Plan Update will be coordinated with the ongoing Bicycle and Pedestrian Master Plan Update, which will also incorporate findings from Petaluma's ongoing Local Roadway Safety Plan (LRSP).

Bicycle Network and Parking

The 2025 General Plan and 2008 BPMP both call for the development of a comprehensive network of bikeways and bicycle support facilities throughout the City to serve alternative transportation and recreational needs. Caltrans recognizes four classifications of bicycle facilities:

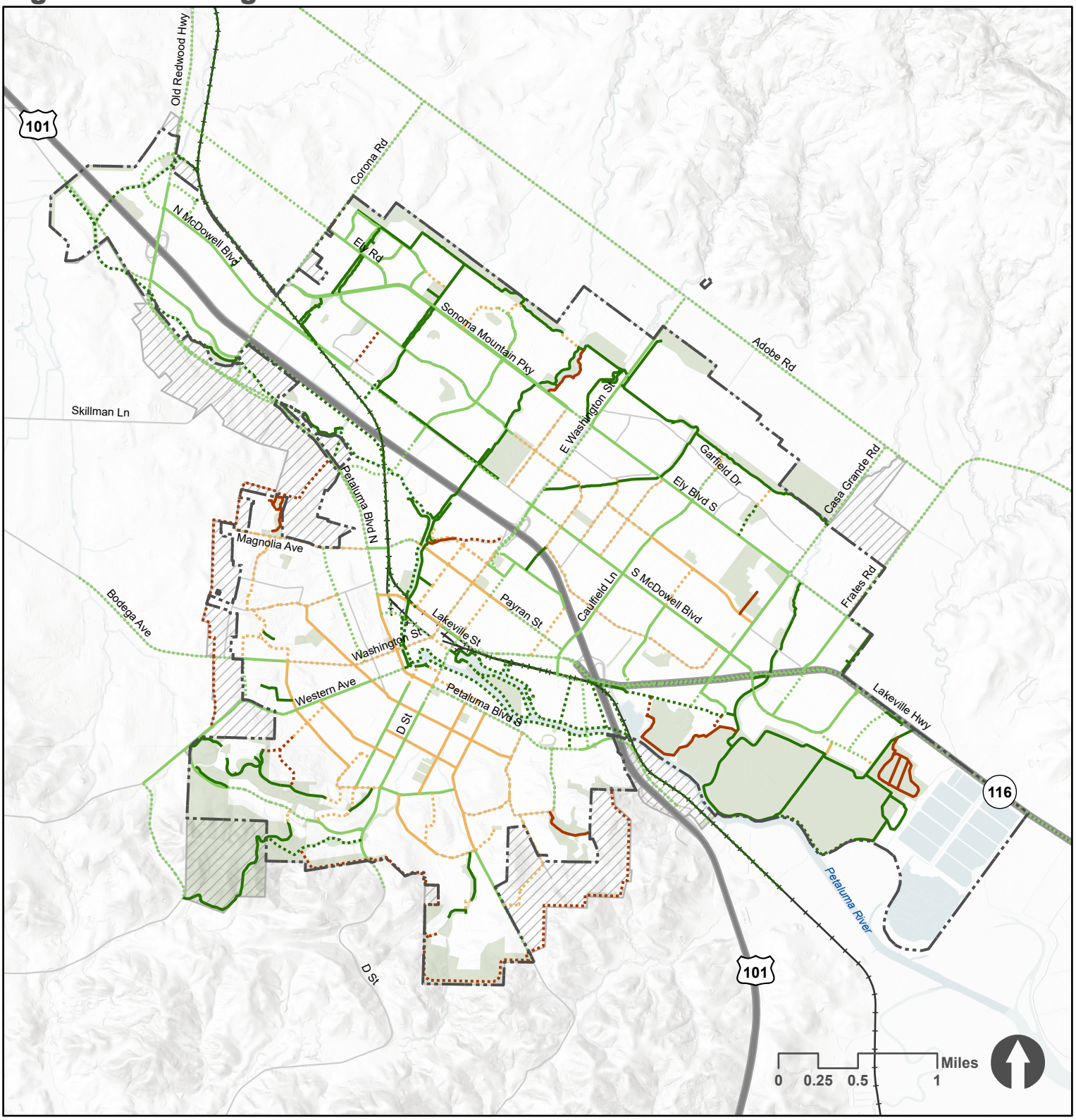
- Class I – commonly referred to as a bike path or bikeway, is a facility separated from automobile traffic for the exclusive use of bicyclists.
- Class II – commonly referred to as bike lanes, are dedicated facilities for bicyclists immediately adjacent to automobile traffic.
- Class III – commonly referred to as bike routes, are on-street routes where bicyclists and automobiles share the road.
- Class IV – commonly referred to as cycle tracks or protected bike lanes, are facilities that combine elements of Class I and Class II facilities to offer an exclusive bicycle route immediately adjacent to a roadway similar to a Class II facility, but provides a physical separation from traffic with raised curb, plastic delineators, or parked automobiles.

Existing and planned bicycle facilities are shown below in **Figure 5.** Petaluma's current bicycle network has good coverage of Class II and Class III bike facilities throughout the City; however, many of these facilities are located on roadways with high vehicle volumes and/or speeds, and may be stressful to navigate for the average bicyclist. Where trails, bicycle boulevards, or other "lower stress" facilities cross major arterials or collectors, new traffic control devices may be needed to provide safer, more comfortable crossings, which will be explored further as part of the ongoing BPMP Update. The Lynch Creek Trail is an integral east-west connector for people walking and biking that links downtown Petaluma with residential areas, commercial areas, schools, parks, and other services. The trail also serves as a connection to bus services and SMART. However, some stretches of the trail are in poor condition and crossings at major arterials – such as McDowell Boulevard where the trail crossing is offset from nearby signalized intersections – can be challenging to navigate.

There are several planned bicycle facilities in downtown Petaluma, including a road diet and Class II bike lanes along Petaluma Boulevard, Class II bike lanes on Western Avenue, and Class I facilities along the Petaluma River. While planned as part of the upcoming Petaluma Boulevard South road diet, Petaluma does not currently have any Class IV protected bicycle facilities.

Short-term bicycle parking (bike racks) are provided outside some establishments in Petaluma, and at key transit stops. However, there is not currently a complete inventory of bicycle parking in Petaluma. The City of Petaluma does not have extensive education and enforcement programs to encourage bicycle use.

Figure 5. Existing Bike Network



City Limit

Urban Growth Boundary / Sphere of Influence

Class I - Off Street - Existing

Class I - Off Street - Proposed

Class II - On Street, Striped - Existing

Class II - On Street, Striped - Proposed

Class III - On Street, Signed - Existing

Class III - On Street, Signed - Proposed

Recreational Trail, Existing

Recreational Trail - Proposed

CITY OF PETALUMA
GENERAL PLAN UPDATE

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

Pedestrian Network

Pedestrian facilities in Petaluma consist of sidewalks, trails, crosswalks, curb ramps, and signals. The City has generally required sidewalks be provided along public roadways, and the majority of streets include sidewalks along both sides of the street, although many were built prior to the 2025 General Plan and therefore do not meet the standards from that plan.

Pedestrian-oriented land uses, street widths, lighting, and landscaping contribute to the quality of the pedestrian environment, particularly in downtown Petaluma and the West Side neighborhood. These areas are characterized by a grid of streets with a well-developed sidewalk network.

Most signalized intersections include a full complement of signalized pedestrian crossings. However, some sidewalk gaps do exist, such as along Hopper Street between East D Street and Caulfield Lane in Central Petaluma and on streets such as D Street and Western Avenue that connect outlying western neighborhoods to Downtown Petaluma.

The City's overall sidewalk conditions are characterized by staff as being in relatively poor condition. The City's sidewalk program is complaint-based and in recent years, approximately 30 sidewalk-related repairs were completed each year. The most common complaints/improvements include sidewalk repairs due to tree roots, water damage, and general maintenance.

Network Gaps and Barriers

Petaluma has predominately suburban land use patterns, and automobile-oriented features such as cul-de-sacs in the residential neighborhoods inhibit bicycle and pedestrian connectivity. Additionally, as described in the Motor Vehicle Travel section, there are several overall transportation network barriers that impede travel around Petaluma for motor vehicles, as well as people walking and biking. Linear barriers to walking and biking include those presented in **Figure 3** such as the Petaluma River, U.S. 101, and the SMART railroad tracks as well as large arterial roadways, which can be stressful to cross for vulnerable road users such as people walking and biking. Many of these barriers create missing links in the bicycle network as bicycle facilities drop while crossing the barriers. These barriers result in a need for more crosstown connectors for people walking/biking between the East and West sides of Petaluma.

As described in the 2025 General Plan Update, barriers to pedestrian mobility can also include a lack of pedestrian crossings at intersections, missing curb ramps or other ADA facilities, missing or narrow sidewalks, difficult crossings across major arterials, and speeding vehicles. In addition, throughout the City are instances of high levels of traffic stress for bicyclists on arterials with high speeds and narrow bike lanes (e.g., Lakeville Street) or sharrows (e.g., D Street). These high-stress conditions mean that bicyclists who are "brave and fearless" or those who have no other transportation alternative are the primary people who bike for transportation in Petaluma.

The General Plan Update will incorporate ongoing efforts to identify and prioritize network gaps and barriers to walking and biking in Petaluma, including Sonoma County's Vision Zero project, the City's ongoing LRSP and BPMP update.

Freight & Truck Travel

This section briefly describes truck and freight travel patterns in Petaluma.

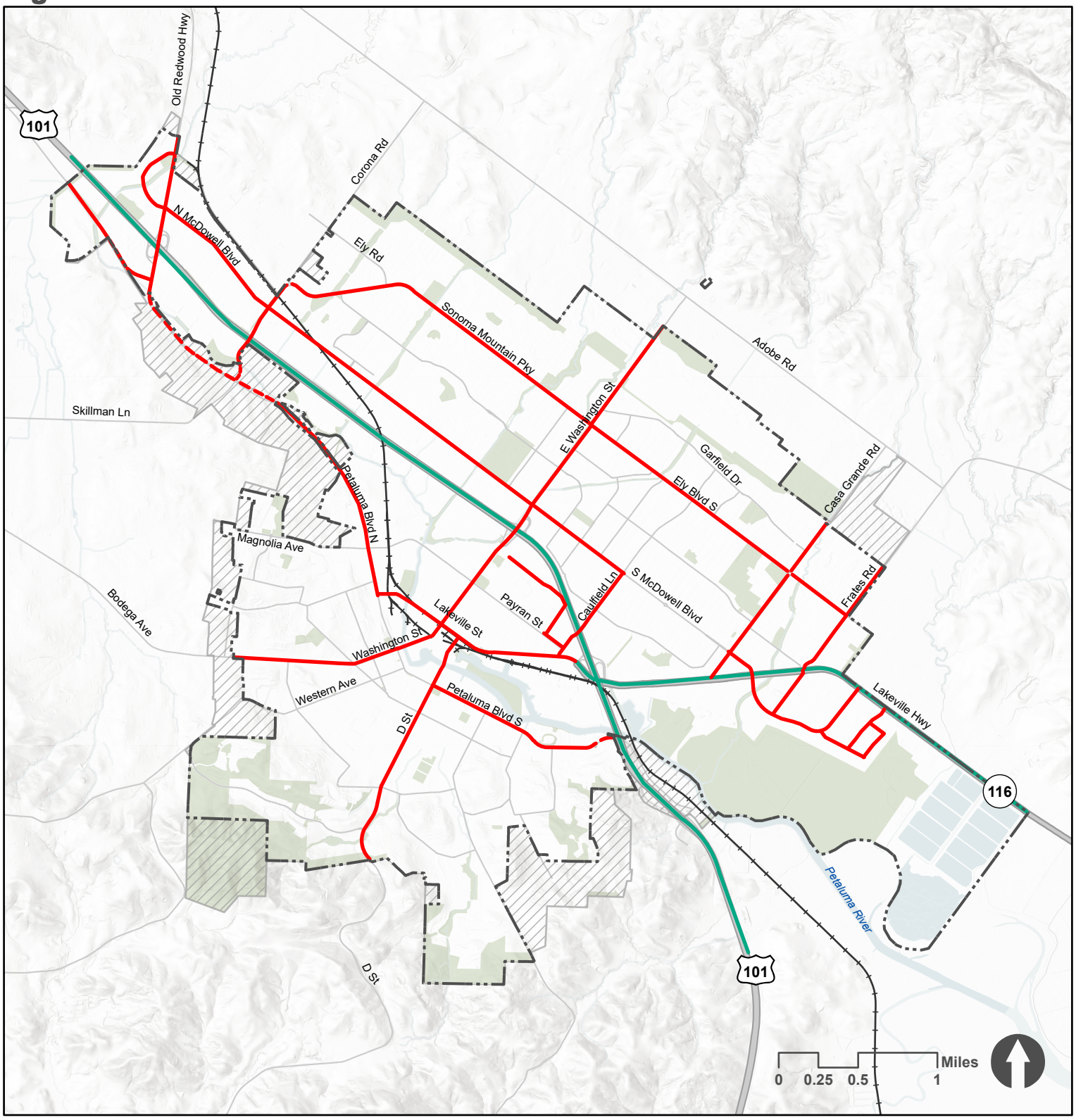
Truck Travel

Trucks and other heavy vehicles frequently travel through Petaluma, particularly on regional highways and major arterials such as Petaluma Boulevard, East Washington Street, Lakeville Street, Ely Boulevard, and McDowell Boulevard. In particular, trucks are critical for supporting the agricultural industries in and around Petaluma. The City has designated official truck routes, as shown below on **Figure 6**, to ensure that truck traffic minimally impacts residential neighborhoods and main streets where possible. The 2025 General Plan Update also recommended enforcing truck parking restrictions.

Freight Rail

Freight service on the Northwestern Pacific Railroad has decreased significantly in the last fifty years. Operations were halted after devastating floods in the late 1990s. In 2021, SMART requested $1.45 million from the California Transportation Commission to help fund a $2.9 million freight rail investment package that is part of the State's Short Line Railroad Improvement Program, which supports investments in smaller freight railroad systems. Rehabilitating the tracks and increasing freight traffic between Sonoma and Marin counties has the potential to shift substantial truck traffic off U.S. 101.

Figure 6. Truck Routes



City Limit

Urban Growth Boundary / Sphere of Influence

Local Truck Route

State Terminal Access

CITY OF PETALUMA
GENERAL PLAN UPDATE

Data Sources: City of Petaluma (2021); County of Sonoma (2021); ESRI (2021)

Other Transport Modes

This section briefly addresses other modes of transportation in Petaluma such as water transportation and air travel.

Water Transport

While water transport along the Petaluma River has decreased from its earlier prominence in Petaluma's daily life, industries such as construction still depend on river transport. The Petaluma Marina and Turning Basin has also been a major recreational destination for Bay Area yacht clubs and other boating uses during summer months. Because silt build-up over the past decade made it impossible for boats to travel along the river, the US Army Corps of Engineers dredged the Petaluma River in 2020, which has reopened the river for recreational opportunities, events, and a revitalized riverfront economy. The City of Petaluma is also in the process of applying for 10-year maintenance dredging permits and funding to support future dredging events.

Petaluma Municipal Airport

Aircraft operations at Petaluma's Municipal Airport average approximately 145 flights per day and approximately 60,000 flights per year. The airport is home to over 200 locally-based aircrafts and is a convenient access point for tourist travel into wine country and corporate travel to North Bay businesses. Petaluma's Municipal Airport is also a hub in FedEx's freight hauling business and home to the Magnon Aircraft's Petaluma Pilot training center and aircraft maintenance operation. During recent wildfire events in neighboring communities, the airport has also served as a base for aircraft involved in firefighting efforts.

Emerging Trends

Transportation patterns continue to evolve alongside changing technology, demographics, and behavioral trends. Some of the emerging trends discussed in this section are still in their nascent stages in Petaluma while others are already familiar sights on local streets. These emerging trends and services will be considered through the General Plan Update process to help the City achieve its mobility goals.

As new technologies such as micromobility, ride-hailing, and autonomous vehicles (AVs) gain prominence in Petaluma, it will be increasingly important for the City to establish policies and programs that proactively manages these changes. For example, curbspace uses and regulations have typically been assembled in an *ad hoc* manner, in response to property and business owners requests—and overwhelmingly allocated to motor vehicle parking. However, cities around the Bay Area and nationally, are contemplating more varied and strategic curb uses that may be particularly well suited to a given location, such as passenger loading zones, commercial loading zones, parklets, rain gardens, or trash collection. The movement for complete streets is another factor influencing cities reshape curb spaces as flexible public spaces that could be better optimized for enjoyment of a streetscape by all people and modes.

During the COVID-19 pandemic, Petaluma introduced two pilot programs with the aim of providing space for social distancing that enabled more flexible use of the public right of way. The “Slow Streets” program designated several streets throughout the City where vehicle traffic was discouraged, to provide low-traffic streets for physically distant walking, wheelchair rolling, jogging, and biking. In addition, the “Free Range” program has allowed small businesses (such as restaurants and services) to expand operations onto sidewalks and parking spaces. As these pilot programs near their end dates, Petaluma is weighing the various tradeoffs of extending the programs.

Micromobility

Micromobility services such as bikesharing and scooter sharing are available in many other Bay Area cities, but do not currently operate in Petaluma. In 2017, SCTA and the Transportation Authority of Marin received an $826,000 grant from MTC to pilot a bikeshare program; the program has been delayed due to the COVID-19 pandemic, but is expected to launch in 2021 or 2022. The three-year pilot program would provide SMART riders with an alternative for the “last mile” of their journey. It is anticipated that 300 bikes would initially be allocated at designated SMART stations across Sonoma and Marin counties.

Carsharing and Ride-Hailing

Carsharing services allow users to rent vehicles for short periods of time. While carsharing services such as ZipCar, Gig, and Getaround are available in other Bay Area cities, none currently operate in Petaluma.

Less than a decade ago ride-hailing services from transportation network companies (TNCs) such as Uber and Lyft did not exist. Today, these services are regularly used to provide on-demand transportation using smartphone applications and electronic payment across the Bay Area. Ride-hailing providers such as Uber and Lyft use online platforms to connect passengers with drivers who use personal, non-commercial, vehicles. UberPOOL and Lyft Line are ridesharing options that allow drivers to carry multiple passengers who split the cost of a trip. These trips do not generate a parking event but do generate a vehicle trip in either direction and require space for passenger pick-up and drop-off, and may influence the City’s approach to curbspace management.

Electric Vehicles

Electric vehicles (EVs), powered by batteries or fuel sources other than gasoline, are becoming more commonplace and affordable. EVs can now be found from a variety of manufacturers, vehicle types, and price points. Sonoma Clean Power, the public electricity provider for Sonoma and Mendocino counties, has helped clients purchase EVs through education and incentive programs. In addition, as described in the **Motor Vehicle Parking** section, approximately 40 EV charging stations are located across several public parking lots in Petaluma. As EVs and other zero emission vehicles become more commonplace, demand for EV charging stations is likely to increase.

Other Emerging Transportation Technologies

Emerging transportation technologies such as autonomous vehicles (AV), sidewalk robots, and drones – have the potential to transform mobility options, for both passenger and goods movement. The influence these technologies will have on travel patterns – and VMT, transit use, traffic congestion – are uncertain and will largely depend on policies and incentives in place, such as those that encourage less VMT, shared vehicle trips, and public transit. Although the timeline for AV technology readiness and adoption is also uncertain, there is general consensus in the transportation and planning communities that these technologies are important to consider for long-range planning such as the General Plan Update.

Although questions remain regarding how AVs and drones will ultimately be employed – and policies at the federal, state, and local levels have yet to be fully fleshed out – these technologies are being tested and piloted today in communities in California and across the U.S. In the future, AVs could be privately owned and/or deployed as part of a shared fleet similar to how transportation network companies (TNCs, e.g., Uber and Lyft) operate today. To the degree to which AVs are used in a fleet or as part of a TNC service, they could improve mobility options for people who cannot drive (e.g., due to a physical disability, too young to drive), or do not otherwise own a private vehicle. Whether AVs can serve as a strategy to reduce VMT or GHGs would depend on whether the vehicles are electric and whether shared trips – similar to UberPOOL and Lyft Line services – are incentivized through policies and pricing.

In terms of goods movement, advancements in autonomous trucking show promise for longer-range freight trips and could help address labor shortages in the trucking industry. Sidewalk robots and drones are other emerging technologies that could help facilitate first/last-mile goods delivery in urban and/or suburban areas. First/last-mile goods delivery is an increasingly important topic in the context of growing demand for e-commerce delivery.

Intelligent Transportation Systems (ITS) technologies have the potential to improve safety and mobility by integrating advanced communications technologies into transportation infrastructure and into vehicles. In addition to the emerging technologies listed above, these systems include traffic signal amenities such as red-light cameras, improved traffic signal coordination, and transit signal priority features, as well as connected vehicle technologies that allow vehicles to communicate with each other or transportation infrastructure. These features have the primary potential to improve traffic flow and reduce collisions.

Potential Transportation Network Disruptions

As identified in Petaluma's Climate Emergency Framework, the impacts from climate change and global warming will have increasingly severe impacts both statewide and in Petaluma. In 2020, the City adopted a Local Hazard Mitigation Plan (LHMP), a Federal Emergency Management Agency (FEMA) mandated document that assesses current risk potential and that will make the City eligible for FEMA funding. Of particular relevance to Petaluma are wildfires and flooding. California has experienced persistent drought conditions over the past 20 years and is suffering from increasing frequency and intensity of wildfires statewide. Petaluma is also prone to flooding during significant rainfall events and may be increasingly vulnerable to severe flooding events due to sea level rise over a 50- to 100-year horizon.

Such network disruptions will be increasingly important to consider in mobility planning for the General Plan Update. While Petaluma has generally been at lower risk of wildfires compared to its neighbors, sites such as the Sonoma-Marin Fairgrounds have played an important role in providing shelter for evacuees from neighboring communities. Therefore, evacuation planning in Petaluma should consider evacuating people both out of and into Petaluma. Further, planning should consider whether the transportation infrastructure is resilient to blockages from fires and flooding, whether the roadway network can support increased demand from many people traveling along limited routes, and how to ensure that residents with limited mobility are able to safely evacuate from hazardous events.

Petaluma does not currently have a defined set of evacuation routes; however, major routes into and out of Petaluma include U.S. 101 and SR 116, D Street to the south, and Bodega Avenue to the west. As required by AB 747, the General Plan Update will include climate change adaptation policies to address climate change-related impacts such as flooding and wildfires, and the Safety Element should address evacuation routes for wildfires and geologic hazards.

Flooding

Some amount of street flooding in Petaluma has occurred approximately once per year over the past twenty or so years. Floods in the Petaluma River Basin are typically of short duration, lasting 3 to 4 days or less. Recent significant flooding events (meaning street and property flooding) have occurred in Petaluma in 1982, 1983, 1986, 1995, 1996, 1998, 2005, 2006, and 2014. The largest flood of record in the City of Petaluma occurred from January 3 through 5, 1982. Evacuations and/or property damages resulting from flooding occur on average every 5 years.

The City maintains an Emergency Operations Center to monitor rainfall rates and river and creek flood levels, and activate emergency procedures when readings reach pre-determined thresholds. Petaluma also maintains a computerized Flood Alert System (originally installed after 1982 flooding and recently updated) to provide timely emergency response and evacuation warnings to residents in flood-prone areas.

Wildfires

Wildfires are a significant concern throughout California. While the majority of vegetation fires can be controlled and contained, wildfires have increased in frequency and severity in recent years due to a buildup of dry brush and expansion of development into wildland-urban interface (WUI) areas. Of note are

the October 2017 Northern California wildfires (including the Nuns Fire that burned nearly 56,000 acres), and the Kincade Fire in 2019 that burned nearly 78,000 acres. Because the Kincade Fire did not directly impact Petaluma, the City opened its community shelters (including the Sonoma-Marin Fairground) to evacuees from neighboring communities.

Based on CAL FIRE Probability and Carbon Accounting mapping, the probability of a fire occurring in Petaluma is relatively low, and a widely damaging fire within City boundaries is considered unlikely. While Petaluma is at slightly lower fire risk compared to unincorporated areas north and south of the City, the effects of climate change are likely increase the likelihood and severity of wildfires that may have significant impacts on the City and require Petaluma residents to evacuate.