4. Circulation

The Circulation Element provides the framework for decisions concerning the city's multi-modal transportation system, which includes roadway, transit, bicycle, and pedestrian modes of travel. The Circulation Element provides for coordination with the San Joaquin Council of Governments (SJCOG), which serves as the coordinating agency for transportation funding for San Joaquin County.

State law (California Government Code Section 65302(b)) mandates that the Circulation Element contain the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, military airports and ports, and other public utilities and facilities, to the extent these items exist in the planning area. As required by California Government Code Section 65302(b), the Circulation Element is correlated closely with the Land Use Element and is related to the Housing, Conservation & Open Space, Noise, and Safety elements.

The Circulation Element reflects the City's desire to provide for complete streets and bicycle and pedestrian facilities. This element considers overall mobility, existing and desired land uses, future street conditions, and mobility for pedestrians, bicyclists, and transit users, including safe routes to schools. This element establishes standards that guide development of the transportation system through goals, policies, and actions.

Multimodal Accessibility

Goal C-1

Provide for a complete multimodal circulation system designed for the safe, balanced movement of all users, including children, persons with disabilities, ~~and~~ seniors, and underserved populations and~~,~~ goods~~,~~ and services to destinations inside and outside of Manteca while minimizing vehicle miles traveled (VMT) and public costs to build and maintain the system.

Policies

C-1.1 Strive to balance levels of service (LOS) for all modes (vehicle, transit, bicycle, and pedestrian) to maintain a high level of access and mobility, while developing a safe, complete, and efficient circulation system. The impact of new development and land use proposals on VMT, LOS, and accessibility for all modes should be considered in the review process.

C-1.2 To the extent feasible, strive for a vehicular LOS of D or better during weekday AM and PM peak hours at all streets and intersections, except in the Downtown area or in accordance with Policy C-1.3.

C-1.3 At the discretion of the City Council ~~or Planning Commission~~, certain locations may be allowed to fall below the City's LOS standard established by C-1.2 under the following circumstances:

a. Where constructing facilities with enough capacity to provide LOS D is found to be unreasonably expensive.

b. Where conditions are worse than LOS D and caused primarily by traffic from adjacent jurisdictions.

Vehicle Miles Traveled (VMT)

VMT is a measure of the total distance traveled by all vehicles for all trips beginning or ending in Manteca on a typical weekday. VMT impacts are calculated and assessed using an efficiency metric (e.g. VMT per household for residential projects or per employee for commercial projects). Lower VMT per household or per employee indicates more efficient travel, with less driving needed to complete a trip, lower pollutant emissions, and less greenhouse gas emissions.

c. Where maintaining LOS D will be a disincentive to use transit and active transportation modes (i.e., walking and bicycling) or to the implementation of transportation or land use improvements that would reduce vehicle travel. Examples include roadway or intersection widening in areas with substantial pedestrian activity or near major transit centers.

C-1.4 While vehicular LOS D is not a requirement in the Downtown area due to the development pattern and limited street right-of-way, traffic studies shall: 1) disclose whether any proposed transportation or land use action will substantially increase traffic at intersections and roadways within this area of the City and 2) identify measures to maintain high quality access and mobility in the area with a priority toward active transportation modes. New discretionary land use permit requests within the Downtown area, which generate net new PM peak-hour vehicle trips, shall participate in enhancing access and mobility for transit, bicycle, and pedestrian modes. These enhancements may include, but are not limited to:

- Enhancing sidewalks to create a high quality pedestrian environment, including wider sidewalks and improved crosswalks, native and drought-resistant landscaping, buffers between sidewalks and vehicle travel lanes, enhanced pedestrian lighting, wayfinding signage, shade trees, and canopies, increased availability of benches, provisions for café-style seating, and usage of monument elements and other public art.
- Improving bicycle facilities to include attractive and secure bicycle parking, installation of bike lockers in appropriate locations, and provision of bicycle lanes, bike paths, and wayfinding signage along appropriate roadways.
- Enhancing transit stops through high quality, well-maintained shelters, and provision of wayfinding signage and transit timetables.
- Providing off-street parking with high quality access to Downtown businesses, and which is well-maintained and provides amenities like shade streets, canopies, adequate lighting, and wayfinding signage.
- Supporting the development of a Downtown Business Improvement District or similar mechanism to help fund ongoing maintenance of the streetscape enhancements.

C-1.54 As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric buses, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented in Manteca and used by the public, the City shall review and update its policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network. Updates to the City's

Level of Service (LOS)

LOS is a qualitative measure used to describe roadway operations for different user types, including vehicles, transit riders, bicyclists, and pedestrians. LOS is assigned letter grades ranging from "A" (free flow conditions) to "F" (severe congestion). Vehicular LOS should not be viewed like school grades where A is best and F is worst. Providing free-flow conditions (LOS A) at all hours of the day requires wide streets, large intersections, substantial right-of-way and considerable funding for maintenance. LOS A or B for vehicles also tends to lead to poor LOS for pedestrians and bicyclists because the wider streets, higher speeds, and longer waiting times to cross makes bicycling and walking less safe and less appealing. Vehicle LOS should be balanced against mobility needs for pedestrians, bicyclists, and transit users, impacts on existing development, and the cost to construct and maintain the facilities.

policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use and docking, etc.

Implementation

C-1a *Maintain an up-to-date master list of multimodal conditions, including volume data for key intersections and roadway segments. This master list shall be updated regularly with traffic counts (for autos, transit, bicycles, and pedestrians) taken in conjunction with project traffic studies and by special counts conducted by the City as necessary and shall include periodic evaluation of the mobility and access on major streets, including access and mobility issues faced by transit riders, bicyclists, and pedestrians.*

C-1b Develop Transportation Impact Study (TIS) Guidelines to provide guidance on identifying deficiencies and impacts on all modes of transportation caused by new development. The TIS guidelines will also provide guidance on the types of ~~mitigation~~ measures that would be appropriate to mitigate project-related impacts to transportation facilities in the City. The TIS guidelines will address impact thresholds for vehicular, transit, bicycle, and pedestrian facilities. The TIS guidelines should include guidance on addressing CEQA required impacts of vehicle miles traveled.

C-1c *Develop a pedestrian, bicycle, and transit improvement plan for the Downtown area through an engaging process inclusive of community members and stakeholders to facilitate implementation of level of service policy C-1.4. This plan will develop a list of multi-modal improvements in the Downtown area to increase the viability and encourage the use of non-auto modes.*

C-1d *Work with the San Joaquin Council of Governments to remove the downtown segment of Yosemite Avenue shown in Policy C-1.2 from the Regional Congestion Management Program (RCMP) roadway network. In the Downtown area the City cannot maintain the RCMP vehicular LOS D standard as discussed in policy C-1.2 and C-1.4.*

C-1e *Periodically review local adoption of new transportation technologies and develop plans based on best practices to ensure these policies benefit the public and the multimodal transportation system, including the following:*

- *Call for and support mobility innovation in California through the League of Cities and other national and statewide organizations.*
- *Advocate for new approaches to financing infrastructure projects.*
- *Invest in lane markings that enhance effectiveness of lane departure warning and prevention systems.*
- *Implement an autonomous vehicle road network along major roadways.*

- *Introduce polices that can influence how autonomous vehicles can affect vehicle miles traveled, urban sprawl, and/or parking requirements.*
- *Opportunities for the Capital Improvement Program and Short Range Transit Plan to address the conversion the public transit vehicle fleet to fully automated.*

C-1f *Encourage open data sharing. While it is important to preserve people's privacy, open, anonymized data can improve the City's decision-making and help to develop more informed policies and plans. Measures may include:*

- *Develop an automated traffic surveillance and control system and provide to the data to enhance transparency of network prioritization for planning.*
- *Launch a Data as a Service program to provide real-time infrastructure data to connected vehicles.*
- *Collaborate with the San Joaquin Council of Governments and Caltrans to promote interoperability.*

C-1g *Review updates to transportation planning documents and any automated vehicle plans to ensure the benefits of automated mobility are equitably distributed across all segments of the community and that the negative impacts of automated mobility are not disproportionately borne on traditionally marginalized neighborhoods.*

C-1h *As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.*

C-1i *Require new residential and non-residential development to install electric vehicle charging infrastructure in accordance with the California Green Building Standards code. Encourage new development to incorporate the code's voluntary measures for electric vehicle charging.*

Major Streets Master Plan

Goal C-2

Provide a safe, high-quality, climate-resilient transportation system that addresses all modes of travel and includes attractive streetscapes with native and drought-resistant landscaping, street trees, planted berms, and landscaped medians.

Policies

C-2.1 Promote development of a future roadway system as shown in the Major Streets Master Plan, Figure C-1, with streets designed in accordance with the City's standard plans to provide multiple, direct,

and convenient routes for all modes and to provide high-volume, multi-lane facilities with access controls, as needed, to preserve the through traffic carrying capacity of the facility.

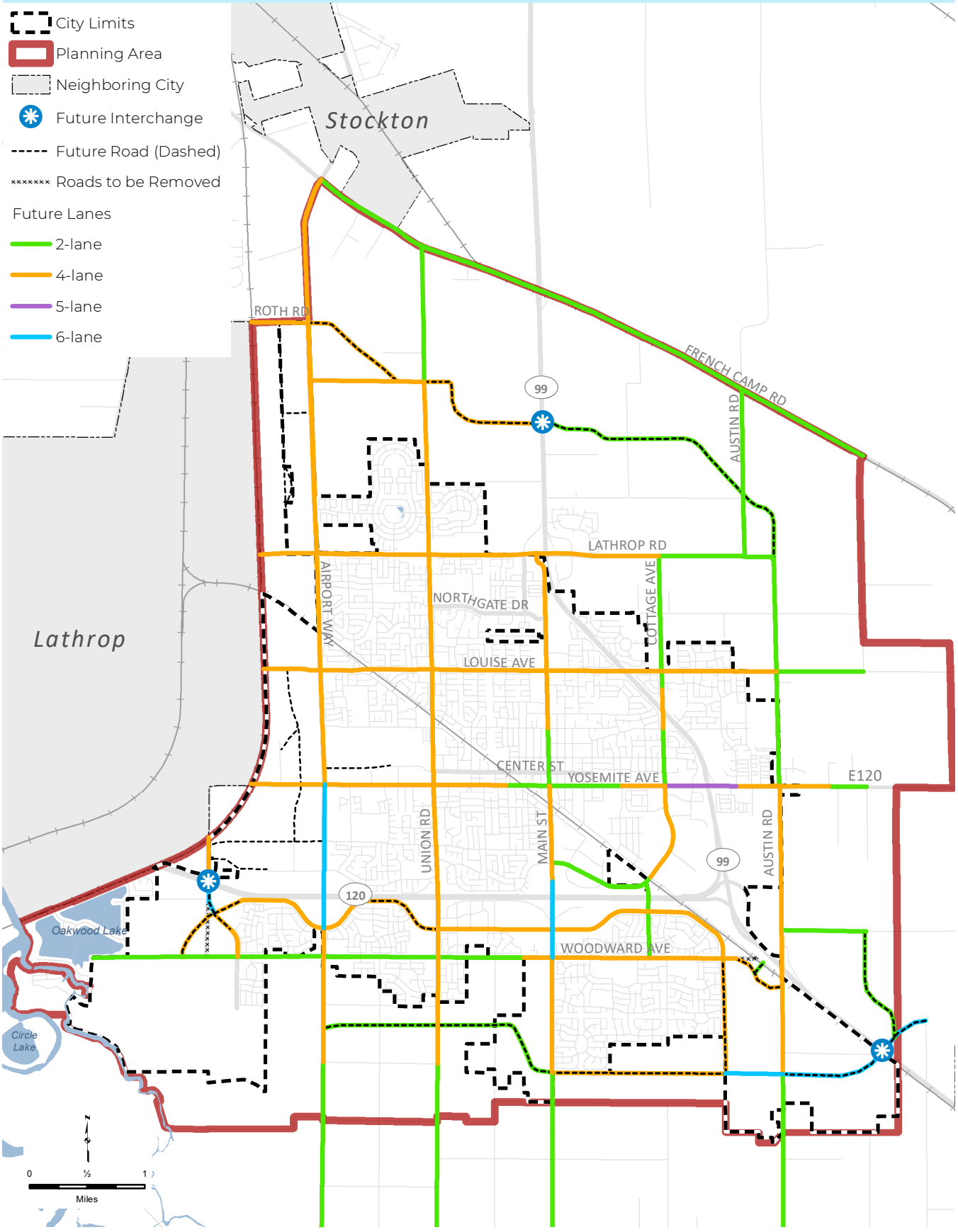
C-2.2 Design roadway improvements to occur in a contiguous, orderly fashion and strive to build roadway improvements in advance of new development particularly when addressing existing deficiencies. However, major circulation improvements shall be constructed no later than when abutting lands develop or redevelop, with dedication of right-of-way and construction of improvements, or participation in construction of such improvements, required as a condition of approval.

Table C-1: Street Classifications

Street Type	Description
Parkway	High-capacity thoroughfare, typically four to six lanes, focused on vehicular traffic with limited property frontages. Aesthetically appealing with landscaped median islands. Provides regional access to adjacent land uses and safe crossings for all travel modes along a regional transportation corridor. Intersections typically require a ½ mile separation. Pedestrians and bicycles accommodated in a landscape-separated path. Emphasizes regional vehicle trips through collaborations with other cities and agencies. On-street motor vehicle parking typically prohibited.
Arterial	Major thoroughfare, typically four lanes, focused on through traffic and public transit, with access for major local traffic generators, such as commercial, industrial, institutional, and large high-density housing complexes. Pedestrian sidewalks and Class II or IV bicycle facilities provided on both sides of the street. Curbside landscaping and landscaped medians encouraged. Restriping with narrower lanes allowed where necessary to close gaps in pedestrian and bicycle system. Provides access and safe crossings for all travel modes. On-street vehicle parking is typically prohibited.
Main Street Arterial	Pedestrian-oriented street, typically two lanes, with primarily retail, mixed-use, or recreation uses. Provides access to all travel modes in support of typical "main street" land uses and includes on-street motor vehicle and bicycle parking. Service to pedestrian-oriented retail is of prime importance. Provides enhancements for walking and transit, including bulb-outs to reduce pedestrian crossing distances. On-street motor vehicle parking may be permitted where feasible to enhance access to adjacent uses.
Major Collector	Major collector streets, typically two to four lanes, serve as smaller-scale parallel routes to arterial streets and provide access to neighborhoods. Examples include Center Street, Powers Avenue, and Daniels Street west of Airport Way. Major collector streets will typically provide two travel lanes, a Class II bike lane or Class IV separated bikeway and a sidewalk on both sides. Median islands and turn lanes may be appropriate in certain conditions. For newly constructed major collector streets, on-street parking should be prohibited to reduce pavement width, pedestrian crossing distances, and maintenance costs. On-street parking for existing major collector streets should be restricted or limited by eliminating the parking lane or through the use of bulb-outs to minimize the cross section and discourage speeding.

Street Type	Description
Minor Collector	Minor collector streets, typically two lanes, serve as the backbone circulation routes within larger neighborhoods and commercial/industrial areas, providing primary access to commercial and industrial uses and linking low volume residential streets to major collector and arterial streets. Minor collector streets should be small scale, two lane streets. The streets should be wide enough to safely accommodate traffic flows, but not so wide as to encourage high-speed travel. Depending on the surrounding land uses (e.g., office, commercial, or residential areas), the minor collector may accommodate Class II bike lanes. Sidewalks should be provided on each side of the street.
Residential Streets	While they carry relatively light traffic loads, residential streets, typically two lanes, constitute the majority of Manteca's street system. These streets are intended to serve residential driveways, providing access between homes and larger streets. These streets should include narrow travel and parking lanes to slow travel and discourage through trips and sidewalks on both sides of the street. Features like corner bulb-outs and traffic circles (a smaller version of a roundabout) should be incorporated to improve the aesthetic quality of the street, while calming traffic. Class III bike routes and special pavement markings for bicycles should be provided where appropriate to provide continuity for the bicycle system. Where a residential street ends in a cul-de-sac, a shared bicycle/pedestrian path should be constructed to connect the cul-de-sac to other residential, collector, or arterial streets to shorten travel distances and encourage the use of these modes.
Intersections of City Streets	Intersections are critical components of the street network since they tend to define how well the system operates. Drivers and transit users typically experience most of their traveling delay at intersections. Intersections are important for pedestrians and bicycles since they provide controlled points where these modes can cross major roadways. In general, intersections should have minimum lane widths to serve the type of vehicles expected on the roadway (e.g., lanes should be sufficiently wide to accommodate trucks in industrial areas). Narrower lanes pose less of a barrier for pedestrians to cross and reduce maintenance costs. Where there is demand, u-turn movements should be accommodated in the intersection design to the extent feasible to extend the length of landscaped medians. Bus bays should be included in intersection designs for expressways, arterials, and major collectors to maintain traffic flow while buses are loading and unloading.

Figure C-1: Major Streets Circulation Plan



C-2.3 Require new development to pay a fair share of the costs of street and other transportation improvements based on impacts in conformance with the goals and policies established in this Circulation Element and the Public Facilities Implementation Program (PFIP).

C-2.4 Design street improvements to provide multiple, direct, and convenient routes for all modes.

C-2.5 In areas adjacent to existing or planned residential development or sensitive receptors, i~~I~~nclude sound attenuation walls in the frontage improvements associated with freeway, highway, parkway, a~~A~~rterial, and major collector roadways in accordance with City adopted Street Standards and Specifications, as amended.

C-2.6 Align residential and collector street intersections with collector and arterial streets with other residential and collector streets, where feasible, to maintain a high degree of connectivity between neighborhoods, minimize circuitous travel, and to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another without using major streets.

C-2.7 Provide access for bicycles and pedestrians at the ends of cul-de-sacs, where right-of-way is available, to provide convenient access within and between neighborhoods and to encourage walking and bicycling to neighborhood destinations.

C-2.8 Signals, roundabouts, traffic circles, and other traffic management, calming, and safety techniques shall be applied according to industry standards~~ppropriately~~ at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another.

C-2.9 Where traffic congestion, pedestrian travel, collision history, or other factors warrant the installation of a traffic signal, the feasibility of a roundabout shall also be evaluated on a whole life cycle cost basis. In

What are Complete Streets?

Complete streets are streets designed considering the full range of users including vehicles, trucks, pedestrians, bicycles, children, the disabled, and seniors. There is no one single design for a complete street; complete streets are context-sensitive and respond to the land use and travel needs of users at a particular location. Complete streets may include sidewalks, bike lanes, transit lanes, frequent crossings, median islands, curb extensions, and other transportation facilities. Complete streets make it easier and safer to use transportation modes other than a car.

general, a roundabout should be installed at these locations unless right of way, cost, operational concerns, design limitations, or other issues preclude the installation of a roundabout.

C-2.10 Development of private streets may be allowed in new residential projects that demonstrate the ability to facilitate police patrol, emergency access, and solid waste collection as well as fund on-going maintenance.

C-2.11 Promote infill development that closes gaps and bottlenecks in the circulation system, especially in disadvantaged and older neighborhoods.

C-2.12 Require new development to establish joint-use driveways and/or cross access easements to provide access when feasible and/or if: 1) located on street segments identified in C-1.2, 2) located on streets with intersections approaching not meeting LOS D, or 3) the shared access will reduce vehicle miles traveled as determined by the City's ~~Community Development~~Development Services Department. The requirement is intended to preserve the movement function of the major thoroughfare system by requiring development of parallel roads or cross access easements to connect developments as they are permitted along major roads, providing more efficient connections to destinations, and reducing air emissions.

C-2.13 Require development projects to arrange streets in an interconnected block pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel to support safer travel. This approach will also add redundancy to the street network, ~~ensure~~ supporting more safe and more efficient movement of emergency responders and ~~ensure that~~ help reduce vehicle miles traveled ~~are minimized~~ within the community. ~~The street pattern shall include measures to provide a high level of connectivity and decrease vehicle miles traveled.~~

C-2.14 Residential subdivisions with lots fronting on an existing arterial street shall provide for separate roadway access for vehicles, pedestrians, and bicyclists to the maximum extent feasible, with access to residential lots provided from residential or collector streets. For those properties that currently front arterial streets, consideration should be given to providing separate roadway access where feasible as a condition of approval for any redevelopment or subdivision of the property.

C-2.15 Ensure that development and infrastructure projects are designed in a way that provides pedestrian and bicycle connectivity to adjacent neighborhoods and areas (such as ensuring that sound walls, berms, and similar physical barriers are considered and gaps or other measures are provided to ensure connectivity).

Interconnected Blocks

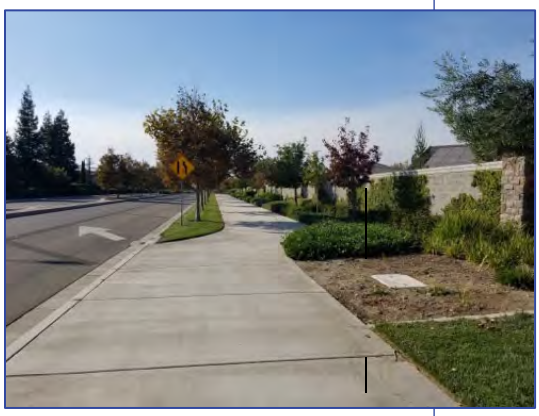
Provide multiple access points between arterial streets and neighborhood streets., thus allowing people who are walking or biking to get to their destinations without traveling on busy, uncomfortable arterials or on long, indirect routes. This pattern of development encourages walking and biking and reduces vehicle miles traveled.

C-2.16 Aggressively pursue state and federal funding to augment the PFIP and implement the City's Circulation Element.

C-2.17 Coordinate with neighboring jurisdictions, including Caltrans, San Joaquin Council of Governments (SJCOG), San Joaquin County, the City of Lathrop, and the City of Ripon to pursue funding for the following regional facilities:

- A new interchange at McKinley Avenue and SR 120;
- A new interchange at Austin Road/~~McKinley Avenue~~Raymus Parkway and SR 99;
- A new interchange on SR 99 between Lathrop Road and French Camp Road;
- An easterly extension of the SR 120 freeway towards Oakdale;
- Grade separated crossings of the Union Pacific Railroad line at Roth Road, Louise Avenue, Yosemite Avenue, and McKinley Avenue; and
- Regional bicycle lanes and bicycle paths.

C-2.18 Prohibit the creation of traffic, bicycle, and pedestrian hazards and conflicts with vehicular traffic movements in new development, infill development, and redevelopment areas and pursue opportunities to improve conditions where there are existing conflicts to ensure that the pedestrian and bicycle network provides a direct and convenient route equal to or greater than vehicular routes in new development, infill, and redevelopment areas.



C-2.19 In the development of ~~new~~ projects, ~~give special attention to maintaining/~~ensure~~ing~~ there are adequate corner-sight distances appropriate for the speed and type of facility, including intersections of city streets and private access drives and roadways.

C-2.20 ~~Require~~Encourage ~~Encourage~~ the development of landscape-separated sidewalks along roadways (particularly arterials and non-residential streets) when feasible to discourage pedestrian/vehicle conflicts and be consistent with complete streets concepts.

C-2.21 Pursue funding for grade separation of the remaining at-grade railroad crossings within the City.

C-2.22 Incorporate emergency access, mountable medians, shoulders to bypass queued vehicles, emergency signal preemption, and other features into development and infrastructure projects to improve emergency response times as appropriate and feasible on new roadways and on existing roadways.

C-2.23 Construct new facilities for emergency services as new areas of the City are developed to maintain response time consistent with existing development.

Implementation

C-2a *Maintain the Major Street Master Plan (Figure CI-1) showing the existing and proposed ultimate right-of-way and street width for each road segment within the City's Sphere of Influence and Area of Interest. The Major Street Master Plan shall also indicate the necessary right-of-way to be acquired or dedicated and the expected method of financing roadway improvements (i.e., City-funded or property owner/developer-funded). The Major Street Master Plan shall be regularly updated.*

C-2b *When planning roadway facilities, incorporate the concept of complete streets. Complete streets include design elements for more safe travel by all modes that use streets, including autos, transit, pedestrians, and bicycles. Complete streets shall be developed in a context-sensitive manner. For example, it may be more appropriate to provide a Class I bike path instead of bike lanes along a major arterial. Pedestrian districts like Downtown Manteca or areas near school entrances should have an enhanced streetscape (e.g., narrower travel lanes, landscape buffers with street trees, etc.) to better accommodate and encourage pedestrian travel.*

C-2c *Review and update the City's standard plans to ensure that the plans reflect the City's goals and policies for the circulation system, including cross-sections that provide for landscape-separated sidewalks along arterials and non-residential streets; best practices for traffic safety travel by vehicles, bicycles, and pedestrians; and accommodate all users. Complete these updates within three years of adoption of this General Plan.*

C-2d *Require new development to participate in the implementation of transportation improvements identified in the Major Street Master Plan. Participation could shall include the construction of roadways, improvements to roadways, including grade-separated crossings of railroads, payment into the PFIP program, payment into other fee programs, or fair-share payments. In general, the infrastructure needs and methods of participation will be determined through an environmental impact report or transportation impact analysis.*

C-2e *Work with SJCOG, community members, and stakeholders to include projects in the City's Circulation Element and Major Street Master Plan into long range planning documents, including the SJCOG Regional Transportation Plan and the San Joaquin County Congestion Management Program.*

C-2f *Ensure that bicycle and pedestrian access is both provided and prioritized through providing openings to increase access where sound walls and berms are located to minimize travel distances and increase the viability walking and bicycling.*

C-2g *To support the City's goals of reducing VMT, minimizing maintenance costs, and encouraging active transportation, any new or substantially*

modified roadway shall be as narrow as feasible while being consistent with LOS standards, goods movement policies, and safety best practices. In general, this implementation measure can be achieved by constructing narrower traffic lanes, although wider lanes may be necessary on certain truck routes.

C-2h *Regularly update the PFIP program to ensure that the fees are consistent with construction costs and the project list reflects changes in the transportation system that may occur as land use development projects progress and more details about specific transportation needs and design are known.*

C-2i *Pursue funding to improve and address areas of traffic, bicycle, and pedestrian hazards and conflicts with vehicular traffic movements.*

C-2j *Identify and remove, as feasible, obstacles limiting corner-sight distances at existing street corners.*

C-2k *In conjunction with the creation of a Vision Zero Action Plan or Local Road Safety Plan, create an ongoing ~~Maintain a program of~~ identification and surveillance program of above average~~high~~ vehicle, bicycle, and pedestrian collision locations, with emphasis on early detection and correction of conditions that ~~could potentially violate user expectations~~create safety issues for users.*

C-2l *Require all new signs, roadway striping, and traffic signals to be consistent with the latest edition of the California Manual on Uniform Traffic Control Devices (MUTCD).*

C-2m *Through the development review process, require joint use access, cross access easements, emergency access, and access prohibitions wherever traffic patterns and physical features make it possible and ensure that proposed street networks ~~maximize access and connectivity~~are designed to balance local access needs with street capacity.*

C-2n *Create a Vision Zero Action Plan or Local Road Safety Plan that prioritizes systems-based approach to preventing traffic fatalities, focusing on the built environment, systems, and policies that influence behavior as well as messaging that emphasizes that these traffic losses are preventable. Complete this plan within four years of adoption of this General Plan.*

C-2o *Upon completion of a Vision Zero Action Plan or Local Road Safety Plan, update the PFIP to address recommended safety improvements for all modes, including vehicles, bicyclists, and pedestrians. Complete this update within two years of adoption of the Vision Zero Action or Local Road Safety Plan.*

C-2p *As new pavement technologies and designs are deployed through the transportation industry, evaluate and implement innovations that can reduce lifecycle costs of construction and maintenance.*

Parking

Goal C-3

Establish reasonable vehicle parking requirements (minimum and maximum rates for uses) that limit parking encroachment while minimizing the amount of land consumed by parking lots.

Policies

C-3.1 Future growth in traffic volumes may necessitate removal of on-street parking spaces to provide additional traffic lanes.

C-3.2 Require new development to provide an appropriate number of off-street parking spaces to accommodate the typical parking demands of the type of development on the site. The City may dictate both minimum and maximum amounts of parking to ensure that adequate parking is available for typical activities associated with a use as well as for special events, where anticipated and appropriate, and to ensure that parking standards encourage alternatives to single occupant vehicles.

C-3.3 Encourage shared parking ~~and bicycle parking~~ to reduce overall land consumed by parking areas and reduce single-occupant vehicle use.

C-3.4 Develop a coordinated approach to address parking supply and demand In the Downtown area, including location of parking facilities within easy walking distance of Downtown businesses.

C-3.5 Allow for changes to the parking requirements under certain circumstances. In such cases, the City may require provision of off-site parking, participation in a parking district, payment of an in-lieu fee to cover the costs of land acquisition and construction of parking spaces, or similar measure to ensure that projects adequately address parking demand.

Implementation

C-3a Review and revise, as necessary, off-street parking standards of the Zoning Ordinance. Such revision shall be based on parking best practices, multimodal transportation needs, infill considerations, construction and maintenance costs, the requirements of the Housing Element to achieve specified residential density levels, and an assessment of the adequacy of the City's current standards.

C-3b Work with local merchants to improve on-street and off-street parking conditions.

C-3c Require a shared parking analysis for all proposed mixed- use

developments and new projects in the Downtown area to ensure that an appropriate supply of parking is provided.

C-3d *To maintain adequate parking supply for businesses, the City may restrict parking on public streets through permit programs, time limits, or parking meters, where appropriate. Parking meter, on-street parking time limits, and off-street lot rates should be periodically evaluated to ensure an appropriate level of vehicle turnover and available spaces to reduce unnecessary travel caused by vehicles hunting for vacant spaces.*

C-3e *If roadway widening requires the removal of on-street parking, a parking supply study should be conducted to determine if the loss of on-street parking spaces would create a parking shortage. If so, the parking supply study should address the feasibility of replacing the lost parking spaces and methods to reduce parking demand, such as transit improvements and/or transportation demand management measures.*

C-3f *Develop standards for the maximum number of parking spaces that will be allowed for any particular use to encourage walking, bicycling, ridesharing, transit use, shared parking, and to facilitate the transition to autonomous vehicle parking demand.*

Bikeway and Pedestrian Systems

Goal C-4

Provide a safe, secure, comfortable, and convenient pedestrian and bicycle system that connects riders of all ages and abilities to schools, including safe routes to schools, retail, employment centers, public facilities, and parks.

Policies

C-4.1 Through regular updates to the City's Active Transportation Plan inclusive of community members and stakeholders, establish a more safe and more convenient network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the city, generally as shown in Figure CI-2). The City shall also strive to develop connections with existing and planned regional routes shown in the San Joaquin County Bicycle Master Plan.

C-4.2 Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians by providing native and drought-tolerant shade trees and controlling traffic speeds by implementing narrow lanes or other traffic calming measures in accordance with the City Neighborhood Traffic Calming Program on appropriate streets, in particular residential and downtown areas.

C-4.3 Provide a sidewalk and bicycle route system that serves all pedestrian and bicycle users and meets the latest guidelines related to the Americans with Disabilities Act (ADA).

C-4.4 Provide bicycle parking facilities at commercial, business/professional and light industrial uses in accordance with Part 11 of the California Building Standards Code.

C-4.5 Expand the existing network of off-street bicycle facilities as shown in the City's Active Transportation Plan to accommodate cyclists who prefer to travel on dedicated trails. Further, the City shall strive to develop: 1) a "city-loop" Class I bike path for use by both bicyclists and pedestrians that links Austin Road, Atherton Drive, Airport Way, and a route along or near Lathrop Road to the Tidewater bike path and its existing and planned extensions, and 2) an off-street bicycle trail extension between the Tidewater Bike Trail near the intersection of Moffat Boulevard and Industrial Park Drive to the proposed regional route between Manteca and Ripon.

C-4.6 Provide on-street Class II bike lanes, Class IV protected bike lanes, or off-street Class I bike paths along major collector and arterial streets whenever feasible.

Figure C-2: Active Transportation Plan - Pedestrian Network

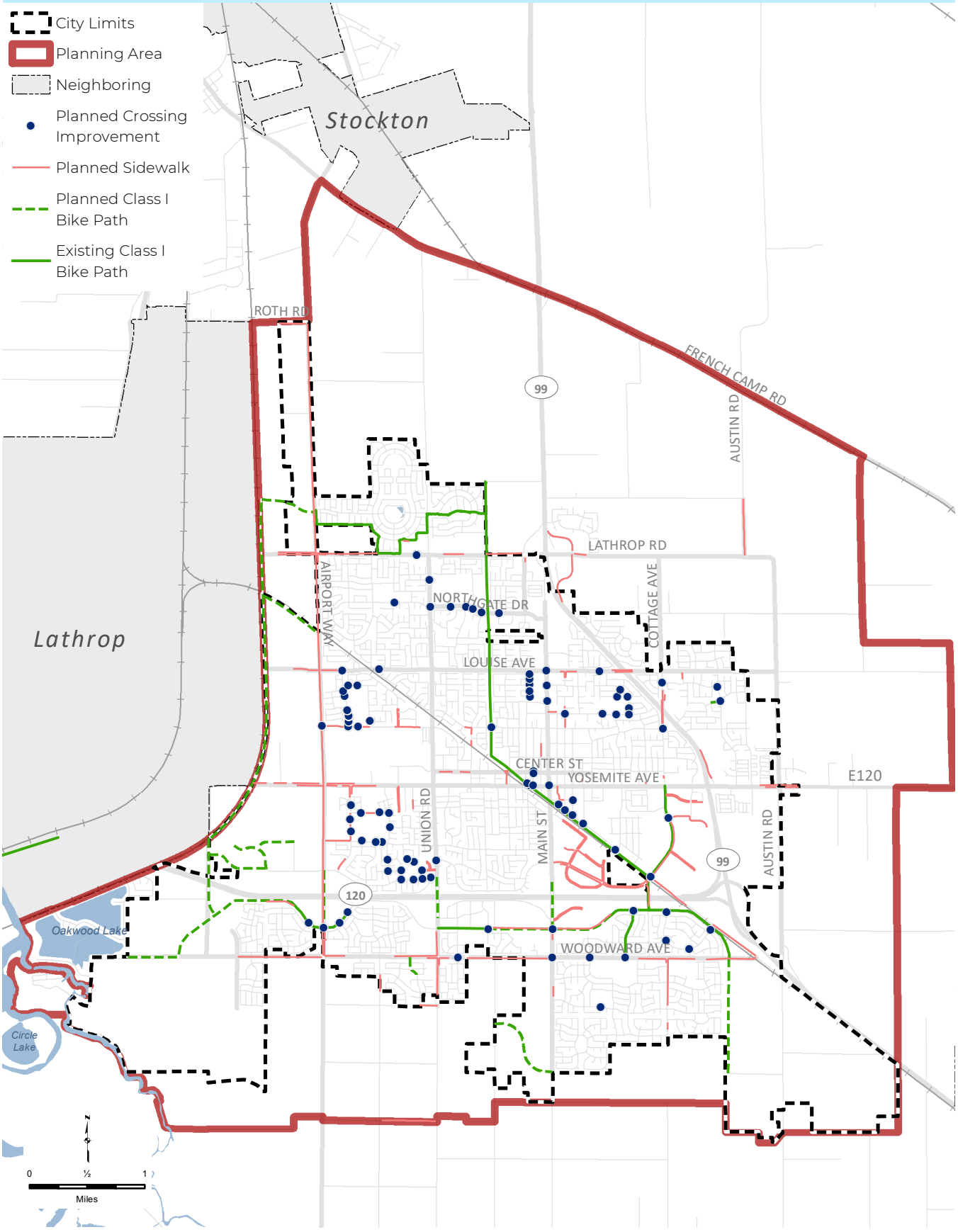
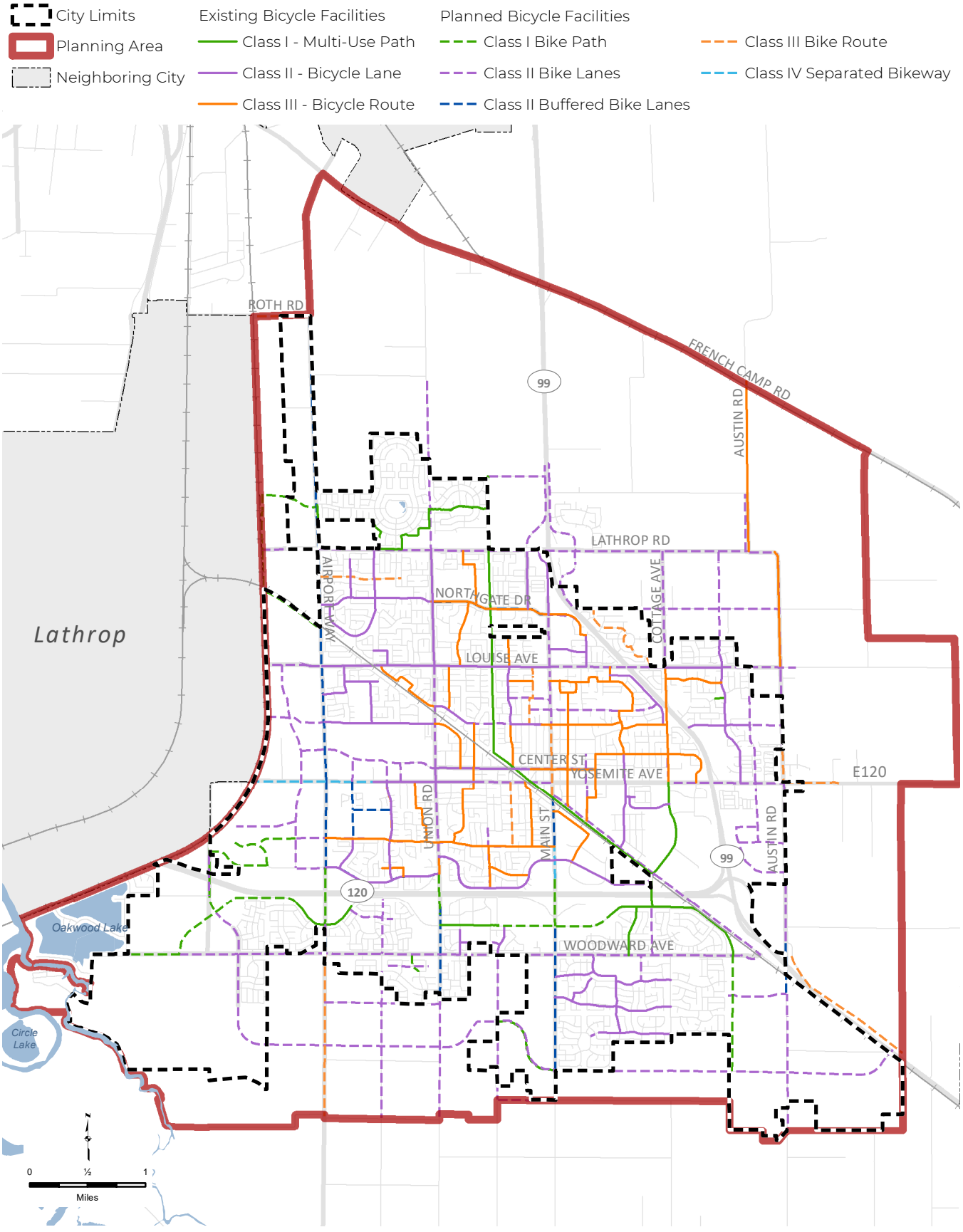


Figure C-3: Active Transportation Plan - Bicycle Network



C-4.7 Facilitate bicycle travel through residential streets through signage necessary to communicate the presence of Class III bicycle ~~lanes~~ routes on residential streets that have sufficiently low volumes as to not require bike lanes or have narrower street cross sections that assist in calming traffic.

C-4.8 Provide sidewalks and/or walkways connecting to the residential neighborhoods, primary public destinations, major public parking areas, transit stops, and intersections with the bikeway system.

C-4.9 Provide sidewalks along both sides of all new streets in the City and add sidewalks to fill gaps on existing streets as identified in the Active Transportation Plan.

Implementation

C-4a Periodically update the Active Transportation Plan through a process inclusive of community members and stakeholders to include all areas envisioned for development by this General Plan and to address pedestrian and bicycle facilities needed to provide a complete circulation system that adequately meets the needs of pedestrians and bicyclists.

C-4b Utilize the standards set forth in the latest editions of the California MUTCD and American Association of State Highway and Transportation Officials (AASHTO) Green Book for improvement and re-striping of appropriate major collector and arterial streets to accommodate Class II bike lanes or Class IV protected bikeways in both directions, where sufficient roadway width is available. This may include narrowing of travel lanes.

C-4c Increase bicyclist and pedestrian~~e~~ safety by:

- *Providing and maintaining bicycle paths and lanes that promote bicycle travel.*
- *Sweeping, repairing, and maintaining vegetation growth along bicycle lanes and paths on a continuing, regular basis.*
- *Ensuring that bikeways are delineated and signed in accordance with the latest editions of the California MUTCD and AASHTO standards and lighting is provided, where feasible.*
- *Ensuring that all new and improved streets have bicycle-safe drainage grates and eliminate uneven pavement, gravel, encroaching vegetation, and other conditions that may impede user safety, expectations, and convenience.*
- *Providing and maintaining sidewalks and crosswalks.*

C-4d Add bicycle facilities whenever possible in conjunction with road rehabilitation, reconstruction, or re-striping projects.

C-4e Update the City's standard plans to accommodate pedestrians and

bicyclists, including landscape-separated sidewalks where appropriate, and to include bike lanes on collector and arterial streets, as defined by the Active Transportation Plan.

C-4f *Encourage and facilitate resident and visitor use of the bike trail system by preparing a map of the pedestrian and bike paths and implementing wayfinding signage.*

C-4g *Update the standard plans to specify a set of roadways with narrower lanes (less than 12 feet) and pedestrian bulb-outs to calm traffic and increase pedestrian and bicycle comfort. These narrow lane standards shall be applied to appropriate streets (e.g., they shall not be applied to outside lanes on major truck routes) and new development.*

C-4h *Develop an ADA Transition Plan that identifies deficiencies related to ADA access and identify an implementation strategy to bring the deficient facilities up to the applicable standards.*

C-4i *Provide for pedestrian access in the Downtown area, along Yosemite Avenue, Main Street, and in other high-use areas by:*

- *Constructing wide sidewalks where feasible to accommodate increased pedestrian use.*
- *Providing improved crosswalks, landscaping, buffers between sidewalks and vehicle travel lanes, enhanced pedestrian lighting.*
- *Improving the walking environment by providing benches, allowing for café seating, and constructing monument elements and other public art.*
- *Providing improvements that enhance pedestrian safety and convenience, such as bulb-outs extending into intersections and at crosswalks to reduce walking distances and provide a safer peninsula for pedestrians.*
- *Providing marked (and signalized, if appropriate) mid-block crossings near schools, parks, or other neighborhood attractions. A landscaped median refuge island, raised/textured sidewalk, or other design features may also be provided.*
- *Providing landscape buffer separated sidewalks.*

~~*C-4j* *Consider adoption of a Vision Zero Action Plan (or strategy) that prioritizes systems-based approach to preventing traffic fatalities, focusing on the built environment, systems, and policies that influence behavior as well as messaging that emphasizes that these traffic losses are preventable.*~~

Public Transit

Goal C-5

Maintain a coordinated, efficient bus service that provides an effective alternative to automobile use, serves members of the community that cannot drive, and includes regional transit connections that link Manteca to other destinations.

Policies

C-5.1 Encourage and plan for the expansion of regional bus service in the Manteca area.

C-5.2 Promote increased commuter and regional passenger rail service that will benefit the businesses and residents of Manteca. Examples include Amtrak, the Altamont Commuter Express (ACE), and high-speed rail.

C-5.3 Identify and implement means of enhancing the opportunities for residents to commute from residential neighborhoods to the ACE station or other transit facilities that may develop in the City.

C-5.4 Include primary locations where the transit systems will connect to the major bikeways and pedestrian ways and primary public parking areas in the Active Transportation Plan (see C-4a).

C-5.5 Encourage programs that provide ridesharing and vanpool opportunities and other alternative modes of transportation for Manteca residents.

C-5.6 Promote the development of park-and-ride facilities near I-5, SR 120, SR 99, and transit stations.

C-5.7 Maintain a working relationship between the City administration and the local management of the Union Pacific Railroad regarding expansion of freight and passenger rail service and economic development of the region.

C-5.8 Design future roadways to accommodate transit facilities, as appropriate. These design elements should include installation of transit stops adjacent to intersections and provision of bus turnouts and sheltered stops, where feasible.

C-5.9 Encourage land uses and site developments that promote public transit along fixed route public transportation corridors, with priority given to those projects that will bring the greatest increase in transit ridership.

C-5.10 Ensure that development projects provide adequate facilities to accommodate school buses, including loading and turn-out locations

in multifamily and other projects that include medium and high density residential uses, and that the school districts are provided an opportunity to address specific needs associated with school busing.

C-5.11 As new areas and neighborhoods of the City are developed, fund transit and paratransit expansion (including capital, operations, and maintenance) to provide service levels consistent with existing development and increase service to support increasing demand across the system.

Implementation

C-5a Periodically review transit needs in the city through a process inclusive of community members and stakeholders and adjust bus routes to accommodate changing land use and transit demand patterns. The City shall also periodically coordinate with the San Joaquin Regional Transit District to assess the demand for regional transit services.

C-5b Explore a transit connections study that would identify improvements to connections and access to the existing ACE station, the Manteca Transit Center, and future planned transit stations.

C-5c Update the City's standard plans to include the option for bus turnouts at intersections of major streets.

C-5d Review and consider alternatives to conventional bus systems, such as smaller shuttle buses (i.e. micro-transit), on-demand transit services, or transportation networking company services that connect neighborhood centers to local activity centers with greater cost efficiency.

C-5e Work with the school districts to identify and implement opportunities for joint-use public transit that would provide both student transportation and local transit service.

C-5f Through the development review process, ensure that projects provide increased land use densities and mixed uses, consistent with the Land Use Element to enhance the feasibility of transit and promote alternative transportation modes.

C-5g Along fixed route corridors, require that new development to be compatible with and further the achievement of the Circulation Element. Requirements for compatibility may include but are not limited to:

- *Orienting pedestrian access to transit centers and existing and planned transit routes.*
- *Orienting buildings, walkways, and other features to provide pedestrian access from the street and locating parking to the side or behind the development, rather than separating the development from the street and pedestrian with parking.*

- *Providing clearly delineated routes through parking lots to more safely accommodate pedestrian and bicycle circulation.*

Goods Movement

Goal C-6

Accommodate truck and freight movements by participating in the development and implementation of an efficient regional ~~developing city-wide truck routes~~ goods and freight movement network ~~and encouraging the development of freight and warehousing centers near existing rail lines and spurs~~that balances the need to support job creation with the need to protect people from noise, emissions, and other impacts created by goods and freight movement (rail and trucks).

Policies

C-6.1 Encourage the development of industrial and warehousing centers near regional transportation facilities, UPRR, I-5, SR 99, and Stockton Airport; and away from residential land uses.

C-6.2 Develop and maintain a truck circulation network~~, as generally shown in Figure C-3,~~ that~~e~~ connects Surface Transportation ~~Accountability~~ Assistance Act (STAA) trucks to industrial areas while balancing the safety needs of motorists in passenger vehicles and persons walking, biking, or riding a bus.

C-6.~~2~~3 ~~-~~Require new industrial development to pay a fair share toward improvements required to accommodate heavy vehicles, including increased pavement wear.

C-6.4~~3~~ Support regional freight planning efforts including regional improvement of logically networked STAA truck routes~~, such as~~ Roth Road, ~~Airport Way,~~ SR 99 Frontage Roads, and French Camp Road that minimize impacts to existing City residents.

C-6.5~~4~~ Encourage the provision of freight rail service into industrial developments through the use and development of rail spurs.

C-6.6~~5~~ ~~Consider i~~Implementing~~Adopt and enforce~~ vehicle weight limit and other freight movement restrictions on roadways near sensitive uses like schools and residential neighborhoods to ~~discourage~~ prohibit cut-through truck traffic.

Implementation

C-6a *Maintain an up-to-date truck route map that identifies key goods movement corridors in Manteca and ensures goods movement needs are adequately served.*

C-6b *Prominently sign all truck routes and roadway segments where trucks are not allowed in accordance with the California MUTCD.*

C-6c *Develop an enforcement program through the Police Department to enforce compliance with truck routes, truck parking, and anti-idling measures.*

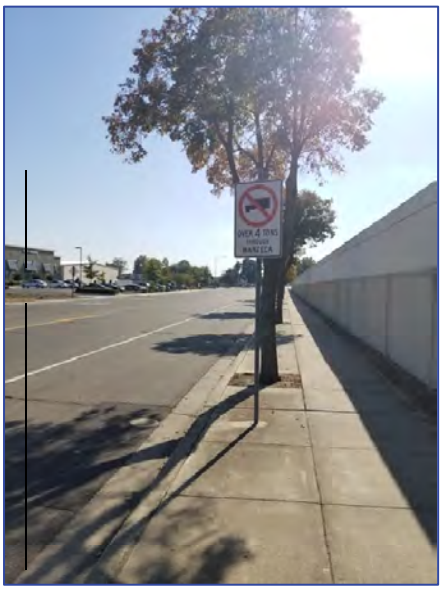
C-6d *Encourage the development of a regional goods and freight movement rest stop and parking plan.*

6e *Support incorporating expenditures for improvements ~~on~~ identified in regional truck route map(s) ~~the Truck Route Map~~ to STAA standards into the SJCOG RTP and the State Transportation Improvement Program (STIP).*

C-6e *Support STAA Terminal Access applications for properties designated industrial that propose routes that avoid sensitive receptors and reduce GHG emissions~~fronting segments shown in regional truck route map(s) on the Truck Route Map~~.*

C-6f *Prioritize feasible upgrades to streets and intersections that support job creation by ~~shown on the Truck Route Mapregional truck route map(s) during review of the~~reviewing the Capital Improvement Program (CIP) to ensure that appropriate STAA improvements are incorporated.*

~~*support STAA operations.*~~



~~Figure C-3: Truck Routes~~

C-6g *Design ~~all~~ CIP improvements on the regional truck route map(s) ~~to STAA truck route streets and intersections~~ to accommodate STAA truck traffic including appropriate structural Traffic Index and STAA truck turning radii at intersections.*

C-6h *Prioritize closing gaps in existing truck routes during the STAA Terminal Access application process.*

C-6i *Explore a joint truck route facilities district with Lathrop and other neighboring jurisdictions to ensure truck routes and facilities are developed and maintained to support area goods movement and commerce.*

C-6j *Continue to support San Joaquin Council of Government efforts to coordinate goods freight movement throughout San Joaquin County and the greater Bay Area region.*

C-6k *Continue to evaluate and mitigate environmental impacts such as ~~nd~~ noise and emissions associated with ~~Truck Route Map~~STAA Routes and regional truck route map(s) segments by design methods such as the use of rubberized asphalt and appropriate landscape buffers.*

C-6l *Support efforts to reduce environmental impacts of truck operations through use of electric vehicles and other advanced technologies for goods and freight movement. Such efforts may involve, but are not limited to, use of roadway marking and striping materials that are compatible with goods and vehicle movement technology, additional coordination and networking of roadway electronic infrastructure, and updating street guidelines and roadway standards to reflect advanced transportation technologies.*

C-6m *Require upgrades to accommodate trucks on roadways to be designated as truck routes prior to designating them as truck routes.*

C6-n *Implement vehicle weight limit restrictions on roadways near sensitive uses like schools and residential neighborhoods to prohibit cut-through truck traffic prior to approving new industrial development.*

C-6o *Before industrial development accessing Castle Road is approved, require the Castle Road railroad crossing south of French Camp Road to be upgraded with advanced signage, flashing signals, and crossing arms, at a minimum.*

C-6~~h~~p *Design all CIP improvements that link industrial land uses to regional transportation facilities to accommodate STAA truck traffic including appropriate structural Traffic Index; STAA truck turning radii at intersections; and infrastructure needed to support AV technology.*

C-6~~i~~q *Where intersections and roadway segments are modified to accommodate STAA truck movement, the City shall ensure that the design of such take into account the needs of all modes of*

transportation. Acceptable design solutions include, but are not limited to, features such as: shoulders for trailer tracking recovery; Class I and IV bicycle lanes; pedestrian and bicyclist shelter islands; and, longer crosswalk crossing phases at traffic signals.

C-6rj *Support efforts to reduce environmental impacts of truck operations through use of electric vehicles and other advanced technologies for goods and freight movement.*

C-6sk *Prioritize closing gaps in existing truck routes and mitigating to a level of less than significant all impacts of such routes during the STAA Terminal Access application process.*

C-6lt *Explore a joint truck route facilities district with Lathrop and other neighboring jurisdictions to ensure truck routes and facilities are developed and maintained to support area goods movement and commerce.*

C-6mu *Continue to support San Joaquin Council of Government efforts to coordinate goods and freight movement throughout San Joaquin County and the greater Bay Area region.*

C-6nv *Continue to evaluate and mitigate environmental impacts such as noise and emissions associated with STAA routes and intersections by design methods such as the use of rubberized asphalt and appropriate landscape buffers.*

C-6ow *Continue to partner with other public agencies and private non-profits for funding opportunities that ensure goods and freight traffic movement takes into account all transportation modes and that all residents share equally in the burden and benefits of the goods and freight movement network.*

C-6px *Continue to work with relevant public agencies and the railroad to appropriately regulate the movement of hazardous materials throughout the City.*

C-6qy *Continue to support the development and implementation of a quick-response emergency services program for railroad corridors and the County's Hazardous Materials Team.*

C-6rz *Coordinate with Caltrans, SJCOG, and rail transportation operators, such as UPRR and ACE, to ensuresupport safe and reliable rail transportation in and through the Planning Area, including grade separation projects at all crossings within the City.*

C-26aa *Update the PFIP program and other applicable programs to implement additional grade separations at existing and planned at-grade rail crossings in Manteca and to provide features to improve response time on new roadways and existing roadways.*

Transportation Demand Management

GOAL C-7

Reduce vehicle miles traveled associated with trips within, to, and from the City while expanding access and mobility options for residents, employees, and visitors.

Policies

C-7.1 Encourage employers to provide alternative mode subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, and work-at-home programs employee education and preferential parking for carpools/vanpools.

C-7.2 Require development projects that accommodate or employee 50 or more full-time equivalent employees to establish a transportation demand management (TDM) program that meets or exceeds applicable standards, including Air District requirements~~s~~.

C-7.3 Partner with SJCOG on the Dibs program, which is the regional smart travel program, including rideshare, transit, walking, and biking, operated by SJCOG.

C-7.4 Require proposed development projects that could have a potentially significant VMT impact to consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction.

C-7.5 Evaluate the feasibility of a local or regional VMT impact fee program, bank, or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot eliminate VMT impacts, the project could contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.

C-7.6 Expand alternatives to driving by increasing opportunities to walk, bike, and use transit.

Implementation

C-7a Provide information about transit services, ridesharing, vanpools, and other transportation alternatives to single occupancy vehicles at City Hall, the library, ~~and~~ on the City website, and through other channels.

C-7b Develop TDM program requirements with consideration of addressing

What is Transportation Demand Management?

Transportation Demand Management uses incentives, information, and encouragement programs to reduce reliance on single-occupant vehicles and decrease traffic congestion. These programs help people walk, bike, ride transit, and telecommute and encourage shifting driving trips from peak hours. Transportation Demand Management measures may be implemented by governments or employers.

CEQA vehicle miles traveled impact analysis requirements (i.e., SB 743) in accordance with implementation measure C-~~1c~~1b. TDM programs shall include measures to reduce total vehicle miles traveled and peak hour vehicle trips. A simplified version of the Air District's Rule 9410 could be used to implement this measure.

C-7c *Coordinate with the San Joaquin Council of Governments on a Congestion/Mobility Management Program to identify TDM strategies to reduce VMT and mitigate peak-hour congestion impacts. Strategies may include: growth management and activity center strategies, telecommuting, increasing transit service frequency and speed, transit information systems, subsidized and discount transit programs, alternative work hours, carpooling, vanpooling, guaranteed ride home program, parking management, addition of general purpose lanes, channelization, computerized signal systems, intersection or midblock widenings, and Intelligent Transportation Systems.*

C-7d *Proposed development projects sh*all incorporate measures to reduce VMT, including ~~ould~~ consider*ation of the ~~list of potential~~ measures listed below. This list is not intended to be exhaustive, and not all measures may be feasible, reasonable, or applicable to all projects. The purpose of this list is to identify options for future development proposals, not to constrain projects to this list, or to require that a project examine or include all measures from this list. Potential measures, with possible ranges of VMT reduction for a project, include:**

- *Increase density of development (up to 10.75 percent)*
- *Increase diversity of land uses (up to 12 percent)*
- ~~*Encourage telecommuting and alternative work schedules (up to 4.5 percent)*~~
- *Implement car-sharing programs (up to 5 percent)*
- *Implement parking management and pricing (up to 6 percent)*
- *Implement subsidized or discounted transit program (up to 0.7 percent)*
- *Implement commute trip reduction marketing and launch targeted behavioral interventions (up to 3 percent)*
- *Participating in local or regional carpool matching programs***
- *Providing preferential carpool and vanpool parking***
- *Providing secure bicycle parking, showers, and lockers at work site***

**Note: VMT reduction ranges based on Quantifying Greenhouse Gas Mitigation Measures, California Air Pollution Control Officers Association (2010), and new research compiled by Fehr & Peers (2020). Additional engineering analysis is required prior to applying reductions to specific projects. Actual reductions will vary by project and project context.*

***Reduction determined at the project-level*

C-7e *Partner with SJCOG, San Joaquin County, and neighboring cities to evaluate a potential regional VMT impact fee program, bank, or exchange.*

C-7f *Implement the Active Transportation Plan and other Bikeway and Pedestrian Systems goals and polices (C-4).*

C-7g *Expand transit service and increase transit frequency and implement Public Transit goals and policies (C-5).*

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